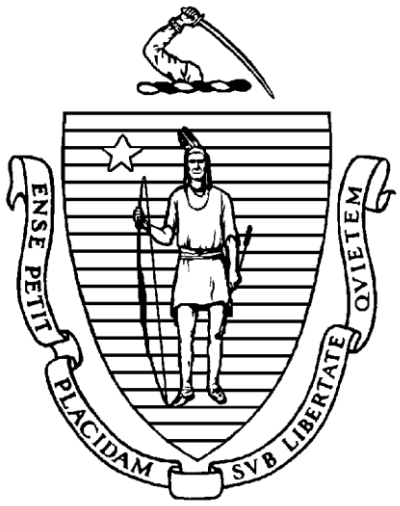


Department of Conservation and Recreation

PART I

INSTRUCTIONS TO BIDDERS

CONTRACTS FOR PUBLIC WORKS PROJECTS
AND
FOR BUILDING PROJECTS ESTIMATED TO
COST MORE THAN $25,000 BUT NOT MORE THAN $100,000
SUBJECT TO THE PROVISIONS OF M.G.L. CH. 30 SEC. 39M

NOTICE TO CONTRACTORS – M.G.L. C. 30, sec. 39M CONSTRUCTION
ADVERTISEMENT OF INVITATION FOR BIDS
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION AND RECREATION
10 PARK PLAZA, SUITE 6620, BOSTON, MA 02116
PHONE: 617-626-1250
www.mass.gov/dcr

Contract No. P24-3573-C1A
Title: Veterans Memorial Park, Waterfront Improvements and Boardwalk Reconstruction
Location: 194 Lynnway, Lynn, Massachusetts

GENERAL BID proposals shall be submitted on a form furnished by the Department and will be received until **12:00 PM on Thursday , March 26, 2026** through DCR's E-bid room at www.bidexpress.com/businesses/36765/home.

Individual sets of contract documents will only be available on DCR's E-bid room at www.bidexpress.com/businesses/36765/home.

If any addenda are issued throughout the open period for this project, DCR will distribute these addenda via Bid Express, which will also email identified prospective at the time plans and specifications are issued.

A pre-bidding conference for prospective bidders will be held on **February 24, 2026**, at 11:00 AM at 10 Park Plaza, Second Floor Conference Room 1. **Bidders are strongly encouraged to visit the site prior to the pre-bid conference. :** Questions should be directed to patrice.kish@mass.gov & Gregory.Robbins@mass.gov and must be received no later than Close of Business on Monday, March 2nd, 2026

The project consists of the reconstruction of Lynn Veterans Memorial Park and Boardwalk (formerly Lynn Heritage State Park on the waterfront). The work includes, but is not limited to, all labor and materials associated with demolition, earthwork and grading, hazardous soil management, paving, planting, addition of a splash pad, lighting, installation of site furnishings, timber framing and decking, sheet pile driving, installation of helical piles, utility replacement, accessibility upgrades, along with erosion control, site preparation, & staging and access.

The estimated project cost is **$ 18,000,000.00**

The work is to be accomplished within 504 calendar days of a notice to proceed. Liquidated damages in the amount of $1,800.00 per day will be assessed if the work has not been completed in accordance with the provisions of the contract within the time specified (as extended by any authorized extension of time granted in accordance with the contract provisions).

Bidders must be pre-qualified by the Massachusetts Dept. of Transportation (MassDOT) Highway Division in **Marine Construction or Recreational Facilities** to bid on the above project. An award will not be made to a Contractor who is not pre-qualified by MassDOT prior to the opening of Proposals.

The Proposed contract includes a requirement of 6% for MBE (Minority Business Enterprise) 10% for WBE (Women Business Enterprise) and 3% VOBE requirement (Veteran-Owned Business Enterprise).

The applicable local minority workforce utilization percentage is a minimum goal of 15.3%. The applicable local women workforce utilization percentage is a minimum goal of 6.9%.

Each bid must be accompanied by a bid deposit, in the form of a bid bond, cash, certified check, or a treasurer's or cashier's check issued by a responsible bank or trust company, payable to the Department of Conservation and Recreation in the amount of 5% of the bid.

Each bid must be submitted through DCR's E-Bid room at www.bidexpress.com/businesses/36765/home. Please ensure that your bid is complete and marked as responsive when submitting through DCR's Bid room. Any bids found to be incomplete and/or marked unresponsive will be rejected by DCR and will not be considered when awarding the project.

Bids are subject to the provisions of M.G.L. Ch. 30, Sect. 39F, G, H and M inclusive. Wages are subject to minimum wage rates as per M.G.L. Ch. 149, sections 26 to 27D inclusive. The Department reserves the right to waive any informalities in or to reject any and all bids if it be in the public interest to do so.

Commissioner Nicole LaChapelle
Massachusetts Department of Conservation and Recreation

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION AND RECREATION

PART I
INSTRUCTIONS TO BIDDERS

CONTRACTS FOR PUBLIC WORKS PROJECTS
SUBJECT TO THE PROVISIONS OF M.G.L. C. 30. SEC. 39M

Awarding Authority:
Department of Conservation and Recreation
10 Park Plaza, Suite 6620,
Boston, MA 02116
Telephone: 617-626-1250

DCR Contract No.: **P24-3573-C1A**
Title: **Veterans Memorial Park, Waterfront Improvements and Boardwalk Reconstruction**
Project Scope: The project consists of the reconstruction of Lynn Veterans Memorial Park and Boardwalk (formerly Lynn Heritage State Park on the waterfront). The work includes, but is not limited to, all labor and materials associated with demolition, earthwork and grading, hazardous soil management, paving, planting, addition of a splash pad, lighting, installation of site furnishings, timber framing and decking, sheet pile driving, installation of helical piles, utility replacement, accessibility upgrades, along with erosion control, site preparation, & staging and access.

Deadline for filing general bids is **12:00 PM on Thursday , March 26, 2026**

The minimum wage rate and truck rate requirements for this Contract are located www.bidexpress.com/businesses/36765/home.

Bid forms for this Contract are located @ www.bidexpress.com/businesses/36765/home.

The Minority, Women & Veterans Business Enterprise participation for this Contract are to be found in the Notice to Contractors section (Part I - Page 2/3).

The time for completion of the Work is specified in Article 2 of the Department of Conservation and Recreation - Contractor Agreement. Liquidated damages for failure to be completed on time are as stated in Article 8 of the Department of Conservation and Recreation - Contractor Agreement.

As used herein, capitalized terms shall have the meaning assigned to them in the General Conditions of the Contract and the Department of Conservation and Recreation - Contractor Agreement unless the context clearly indicates otherwise.

SECTION 1 - BIDDER'S REPRESENTATION

1.1 Each bidder (hereinafter sometimes referred to as "Bidder") by making a bid (hereinafter sometimes referred to as "Bid") represents and warrants that Bidder has visited and examined the Site and the Contract Documents; that Bidder is familiar with the local conditions under which the Work is to be performed; that Bidder has correlated personal observations with the requirements of the Contract Documents; and that where the Contract Documents require, in any part of the Work, a given result to be produced, the Contract Documents are adequate and that Bidder will produce the required result within the Bid price and that the Bid is made in accordance therewith.

1.2 FAILURE TO EXAMINE THE CONTRACT DOCUMENTS AND THE SITE WILL NOT RELIEVE ANY BIDDER FROM ANY OBLIGATION UNDER THE BID AS SUBMITTED. NEITHER THE COMMONWEALTH NOR THE DESIGNER WILL BE RESPONSIBLE FOR ERRORS, OMISSIONS AND/OR CHARGES FOR EXTRA WORK ARISING FROM BIDDER'S FAILURE TO FAMILIARIZE ITSELF WITH THE CONTRACT DOCUMENTS OR EXISTING CONDITIONS.

1.3 Pre-Bidding Conference

A. If applicable, a pre-bidding conference for prospective bidders will be held at the date, time and location as specified in the Notice to Contractors section (Part I – page 2/3).

B. At the conference, the project will be discussed in general. It is desirable that all prospective bidders attend. The Contract, Specifications, Drawings, and any other aspects of this project will be explained in response to questions by those attending. For interpretations of questions requiring legal, administrative, or engineering decisions, prospective bidders shall comply with Section 3 herein.

SECTION 2 - GENERAL BIDDERS - QUALIFICATION

2.1 Every Bidder must submit the following documents, as required:

Special certification may be required as required by the Department on a contract-specific basis.

Refer to the Notice to Contractors regarding the specific qualification requirements of this contract.

SECTION 3 - REQUESTS FOR INTERPRETATION

3.1 Interpretation

A. The Plans and Specifications and other Contract Documents are to be considered together and are intended to be mutually complementary, so that any work shown on the Plans though not specified in the Specifications, and any work specified in the Specifications though not shown on the Plans, is to be executed by the Contractor as a part of this Contract.

B. All things that in the opinion of the Awarding Authority may be reasonably inferred from the Plans, Specifications and other Contract Documents are to be executed by the Contractor. The Awarding Authority shall determine whether the detail Plans conform to the general Plans and Contract Documents.

C. The tables of contents, titles, headings and marginal notes or sub-scripts contained herein are solely to facilitate references, are not intended to be construed as provisions of the Contract, and in no way affect the interpretation of the provisions to which they refer.

D. Where reference is made in the Contract Documents to publications, standards, or codes issued by associations or societies, such reference shall be interpreted to mean the current edition of such publications, standards, or codes, including revisions in effect on the date of the Advertisement, notwithstanding any reference to a particular date. The foregoing sentence shall not apply to the dates, if any, specified with respect to insurance policy endorsement forms.

E. In case of any conflict among the Contract Documents, unless the context clearly otherwise requires, the Contract Documents shall be construed according to the following priorities:

First Priority:	Contract Modifications
Second Priority:	Department of Conservation and Recreation - Contractor Agreement
Third Priority:	General Conditions of the Contract
Fourth Priority:	Drawings - Schedules take precedence over enlarged detail Drawings and enlarged Detail Drawings take precedence over reduced scale Drawings; figured dimensions shall prevail over scale.
Fifth Priority:	Specifications

3.2 Any questions by prospective Bidders concerning interpretation of the Contract Documents must be submitted in writing to the Awarding Authority and should be in its

possession at least five working days before the date set for the receipt of Bids. The Awarding Authority will post to Bid Express any addenda or written interpretations that it deems necessary to Bidders who have taken out plans at the address given by them before the date set for the receipt of affected Bids. Bidders may not rely upon oral communications or interpretations from the Awarding Authority or the Designer, and the Awarding Authority shall not be bound by them.

Written Questions shall be submitted to:

Attn: Patrice Kish, Chief, Design & Engineering
Department of Conservation and Recreation
Email: patrice.kish@mass.gov

With a copy to: Greg Robbins, Deputy Chief, Waterway & Coastal Engineering
Email: gregory.robbins@mass.gov

3.3 It is the sole responsibility of the Bidder to ascertain the existence of any addenda issued by the Awarding Authority, all addendums are posted on Bid Express- www.bidexpress.com/businesses/36765/home. Copies of addenda will be made available for inspection at the locations listed in the Advertisement where the Contract Documents are on file.

3.4 Wherever in the Contract Documents reference is made to Massachusetts General Laws; it shall be construed to include all amendments thereto effective as of the date of the issuance of the invitation to bid on the proposed work.

SECTION 4 - PREPARATION OF BIDS; ALTERNATES

4.1 Bids shall be submitted through the DCR E-Bid room at www.bidexpress.com/businesses/36765/home?agency=true.

4.2 All Bids submitted through Bid Express must be deemed responsive by Bid Express to be considered

4.3 Where so indicated on the Bid Form, sums shall be expressed in both words and numerals. Where there is a discrepancy between the Bid sum expressed in words and the Bid sum expressed in figures, the Bid sum expressed in words shall control unless the intention of the Bidder clearly is otherwise as determined by the Awarding Authority in its sole discretion.

4.4 Each Bidder shall acknowledge all required alternates in Section C on the Bid Express by entering the dollar amount of addition or subtraction necessitated by the alternate(s).

4.5 If an alternate includes work within the Bidder's scope of work and does not involve a change in the cost of the Bid, the Bidder shall so indicate by writing "No Change" or "N/C" or "0" in the space provided for that alternate.

4.6 The lowest Bidder will be determined based on the sum of the base Bid and the accepted alternates.

4.7 Each bid must be accompanied by a bid deposit, payable to the Department of Conservation and Recreation in the amount of 5% of the bid. Bid Bonds must be submitted electronically, please ensure your company and your bonding agent's company register with one of the Bid Bond agencies affiliated with Bid Express: If you need additional assistance, please call the Bid Express Customer Support Team at 888-352-2439, available Monday - Friday from 7:00am – 8:00pm (EST). You can also email the team at support@bidexpress.com

4.8 The amount of such bid deposit shall be **5% five per cent** of the value of the Bid.

SECTION 5 - SUBMISSION OF BIDS

5.1 Each bid, **including the bid deposit,** shall be submitted via DCR's Bid room at www.bidexpress.com/businesses/36765/home?agency=true

5.2 All Bids must be received by the Awarding Authority no later than the applicable date and time specified on page 1 of these Instructions to Bidders. Any Bid not received by the applicable deadline will not be accepted.

SECTION 6 - WITHDRAWAL OF BIDS; REJECTION OF BIDS

6.1 Any Bid may be withdrawn prior to the specified deadline for the receipt of Bids provided that the withdrawal shall be made by a written request signed by a person having the authority to bind the Bidder. The written request must be hand delivered or otherwise delivered to Robert Boncore, Director of Contracts and Procurement, at 10 Park Plaza, Suite 6620, Boston, MA 02116 or through email at Robert.Boncore@Mass.Gov, and must be received on or before the date and time appointed as the deadline for the receipt of Bids.

6.2 A Bidder may withdraw its Bid without penalty at any time up to the time of Award as defined below in subsection 9.1 only upon demonstrating to the satisfaction of the Awarding Authority that a death or disability has occurred, or a bona fide clerical error or mechanical error of a substantial nature was made during the preparation of the bid. Failure to demonstrate conclusively that a bona fide clerical error or mechanical error of a substantial nature was made may result in forfeiture of the Bid deposit

6.3 The Awarding Authority reserves the right to waive any informality in or to reject any and all Bids if it is in the public interest to do so. Without limiting the foregoing, the Awarding Authority reserves the right to reject unit prices, which it deems unduly high or unduly low as unbalanced.

SECTION 7 – INSURANCE

7.1 Insurance Generally

A. The Contractor shall take out and maintain the insurance coverages listed in this Section with respect to the operations as well as the completed operations of this Contract. The insurance requirements stipulated shall cover all damage to property, whether above or below ground, and shall apply to all the Work to be performed under this Contract. This insurance shall be provided at the Contractor's expense and shall be in full force and effect for the full term of the Contract or for such longer period as this Article requires.

B. All policies shall be written on an occurrence basis and be issued by companies authorized to write that type of insurance under the laws of the Commonwealth and rated in Best's Insurance Guide (or any successor thereto or replacement thereof) as having a general policy holder rating of "A" or better and a financial rating of at least "9" or otherwise acceptable to the DCR.

C. The Contractor shall submit two originals of each certificate of insurance, acceptable to the DCR, simultaneously with the execution of this Contract. Certificates shall include:

"Notwithstanding any policy terms or endorsements: DCR Contract Number /Project Name & *DCR is an additional insured as to all policies of insurance, with the exception of workmen's compensation. In addition, none of the above-referenced insurance coverages shall be cancelled, terminated, or materially modified in any way unless and until 10 (Ten) days advance written notice is given to the DCR. The contractor has paid all premiums.

The Contractor shall submit updated certificates prior to the expiration of any of the policies referenced in the certificates so that the DCR shall at all times possess certificates indicating current coverage. Certificates shall indicate contractual liability coverage, and the Contractor's Protective Liability coverage is in force. Certificates shall include specific acknowledgment that the coverage set forth in Section 7 is included in the policies.

7.2 Types and Amounts of Insurance

Contractor's Commercial General Liability

Bodily Injury &	500,000.00 each occurrence
Property Damage	1,000,000.00 general aggregate, per project

This policy shall include coverage relating to explosion, collapse, and underground property damage if blasting operations constitute part of the Work to be performed under this Contract.

If the Contract work includes work to be performed within fifty feet of a railroad, any exclusion for liability assumed under contract for work within fifty feet of a railroad shall be deleted.

Vehicle Liability

The Contractor shall provide the following minimum coverage with respect to the operations of any employee, including coverage for owned, non-owned, and hired vehicles:

Combined Single Limit: 1,000,000.00

Worker's Compensation

The Contractor shall provide the following coverage in accordance with M.G.L. c. 149, sec. 34A and M.G.L. c. 152 as amended, unless a higher coverage is specified below:

Part One	Provide Statutory Minimum
Employer's Liability	$500,000.00 each accident
Part Two	$500,000.00 disease per employee
	$500,000.00 disease policy aggregate

SECTION 8 – MBE, WBE AND VOBE PARTICIPATION

8.1 The apparent low Bidder's compliance with the requirements of this Section 8 is a prerequisite for receiving the Award of the Contract. The MBE, WBE and VOBE participation for this Contract are as set forth on the first page of these Instructions to Bidders

8.2. The Awarding Authority reserves the right to reduce or waive the MBE or WBE participation established for this Contract upon written request made by a Bidder. Requests to reduce or waive the MBE,WBE & VOBE participation for this Contract should be received by the Awarding Authority no later than Ten (10) working days before the date set for the receipt of general Bids. **THE AWARDING AUTHORITY RESERVES THE RIGHT TO REJECT ANY REQUEST TO REDUCE OR WAIVE THE MBE,WBE & VOBE REQUIREMENTS FOR THIS CONTRACT THAT IS RECEIVED AFTER THESE DEADLINES**. Such written request must demonstrate to the satisfaction of the Awarding Authority that it is not feasible for a non-MBE or non-WBE general Bidder to meet the percentage established for this Contract based upon any

or all of the following: (i) actual MBE,WBE & VOBE availability, (ii) the geographic location of the project to the extent related to MBE,WBE & VOBE availability, (iii) the scope of the work, (iv) the percentage of work available for subcontracting to MBE,WBE & VOBEs and/or (v) other relevant factors, including a **documented** inability by the prospective Bidder to obtain commitments from MBE,WBE & VOBE subcontractors sufficient to meet the MBE,WBE & VOBE requirements after having made a diligent, good faith effort to do so. All the foregoing documentation shall accompany the Bidder's request for a reduction or waiver of the MBE,WBE & VOBE participation requirements. Such documentation shall include, at a minimum, the following:

-- A list of all items of work under the Contract that the Bidder made available for subcontracting to MBE,WBE & VOBEs. The Bidder shall identify all items of work that the Bidder did not make so available and shall state the reasons for not making such work available for subcontracting to MBE,WBE & VOBEs. The Bidder shall also demonstrate that, where commercially reasonable, subcontracts were divided into units capable of being performed by MBE,WBE & VOBEs.

-- Evidence that the Bidder sent written notices soliciting Bids or proposals to perform the items of work made available by the Bidder for subcontracting to all MBE,WBE & VOBEs qualified to perform such work. The Bidder shall identify (if) each solicited, and (ii) each MBE,WBE & VOBE listed in the Massachusetts Supplier Diversity Office (“SDO” formerly “SOMWBA”) directory under the applicable trade category that was not solicited and reasons, therefore. The Bidder shall also state the dates that notices were mailed and provide a copy of the written notice(s) sent.

-- Evidence that the Bidder made reasonable efforts to follow up the written notices sent to MBE,WBE & VOBEs with telephone calls or personal visits to determine with certainty whether the MBE,WBE & VOBEs were interested in performing the work. Phone logs or other documentation must be submitted.

-- A statement of the response received from each solicited person, including the reason for rejecting any MBE,WBE & VOBE who submitted a bid or proposal.

-- Evidence of efforts made to assist MBE,WBE & VOBEs that needed assistance in obtaining bonding or insurance, or lines of credit with suppliers if the inability of MBE,WBE & VOBEs to obtain bonding, insurance, or lines of credit is the reason given for the Bidder's inability to meet the requirements.

The Bidder may also submit any other information supporting its request for a waiver or reduction in the MBE,WBE & VOBE participation, including without limitation evidence that the Bidder placed advertisements in appropriate media and trade association publications announcing the Bidder's interest in obtaining bids or proposals from MBE,WBE & VOBEs, and/or sent written notification to MBE,WBE & VOBE economic development assistance agencies, trade groups and other organizations notifying them of the Contract and the work to be subcontracted by the Bidder to MBE,WBE & VOBEs. The Bidder shall also submit any other information

requested by the Awarding Authority to show that the Bidder has taken all actions that could be expected to achieve the MBE,WBE & VOBE participation.

8.3 Any reduction or waiver of the MBE,WBE & VOBE participation for this Contract will be made by written addendum via Bid Express to all persons who have taken out plans for the project.

8.4 No later than five (5) working days after the opening of Bids, the apparent low Bidder shall submit the following documents to the Awarding Authority's Contract Officer listed in subsection 5.1: (i) a completed Schedule for Participation by Minority/Women Business Enterprises ("Schedule for Participation") in the form provided by the Awarding Authority showing participation in amounts equal to or exceeding the MBE,WBE & VOBE requirements for this Contract, (ii) a completed Letter of Intent in the form provided by the Awarding Authority for each MBE,WBE & VOBE listed in the Schedule for Participation, and (iii) a current SDO certification letter for each MBE,WBE & VOBE listed in the Schedule of MBE,WBE & VOBE Participation showing that the MBE,WBE & VOBE is certified in the area of work for which it is listed on the Letter of Intent.

8.5 Each Letter of Intent shall identify and describe the work to be performed by the named (the “MBE,WBE & VOBE Work”) with enough specificity to permit the Awarding Authority to identify the items of contract work that the MBE,WBE & VOBE will perform for participation credit. The Awarding Authority reserves the right to reject any Letter of Intent if the price to be paid for the MBE,WBE & VOBE Work does not bear a reasonable relationship to the value of such work under the Contract as determined by the Awarding Authority.

8.6 Within five (5) working days after receipt of the Schedule For MBE,WBE & VOBE Participation, Letters of Intent, and SDO certification letters, the Awarding Authority shall review and either approve or disapprove the apparent low Bidder’s submissions. If the apparent low Bidder has not submitted an appropriate Schedule For MBE,WBE & VOBE and appropriate Letters of Intent and SDO certification letters establishing that the MBE,WBE & VOBE participation for the project will be met, the apparent low Bidder may be considered ineligible for Award of the Contract and the Awarding Authority will Award the Contract to the second lowest Bidder, subject to said Bidder’s compliance with these conditions.

8.7 The Contractor is required to submit to the Awarding Authority signed subcontracts with all subcontractors prior to the commencement of work to be performed under these contracts, and/or a purchase order or invoice from each material supplier and/or manufacturer listed on the Schedule For MBE,WBE & VOBE Participation of the issuance of the Notice to Proceed by the Awarding Authority.

SECTION 9 - CONTRACT AWARD

9.1 "Award" means the determination, selection, and notification of the lowest, responsible, and eligible Bidder by the Awarding Authority.

9.2 The Contract will be awarded to the lowest responsible and eligible Bidder as determined by the Awarding Authority. Bidders will be required to hold firm their respective bids for thirty (30) days, Saturdays, Sundays, and legal holidays excluded, after the opening of the Bids.

9.3 As used herein, the term "lowest responsible and eligible Bidder" shall mean the Bidder whose Bid is the lowest of those Bidders who, in the Awarding Authority's opinion, are ready, willing and able to comply with all requirements of the Contract Documents and demonstrably possess the skill, ability, and integrity necessary for the faithful performance of the Work, based on the determination of past performance and financial soundness under M.G.L. c. 30, sec. 39M, (ii) the rules, regulations, orders, guidelines and policies promulgated from time to time by the Commissioner of the Department of Conservation and Recreation and (iii) any other relevant criteria that the Awarding Authority may prescribe.

9.4 The Bid price shall be the price set forth in paragaraph C of the Bid Form.

9.5 Should the Contract Documents require submission of special data to accompany the Bid, the Awarding Authority reserves the right to rule the Bidder's failure to submit such data an informality and to receive said data subsequently within a reasonable time as set by the Awarding Authority, provided that no such ruling shall result in an unfair advantage to the Bidder.

9.6 Should the Contract Documents require submission of special data to accompany the Bid, the Awarding Authority reserves the right to rule the Bidder's failure to submit such data an informality and to receive said data subsequently within a reasonable time as set by the Awarding Authority, provided that no such ruling shall result in an unfair advantage to the Bidder. **In addition,** the Department reserves the right to waive minor defects in documents or time limits

SECTION 10 - EXECUTION OF CONTRACTS

10.1 Upon receipt of the Award, the Bidder awarded the Contract shall submit two (2) properly executed originals of each of the following documents prior to execution of the Contract by the Awarding Authority. All such documents shall be in the form prescribed by the Awarding Authority and received within five working days from receipt of the Award.

-Department of Conservation and Recreation-Contractor Agreement
-Certificate of Corporate Vote
-Joint Venture Authorization (if appropriate)
-Performance and Payment Bonds with power of attorney
-Certificates of Insurance evidencing coverages in amounts required by the Contract Documents.
-Any other documents that the Awarding Authority may require in connection with the Contractor's execution of the Contract.

10.2 Please note that no part of the Contractor's work may be subcontracted without the prior written approval of the Awarding Authority. The Contractor must complete a minimum of 51% of the scope of this contract by his own work force. If the Contractor desires to subcontract any part of the Work, the Contractor must promptly forward to the Awarding Authority a list in duplicate designating the work to be performed and the name of each proposed subcontractor. Approved subcontractors are eligible for direct payments under M.G.L. 30, sec. 39F, as amended. Material suppliers not involving site labor need not be submitted for approval.

SECTION 11 - RETURN OF BID DEPOSITS

11.1 All Bid deposits of Bidders, except those of the three (3) lowest responsible and eligible general Bidders, shall be returned within five days, Saturdays, Sundays, and legal holidays excluded, after the opening of the Bids. The Bid deposits of the three (3) lowest responsible and eligible Bidders shall be returned upon the execution and delivery of the Contract, or if no award is made; except that, if any Bidder fails to perform its agreement to execute the Contract and furnish performance and payment bonds as stated in its Bid, then said Bidder's Bid deposit shall become the property of the Commonwealth as liquidated damages; provided that the amount of the Bid deposit that becomes the property of the Commonwealth shall not exceed the difference between the Contractor's Bid price and the Bid price of the next lowest responsible and eligible Bidder; and provided further that, in the case of death, disability, bona fide clerical or mechanical error of a substantial nature, or other similar unforeseen circumstances affecting the Bidder, such Bidder's Bid deposit shall be returned.

11.2 In addition to the provisions for the return of Bid deposits as provided above, upon receipt of a Bid Bond in an amount not less than the amount of the required Bid deposit, the Awarding Authority shall return any Bid deposit of a Bidder forthwith after the public opening of Bids.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION & RECREATION
STANDARD CONSTRUCTION CONTRACT
For Projects Subject to M.G.L. c. 149 or M.G.L. c. 30, sec. 39M

PART II

DEPARTMENT OF CONSERVATION AND RECREATION - CONTRACTOR AGREEMENT

Awarding Authority: The Massachusetts Department of Conservation and Recreation

Department Code: DCR

This agreement ("Contract") is made by and between the Commonwealth of Massachusetts, acting by and through the Awarding Authority identified above with a principal place of business at 10 Park Plaza, Suite 6620, Boston, MA 02116, and hereinafter called the "Contractor".

Terms used in this Department of Conservation and Recreation - Contractor Agreement, which are defined in the General Conditions of the Contract, shall have the meanings designated therein.

The Awarding Authority and the Contractor agree as follows:

Article 1. Scope of Work. The Work under this Contract is defined as all work required by the Contract Documents for the construction of Contract No: in accordance with and as described in the Plans and Specifications prepared by and as modified by Addenda () included herein.

Article 2. Time for Completion. The Contractor shall commence the Work under this Contract on the date specified in the written "Notice to Proceed," and shall within __Days after such date, bring the Work to Substantial Completion and to the point at which a Certificate of Agency Use and Occupancy may be issued, and shall bring the Work to Final Acceptance within 10 days after the date specified for Substantial Completion.

Article 3. Contract Price. The Awarding Authority shall pay the Contractor, in current funds, for the performance of the Work, subject to additions and deductions by Approved Change Order(s), the Contract Price of Dollars and Zero Cents ($.00).The Unit Prices, if any, approved by the Awarding Authority are those included in the Contractor's General Bid. The following Alternates have been accepted, and their costs are included in the Contract Price:

Article 4. Approved Subcontractors. The filed Subcontractors listed in the Contractor's General Bid submitted by the Contractor have been approved for the performance of the specified portions of the Work subject to the Commonwealth's verification that they have complied with state corporation and partnership registration laws. No other filed Subcontractors and no non-filed Subcontractors shall be used for these or any other portions of the Work without the prior written approval of the Awarding Authority.

Article 5. Certifications. Pursuant to M.G.L. c. 62C, sec. 49A, the individual signing this Contract on behalf of the Contractor hereby certifies, under the penalties of perjury, that to the best of his or her knowledge and belief the Contractor has complied with all applicable state and federal tax laws. The individual signing this Contract on behalf of the Contractor further certifies under penalties of perjury that the Contractor is not presently debarred from doing public construction work in the Commonwealth under the provisions of M.G.L. c. 29, sec. 29F, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder and is not presently debarred from doing public construction work by any agency of the United States.

Article 6. The Contract Documents: The following documents form the Contract are incorporated by reference herein, and are referred to as the "Contract Documents:"
-The Instructions to Bidders
-The General Bid submitted by the Contractor
-This Department of Conservation and Recreation – Contractor Agreement
-The General Conditions of the Contract
-The Special Conditions [Note: the term “Special Conditions" may also refer to Division 1 of the Specifications.]
-The Plans and Specifications, including Addenda identified in Article 1 above
-All Approved Change Orders issued after execution of this Department of Conservation and Recreation - Contractor Agreement

Article 7. Minority Business Enterprise, Women Business Enterprise and Veteran-Owned Business Enterprises Participation requirements and Minority/Women and Veteran-Owned Business Enterprises Workforce Utilization Percentages: The applicable requirements, if any, for minority business enterprise and women business enterprise participation, as well as those for minority and women workforce utilization percentages established for this Contract are to be found at the Notice to Contractors for this project, at Part I – Instructions to Bidders, and are incorporated by reference herein.

Article 8. Liquidated Damages. For the purposes of Article VI of the General Conditions of the Contract, liquidated damages for delay are to be found at the Notice to Contractors for this project at Part I – Instructions to Bidders and are incorporated by reference herein.

Article 9. Insurance Requirements. The insurance requirements are set forth in the Instructions to Bidders and are incorporated herein.

In witness whereof, the parties hereto have caused this instrument to be executed in duplicate under seal as of the date set forth above.

Forms Used During Contract Award and Execution

PAYMENT BOND
PERFORMANCE BOND
CERTIFICATE OF CORPORATE VOTE OF AUTHORITY
CERTIFICATE OF COMPLIANCE WITH STATE TAX LAWS AND WITH UNEMPLOYMENT COMPENSATION CONTRIBUTION REQUIREMENTS
CERTIFICATE OF LIABILITY INSURANCE
A. SEE PART I, SECTION 7 – ARTICLE 7.1 C.
B. ADDING IN THE DESCRIPTION **DCR AS ADDITIONAL INSURED**.
SCHEDULE FOR WOMEN AND MINORITY BUSINESS ENTERPRISE
LETTER OF INTENT – MINORITY AND WOMEN BUSINESS PARTICIPATION
SCHEDULE FOR VETERAN-OWNED BUSINESS ENTERPRISE
LETTER OF INTENT – VETERAN-OWNED BUSINESS ENTERPRISE
EXECUTIVE ORDER 546 – CONTRACTOR CERTIFICATION - VOBE POLICY OF THE COMMONWEALTH
EXECUTIVE ORDER 481 – CONTRACTOR CERTIFICATION - UNDOCUMENTED WORKERS POLICY OF THE COMMONWEALTH
EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE FORM
IF APPLICABLE FORM OF SUBCONTRACTOR(S)

IN WITNESS WHEREOF, said Contractor has caused these presents to be signed in its name and its behalf under seal by its officers, duly authorized to do so, and the said Commonwealth has executed these presents by the Commissioner of said Department, or its authorized agent, as prescribed by law, who shall not incur any personal liability by reason of the execution of these presents or of anything herein contained, and who hereby certifies under penalties of perjury that all applicable provisions of M.G.L. c. 149, sec. 44J, have been complied with.

(Executed in duplicate under Seal)

CONTRACTOR:

By:_____SIGNATURE & SEAL

Name: _____

Title: _____

Date: _____

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION AND RECREATION

By: _____

Name: Nicole LaChapelle

Title: Commissioner

Date: _____

PAYMENT BOND

BOND No._____

Know all men by these presents, that

_____

as principal and_____

as surety are held and firmly bound unto the Commonwealth of Massachusetts in the sum of Dollars and Zero Cents ($.00) in lawful money of the United States of America, to be paid to the Commonwealth of Massachusetts, for which payments, well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Whereas the said principal has made a Contract with the Commonwealth acting through its Department of Conservation and Recreation ("Awarding Authority") the construction of .

Now the condition of this obligation is such that if the principal shall pay for all labor performed or furnished and for all materials used or employed in said Contract and in any and all duly authorized modifications, alterations, extensions of time, changes or additions to said Contract that may hereafter be made, notice to the surety of such modifications, alterations, extensions of time, changes or additions being hereby waived, the foregoing to include any other purposes or items set out in, and to be subject to, the provisions of Massachusetts General Laws, Chapter 30, Section 39A, and Chapter 149, Section 29, as amended, then this obligation shall become null and void; otherwise it shall remain in full force and virtue.

In witness whereof we hereunto set our hand and seals this___day of_____,_____

_____(Seal) _____(Seal)

(Print Name of General Contractor) (Print Name of Surety)

By_____ By _____

(Signature – Title) (Signature – Title)

Surety Address_____

_____

PERFORMANCE BOND

BOND No. _____

Know all men by these presents, that

_____

as principal and_____

as surety are held and firmly bound unto the Commonwealth of Massachusetts in the sum of ($,000.00) in lawful money of the United States of America, to be paid to the Commonwealth of Massachusetts, for which payments, well and truly to be made, we bind ourselves, our respective heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Whereas the said principal has made a Contract with the Commonwealth acting through its Department of Conservation and Recreation ("Awarding Authority") the construction of .

Now the condition of this obligation is such that if the principal shall well and truly keep and perform all the undertakings, covenants, agreements, terms and conditions of said Contract and any extensions thereof that may be granted by the Commonwealth, with or without notice to the surety, and during the life of any guarantee required under the Contract, and shall also well and truly keep and perform all the undertakings, covenants, agreements, terms and conditions of any and all duly authorized modifications, alterations, changes or additions to said Contract that may hereafter be made, notice to the surety of such modifications, alterations, changes or additions being hereby waived, then this obligation shall become null and void; otherwise it shall remain in full force and virtue.

In the event that the Contract is abandoned by the Contractor or is terminated by the Commonwealth under the provisions of said Contract, said surety shall, if requested in writing by the Commonwealth, take such action as is necessary to complete the Contract.

In witness whereof we hereunto set our hand and seals this_____day of_____, _____

_____(Seal) _____(Seal)

(Print Name of General Contractor) (Print Name of Surety)

By_____ By_____

(Signature – Title) (Signature – Title)

Surety Address _____

_____

CERTIFICATE OF CORPORATE VOTE

I hereby certify that I am the____clerk,_____assistant clerk, of

_____(the “Corporation”) and that at a
(Name of Corporation)
duly authorized meeting of the Board of Directors of the Corporation held on

_____in_____at which a quorum was
(Date) (Location)
present and voting it was voted to authorize _____
(Name)
_____of the Corporation to execute
(Officer Title)
and deliver on behalf of the Corporation Contract, and to act as principal to execute bonds in connection therewith,

I further certify that_____is the duly qualified and acting
(Name of Corporate Officer)

_____ of the Corporation and that said vote has not been
(Officer Title)
Repealed, rescinded, or amended.

_____
Name

_____
Print Name

_____
Date

(CORPORATE SEAL)

SUBSCRIBED AND SWORN TO THIS_____DAY OF_____, 20____BEFORE ME

_____
Notary Public

My Commission Expires: _____

CERTIFICATE OF LLC VOTE

_____, 2026

I hereby certify, warrant and represent that I am the _____of

the _____(the "LLC") and that
(Name of LLC)

I am fully and unconditionally authorized, pursuant to the Operating Agreement of the LLC to execute and deliver on behalf of the LLC a contract and all amendments thereto, and to act as principal and to execute bonds in connection therewith:

Mass. State Project No. _____

Project Title:_____

I further certify under the penalties of perjury that I,_____am the duly qualified and acting member and principal of the LLC for all purposes.
.

_____
Name

_____
Print Name

_____
Date

SUBSCRIBED AND SWORN TO THIS ____DAY OF _____BEFORE ME

_____
Notary Public
My Commission Expires: _____

CERTIFICATE OF COMPLIANCE WITH STATE TAX LAWS AND WITH UNEMPLOYMENT COMPENSATION CONTRIBUTION REQUIREMENTS

Pursuant to MGL, c. 62C, s. 49A and MGL, c. 515A, s. 29A, I,

_____ authorized signatory for

_____ whose principal place of business is at

_____ do hereby certify

under penalties of perjury that _____ has filed all

State tax returns and paid all taxes as required by law and has complied with all state laws

pertaining to contributions to the unemployment compensation fund and to payments

in lieu of contributions.

The Business Organization Social Security Number or Federal Identification Number is

_____.

Signed under the penalties of perjury the _____ day of _____ 20_____

Signature: _____

Name and Title: _____

Schedule for Participation by Minority Business Enterprise
(To be completed and submitted within five calendar days from bid opening)

NOTE I: Participation of a Minority-owned enterprise may be counted in only one category.

Minority Business Enterprise Participation in the work

Name & address of MBE	Requirement **6%**	Dollar Value of Participation	Nature of Participation
1.			
2.			
3.			
4.			
5.			
6.			

Total MBE Commitment:_____

Percentage MBE Participation (divide Total Commitment by Total Bid Price)= _____

The bidder agrees to furnish implementation reports as required by the Department to indicate the MBE(s) which it has used or intends to use. Breach of this commitment constitutes a breach of contract.

Name of bidder:_____

Date:_____By:_____

Letter of Intent – Minority Business Enterprise Participation

(To be completed by W or MBE and Submitted by the Low Bidder within five calendar days of bid opening)

Project Number:_____ MBE
Project Location:_____
To: _____
Name of General Bidder

1. My company has been certified by SDO (Supplier Diversity Office) and it has not changed its minority ownership, control, or management without notifying SDO within thirty (30) calendar days of such a change.

2. My company understands that if your company is awarded the contract, your company intends to enter into an agreement with my company to perform the activity described below for the prices indicated. My firm also understands that your firm, as General Bidder, will make substitutions and quantity changes as allowed or required by the provisions of the contract with the Commonwealth.

3. This firm understands that under the terms of Article XIII of the contract, only work **performed** by an MBE will be credited toward MBE participation requirements, and this firm **cannot assign or subcontract out any of its work** without prior written approval of the DCR Compliance Office, and that any such assignment or subcontracting will not be credited toward MBE participation requirements.

W or MBE PARTICIPATION

Contract Item	**Description of Activity** (with Notation such as "Labor Only", "Material Only", etc.)	Quantity	Unit Price	Total Amount

Total Dollar Value:_____

(Additional copies of this form shall be prepared by the Contractor in the quantity necessary to comply with the contract.)

Name of MBE
Firm_____Authorized Signature_____

Business Address_____

Print Name_____Title_____
Telephone No._____Cell:_____Date_____

Schedule for Participation by Women Business Enterprise

(To be completed and submitted within five calendar days from bid opening)

NOTE I: Participation of a Woman-owned enterprise may be counted in only one category.

Women Business Enterprise Participation in the work

Name & address of WBE **10%**	Dollar Value of Participation	Nature Participation
1.		
2.		
3.		
4.		
5.		
6.		

Total WBE Commitment:_____

Percentage WBE Participation (divide Total Commitment by Total Bid Price) = _____

The bidder agrees to furnish implementation reports as required by the Department to indicate the WBE(s) which it has used or intends to use. Breach of this commitment constitutes a breach of contract.

Name of bidder:_____

Date:_____By:_____

Letter of Intent – Women Business Enterprise Participation

(To be completed by WBE and Submitted by the Low Bidder within five calendar days of bid opening)

Project Number:_____ WBE
Project Location:_____
To: _____
Name of General Bidder

4. My company has been certified by SDO (Supplier Diversity Office) and it has not changed its women ownership, control, or management without notifying SDO within thirty (30) calendar days of such a change.

5. My company understands that if your company is awarded the contract, your company intends to enter into an agreement with my company to perform the activity described below for the prices indicated. My firm also understands that your firm, as General Bidder, will make substitutions and quantity changes as allowed or required by the provisions of the contract with the Commonwealth.

6. This firm understands that under the terms of Article XIII of the contract, only work **performed** by a WBE will be credited toward WBE participation requirements, and this firm **cannot assign or subcontract out any of its work** without prior written approval of the DCR Compliance Office, and that any such assignment or subcontracting will not be credited toward WBE participation requirements.

W or MBE PARTICIPATION

Contract Item	**Description of Activity** (with Notation such as "Labor Only", "Material Only", etc.)	Quantity	Unit Price	Total Amount

Total Dollar Value:_____

(Additional copies of this form shall be prepared by the Contractor in the quantity necessary to comply with the contract.)

Name of WBE Firm_Authorized Signature_____

Business Address_____

Print Name_____Title_____

Telephone No._____Cell:_____Date_____

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION AND RECREATION
VETERAN OWNED BUSINESS ENTERPRISE POLICY
AND CONTRACTOR CERTIFICATION

In accordance with Executive Order No. 546, it is the policy of the Commonwealth and its executive agencies to promote self-reliance among veterans by offering such veterans who own and control business enterprises the opportunity to participate in state contracting activity, as well as to assist and encourage the participation of businesses owned and controlled by veterans in all areas of state procurement contracting, including contracts for public construction, design services, and commodities and services.

The Massachusetts Executive Office of Administration and Finance has therefore established the Veteran-Owned Business Enterprise (VOBE) Program (the "Program") to oversee the inclusion of business enterprises owned and controlled by veterans in all areas of state procurement contracting, including contracts for construction, design and professional services, and commodities and services. For more information on this Order, see: http://www.mass.gov/governor/legislationeexecorder/executiveorder/executive-order-no-546.html.

DCR Requires Contractors to acknowledge this policy and the requirements as provided in the contract by signing this certification as well as the Contract Documents.

CONTRACTOR CERTIFICATION

As evidence by the signature of the Contractor's Authorized Signatory below, the Contractor certifies under the pains and penalties of perjury that the Contractor acknowledges the above-referenced policy as set forth in Executive Order 546, has read Executive Order 546, and will abide the requirements concerning the policy and order as set forth in the referenced Contract. The Contractor acknowledges that if the Contractor has not submitted an appropriate Schedule for VOBE Participation and appropriate Letters of Intent establishing that the VOBE participation requirements for the project will be met, the Contractor may not be considered eligible for Award of the Contract unless he/she requests a waiver by completing and submitting the waiver form to the Contracts Administrator/DCR and that request is approved. The Contractor also understands and agrees that a breach of any of these terms during the period of the Contract may be regarded as a material breach, subjecting the Contractor to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension and /or termination.

_____ Date:_____
Contractor Authorizing Signature

_____
Print Name

Title:_____ Telephone:_____

Cell:_____ Email:_____

Schedule for Participation by Veteran-Owned Business Enterprise

(To be completed and submitted within five (5) calendar days from bid opening)

NOTE: Participation of a Veteran-Owned Enterprise may be counted in only one category; the same participation cannot be used in computing the percentage of DBE/MBE/WBE participation.

Veteran-Owned Business Enterprise Participation in the work

Name & address of VOBE **3%**	Dollar Value of Participation	Nature Participation
1.		
2.		
3.		
4.		
5.		
6.		

Total VOBE Commitment: _____

Percent VOBE Participation (divide Total Commitment by Total Bid Price)= _____

The bidder agrees to furnish implementation reports as required by the Department to indicate the VOBE(s) which it has used or intends to use. Breach of this commitment constitutes a breach of contract.

Name of bidder:_____

Date:_____By:_____

Letter of Intent – Veteran-Owned Business Enterprise Participation

(To be completed by VOBE and Submitted by the Low Bidder within five (5) calendar days of bid opening; use and prepare extra forms as needed)

DCR Contract/ Project Number:_____

Project Location:_____

To: _____

VOBE Name of General Bidder

My company has been certified by the Department of Veterans Affairs and or Supplier Diversity Office (SDO). It has not changed its veteran ownership, control, or management without notifying the Department of Veterans Affairs within thirty (30) calendar days of such a change.

1. My company understands that if your company is awarded the contract, your company intends to enter into an agreement with my company to perform the activity described below for the prices indicated. My firm also understands that your firm, as General Bidder, will make substitutions and quantity changes as allowed or required by the provisions of the contract with the Commonwealth.

2. This firm understands that under all relevant terms of the contract, only work **performed** by a VOBE will be credited toward VOBE participation requirements, and this firm **cannot assign or subcontract out any of its work** without prior written approval of the DCR Compliance Office, and that any such assignment or subcontract will not be credited toward VOBE participation requirements.

VOBE PARTICIPATION

Contract **Description of Activity** (with Item Notation such as “Labor Only”, Quantity, Unit Price, Total Amount, “Material Only”, etc.):

Activity	Labor or Material Only?	Quantity Unit Price	Total Dollar Value

VOBE Firm Name_____

Authorized Signature_____

Printed Name_____Title_____

Telephone No._____Cell No._____

E-mail:_____ Date_____

INSTRUCTIONS:

Executive Order 481 applies to all state agencies in the Executive Branch, including all executive offices, boards, commissions, agencies, departments, divisions, councils, bureaus, and offices, now existing and hereafter established. As it is the policy of the Executive Branch to prohibit the use of undocumented workers in connection with the performance of state contracts, all contracts entered after February 23, 2007, require that contractors, as a condition of receiving Commonwealth funds under any Executive Branch contract, make the following certification:

CONTRACTOR CERTIFICATION:

As evidenced by the signature of the Contractor's Authorized Signatory below, the Contractor certifies under the pains and penalties of perjury that the Contractor shall not knowingly use undocumented workers in connection with the performance of all Executive Branch contracts; that pursuant to federal requirements, the Contractor shall verify the immigration status of all workers assigned to such contracts without engaging in unlawful discrimination; and that the Contractor shall not knowingly or recklessly alter, falsify, or accept altered or falsified documents from any such worker(s). The Contractor understands and agrees that breach of any of these terms during the period of each contract may be regarded as a material breach, subjecting the Contractor to sanctions, including but not limited to monetary penalties, withholding of payments, contract suspension or termination.

_____ Date: _____

Contractor Authorizing Signature

_____

Print Name

Title:_____ Telephone: _____

Cell:_____ Email: _____

EQUAL EMPLOYMENT OPPORTUNITY COMPLIANCE FORM

Contractor's Certificate

A contractor shall not be eligible for award of a contract unless such a contractor has submitted the following certification to the Awarding Authority, said certification shall be deemed a part of the resulting contract:

Contractor's Certification

X _____

(Contractor)

certifies that it intends to use the following listed **certification trades** in the work subject to this contract.

X _____

_____

_____

and, further, that it will comply with the minority manpower ratio and specific affirmative action steps contained herein; and will obtain from each of its subcontractors and submit to the Awarding Authority prior to the award of any subcontract under this contract, the subcontractor certification required by these bid conditions.

X _____

(Signature of authorized representative of contractor)

Subcontractor's Certification

Prior to the award of any subcontract, regardless of tier, the prospective subcontractor must execute and submit to the general contractor the following certification, which shall be deemed a part of the resulting subcontract:

_____

(Subcontractor)

certifies that: it intends to use the following listed construction trades in the work under the subcontract

_____

_____

_____

and, further, it will comply with the manpower ratio and specific affirmative action steps contained herein and will obtain from each of the subcontractors prior to the award of any subcontract under this subcontract, the subcontractor certification required by these bid conditions.

_____

(Signature of authorized representative of subcontractor)

To ensure that said subcontractor's certification becomes a part of all subcontracts under the general contract, no subcontract shall be executed unless or until an authorized representative of the Awarding Authority administering this contract has determined, in writing, that said certification has been incorporated in such subcontract, regardless of tier. Any subcontract executed without such written approval shall be void.

Exhibit A
Executive Order 504 Contractor Certification Form

BIDDER/CONTRACTOR LEGAL NAME:

BIDDER/CONTRACTOR VENDOR/CUSTOMER CODE:

Executive Order 504: For all Contracts involving the Contractor's access to personal information, as defined in M.G.L. c. 93H, and personal data, as defined in M.G.L. c. 66A, owned or controlled by Executive Department agencies, or access to agency systems containing such information or data (herein collectively "personal information"), Contractor certifies under the pains and penalties of perjury that the Contractor (1) has read Commonwealth of Massachusetts Executive Order 504 and agrees to protect any and all personal information; and (2) has reviewed all of the Commonwealth of Massachusetts Information Technology Division's Security Policies available at www.mass.gov/ITD under Policies and Standards.

Notwithstanding any contractual provision to the contrary, in connection with the Contractor's performance under this Contract, for all state agencies in the Executive Department, including all executive offices, boards, commissions, agencies, departments, divisions, councils, bureaus, and offices, now existing and hereafter established, the Contractor shall:

(1) obtain a copy, review, and comply with the contracting agency's Information Security Program (ISP) and any pertinent security guidelines, standards, and policies; (2) comply with all of the Commonwealth of Massachusetts Information Technology Division's Security Policies ("Security Policies") available at www.mass.gov/ITD under Policies and Standards.

(2) communicate and enforce the contracting agency's ISP and such Security Policies against all employees (whether such employees are direct or contracted) and subcontractors.

(3) implement and maintain any other reasonable appropriate security procedures and practices necessary to protect personal information to which the Contractor is given access by the contracting agency from the unauthorized access, destruction, use, modification, disclosure, or loss.

(4) be responsible for the full or partial breach of any of these terms by its employees (whether such employees are direct or contracted) or subcontractors during or after the term of this Contract, and any breach of these terms may be regarded as a material breach of this Contract.

(5) in the event of any unauthorized access, destruction, use, modification, disclosure or loss of the personal information (collectively referred to as the "unauthorized use"): (a) immediately notify the contracting agency if the Contractor becomes aware of the unauthorized use; (b) provide full cooperation and access to information necessary for the contracting agency to determine the scope of the unauthorized use; and (c) provide full cooperation and access to information necessary for the contracting agency and the Contractor to fulfill any notification requirements.

Breach of these terms may be regarded as a material breach of this Contract, such that the Commonwealth may exercise all contractual rights and remedies, including without limitation indemnification under Section 11 of the Commonwealth's Terms and Conditions, withholding of payments, contract suspension, or termination. In addition, the Contractor may be subject to applicable statutory or regulatory penalties, including and without limitation, those imposed pursuant to M.G.L. c. 93H and under M.G.L. c. 214, § 3B for violations under M.G.L. c. 66A.

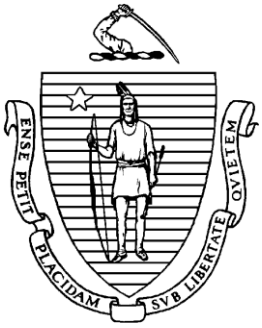
Bidder/Contractor Name: _____

Bidder/Contractor Authorized Signature: _____

Print Name and Title of Authorized Signatory: _____

Date: _____

This Certification may be signed once and photocopied to be attached to any
Commonwealth Contract that does not already contain this Certification Language and shall be interpreted to be incorporated by reference into any applicable contract subject to Executive Order 504 for this Contractor.



COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION & RECREATION
STANDARD CONSTRUCTION CONTRACT

PART III

GENERAL CONDITIONS OF THE CONTRACT

FOR PROJECTS SUBJECT TO M.G.L. CH. 149 OR
M.G.L. CH. 30, SEC. 39M

TABLE OF CONTENTS

ARTICLE I: DEFINITION OF TERMS 5

ARTICLE II: EXECUTION OF THE CONTRACT, SCOPE OF WORK, INTERPRETATION OF CONTRACT DOCUMENTS 7

1. ***Execution.*** *7*
2. ***Scope of Work.*** *7*
3. ***Interpretation.*** *7*
4. ***Distribution of Work.*** *8*
5. ***Contract Price.*** *8*

ARTICLE III: CONTROL OF WORK/ADMINISTRATION OF THE CONTRACT 8

1. ***DCR.*** *8*
2. ***Right of Access to Work.*** *8*
3. ***Inspection No Waiver.*** *8*

ARTICLE IV: GENERAL PERFORMANCE OBLIGATIONS OF THE CONTRACTOR 8

1. ***Review of Contract Documents and Field Conditions.*** *8*
2. ***Supervision and Construction Procedures; Coordination; Cutting, and Patching.*** *9*
3. ***Superintendent.*** *9*
4. ***Labor.*** *10*
5. ***Notices and permits.*** *10*
6. ***Lines, Marks etc.*** *10*

7. Excavation. *10*

8. Dewatering/Hoisting/Staging. *10*

9. Corrections to the Work; Inspection No Bar to Subsequent Corrections. *11*

10. Sanitary Facilities. *11*

11. Temporary Offices. *11*

12. Telephones. *11*

13. Project Sign. *11*

14. Contract Documents and Samples at the Site. *12*

15. Safety Laws, Regulations, and Practices. *12*

16. Environmental Protection *14*

2. Dust Control. *16*

17. Debris, Excavated Material and Chemical Waste. *16*

18. Nuisances. *16*

19. Weather Protection (M.G.L. c. 149, sec. 44G and 44F(1). *17*

20. Furnishings and Equipment. *17*

21. Form for Sub-contract. *17*

22. Sales Tax Exemption and Other Taxes. *18*

23. Final Cleaning. *18*

24. Maintenance Data. *18*

25. Drainage Specifications. *18*

26. Closeout Procedures. *18*

27. Risk of Loss. *18*

28. Photographs. *18*

ARTICLE V:_____MATERIALS AND EQUIPMENT 19

1. Materials Generally. *19*

2. Shop Drawings, Product Data, and Samples. *19*

3. Tests. *20*

4. "Or Equal" Submissions. *21*

5. Delivery and Storage of Materials; Inspection. *21*

6. Defective, Damaged, or Deteriorated Materials and Rejection Thereof. *23*

7. Measurement *23*

ARTICLE VI: PROSECUTION AND PROGRESS 24

1. Beginning, Progress Schedule, and Completion of Work. *24*

2. Failure to Complete Work on Time - Liquidated Damages. *25*

3. Delays; Statutory Provisions (M.G.L. c. 30, sec. 39O). *25*

4. Occupancy and/or Use of Project Prior to Final Acceptance. *26*

5. Substantial Completion – Punch List. *26*

6. Final Acceptance of the Work. *27*

7. One-Year Warranty Repair List and Inspection. 27

ARTICLE VII: CHANGES IN THE WORK 28

1. Change Orders Generally. 28

2. Methods of Computing Equitable Adjustments. 28

3. Work Performed Under Protest. 29

4. False Claims, Statutory Provisions Regarding Changes. 30

5. Mediation. 31

ARTICLE VIII: PAYMENT PROVISIONS 31

1. Schedule of Values. 31

2. Payment Liabilities of Contractor. 31

3. Retention of Moneys by the DCR. 32

4. Applications for Payment. 32

5. Periodic Payments (M.G. L. c. 30, sec. 39K) for Building Projects. 33

6. Payment of Subcontractors (M.G.L. c. 30, sec. 39F). 34

7. Contracts for Public Works Governed by M.G.L. c. 30, sec. 39G: 37

8. Liens 38

9. Final Payment; Release of Claims by Contractor. 38

ARTICLE IX. GUARANTEES AND WARRANTIES 39

1. General Warranty. 39

2. Special Guarantees and Warrantees. 39

ARTICLE X: MISCELLANEOUS LEGAL REQUIREMENTS. 39

1. Contractor to be Informed. 39

2. Compliance with all Laws. 39

ARTICLE XI: CONTRACTOR'S ACCOUNTING METHOD REQUIREMENTS (M.G.L. c. 30, sec. 39R) 41

1. Definitions. 41

2. Record Keeping. 42

3. Statement of Management Controls. 42

4. Annual Financial Statement. 42

5. Bid Pricing Materials. 42

ARTICLE XII: EQUAL EMPLOYMENT OPPORTUNITY, NON-DISCRIMINATION, AND AFFIRMATIVE ACTION PROGRAM. 43

ARTICLE XIII: GOALS FOR PARTICIPATION BY MINORITY BUSINESS ENTERPRISES AND WOMEN BUSINESS ENTERPRISES 43

ARTICLE XIV: INSURANCE REQUIREMENTS 43

ARTICLE XV: INDEMNIFICATION 43

1. Generally. 43

2. DCR's Actions. 43

3. Survival. 43

ARTICLE XVI: PERFORMANCE AND PAYMENT BONDS 44

1. Contractor Bonds. 44

2. Subcontractor Bonds. 44

ARTICLE XVII: TERMINATION OF CONTRACT 44

1. Termination for Cause. 44

2. Termination For Convenience. 45

3. Contractor's Duties Upon Termination for Convenience. 45

ARTICLE XVIII: MISCELLANEOUS PROVISIONS 45

1. No Assignment by Contractor. 45

2. Non-Appropriation. 46

3. Claims by Others Not Valid. 46

4. No Personal Liability of Public Officials. 46

5. Severability. 46

6. Choice of Laws. 46

7. Standard Forms. 46

8. No Waiver of Subsequent Breach. 46

9. Remedies Cumulative. 46

10. Notices. 46

APPENDIX A to General Conditions of the Contract 47

1. Compliance Generally. 47

2. Non-Discrimination and Affirmative Action. 47

3. Liaison Committee, Reports and Records. 48

4. Sanctions. 48

APPENDIX B to General Conditions of the Contract 50

1. Goals. 50

2. M/WBE Participation Credit. 50

3. Establishing M/WBE Status. 50

4. Subcontracts with M/WBEs. 50

5. Performance of Contract Work by M/WBEs. 51

6. Notification of Changes in M/WBE Work. 51

7. Actions Required if there is a Reduction in M/WBE Participation. 51

8. Suspension of Payment and/or Performance for Noncompliance. 52

9. Liquidated Damages; Termination. 52

10. Reporting Requirements. 53

11. Awarding Authority's Right to Waive Provisions of this Article in Whole or in Part. 53

12. Performance of contract work by SDVOBE 54-57

APPENDIX C to the General Conditions of the Contract 54

INDEX OF THE COMMONLY USED FORMS 57

CONTRACTOR'S WEEKLY WORKFORCE REPORT - 59 -
MINORITIES/WOMEN IN CONTRACTOR'S WEEKLY WORKFORCE REPORT - 60 -
WEEKLY PAYROLL REPORT FORM - 61 -
WEEKLY PAYROLL RECORDS REPORT & STATEMENT OF COMPLIANCE *- 62 -*

ARTICLE I: DEFINITION OF TERMS

The following words shall have the following meanings as used in this Contract:

Advertisement: The Advertisement or Notice Inviting Bids or Proposals for the Work identified in Article 1 of the Department of Conservation and Recreation - Contractor Agreement.
Approval: (or approved): An approval in writing signed by the authorized signatory of the Awarding Authority.
As directed (As permitted, as required, as determined or words of like effect): The direction, permission, requirement, or determination of the Awarding Authority. Similarly, *approved*, *acceptable*, *satisfactory* or words of like import shall mean approved by or acceptable or satisfactory to the Awarding Authority.
Awarding Authority: The Department of Conservation and Recreation, the public agency awarding and administering this Contract, as identified in the Department of Conservation and Recreation - Contractor Agreement. Where the Awarding Authority is an agency of the Commonwealth, references to the Awarding Authority shall also include the Commonwealth and its agencies.
Building Code: All applicable rules and regulations to which the Awarding Authority is subject, and which are contained or referenced in the code authorized by M.G.L. c. 143, sec. 93 et seq., including all amendments thereto.
Change Order: (1) A written order not requiring the consent of the Contractor, signed by the Project Engineer, and designated as a Change Order, directing the Contractor to make changes in the Work within the general scope of the Contract, or (2) any written or oral order from the Project Engineer that causes any change in the Work, provided that the Contractor has given the Awarding Authority written notice stating the date, circumstances, and source of the order and that the Contractor regards the order as a Change Order.
Contract: The Contract formed by the Contract Documents as defined in Article 6 of the Department of Conservation and Recreation - Contractor Agreement.
Contract Documents: The documents listed in Article 6 of the Department of Conservation and Recreation - Contractor Agreement.
Contract Modification: Any alteration of the Contract Documents accomplished by a written agreement properly executed by the parties to this Contract.
Contract Price: The Contract Price stated in Article 3 of the Department of Conservation and Recreation - Contractor Agreement, which is the total sum, owed to the Contractor for all the Work.
DCR: The Department of Conservation and Recreation, the public agency awarding and administering this Contract.
Designer: The architect or engineer who prepared the plans and specifications for the work, identified as the Designer in Article 1 of the Department of Conservation and Recreation – Contractor Agreement.
Dispute Review Board: A panel of three experienced impartial reviewers organized and agreed upon by the DCR and Contractor. The Board members are provided with project plans and Specifications and become familiar with project procedures and participants. The Board meets on the job site regularly to encourage the resolution of disputes at the job level and renders non-binding recommendations on the resolution of the dispute.
Drawings: The Drawings are the graphic and pictorial portions of the Contract Documents, wherever located and whenever issued, showing the design, location, and dimensions of the Work, generally including Plans, elevations, sections, details, schedules, and diagrams.
Engineer: The Project Engineer, except that the term "Resident Engineer" shall have the meaning otherwise specified herein.
Final Acceptance: The written determination by the Awarding Authority that the Work has been 100% completed, except for the Contractor's indemnification obligations, warranty obligations, obligations to continue to maintain insurance coverage for the time periods provided in the Contract Documents, and any other obligations which are intended to survive Final Acceptance and/or the termination of the Contract.
General Bid: The completed bid form submitted by the Contractor in accordance with the requirements of either M.G.L. c. 149 or M.G.L. c. 30, sec. 39M.
Laws: All applicable statutes, regulations, ordinances, codes, laws, orders, decrees, approvals, certificates, and

requirements of governmental and quasi-governmental authorities.
Neutral: An impartial third party not having an interest in the Owner, DCR, the Contractor or the Project.
Notice to Proceed: The written notice provided by the Awarding Authority to the Contractor which authorizes the Contractor to commence the Work as of a date specified therein and complete the entire Work of the Contract by a date specified therein.
Or equal (or words of like import): Equal in the opinion of the Awarding Authority, determined pursuant to the provisions of M.G.L. c. 30, sec. 39M and the provisions of these General Conditions of the Contract.

Owner: The Commonwealth of Massachusetts or political subdivision thereof, authority, or other instrumentality that will own the Work.
Plan(s): Drawing(s).
Product Data: Product Data are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor or its Subcontractors and suppliers to illustrate materials or equipment for some portion of the Work. Product data also include any such information or instructions produced by the manufacturer or distributor of such materials or equipment and made readily available by said manufacturer or distributor.
Progress Schedule: The progress schedule Approved by the Awarding Authority in accordance with Article VI of these General Conditions of the Contract.
Project: The Project is the total construction of which the Work performed under the Contract Documents may be the whole or a part and which may include construction by the Owner, the Department of Conservation and Recreation, or by separate contractors.
Project Engineer: The Awarding Authority's representative assigned to the Project.
Punch List: A list of items determined by the Awarding Authority to be minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the Work for its intended purpose.
Resident Engineer: The On-Site representative of the Awarding Authority.
Samples: Samples are physical examples that illustrate materials, equipment, or workmanship and establish standards by which the Work will be judged.
Schedule of Values: The schedule Approved by the DCR pursuant to Article VIII of these General Conditions of the Contract which allocates the Contract Price to the various portions of the Work and is used as a basis for payments to the Contractor.
Shop Drawings: Drawings, diagrams, details, schedules, and other data specially prepared for the Work by the Contractor or a Subcontractor, Sub-subcontractor, manufacturer, supplier, or distributor to illustrate a portion of the Work.
Site: The land and, if any, building(s), space within any such building(s), or other structures on which or in which the Contractor is to perform the Work.
Specifications: The Specifications are that portion of the Contract Documents consisting of the written requirements for materials, equipment, construction systems, standards, and workmanship for the Work and performance of related services.
Subcontractor: Person or entity with whom the Contractor contracts to perform the Work, except as otherwise specifically provided or required herein or by Law.
Substantial Completion: For work subject to M.G.L. c. 30 sec. 39K, "substantial completion" shall occur when (1) the Contractor fully completes the Work or substantially completes the Work so that the value of the Work remaining to be done is, in the estimate of the DCR, less than one percent of the original contract price, or (2) the Contractor substantially completes the Work and the DCR takes possession for occupancy, whichever occurs first. For work subject to M.G.L. c. 30 sec. 39G, "substantial completion" shall mean either that the work required by the Contract has been fully completed, completed except for work having a Contract Price of less than one percent of the then adjusted total Contract Price, or substantially all of the Work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the Work.
Superintendent: The licensed construction supervisor who is an employee of the Contractor designated to be in full-time attendance at the Site throughout the prosecution and progress of the Work and who shall have complete authority to act for the Contractor.
Work: The Work defined in Article 1 of the Department of Conservation and Recreation - Contractor Agreement, Article II, Section 2 of these General Conditions of the Contract and otherwise in the Contract Documents.
Working Hours: 7:00 a.m. to 5:00 p.m., but not more than eight hours per day, Monday through Friday, unless

otherwise specified by applicable Laws or deemed necessary by the DCR for traffic considerations or to minimize another contract impacts to the public.

All terms that this Contract defines may be used with or without initial capital letters. Other terms, abbreviations and references are defined as they appear herein. Words and abbreviations that are not defined in the Contract Documents, but which have recognized technical, or trade meanings are used in accordance with those meanings. For additional definitions of terms, abbreviations and references refer to the *Special Conditions or Specifications.*

ARTICLE II: EXECUTION OF THE CONTRACT, SCOPE OF WORK, INTERPRETATION OF CONTRACT DOCUMENTS

1. Execution.

The execution of the Department of Conservation and Recreation – Contractor Agreement by the Contractor is a representation that the Contractor has visited the Site, has become familiar with local conditions under which the Work is to be performed and has correlated personal observations with requirements of the Contract Documents.

2. Scope of Work.

The Work consists of the Work identified in the Contract Documents. The Work comprises the completed construction required by the Contract Documents and includes all labor, tools, materials, supplies, equipment, permits, approvals, paperwork, calculations, submittals, and certificates necessary to develop, construct and complete the Work in accordance with all Laws, and all construction and other services required to be supervised, overseen, performed or furnished by the Contractor or that the Contract Documents require the Contractor to cause to be supervised, overseen, performed or furnished. The Contractor shall provide and perform for the Contract Price all the duties and obligations set forth in the Contract Documents.

3. Interpretation.

A. The Plans and Specifications and other Contract Documents are to be considered together and are intended to be mutually complementary, so that any work shown on the Plans though not specified in the Specifications, and any work specified in the Specifications though not shown on the Plans, is to be executed by the Contractor as a part of this Contract.

B. All things that in the opinion of the Project Engineer may be reasonably inferred from the Plans, Specifications and other Contract Documents are to be executed by the Contractor. The Project Engineer shall determine whether the detail Plans conform to the general Plans and Contract Documents, except as may be otherwise determined by the DCR.

C. The tables of contents, titles, headings and marginal notes or sub-scripts contained herein are solely to facilitate references, are not intended to be construed as provisions of the Contract, and in no way affect the interpretation of the provisions to which they refer.

D. Where reference is made in the Contract Documents to publications, standards, or codes issued by associations or societies, such reference shall be interpreted to mean the current edition of such publications, standards, or codes, including revisions in effect on the date of the Advertisement, notwithstanding any reference to a particular date. The foregoing sentence shall not apply to the dates, if any, specified with respect to insurance policy endorsement forms.

E. In case of any conflict among the Contract Documents, unless the context clearly otherwise requires, the Contract Documents shall be construed according to the following priorities:

Priority: Contract Modifications
Second Priority: Department of Conservation and Recreation - Contractor Agreement
Third Priority: General Conditions of the Contract
Fourth Priority: Special Conditions of the Contract
Fifth Priority: Drawings -- Schedules take precedence over enlarged detail Drawings, and enlarged Detail Drawings take precedence over reduced scale Drawings; figured dimensions shall prevail over scale.
Sixth Priority: Specifications

4. Distribution of Work.
The distribution of the Work is intended to be described under the appropriate trades and, except for filed sub-bid work, may be redistributed, except as directed herein, provided that such redistribution shall cause no controversy among the trades and no delay in the progress of the Work.

5. Contract Price.
The Contract Price constitutes full compensation to the Contractor for everything to be performed and furnished in connection with the Work and for all damages arising out of the performance of the Work and/or the action of the elements and constitutes the maximum compensation regardless of any difficulty incurred by the Contractor in connection with the Work or in consequence of any suspension or discontinuance of the Work. The costs associated with the requirements of the General Conditions and any required in the Special Conditions or Specifications shall be included in the Contract Price and no direct or separate payment shall be made to the Contractor.

ARTICLE III: CONTROL OF WORK/ADMINISTRATION OF THE CONTRACT

1. DCR.
The Project Engineer shall be responsible for the general administration of the Contract. Except as otherwise specifically provided herein, the Project Engineer shall decide all questions which may arise as to the conduct, quantity, quality, equality, acceptability, fitness, and rate of progress of the several kinds of work and materials to be performed and furnished under this Contract and shall decide all questions which may arise as to the interpretation of the Plans and Specifications and as to the fulfillment of this Contract on the part of the Contractor.

2. Right of Access to Work.
The DCR, and persons designated by it, may for any purpose enter upon the Work, the Site, and premises used by the Contractor, and the Contractor shall provide safe facilities therefor. Other contractors of the DCR may also enter upon the same for the purposes which may be required by their contracts or work. Any differences or conflicts which may arise between the Contractor and other contractors of the DCR with respect to their work shall be initially resolved by the DCR.

3. Inspection No Waiver.
No inspection by the DCR or its employees or agents, and no order, measurement, certificate, approval, payment order, payment, acceptance or any other action or inaction of any of them, shall operate as a waiver by the DCR of any provision of this Contract.

ARTICLE IV: GENERAL PERFORMANCE OBLIGATIONS OF THE CONTRACTOR

The Contractor shall complete for the Contract Price all the Work in a proper, thorough, and workmanlike manner in accordance with the Contract Documents. Without limiting the foregoing and without limiting the Contractor's obligations under any other provision of the Contract Documents, the Contractor shall for the Contract Price perform the following general obligations:

1. Review of Contract Documents and Field Conditions.

A. Before commencing the Work, the Contractor shall carefully study the Contract Documents and carefully compare all Specifications, Plans, Drawings, figures, dimensions, lines, marks, scales, directions of the Project Engineer, and any other information provided by the DCR and shall at once report to the Project Engineer in writing any questions, errors, inconsistencies, or omissions.

B. Before commencing the Work, the Contractor shall take field measurements and verify field conditions and shall carefully compare such field measurements and conditions and other information known to the Contractor with the Contract Documents and shall at once report to the Project Engineer in writing any questions, errors, inconsistencies, or omissions.

C. Any work performed by the Contractor after the discovery of said discrepancies without the written approval of the DCR shall be at the Contractor's risk and expense.

D. The Contractor shall be responsible for all errors in the Work arising from the Contractor’s failure to comply with any of the requirements set forth in this section. The Contractor shall not be entitled to any extra compensation for any work or expense arising from or caused by his/her failure to comply with said requirements.

2. Supervision and Construction Procedures; Coordination; Cutting, and Patching.

A. The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for, and shall have control over, construction means, methods, techniques, sequences, and procedures, and shall be responsible for coordinating all portions of the Work under the Contract.

B. The Contractor shall be responsible for the proper fitting of all work and the coordination of the operations of all trades, subcontractors, and material suppliers engaged upon the Work. The Contractor shall guarantee to each of its subcontractors all dimensions which they may require for the fitting of their work to all surrounding work. Where equipment and lines of piping are shown diagrammatically, the Contractor shall be responsible for the coordination and orderly arrangement of the various lines of embedded piping and conduit included in the Work. The Contractor shall coordinate the work of any Subcontractor and prevent all interferences between the equipment, lines of piping or structural and architectural features, and avoid any unsightly arrangements in exposed work.

C. The Contractor should note that other contractors may be working on or near the Site where the Contractor's Work is being performed. The Contractor shall coordinate his/her work and the operations of all trades, subcontractors, and material suppliers engaged upon the Work so as not to interfere with or hinder the progress or completion of work being performed under another DCR contract.

D. All necessary cutting, coring, drilling, grouting, and patching required to fit together the several parts of the Work shall be done by the Contractor, except as may be specifically noted otherwise under any filed sub-bid section of the Specifications.

E. The Contractor shall be responsible to the DCR for the acts and omissions of the Contractor's employees, agents and Subcontractors, and their agents and respective contractors' employees, and other persons performing portions of the Work or supplying materials therefor.

F. The Contractor shall be responsible for the inspection of portions of the Work already performed under this Contract to determine that such portions are in proper condition to receive subsequent Work.

G. The Contractor shall employ a registered land surveyor to perform any engineering required for establishing grades, lines, levels, dimensions, layouts, and reference points for the trades. The Contractor shall be responsible for maintaining benchmarks and other survey marks and shall replace any benchmarks or survey marks that may have become disturbed or destroyed. The Contractor shall verify the materials shown on the Drawings before laying out the Work and shall be responsible for any error resulting from its failure to exercise this precaution.

H. Unless otherwise required by the Plans and Specifications, or directed in writing by the DCR, Work shall be performed during regular Working Hours. However, if the Contractor desires to carry on the Work outside of regular working hours or on Saturdays, Sundays, or Massachusetts or federal holidays, then the Contractor shall allow ample time to allow satisfactory arrangements to be made for inspecting Work in progress and shall bear the costs of such inspection. The DCR shall bill the Contractor directly for such costs.

I. Work performed outside of regular Working Hours without the consent or knowledge of the DCR shall be subject to additional inspection and testing as directed by the DCR. The cost of this inspection and testing shall be borne by the Contractor whether the Work is found to be acceptable or not. The DCR at its election shall be entitled either to issue a credit Change Order to cover such cost or to withhold such cost from any further payments due the Contractor and/or to receive a payment from the Contractor of the amount of such cost.

3. Superintendent.

A. The Contractor shall employ a Superintendent whose appointment shall be subject to the Approval of the DCR. The Superintendent shall attend the Site full-time during the performance of the Work. The Superintendent shall represent the Contractor. Communications given to and from the Superintendent shall be deemed given to and from the Contractor. Important communications shall be confirmed in writing. Other communications shall be similarly confirmed upon written request in each case. The Superintendent shall attend each job meeting. The Superintendent shall be responsible for coordinating all the Work of the Contractor and the Subcontractors.

B. The Superintendent shall be a competent employee regularly employed by the Contractor. The Superintendent shall be licensed in accordance with the Building Code, if applicable, and shall have satisfactorily performed similar duties on previous construction projects similar in type, complexity, and scale to the Project. The Superintendent's resume shall be submitted to the DCR prior to commencement of construction together with such other information as the DCR may reasonably require determining whether to Approve of his or her appointment. Any change in the Superintendent shall require the prior consent of the DCR. The Contractor shall establish an emergency telephone line by which the DCR or its agents may contact the Superintendent during non-working hours.

4. Labor.

A. The Contractor shall employ only competent workers. The Contractor shall enforce strict discipline and good order among the Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. Whenever the DCR shall notify the Contractor in writing that any worker is, in the DCR's opinion, incompetent, unfaithful, disorderly, or otherwise unsatisfactory, such employee shall be discharged from the Work and shall not again be employed on the Project except with the consent of the DCR.

B. The Contractor shall employ enough workers to carry on the Work with all proper speed in accordance with Laws, the requirements of the Contract Documents, and the Progress Schedule.

C. The Contractor shall procure materials from such sources and shall manage its own forces and the forces of its Subcontractors and any sub-subcontractors in such a manner as will result in harmonious labor relations on the Project Site. If union and nonunion workers are employed to perform any part of the Work, the Contractor shall establish and maintain separate entrances to the Site for the use of union and nonunion workers. The Contractor shall cause persons to be employed in the Work who will work in harmony with others so employed. Should the Work be stopped or materially delayed in the DCR's reasonable judgment due to a labor dispute, the DCR shall have the right to require the Contractor to employ substitutes acceptable to the DCR.

D. The Contractor shall bear the entire expense, and no separate or direct payment shall be made by the DCR, because of extra work which may be necessary because of inferior workmanship, or for specific items of work which are normally considered a part of good workmanship in completing any phase of the work.

5. Notices and Permits.

A. The Contractor at its sole cost shall take out and pay for all approvals, permits, certificates and licenses required by Laws, pay all charges and fees, and pay for (or cause the appropriate Subcontractor to pay for) all utilities required for the proper execution of the Work. All permits secured by the Contractor, complete with the application and orders of conditions, shall be kept on file in the Contractor's office and field office with copies submitted to the Project Engineer.

B. The Contractor shall comply with all Laws and shall give all notices required thereby.

C. Except as otherwise specified in this Contract, it is not the Contractor's responsibility to ascertain that the Contract Documents are in accordance with applicable Laws. However, if the Contractor observes that portions of the Contract Documents are at variance with the requirements of Laws, the Contractor shall promptly notify the DCR in writing, and necessary changes shall be accomplished by an appropriate Contract Modification.

D. If the Contractor performs work knowing it to be contrary to Laws without giving such notice to the DCR, the Contractor shall bear full responsibility for such Work and all costs attributable thereto, including, without limitation, corrections to the Work.

6. Lines, Marks etc.

The Contractor shall furnish batter boards and stakes and shall cause to be placed and maintained thereon to be easily read, such lines, marks and directions relating to the Work as the Project Engineer shall from time to time direct. The Project Engineer shall establish base lines and benchmarks on the Drawings for the locations of the Work but all other lines and grades in the field shall be determined by the Contractor.

7. Excavation.

The Contractor shall prevent by sheeting and shoring or bracing, if necessary, any caving or bulging of the sides of any excavation made by the Contractor, leaving sheeting, and shoring in place, or if any is removed, filling solid the spaces left thereby.

8. Dewatering/Hoisting/Staging.

The Contractor shall provide pumping, drainage, and disposal of all water and other flows so that no puddle, nuisance, or damage will be caused by water or flooding. If pumping results in contaminated water the Contractor shall take appropriate measures to treat this water prior to discharge and shall seek appropriate permits for discharge of water. The Contractor shall provide all hoisting equipment and machinery required for the proper execution of the Work. The Contractor shall provide all exterior and interior staging required to be over eight feet in height, except as may be otherwise provided in the Contract Documents.

9. Corrections to the Work; Inspection No Bar to Subsequent Corrections.

The DCR's inspection of the Work shall not relieve the Contractor of its responsibilities to fulfill the Contract obligations. Defective work may be rejected by the DCR whether such work and/or materials have been previously overlooked or misjudged by the Resident Engineer or Project Engineer and accepted for payment. If the Work or any part thereof shall be found defective at any time before the Final Acceptance of the whole Work, the Contractor shall forthwith cease the performance of any defective work in progress and, whether such work is still in progress, shall forthwith correct such defect in a manner satisfactory to the Project Engineer. If any material brought upon the Site for use in the Work, or selected for the same, shall be rejected by the Project Engineer as unsuitable or not in conformity with the Contract Documents, or as damaged by casualty or deteriorated due to improper storage at the Site or to any other factor, the Contractor shall forthwith remove such materials from the Site. The Contractor shall pay for the cost of making good all work or property of other contractors, the Owner or of the Department of Conservation and Recreation destroyed or damaged by such removal or replacement; repair any injury, defect, omission, or mistake in the Work as soon as it is discovered; finish and immediately make good any defect, omission, or mistake in the Work; and complete and leave the Work in perfect condition.

10. Sanitary Facilities.

The Contractor shall provide and maintain sanitary facilities for all persons employed on the Work, beginning with the first worker at the Site. Said facilities shall meet the following requirements unless otherwise specified in the Special Conditions or Specifications.

A. There shall be no fewer facilities than the number required by applicable Laws.

B. Facilities shall be always kept in a clean sanitary condition and shall be adequately screened to be inaccessible to flies. (**Note:** If existing sanitary facilities at the Site are to be used by the Contractor, this requirement will be modified accordingly in the Special Conditions or Specifications.)

11. Temporary Offices.

A. Contractor's Field office. The Contractor shall erect a temporary field office at or near the Site of the Work at which the Contractor's authorized representative shall be always present while the Work is in progress. Instructions, notices, and other communications delivered there by the DCR shall be deemed delivered to the Contractor. The Contractor shall adequately furnish and maintain this office in a clean, orderly condition.

B. Resident Engineer's Office. The Contractor shall erect an Office for the Resident Engineer if, and as required by the Special Conditions or Specifications of the Contract.

12. Telephones.

A. The Contractor shall provide and maintain telephone service in the Contractor's field office. The Contractor shall pay for all calls and costs relating to this service. The DCR and its employees and authorized agents shall always be allowed the use of this telephone service without charge. Telephone service and equipment shall meet the requirements, if any, of the Special Conditions or Specifications.

B. The Contractor shall also provide and maintain telephone service in the Resident Engineer's Office, when the Contractor is required to erect such office, for the use of the DCR and its employees and authorized agents. The Contractor shall pay for all calls and costs relating to this service. Telephone service and equipment shall meet the requirements, if any, of the Special Conditions or Specifications.

13. Project Sign.

A. The Contractor shall furnish and erect at a suitable location, Approved by the Project Engineer, at the start of the work, a sign having dimensions of at least eight (8) feet long by four (4) feet high, bearing the words: Massachusetts Department of Conservation and Recreation. Also included may be the project title, expected completion date, and facility name.

B. The Contractor shall submit the design of the sign to the Project Engineer for review and approval prior to posting.

14. Contract Documents and Samples at the Site.

The Contractor shall maintain at the Site for the use and information of the DCR one record copy of the Drawings, Specifications, Addenda, Change Orders, Approved Shop Drawings, Product Data, Samples, updated Progress Schedule, and all other submittals, all in good order and marked currently to record changes and selections made during construction. These shall be available to the DCR and shall be delivered to the DCR upon completion of the Work.

15. Safety Laws, Regulations, and Practices.

A. The Contractor shall comply with all health and safety Laws applicable to the Work. Without limitation,
(1) If the Contractor uses or stores toxic or hazardous substances it shall comply with M.G.L. c. 111F, sec. 2, the "Right to Know" law and regulations promulgated by the Department of Public Health, 105 CMR 670, the Department of Environmental Protection, 310 CMR 33, and the Department of Labor and Workforce Development, 441 CMR 21; and shall post a Workplace Notice obtainable from the Department of Labor and Workforce Development.
(2) The Contractor shall comply with the Federal Resource Conservation and Recovery Act, the Federal Comprehensive Environmental Response, Compensation and Liability Act, M.G.L. c. 21C, M.G. L. c. 21E, and any other Laws affecting toxic or hazardous materials, solid, special, or hazardous waste (collectively "Hazardous Materials Laws"). Should the Contractor discover unforeseen materials subject to Hazardous Materials Laws at the Site, the Contractor shall immediately notify the DCR of such discovery.
(3) The Contractor shall be responsible for the location of all utilities in connection with the Work. Without limiting the foregoing, the Contractor shall comply with Dig Safe Laws. Dig Safe is the Utility Underground Plant Damage Prevention System established pursuant to M.G.L. c. 164, sec. 76D. This System is operated by Dig Safe Systems, Inc., located at 331 Montvale Avenue, Woburn, MA 01801, whose toll-free telephone number is 1-888-DIG-SAFE (1-888-344-7233). The Contractor shall notify Dig Safe of contemplated excavation, demolition, or explosive work in public or private ways, and in any utility company right of way or easement, by certified mail, with a copy to Department of Environmental Protection (DEP). This notice shall be given at least 72 hours prior to the work, but not more than sixty days before the work is to be done. Such notice shall state the name of the street or the route number of the way and shall include an accurate description of the location and nature of the proposed work. Dig-Safe is required to respond to the notice within 72 hours of receipt by designating the location of pipes, mains, wires, or conduits at the Site. The Contractor shall not commence work until Dig-Safe has responded. The work shall be performed in such manner and with reasonable precautions taken to avoid damage to utilities under the surface at the work location. The Contractor shall provide the Superintendent with current Dig-Safe regulations, and a copy of M.G.L. c. 82, sec. 40. Any costs related to the services performed by Dig-Safe shall be borne by the Contractor.
(4) The Contractor shall comply with Public Law 92-596, "Occupational Safety and Health Act of 1970" (OSHA), with respect to all rules and regulations pertaining to construction, U.S. Code Title 29, sections 651 et seq. including Volume 36, numbers 75 and 105 of the Federal Register as amended, and as published by the U.S. Department of Labor.
(5) The Contractor shall comply with M.G.L. c. 149, sec. 129A, relative to shoring and bracing of trenches.

B. The Contractor shall take reasonable precautions to prevent damage, injury, or loss to persons (whether under his management, DCR staff, or the public) or property. Nothing herein shall relieve Subcontractors of their responsibility for the safety of persons and property, and for compliance with all Laws applicable to the Work and their activities in connection therewith. Without limitation, the Contractor shall take all reasonable precautions for the safety of, and the prevention of injury or damage to (1) all agents and employees and contractors on the Work and all other persons who may be affected thereby including the general public, (2) all the Work and all materials and equipment to be incorporated therein, whether in storage on or off the Site, under the care custody or control of the Contractor or any of its Subcontractors or any contractors directly or indirectly contracting through any of them, and (3) other property at the Site or adjacent thereto, including but not limited to trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of the Work. The Contractor shall promptly remedy all damage or loss to any such property caused in whole or in part by the Contractor, any Subcontractor, or anyone directly or indirectly contracted or employed by any of them or by anyone for whose acts any of them may be liable. Without limiting the foregoing, the Contractor shall:
(1) post and maintain adequate danger signs and other warnings against hazards.
(2) promulgate safety regulations and give appropriate notices to the DCR and users of adjacent utilities and property.

(3) ensure the adequate strength and safety of all scaffolding, staging and hoisting equipment, temporary shoring, bracing, and tying.
(4) protect adjoining private or public property.
(5) provide barricades, temporary fences, and covered walkways required by prudent construction practices, Laws and/or the Contract Documents.
(6) furnish approved hard hats and other personal protective equipment, furnish approved first aid supplies, furnish the name of the first aid attendant, and maintain a posted list of emergency facilities.
(7) provide proper means of access to property where the existing access is cut off by the Contractor, including maintaining traffic over, through or around the Work included in this contract, with the maximum safety, and practicable convenience to such traffic suspended temporarily.
(8) maintain from the beginning of any darkness or twilight through the whole of every night sufficient lights on or near any obstruction to guard or protect travelers from injury from such obstruction.
(9) maintain adequate security at the Site so as not to expose the Work, the materials to be incorporated in the Work, DCR's materials stored or otherwise located upon the Site, and surrounding property to vandalism or malicious mischief.
(10) provide adequate fire protection procedures during the use of cutting torches, welding equipment, plumbers' torches and other flame and spark producing apparatus.
(11) take prompt action to correct any dangerous or hazardous conditions.

C. Use of Explosives: The use of explosives will not be permitted in the Work unless specifically authorized in the technical Specifications, Special Conditions and/or Drawings or approved by the DCR in writing. If such approval is given, the Contractor shall comply with all Laws and obtain all permits, approvals, and certificates required in connection with the same and shall exercise best efforts, including but not limited to the employment and supervision of properly qualified personnel, to prevent damage, injuries, and accidents involving said explosives.

D. Written notice shall be given by the Contractor to all public service corporations or officials owning or having charge of public or private utilities of his/her intention to commence operations affecting such utilities at least seventy-two (72) hours exclusive of Saturdays, Sundays, and legal Holidays in advance of the start of such operations, and the Contractor shall at the same time file a copy of said notice with the DCR.

E. When necessary, the Contractor shall cooperate with representatives of public service companies to avoid damage to their structures by furnishing and erecting suitable supports, props, shoring or other means of protection. Fire hydrants adjacent to the work always shall be readily accessible to fire apparatus and no materials or other obstructions shall be placed within a radius of 10 feet of a fire hydrant.

F. Although the drawings may indicate the approximate location of existing subsurface utilities in the vicinity of the work, the accuracy and completeness of the information is not guaranteed by the DCR. Before commencing any work, or operations which may endanger or damage any subsurface structures, the Contractor shall carefully locate all such structures and conduct his/her operations in such manner as to avoid damage thereto. He/she shall not interrupt live services until new services have been provided. All abandoned services shall be plugged or otherwise made secure.

G. If the Contractor wishes to have any utilities temporarily relocated for his/her convenience, other than those specified by DCR, he/she shall submit such a request in writing to the Project Engineer. If the DCR approves this request, the Contractor shall pay for the cost of the relocation at his/her sole expense.

H. Land monuments and property markers shall be carefully protected. If is necessary to remove land monuments and/or property markers to perform the contract Work, the Contractor shall do so only at the DCR's direction and after an authorized agent of the DCR has referenced their location.

I. The Contractor shall not injure or remove trees or shrubs without authorization from the DCR.

J. Disturbance of damage to any above- or below-ground structures, conduits, cables, or the like, caused by any act of omission, neglect or misconduct in the execution or non-execution of work thereof by the Contractor shall be repaired, and/or replaced by the Contractor to the satisfaction of the DCR and at no additional expense to the DCR.

K. Disturbance or damage to any structure shall be replaced or repaired by the Contractor to the satisfaction of the DCR and at no additional expense to the DCR.

L. The Contractor shall receive no extra compensation for protection and restoration of property unless said compensation is authorized in writing by the DCR, as specified under Article VI I of the Contract General Conditions.

M. The Contractor shall not permit cutting or welding in or immediately adjacent to existing property of the Department of Conservation and Recreation or of anyone else without the DCR's prior approval in each instance.

N. The Contractor shall designate by notice to the DCR a responsible member of its organization at the Site whose duties shall include preventing accidents.

O. The Contractor shall submit to the DCR without delay verbal and written reports of all accidents involving bodily injury or property damage arising in connection with the Work.

P. In any emergency affecting the safety of persons or property the Contractor shall immediately act in the exercise of reasonable judgment to prevent threatened damage, injury, or loss. The Contractor shall immediately notify the DCR of such emergency.

16. Environmental Protection

A. The DCR shall secure the required environmental permits required under M.G.L. Chapters 131 and 91, including the National Pollutant Discharges Elimination System (NPDES) Construction General Permit and those issued by the Army Corps of Engineers under Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). The Contractor is obligated to conform to all the requirements of the permits and subsequent requirements issued by the governing agencies.

B. Contractors operating under a DEP permit shall post on the Site a sign in a format consistent with that enclosed.

C. Prevention of Water Pollution:

1. The Contractor shall take such precautions in the conduct of the Work as may be necessary to avoid contaminating water in adjacent watercourses, water resources or wetlands. All earthwork, moving of equipment, water control for excavation or foundation areas, and other operations likely to create silting shall be conducted to avoid pollution of watercourses, water resources and wetlands.
2. Erosion Control: The Contractor shall utilize such methods as may be necessary to effectively prevent erosion and sediment from entering nearby waterways.
3. Control of Surface Water Runoff: The Contractor shall keep the rate of runoff from the Site at a minimum, and control it by constructing diversion ditches, trenches, and berms, and taking any other necessary action to retard and divert runoff to protect watercourses. The Contractor shall inspect said Site controls regularly, after significant storm events (greater than one-half inch over a 24-hour period) and in accordance with a site-specific storm water pollution prevention plan (SWPPP) prepared by the Contractor. The Contractor shall repair any damage to Site controls to prevent discharge of sediments or pollutants.
4. The Contractor shall construct silt retention basins in areas of the Work adjacent to streams, or rivers, as directed by the DCR. These basins shall be removed upon completion of the Work. Water used during the Work which has become contaminated with oil, bitumen, harmful or objectionable chemicals, sewage or other pollutants shall be discharged in accordance with all Laws to avoid affecting nearby waters.
5. Under no circumstances shall the Contractor discharge pollutants into any watercourse, water resource, or wetland. When water from adjacent natural sources is used in the contract work, intake methods shall be such as to avoid contaminating the source of supply.

D. Protection of Land Resources

1. Prevention of Landscape Defacement: The Contractor shall not deface, injure, remove, cut, or destroy trees or shrubs, without authority from the DCR. No ropes, cables, or guys shall be fastened to or attached to any existing nearby trees for anchorages unless specifically approved by the DCR. Where such activity is permitted, the Contractor shall adequately wrap the tree with burlap or rags over which softwood slats shall be tied. The Contractor shall be responsible for any damage resulting from such use. Where trees may possibly be defaced, bruised, injured, or otherwise damaged by equipment, dumping, or other operations, the Contractor shall protect such trees by placing boards, planks or approved protective fencing around them.
2. Restoration of Landscape Damage: Any trees or other landscape feature scarred or damaged by equipment or operations shall be restored as nearly as possible to the original condition, as approved by DCR. All trimming or pruning shall be performed in an approved manner by licensed arborists with saws or pruning shears. Trimming with axes will not be permitted.
3. Plant Pest Control: If the Work under this contract requires the use of soil moving equipment in an area with plant infestation, the Contractor shall be subject to applicable plant quarantine regulations. In general, these regulations require the thorough cleaning of soil from equipment before such equipment is moved from regulated areas to area's
noninfected

E. Noise Control: The Contractor shall use every effort and every means possible to minimize noise caused by his/her operations which the DCR may consider objectionable. Each Contractor shall provide working machinery and equipment designed to operate with the least possible noise, and when gearing is used, such gearing shall be of a

type designed to reduce noise to a minimum. Compressors shall be equipped with silencers on intake lines. All gas or oil operated equipment shall be equipped with silencers or mufflers on intake and exhaust lines. Electricity shall be used for power to reduce noise. Dumping bins, hoppers and trucks used for disposal of excavated materials shall be lined with wood or other sound-deadening material if required. Where required by agencies having jurisdiction, certain noise-producing work may have to be performed during specified periods only.

E. Air Pollution Control: The Contractor shall conduct his/her operations to comply with all Laws pertaining to air pollution, including Section 142B of Chapter 111 of the Massachusetts General Laws.

1. Diesel Equipment Emission Controls

a.) All motor vehicles and construction equipment shall comply with all pertinent local, state, and federal regulations covering exhaust emission controls and safety.

b.) All Contractor and Sub-Contractor diesel-powered non-road construction equipment with engine horsepower (HP) ratings of 50 and above, which are used on the Project Site for a period more than 30 calendar days over the course of the construction period on the Project Site, shall be retrofitted with Emission Control Devices to reduce diesel emissions.

c.) The reduction of emissions of volatile organic compounds (VOCs); carbon monoxide (CO) and particulate matter (PM) from diesel-powered equipment shall be accomplished by installing Retrofit Emission Control Devices.

d.) Acceptable Retrofit Emission Control Devices for the Project shall consist of oxidation catalysts that are (1) included on the US Environmental Protection Agency (EPA) *Verified Retrofit Technology List* and/or the California Air Resources Board (CARB) *Currently Verified Technologies List*; and (2) are verified by EPA, CARB, or certified by the manufacturer to provide a minimum emissions reduction of 50 percent for VOCs, 40 percent for CO and 20 percent for PM. Attainment of the required reduction in PM emissions can also be accomplished by using less polluting Clean Fuels. Verified technologies can be identified on the following websites:

EPA: http://www.epa.gov/otaq/retrofit/retroverifiedlist.htm

CARB: http://www.arb.ca.gov/diesel/verdev/verifiedtechnologies/cvt.htm

e.) The emission control equipment can be procured through the Statewide Contract #VEH71 that has fixed costs associated with retrofitting of diesel emission control devices.

f.) Construction shall not proceed until the Contractor has submitted a certified list of the non-road diesel-powered construction equipment subject to this provision which either are or will be retrofitted with emission control devices. The list shall include (1) the equipment number, type, make, and Contractor/Sub-Contractor name; and the emission control device make, model, and EPA verification number. Contractors shall also submit a receipt or other documentation from a manufacturer or installer that verifies that appropriate equipment has been installed. The Contractor shall also identify any vehicles that will use Clean Fuels. Equipment that has been retrofitted with an emission control device shall be stenciled or otherwise clearly marked as "Low Emission Equipment".

g.) The Contractor shall submit monthly reports, updating the same information stated in Paragraph f above, including the quantity of Clean Fuel utilized. The addition or deletion of non-road diesel equipment shall be indicated in the report.

h.) The Contractor shall use methods to control nuisance odors associated with diesel emissions from construction equipment including but not limited to the following: (1) turning off diesel combustion engines on construction equipment not in active use and on trucks that are idling for five minutes or more; and (2) locating diesel equipment away from the public and sensitive receptors.

i.) All costs associated with implementation of the diesel equipment emissions control shall be borne by the

respective Contractor or subcontractor and included in their cost for performing the work of the Contract.

2. Dust Control.

A. The Contractor is placed on notice that blowing dust from un-stabilized earth areas of the work under his/her control will be considered a nuisance. He/she shall, by spraying with water or by other approved means, dampen the soil to hold down the dust. The use of calcium chloride as a wetting agent will not be permitted. During working hours and before leaving the work for the evening, for weekends, or for a more extended period, the Contractor shall assess the moisture content of the soil and dampen it to the extent necessary to hold down the dust. While work is suspended, he/she shall return to work, if so, directed by the DCR, to maintain the dust control.

17. Debris, Excavated Material and Chemical Waste.

A. The Contractor shall not permit the accumulation of interior or exterior debris. The Contractor shall always keep the Work area clean. Without limitation, garbage shall be removed daily. Where no disposal area is shown on the Drawings, the Contractor shall remove and legally dispose of all materials off land owned by the Commonwealth to a location approved by the DCR. Documentation certifying proper disposal shall be submitted to the DCR.

B. The Contractor shall, at his/her own expense, and in accordance with all Laws, arrange for the waste of materials from excavations that are unacceptable for use in the refill or that are more than the refill materials required, in spoil banks off the lands owned by the Commonwealth of Massachusetts. Materials, if any, which cannot be placed at once in permanent positions may be deposited in storage piles at locations designated, but materials re- excavated from such storage piles shall not again be paid for as excavation.

C. The Contractor shall properly classify and remove debris and waste from the Site and transport and dispose of it, all in accordance with Laws, employing a qualified and properly licensed transporter, at any landfill, disposal or recycling facility licensed under applicable Laws, including without limitation, hazardous materials laws. The Contractor shall make all arrangements and give and obtain all notices, communications, documentation, permits, certificates, and approvals necessary for said disposal from the owner or officials in charge of such landfills, disposal, or recycling facilities. The Contractor shall bear all fees and costs in connection with such classification, removal, transportation, disposal, and storage, except as otherwise specifically provided or required by the Special Conditions or other Contract Document. The Contractor shall not permit any storage of debris or waste except in accordance with Laws.

D. The Contractor shall not permit any open fire on the Site.

E. Chemical Waste: Chemical waste shall be identified and labeled properly, stored in appropriate Department of Transportation approved containers in a secure location, removed from the Site, and disposed of not less frequently than monthly unless more frequently required by Laws, including without limitation hazardous materials laws, or by the Special Conditions or Specifications. Disposal of chemical waste shall be performed in accordance with requirements of the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Environmental Protection (DEP). Stockpiles of contaminated soils will be placed on a protective surface and covered to prevent migration or erosive loss by wind or water. Fueling and lubricating of vehicles and equipment shall be conducted in a manner that affords the maximum protection against spills and evaporation. Lubricants shall be disposed of in accordance with procedures meeting all applicable Laws. The Contractor shall immediately notify the DCR of any hazardous materials release large enough to require reporting under applicable Laws. The Contractor shall be responsible for immediately containing and cleaning up in accordance with Laws any oil or hazardous materials releases resulting from his/her operations. Any costs incurred in cleaning up any such releases shall be borne by the Contractor.

18. Nuisances.

The Contractor shall strictly prohibit and take all necessary measures to prevent the committing of nuisances on the land of the Commonwealth and adjacent properties.

19. Weather Protection (M.G.L. c. 149, sec. 44G and 44F(1).

A. For all building projects, the Contractor shall furnish and install "weather protection," which means temporary protection of that Work adversely affected by moisture, wind and cold. Weather protection shall be achieved by covering, enclosing and/or heating working areas such that a minimum temperature of 40 degrees Fahrenheit is maintained at the working surface during the months of November through March to permit construction to be carried on during such period in accordance with the Progress Schedule. After the building or portion thereof is completely enclosed by either permanent

construction or substantial temporary materials having a resistance comparable to the specified permanent construction, the Contractor shall provide heat therein of not less than 55 degrees Fahrenheit nor more than 75 degrees Fahrenheit. The foregoing provisions do not supersede any specific requirements for methods of construction, curing of materials and the like. Concrete, masonry, plaster, and all other materials that require special considerations in temperatures below 40 degrees Fahrenheit shall be installed, applied, and cured in accordance with the specific requirements for cold weather protection as defined in the project specifications.

B. The general contractor may, with the approval of the Engineer, elect to utilize the permanent heating system for temporary heat after the building is enclosed and after it has been tested and ready to operate. It shall, however, be his responsibility to thoroughly clean and restore to first-class condition any portion of the permanent heating system used for heating during construction to the satisfaction of the Engineer.

C. The Contractor shall furnish and install one thermometer for every 2,000 square feet of floor space or fraction thereof.

D. Installation of weather protection and heating devices shall comply with all safety regulations including provisions for adequate fire protection devices. Approved methods of heating should also provide for adequate ventilation to prevent exposing people and materials to carbon monoxide, carbon dioxide and other noxious fumes.

E. Within 30 calendar days after the award of this contract, the general contractor shall submit in writing to the Engineer three (3) copies of his proposed methods for "Weather Protection" for approval.

F. The Contractor shall give adequate notification to the Engineer and all subcontractors prior to the erection and removal of temporary protective enclosures.

G. Such weather protection shall be consistent with the Progress Schedule, shall permit the continuous progress of the Work necessary to maintain an orderly and efficient sequence of construction operations and shall meet such additional requirements as may be specified by the Special Conditions or Specifications.

20. Furnishings and Equipment.

When, in the opinion of the DCR, any portion of the Work is in a reasonable condition to receive fittings, furniture, or other property of the Department of Conservation and Recreation not covered by this Contract, the Contractor shall allow the DCR to bring such fittings, furniture, and/or other property into such portions of the Work and shall provide all reasonable facilities and protection thereof. No such occupancy shall be construed as interfering with the provisions relating to time of completion, or as constituting an acceptance of the whole or any part of the Work. Any furniture or fittings so installed shall be placed in the Work at the risk of the DCR except that the Contractor shall be liable for damages or losses to such furniture or fittings to the extent such damages or losses arise in whole or in part from the negligence or intentional misconduct of Contractor, Subcontractors, their agents and/or employees, or anyone for whose acts the Contractor is responsible.

21. Form for Sub-contract.

The Contractor when subcontracting with sub-bidders filed pursuant to M.G.L. c. 149, sec. 44F shall use the form for sub-Contract in M.G.L. c. 149, sec. 44F(4)(c). The Contractor shall not interpret paragraph 3 of the statutory form of Subcontract to require such sub-bidders to provide insurance with limits higher than the limits that are required by the Contract Documents, if the term “Contractor” refers to the sub-bidder and that the term “Contract Price” refers to the sub-bidder’s price stated in paragraph 1 of the statutory form of Subcontract.

22. Sales Tax Exemption and Other Taxes.

All building materials and supplies as well as the rental charges for construction vehicles, equipment and machinery rented exclusively for use on the Site, or while being used exclusively for the transportation of materials for the Work are entitled to an exemption from sales taxes under M.G.L. c. 64H, sec. 6(f). The Contractor shall take all action required to obtain the benefit of such sales tax exemption. The Contractor shall bear the cost of any sales taxes that the Contractor incurs in connection with the Work and the DCR shall not reimburse the Contractor for any such taxes. The exemption number assigned to the Contractor as an exempt purchaser shall be provided to the Contractor by the DCR upon the written request of the Contractor.

23. Final Cleaning.

At the completion of the Work, the Contractor shall remove all waste materials, rubbish, tools, equipment, machinery,

and surplus materials, and professionally clean all sight-exposed surfaces so that the Work is clean and ready for occupancy and/or use. After installation of DCR furniture, telephones, and equipment, the Contractor shall provide such additional cleaning as may be necessary to remove any soil resulting from installation of such furniture, telephones, and equipment. The costs of the required cleaning are included in the Contract price.

All permanent drainage structures such as catch basins, permanent detention or retention basins, drainage conveyances, piping, sumps, and particle separators will be cleaned of sediments and debris prior to acceptance of the Work. Any sediments or debris accumulated during construction shall be removed and disposed in accordance with local and state requirements.

24. Maintenance Data.
Subject to such additional requirements as may be provided in the Special Conditions or Specifications, the Contractor shall compile 3 complete and identical binders of operating and maintenance data for the entire Work. The Contractor shall submit record maintenance data to the DCR for approval and shall instruct and train the DCR's personnel in proper inspection and maintenance procedures.

25. Drainage Specifications.
Subject to such additional requirements as may be provided in the Special Conditions or Specifications, where construction involves replacement or construction of new storm water drainage systems including but not limited to catch basins, roof drains, recharge to groundwater systems and outfall structures, the Contractor shall provide drawings and electronic records in a form acceptable to the DCR that provides specifications and a site plan that identifies locations of the drainage system components and cleanout, if applicable.

26. Closeout Procedures.
The Contractor shall take all actions and submit all items required for Final Acceptance as specified in the Contract Documents.

27. Risk of Loss.
The Contractor shall bear all risk of loss to the Work during the term of the Contract except for any portion of the Work as to which the DCR has given final acceptance. Nothing herein shall limit the Contractor's responsibilities under Article IX or XV of these General Conditions of the Contract.

28. Photographs.
A. At the request of the DCR, the Contractor shall furnish the DCR suitable 4" X 6" color photographs and/or digital image files of the construction area, and any related work areas.
B. If the DCR requires the Contractor to provide photographs of the Work, the areas to be photographed and the locational reference point from which they are to be taken will be designated by the DCR, and shall be taken according to the following schedule:
a. Before construction operations have been started.
b. Each month during the performance of the Work.
c. After construction has been completed.
C. Each photograph shall have permanently written on its face a legible description or title indicating date, location, direction from which taken, project title and item of work photographed.
D. Upon completion of all work under this contract, the Contractor shall deliver all negatives, clearly identified, to the DCR. Photographs will be placed in acetate sleeves and bound in three booklet form.
E. The cost of furnishing photographs shall be included in the prices bid for the various items scheduled in the Proposal.

ARTICLE V: MATERIALS AND EQUIPMENT

1. **Materials Generally.**
A. Unless otherwise specifically provided in the Contract Documents, the Contractor shall provide and pay for materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for proper execution and completion of the Work, whether temporary or permanent and whether incorporated or to be incorporated in the Work.
B. Materials and equipment to be installed as part of the Work (both or either of which are hereinafter referred to

as "materials") shall be new, unused, of recent manufacture, assembled, and used in accordance with the best construction practices. The Contractor shall inform himself/herself as to, and shall comply with, the provisions of M.G.L. c. 7, sec. 23A, as amended, and shall abide by the same and all applicable rules, regulations, and orders made thereunder in relation to the purchase of supplies and materials in the execution of the Work, including the provisions of M.G.L. c. 7, sec. 22, paragraph 17, which provides that there be *"a preference in the purchase of supplies and materials, other considerations being equal, in favor, first, of supplies and materials manufactured and sold within the Commonwealth, and, second, of supplies and materials manufactured and sold elsewhere within the United States."*

C. All materials furnished by the DCR to the Contractor for installation in the work will be delivered by freight train, truck, or other means of common carrier to the nearest convenient public railroad siding, freight station, trucking terminal or such other designated delivery point of which he will receive due notification. The Contractor, at his/her own expense, shall do all handling and conveying of such materials at and from the noted deliver site. He shall unload and remove them promptly from the cars, trucks, or terminals upon notification of their arrival and he shall be responsible for any demurrage, delay charges, damage done or loss of materials from the time of delivery to the final acceptance of the work. Materials previously delivered shall be turned over to the Contractor as soon as possible after the date ordered to begin work. He shall make a complete inventory with the Resident Engineer as to content and condition; thereafter he shall be responsible for the care, custody, and handling until the final acceptance of the work.

2. **Shop Drawings, Product Data, and Samples.**

A. The Contractor shall furnish to the Project Engineer all samples of the materials to be used in the execution of the Work as required by the Contract Documents. The Contractor shall furnish to the DCR in a timely manner all coordination Drawings, shop details, Shop Drawings, and setting diagrams which may be necessary for acquiring and installing materials. These shall be reviewed as required by the DCR. A minimum of six (6) copies shall be submitted for final approval, one of which shall be returned to the Contractor, one given to the Resident Engineer, and four maintained by the DCR. The inspection and approval by the DCR of Shop Drawings, etc. shall be general and shall in no way relieve the Contractor from responsibility for proper fitting, coordinating, construction, and construction sequencing. The Contractor shall furnish to the DCR such information and vouchers relative to the Work, the materials therefore, and the persons employed thereon, as the DCR shall from time-to-time request.

B. Shop Drawings, Product Data, Samples, and similar submittals are not Contract Documents. The purpose of their submission is to demonstrate for those portions of the Work for which submittals are required the way the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents.

C. The Contractor shall review, approve, and submit to the DCR, Shop Drawings, Product Data, Samples, and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the DCR or of separate contractors. Submittals made by the Contractor which are not required by the Contract Documents, or which do not comply with the Contract Documents may be returned without action. The Contractor's attention is directed to the provisions of Section 4 of this Article V and to the Specifications.

D. The Contractor shall prepare and keep current for the DCR's approval a schedule of submittals which is coordinated with the Progress Schedule and allows the DCR reasonable time to review submittals.

E. The Contractor shall perform no portion of the Work requiring submittal and review of Shop Drawings, Product Data, Samples, or similar submittals until the respective submittal has been approved by the DCR. Such Work shall be in accordance with Approved submittals.

F. By submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements, and field construction criteria related thereto and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.

G. The Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the DCR's approval of Shop Drawings, Product Data, Samples, or similar submittals unless the Contractor has specifically informed the DCR in writing of such deviation at the time of submittal and the DCR has given explicit written

approval to the specific deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples, or similar submittals by the DCR's actions.

H. The Contractor shall direct specific attention, in writing or on resubmitted Shop Drawings, Product Data, Samples or similar submittals, to revisions other than those requested by the DCR on previous submittals.

I. Informational submittals upon which the DCR is not expected to take responsive action may be so identified in the Contract Documents.

J. When professional certification of performance criteria of materials, systems or equipment is required by the Contract Documents, such certification must be stamped by a registered Massachusetts professional in the discipline required. The DCR shall be entitled to rely upon the accuracy and completeness of such calculations and certifications.

K. Materials furnished or used or employed under the Contract must be equal in quality to the samples furnished and be satisfactory to the DCR.

3. **Tests.**

A. Any material to be used in the Work may be tested or inspected at any time, on or off Site, by or under direction of the DCR, and may be rejected if it fails to comply with specified tests. The Contractor shall test all materials unless specified otherwise in the Special Conditions or Specifications. The Contractor shall also pay for all testing of specified material unless specified otherwise in the Special Conditions or Specifications. If the Contractor requests permission to use a material that was not specified, then the Contractor in all cases shall pay for such testing. The cost of testing of materials that fail the testing criteria shall be borne by the Contractor

B. The Contractor shall notify the DCR of the proposed sources of materials in time to permit all required testing and inspection before the material is needed for incorporation into the Work. The Contractor shall have no claim arising from the Contractor's failure to designate the proposed source or to order the material in time for adequate testing and inspection. Necessary arrangements shall be made to permit the DCR to make factory, shop or other inspection of materials or equipment ordered for the Work in the process of manufacture or fabrication, as required by the Contract Documents. The DCR will not assume any obligation for the sampling and testing of materials other than on the Site, unless so required by the Specifications.

C. Where tests of materials will be made by the DCR or under its direction, the Contractor or his/her suppliers shall furnish such facilities as the DCR may require for collecting and forwarding samples and shall not make use of, nor incorporate into the Work, any material represented by the samples until the required tests have been made and the material accepted, unless otherwise directed. The Contractor in all cases shall furnish the required samples without charge. In the event of failure of materials to meet the Contract Documents, any retesting of new materials or of the same materials after reworking, shall be paid for by the Contractor.

D. The testing of the Work shall not relieve the Contractor of any of his/her obligations to fulfill the terms of the Contract as herein prescribed by the Contract Documents. Failure to reject any defective work or materials shall in no way prevent later rejection when such defect is discovered, notwithstanding that such defective work or materials had been previously overlooked or misjudged by the DCR and accepted or estimated for payment, nor shall such obligate the DCR to make final acceptance thereof. If sampling and testing reveal that the material is unsatisfactory, it will then be the responsibility of the Contractor to remove it from the Work, replace it, or blend it with such other material so that an acceptable material will be produced. The removal, replacement and blending of such material shall be done by the Contractor without additional compensation.

4. **"Or Equal" Submissions.**

A. Where products or materials are prescribed by manufacturer name, trade name, or catalog reference, the words "or Approved equal" shall be understood to follow. An item shall be considered equal to the item so named or described if in the opinion of the DCR (a) it is at least equal in quality, durability, appearance, strength, and design, (b) it performs at least equally the function imposed in the general design for the Work, and (c) it conforms substantially, even with deviations, to the detailed requirements for the items as indicated by the Specifications. Any structural or mechanical changes made necessary to accommodate products or materials substituted as an "or equal" shall be at the expense of the Contractor. If the cost of the material substituted as an "or equal" is less than the cost of the material specified, such savings in cost shall be credited to the DCR and deducted from the price. "Approved equal" shall mean an item with respect to which the DCR shall have issued a written statement to the Contractor to the effect that the item is, in the DCR's opinion, equal within the meaning of this paragraph to that prescribed in the Contract Documents.

B. The Contractor shall be responsible for providing the DCR with any information and test results that the DCR reasonably requires to determine whether a material is equal to a material named or described in the Contract Documents.

C. The Contractor shall make all requests for substitution of a material named or described in the Contract Documents in writing, and at least thirty (30) days prior to the date the materials will be used in the Work, or immediately upon becoming aware of the following exigencies: (1) the non-availability of the specified material, (2) delay of the delivery of the specified material that will preclude the completion of the Work or any part thereof within the time specified in the Contract or (3) unforeseen field conditions that necessitate the substitution of the specified material. In no event shall the Contractor maintain a claim for delays based upon the DCR's review of such substituted materials if the Contractor failed to submit a written request for such substitution in accordance with the provisions of this paragraph. A written request for a material substitution due to an exigency set forth above shall be accompanied with documentation of the exigency, including but not limited to, a photocopy of a letter from the supplier or manufacturer stating that he/she is unable to furnish the specified materials and the reasons that he/she is unable to furnish the materials, as required by the DCR. If the Contractor's proposed substitution due to an exigency is declined, the DCR shall, at its discretion, specify an “or equal” substitution.

D. The Contractor shall have the burden of proof with respect to any claimed increases in the Contract Price resulting from the improper rejection by the DCR of any material proposed by the Contractor as an equal. No increase in the Contract Price shall be permitted unless the Contractor submits documentary evidence sufficient to prove to the reasonable satisfaction of the DCR that the rejection increased the Contractor's costs over the costs provided for in the Bid pricing documents, net of all savings the Contractor obtained by substituting other “or equal” items. The Contractor shall submit copies of all pricing materials, calculations, plans, Specifications, Drawings, and other design documents that the DCR deems necessary or desirable to evidence such increased costs. In calculating the Contractor's increased costs, a deduction shall be made for all costs that the Contractor would have incurred making structural or mechanical changes to include within the Work the item later found to have been improperly rejected.

5. **Delivery and Storage of Materials; Inspection.**

A. Materials and equipment shall be progressively delivered to the Site so that there will be neither delay in the progress of the Work nor an undue accumulation of materials that are not to be used within a reasonable time, and stored so that their security, quality, and fitness of the materials for the Work is preserved.

B. Vehicle Weight Limits

1. The Contractor's attention is directed to Chapter 90, Section 19A of the General Laws as amended concerning the weight limits for construction type motor vehicles.
2. No materials supplied for the project shall be accepted in vehicles whose gross weight exceed the legal load limits as determined by the regulatory agencies of the Commonwealth and Federal Government
3. Weight slips that indicate the load exceeding the legal load limit will not be countersigned by the DCR.

C. If the Engineer so requests, the Contractor, at any time before final acceptance of the work, shall remove or uncover such portions of the finished work as may by directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering or removing and the replacing of the covering or making good of the parts removed, will be at the Contractor's expense.

D. Necessary arrangements shall be made to permit the DCR to perform all required inspection and testing of materials or equipment ordered for the Work at the factory or shop during the process of manufacture or fabrication, or in storage on or off Site. The Contractor shall have no claims because of his/her failure to designate the proposed source of the material in time for adequate testing and inspection.

E. Materials stored off Site shall be insured and stored at the expense of the Contractor to guarantee the preservation of their security, quality, and fitness for the Work. Without derogating from the Contractor's responsibilities in the previous sentence, when necessary to avoid deterioration or damage, material (on or off Site) shall be placed on wooden platforms or other hard clean surfaces and not on the ground and shall be properly protected.

F. Expenses for inspection of material by DCR personnel including travel, quarters, and subsistence shall be borne by the Contractor requesting the inspection of material stored outside the Commonwealth of Massachusetts as part of the Contract Price. The policy of the DCR precludes the payment for material stored outside the boundaries of Massachusetts except in extremely limited circumstances with the express written consent of the DCR. If the Contractor requests an inspection of material stored outside the Commonwealth of Massachusetts, the DCR will initially pay for all expenses of inspecting the material incurred by DCR's personnel including travel, quarters, and subsistence. The DCR will then give Contractor an invoice for those costs and the Contractor shall submit a credit Change Order for those expenses.

G. Stored materials either at the Site or at some other location agreed upon in writing shall be so located as to facilitate prompt inspection and even though approved before storage, may again be inspected prior to their use in the Work.

H. Where no inspection of materials is arranged by the DCR and before such materials are incorporated into the work, the Contractor shall be required to submit to the DCR for approval, three copies of the Manufacturer's or Supplier's statement for each kind of material furnished, which shall contain the following information:

1. Work for which the material is consigned.
2. Name of the Contractor to which the material is supplied.
3. Description of material supplied.
4. Quantity of material supplied.
5. Means of identifying the consignment, such as label, marking, seal number, etc.
6. Date and method of shipment.
7. Statement to the effect that the material has been tested and found in conformance with the Contract Documents.
8. Results of all required tests, or in lieu of said results, the Manufacturer's, or Supplier's guarantee that he/she shall maintain said results, and make them available to the DCR for a period of not less than three years from the date of final acceptance of final payment by the Commonwealth.
9. Signature of a person duly authorized to bind the Manufacturer or Supplier.

I. All storage sites shall be restored to their original condition by the Contractor at the Contractor's expense. This shall not apply to the stripping and storing of topsoil, or to other materials salvaged from the work.

J. The Contractor shall take charge of and be liable for any loss of or injury to the materials for his/her use delivered to or in the vicinity of the place where the Work is being done, whether furnished by the DCR or otherwise. The Contractor shall notify the DCR as soon as any such materials are so delivered, allow them to be examined by the DCR, and furnish workers to assist therewith.

K. Private property shall not be used for storage purpose without the written permission of the property owner, and if requested by the DCR copies of such written permission shall be furnished by the Contractor.

6. **Defective, Damaged, or Deteriorated Materials and Rejection Thereof.**

The DCR may reject materials if the DCR reasonably determines that such materials do not conform to the Contract Documents in any manner, including but not limited to materials that have become damaged or deteriorated from improper storage whether such materials have previously been accepted. The Contractor at its own expense shall remove rejected materials from the Work. No rejected material, the defects of which have been subsequently corrected, shall be used except with the written permission of the DCR. Should the Contractor fail to remove rejected material within a reasonable time, the DCR may, in addition to any other available remedies, remove and/or replace the rejected material, and deduct the cost of such removal and/or replacement from any moneys due or to become due the Contractor. No extra time shall be allowed for completion of Work by reason of such rejection. The inspection of the Work shall not relieve the Contractor of any of its obligations herein prescribed, and any defective Work shall be corrected. Work not conforming to the Contract Documents may be rejected notwithstanding that such Work and materials have been previously overlooked or misjudged by the DCR and accepted for payment. If the Work or any part thereof shall be found defective at any time before Final Acceptance of the whole Work, the Contractor shall forthwith make good such defect in a manner satisfactory to the DCR. Nothing in the Contract shall be construed as vesting in the Contractor any property rights in the materials used after they have been attached or affixed to the Work or the Site; but all such materials shall upon being so attached or affixed become a property of the DCR.

7. **Measurement**

A. The method of measurement for materials necessary for the proper execution of the Work is set forth at the end of each Section of these Specifications. The computations to be used in determination of quantities of material furnished and of work performed under the Contract shall be selected by the DCR.

B. For the estimating of quantities in which the computations or areas by analytic and geometric methods would be comparatively laborious, it is stipulated and agreed that the planimeter shall be considered an instrument of precision adapted to the measurement of such area.

C. To aid the Resident Engineer in determining the quantities and weights of cement and other materials to be paid for, the Contractor shall, whenever so required, give him access to the proper invoices, bills of lading, etc., and shall provide scales and assistance for weighing, or assistance for measuring, any of the materials.

D. All measurements shall be confirmed by the DCR as they are made to determine the quantities of the various items of work performed. All measurements shall be made according to the United States Standard Units of Measurement.

E. Unless otherwise specified, longitudinal measurements for area computations will be made horizontally. Unless otherwise specified transverse measures for area computations will be the dimensions shown on the Drawings or in writing by the DCR.

F. All items which are measured by the linear foot, including, but not limited to pipe, culverts, guardrail, curbing, will be measured parallel to the base or foundation upon which such structures are placed, unless otherwise shown on the Drawings.

G. In computing volumes of excavation, the average end area method, or other methods acceptable to the DCR will be used.

H. A sworn weigher shall weigh all materials required to be weighed. The weighing of such materials may be witnessed by the DCR.

I. If materials are shipped by rail or trucks, the car weights or quarry weights may be accepted. Weight slips shall be provided for each shipment of material weighed. Each weight slip shall be signed by the sworn weigher, and countersigned, on delivery, by the DCR. Material listed on weight slips that are not countersigned by the DCR shall not be included for payment under the Contract.

J. When requested by the Contractor and approved by the DCR in writing, material specified to be measured in weight may be weighed and converted to volume measurement for payment purposes.

ARTICLE VI: PROSECUTION AND PROGRESS

1. Beginning, Progress Schedule, and Completion of Work.

A. The Contract time shall commence the work upon the date specified in the Notice to Proceed. The Contractor shall begin Work at the Site within ten (10) days of said date unless otherwise ordered in writing by the DCR.

B. Within seven (7) days after the issuance of the Notice to Proceed, Saturdays, Sundays and legal holidays excluded, the Contractor shall submit to the DCR a progress schedule for the term of the Contract as required by the Contract Documents, showing in detail his/her proposed progress for the construction of the various parts of the Work and the proposed times for receiving required materials. Upon approval by the DCR, said schedule shall constitute the Progress Schedule. The Contractor shall at the end of each month, or more often if required, furnish to the DCR a schedule meeting the requirements of the Specifications showing the actual progress of the parts of the Work in comparison with the Progress Schedule.

C. Time is of the essence of this Contract. The Work shall be completed within the time specified in Article 2 of the Department of Conservation and Recreation - Contractor Agreement. Should the Contractor require additional time to complete the Work, the Contractor shall document the reasons therefor and submit a written request for an extension of time within 20 days of the occurrence of the event alleged to be the cause of the delay, as provided in this Article and in Article VII of these General Conditions of the Contract. Failure to submit said written request within the time required by the preceding sentence shall preclude the Contractor from subsequently claiming any time extension due to said delay.

D. If, in the opinion of the DCR, the Contractor fails to comply with the construction schedule as set forth in the Contractor's bid or the Project specifications, the DCR may give the Contractor a notice specifying the time limits and performance standards that the Contractor is failing to meet whereupon (1) the Contractor shall, if the notice requires, discontinue all or any portion of the Work (which discontinuance shall neither terminate the Contract nor give the Contractor any claim for an increase in the Contract Price, damages, or an extension of any completion deadlines); or (2) at Contractor's sole cost increase the work force, equipment and plant, or any of them, employed on the whole or any part of the Work, to the extent required by such notice, and employ the same from day to day until the completion of the Work or such part thereof, or until the failure regarding the rate of progress, in the opinion of the DCR, shall have been sufficiently corrected.

E. If, in the opinion of the DCR, the Contractor fails to comply with the construction schedule, and whether the DCR shall have given the Contractor a notice described in D above, the DCR may (but shall not be required to) give the Contractor notice of such failure and five (5) days to cure the same. Unless the Contractor shall within that five days take all necessary steps to do so (including, if the DCR requires, increasing its forces, equipment and plant) and continue to do so until in the opinion of the DCR the failure is corrected, the DCR may at the Contractor's expense and without terminating this Contract take exclusive or joint possession of all or a portion of the Site and employ and direct the labors of existing or such additional forces, equipment and plant as may in the DCR's opinion be necessary to insure the completion of the Work or such part thereof within the time specified in the Contract Documents or at the earliest possible date thereafter. The DCR may exercise its rights under this Article at any time and from time to time without waiving any of its rights under this Contract, at law or in equity, including, without limitation, the right to deem this Contract terminated or to order the Contractor to discontinue the Work at any time thereafter. The Contractor shall continue to perform the remaining Work under this Contract even if the DCR elects to have another contractor perform a portion of the Work under this Article.

F. The DCR shall deduct the cost of any actions the DCR takes under this Article from any amount then due or which might have become due to the Contractor under this Contract had the Contractor performed as required. On demand, the Contractor shall pay the DCR any amount by which the cost of completing all or any portion of the Work exceeds the amount attributable to that Work under the Contract Documents. The DCR's sole goal will be to complete the Work that it elects to complete within the time limits stated in the Contract or soon thereafter. Consequently, the DCR shall have no obligation to obtain competitive bids or the lowest cost for completing the Work or any part thereof, except when it is required by law. The DCR's election to complete all or part of the Work shall not release the Contractor from any liability for failure to complete the Work as the Contract Documents require and shall not entitle the Contractor to a claim for an increase in the Contract Price or an extension of the time for completing the Work. If the cost that the DCR incurs in completing all or any portion of the Work is less than the amount that the Contract Documents attribute to that Work, the DCR will pay or credit the difference to the Contractor, less any other costs and expenses that the DCR incurs, including the cost of supervision, and attorneys' fees and costs.

2. <u>Failure to Complete Work on Time - Liquidated Damages.</u>

A. If liquidated damages are specified in the Department of Conservation and Recreation - Contractor Agreement, the DCR has determined that its damages because of Contractor's failure to complete the Work fully within the time specified will be difficult or impracticable to ascertain. Accordingly, if the Work is not completed to such point by the date specified in this Contract, the Contractor shall pay to the DCR the sum designated as liquidated damages in the Contract for each calendar day that the Contractor is in default in completing the Work to such point. Such moneys shall be paid as liquidated damages, not as a penalty, to cover losses and expenses to the DCR resulting solely from the fact that the Work is not completed on time.

B. Similarly, if the Contract states that by a specified date a designated portion of the Work shall be fully completed, and if such portion has not been prosecuted to such point by said date, the Contractor shall pay to the DCR the sum designated in the Contract for each calendar day that the Contractor is in default in completing such portion of the Work to such point. Such moneys shall also be paid as liquidated damages, not as a penalty, to cover losses and expenses to the Department of Conservation and Recreation resulting solely from the fact that the Work is not completed on time.

C. The DCR may recover such liquidated damages by deducting the amount thereof from any moneys due or that might become due the Contractor, and if such moneys shall be insufficient to cover the liquidated damages, then the Contractor or the Surety shall pay to the DCR the amount due.

D. Permitting the Contractor to continue and finish the Work or any portion of it after the time fixed in the Contract for its completion shall not be deemed as a waiver of any of the DCR's rights hereunder, at law or in

equity.

E. Liquidated damages or a portion thereof may be waived by the DCR if the Contractor submits evidence satisfactory to the DCR that the delay was caused solely by conditions beyond the control of the Contractor and that the DCR has not suffered any damages because of said delay.

F. Failure by the DCR to specify a sum as liquidated damages in the Department of Conservation and Recreation - Contractor Agreement, or the insertion of "N/A" or "none" in the space provided therein for liquidated damages, shall not be deemed a waiver of the DCR's right to recover actual damages arising from the Contractor's failure to complete the Work on time.

3. Delays; Statutory Provisions (M.G.L. c. 30, sec. 39O).

A. Notwithstanding any provision of this Contract to the contrary, except as otherwise provided by law as set forth in paragraph B below, the Contractor shall not be entitled to increase the Contract Price or to receive damages on account of any hindrances or delays, avoidable or unavoidable; but if any delay is caused in the opinion of the DCR, the Contractor shall be entitled to an extension of time. The length of the extension shall be sufficient in the opinion of the DCR for the Contractor to complete the Work. Although no delay shall increase the Contract Price, the DCR may require that any change in the date by which the Contractor must complete all or any part of the Work be processed on a Change Order form.

B. If a suspension, delay, interruption or failure to act of the DCR increases the cost of performance to any Subcontractor, that Subcontractor shall have the same rights against the Contractor with respect to such increase as the Contractor shall have against the DCR by virtue of (a) and (b) of M.G.L. c. 30, s. 39O set forth below, but nothing in provisions (a) and (b) shall alter any other rights which the Contractor or the subcontractor may have against each other. As used in the statutory language of (a) and (b) below, "contract" means this Contract, "general contractor" means the Contractor and "awarding authority" means the DCR:

"*(a) The awarding authority may order the general contractor in writing to suspend, delay, or interrupt all or any part of the work for such period of time as it may determine to be appropriate for the convenience of the awarding authority; provided, however, that if there is a suspension, delay or interruption for fifteen days or more or due to a failure of the awarding authority to act within the time specified in this contract, the awarding authority shall make an adjustment in the contract price for any increase in the cost of performance of this contract but shall not include any profit to the general contractor on such increase; and provided further, that the awarding authority shall not make any adjustment in the contract price under this provision for any suspension, delay, interruption or failure to act to the extent that such is due to any cause for which this contract provides for an equitable adjustment of the contract price under any other contract provisions.*

(b) The general contractor must submit the amount of a claim under provision (a) to the awarding authority in writing as soon as practicable after the end of the suspension, delay, interruption or failure to act and, in any event, not later than the date of final payment under this contract and except for costs due to a suspension order, the awarding authority shall not approve any costs in the claim incurred more than twenty days before the general contractor notified the awarding authority in writing of the act or failure to act involved in the claim."

4. Occupancy and/or Use of Project Prior to Final Acceptance.

A. The Contractor agrees to the occupancy and/or use of the Project or any portion thereof before Final Acceptance of the Work by the DCR.

B. The DCR will cooperate with the Contractor with respect to the completion of the Work by taking such reasonable steps as may be possible to avoid interference with the Contractor's Work if they do not interfere with the proper functioning of the facility.

C. The Contractor shall not be responsible for wear and tear or damage resulting solely from temporary occupancy.

D. Occupancy and/or use of any part of the Work prior to Final Acceptance by the DCR shall not relieve the Contractor from maintaining the required payment and performance bonds and insurance (to the extent that insurance is required to be maintained after Substantial Completion) required by this Contract.

5. Substantial Completion – Punch List.

A. When the Work, or portion thereof which the DCR agrees to accept separately has reached the state of Substantial Completion as shown on an Approved payment request, the Contractor shall develop, with the participation of the DCR, the Punch List identifying those items of unfinished or unacceptable Work that remain to be performed or corrected under the Contract.

B. Before the Work shall be deemed completed to the point where it is ready for the issuance of Final Acceptance, the Contractor shall:

(1) Provide Contractor's proposed Punch List containing a statement of the reason for each item listed thereon.
(2) Advise the DCR of proposed changes in insurance in accordance with the provisions of this Contract, and provide to the DCR evidence of the Contractor's Completed Operations insurance coverage to the extent required by the Contract Documents.
(3) Execute and submit a notarized warranty on a form provided by the DCR meeting the requirements of Article IX of these General Conditions of the Contract, to commence upon the date of the Certificate of Final Acceptance, unless otherwise provided in the Certificate of Final Acceptance.
(4) Submit signed special warranties and warranties of longer than one year as required by the Contract Documents.
(5) Submit signed maintenance agreements for all portions of the Work specified to receive maintenance after the issuance of the Certificate of Final Acceptance.
(6) Submit all preliminary record Drawings to the DCR and documents and framed data in the forms required by the Contract Documents.
(7) Complete all items required to be completed by the Department of Public Safety and obtain a Certificate of Occupancy from the Department of Public Safety and similar releases which permit the full and unrestricted use of the areas claimed to be ready for occupancy.
(8) Deliver specified maintenance stocks of materials, required spare parts, and all special tools furnished by manufacturers to persons designated by the DCR and obtain written receipts for same.
(9) Make final changes of lock cylinders or cores and advise the DCR of the change of project security responsibility.
(10) Complete start-up of systems, and instruct DCR personnel on proper operation and routine maintenance of all systems and equipment.
(11) Remove all remaining temporary facilities that are no longer needed, surplus materials, and debris; (the Contractor shall not remove construction offices and trailers without the prior Approval of the DCR).
(12) Submit final utility meter readings and similar information and advise the DCR of the change of responsibility for utility charges and payments upon occupancy and/or use,
(13) Complete final clean-up of all Work, restoration of damaged land and property, including finishes, and replacement of all damaged and broken glass not listed on the Contractor's Punch List.
(14) Complete such other items as may be called for in the Special Conditions, if any, or Specifications.

C. After completing the items specified in subsection A above, the Contractor shall make a written request for the DCR's inspection for a Certificate of Final Acceptance in accordance with the Contract Documents. The DCR shall review the submittals and the Work and shall either 1) sign a Certificate of Final Acceptance or 2) notify the Contractor of incomplete and/or incorrect Work that must be completed and corrected prior to the issuance of the Certificate of Final Acceptance. The DCR shall notify the Contractor of any additions to the Punch List. In connection with the execution of the Certificate of Final Acceptance, the DCR shall assign dollar values to each item on the Punch List. Failure to include any incomplete or defective item on the Punch List shall not relieve the Contractor of the obligation to complete all Work in accordance with the Contract Documents.

6. <u>Final Acceptance of the Work.</u>

A. Prerequisites for Final Acceptance. After the Contractor has completed all the Work required by this Contract, including Change Orders and Punch List Items, the Contractor shall submit the following completed items to the DCR together with such additional items as may be specified in the Contract Documents:

(1) A final request for payment showing a final accounting of all changes in the Work.
(2) Certification and satisfactory evidence that all taxes, fees, and similar obligations have been paid.
(3) Consent of the Surety to Final Payment executed by applicable bonding companies.
(4) Certified copy of the Punch List stating that the Contractor has completed or corrected every item listed.
(5) Evidence of the Contractor's continuing Completed Operations Insurance coverage to the extent required by the Contract Documents.
(6) All final record Drawings and documents in the forms specified by the Contract Documents.
(7) A notarized certification that all purchases made under the tax exemption certificate were legitimate and entitled to exemption.

(8) Written certifications from the Department of Public Safety and/or the DCR, where required, to the effect that: a) the Work has been inspected for compliance with the Contract Documents and has satisfied the Department of Public Safety; b) all equipment and systems included in the Work have been tested in the presence of the DCR and are operational and satisfactory; c) the Work is completed and ready for final inspection.
(9) Such other items as may be required by the Contract Documents.

B. Reinspection; Final Acceptance. After notification from the Contractor that all remaining contract exceptions, omissions, and incompletions have been completed (except for the Contractor's continuing warranty, insurance, indemnification, and such other obligations as are intended by the terms of the Contract Documents to extend beyond the date of Final Acceptance), the DCR shall inspect the Work to verify the completion of the same. If the Work is satisfactory, the DCR shall prepare a Certificate of Final Acceptance or shall notify Contractor of items which remain to be completed prior to Final Acceptance.

7. <u>One-Year Warranty Repair List and Inspection.</u>
Approximately 30 days prior to the expiration of the comprehensive one-year warranty period, the Contractor shall schedule an appointment with the DCR for a re-inspection of the Work with the DCR and shall thereafter inspect the Work at the time scheduled. Based on this inspection and on prior inspections, the DCR shall issue a "Warranty Repair List" of items to be corrected by the Contractor. The Contractor shall make the repairs and/or replacements listed within 30 days of the issuance of the Warranty Repair List unless otherwise agreed by the DCR in writing.

ARTICLE VII: CHANGES IN THE WORK

1. <u>Change Orders Generally.</u>
A. The DCR may, pursuant to the provisions of M.G.L. c. 30, sec. 39K, authorize in writing, alterations in the line, grade, plans, form, dimensions or materials of the work, or any part thereof, either before, or after the commencement of construction. If such alterations diminish or increase the quantity included to be done and paid for at a unit price, or work substituted for the work specified is of a different cost and quality, the parties shall be governed by the aforesaid provisions of Law. No changes in the Work shall be made in absence of a Change Order defined in Article I of these General Conditions of the Contract, directing the Contractor to perform such changes. A request for a change in the provisions of this Contract may be submitted to the DCR by the Contractor, Project Engineer or Resident Engineer. The request must be made in writing and in accordance with the provisions of this Contract, Laws, and the procedures of the DCR. The DCR reserves the right to increase or decrease quantities, to eliminate portions of the work or add work of similar nature, and to direct the commencement and order of prosecution of various portions of the work.
B. A Change Order may be issued by the DCR for changes in the Work within the scope of the Contract, including but not limited to, changes in: (1) the Plans and Specifications; (2) the method or manner of performance of the Work; (3) the DCR-furnished facilities, equipment, materials, services, or Site; (4) the schedule for performance of the Work.
C. The Contractor shall immediately perform any Change Order work that is ordered by the DCR.

D. Whenever a Change Order is issued and said Change Order will cause a change in the Contractor's cost, the Contractor or the DCR may request an equitable adjustment in the Contract Price. A request for such an adjustment shall be in writing and shall be submitted by the party making such claim to the other party before commencement of the pertinent work or as soon thereafter as possible.
E. The DCR and the Contractor shall negotiate in good faith an agreement on an equitable adjustment in the Contract Price, and/or time if appropriate, before commencement of the pertinent work or as soon thereafter as is possible. In the absence of an agreement for an equitable adjustment, the DCR shall unilaterally determine the costs attributable to the change and provide the Contractor with a written notice to that effect. The determination of the DCR shall be final as to all questions of the amount and value of extra work, where the Contractor does not appeal said decision pursuant to the process set forth in this paragraph. The Contractor may appeal the decision of the DCR within thirty days of receipt of said notice, to the Commissioner of the DCR or his designee. The Contractor shall have the right to such further appeal as is provided in M.G.L. c. 30, sec. 39Q set forth in Section 4.D of this Article VII. However, if the Contractor shall exercise its rights to appeal the decision of the DCR as

aforesaid, the Contractor shall be required to engage in the mediation procedures set forth in Section 5 of this Article VII, should the DCR require such mediation.

F. During the negotiation of an equitable adjustment in the Contract Price, the Contractor shall, if requested, provide the DCR with all cost and pricing data used by him in computing the amount of the equitable adjustment, and the Contractor shall certify that the pricing data used was accurate, complete, and current. If the DCR subsequently determines that the data submitted by the Contractor was incomplete, incorrect, or not current, the DCR may exclude such data from consideration under the equitable adjustment request.

2. Methods of Computing Equitable Adjustments.

A. Equitable adjustments in the Contract Price shall be determined according to one of the following methods, or a combination thereof, as determined by the DCR: (1) fixed price basis, provided that the fixed price shall be inclusive of items (a) through (e) below and shall be computed in accordance with those provisions; (2) estimated lump sum basis to be adjusted in accordance with Contract unit prices or other agreed upon unit prices provided that the unit prices shall be inclusive of all costs related to such equitable adjustment; (3) time and materials basis to be subsequently adjusted on the basis of actual costs (but subject to a predetermined "not to exceed limit") calculated as follows:

(a) the direct cost (or credit) for labor at the minimum wage rates established for this Contract pursuant to M.G.L. c. 149, sections 26-27H, and the direct cost for material and use of equipment.

(b) plus (or minus) the cost of Workmen's Compensation Insurance, Liability Insurance, Federal Social Security and Massachusetts Unemployment Compensation, or as an alternative the Contractor may elect to use a flat 30% of the total labor rate computed in accordance with subparagraph (a) above.

(c) plus, an allowance equal to 20% of the amount of (a) above for overhead, superintendence, and profit; (In the case of Item 1 work, which is the work of the Contractor and all his non-filed Subcontractors, said 20% allowance shall be paid to the Contractor and the Contractor and said non-filed Subcontractors shall agree upon the distribution of this amount as a matter of contract between them. In the case of Item 2 work, which is work performed by a Subcontractor filed pursuant to M.G.L. c. 149, sec. 44F, said 20% allowance shall be paid to the filed Subcontractor, it being understood that this provision does not apply to other Subcontractors including sub-Subcontractors listed under paragraph E of the form for sub-Bid).

(d) plus, for work performed by a Subcontractor filed pursuant to M.G.L. c. 149, sec. 44F, an additional allowance equal to 7% of the sum of (a) through (c) above as full compensation to the Contractor for processing forms and assuming full responsibility for the faithful performance of such work by said filed Subcontractor(s).

(e) plus (or minus) the actual direct additional premium costs and expenses incurred because of collective bargaining agreements or other agreements between organized labor and employers, and plus (or minus) the actual direct premium cost of payment and performance bonds required of the Contractor and filed Subcontractors for this Contract.

B. If the net change is an addition to the Contract Price, it shall include the Contractor's overhead, superintendence, and profit. On any change that involves a net credit, no allowance for overhead, superintendence and profits shall be included. For any change that does not include labor performed or materials installed in the Project, there will be no markup for the Contractor's overhead, superintendence, and profit, even though there may be a net increase in the Contract Price. Charges for small tools known as "tools of the trade" are not to be computed in the amount of any change in the Contract Price.

C. Statutory Contract adjustments made under the provisions of M.G.L. c. 149, sec. 44F shall not be considered Change Orders and shall not entitle the Contractor to any adjustments for overhead, profit, and superintendence, although the DCR may require that such Contract adjustments be processed on standard Change Order and equitable adjustment forms.

3. Work Performed Under Protest.

The Contractor agrees to perform all Work as directed by the DCR, and if the Project Engineer determines that certain Work that the Contractor believes to be or to warrant a Change Order under this Article does not represent a change in the Work, the Contractor shall perform said Work. The Contractor shall be deemed to have concurred with the Project Engineer's determination as aforesaid unless the Contractor shall perform Work under protest in compliance with the following sub-paragraphs (1) and (2) below:

(1) If the Contractor claims compensation for a change in the Work that is not deemed by the Project Engineer to be a change or to warrant additional compensation as claimed by the Contractor, the Contractor shall within one week after the commencement of any such work or the sustaining of any such damage submit to the Resident Engineer a written statement of the nature of such work or claim. The Contractor shall not be entitled to additional compensation for any work performed or damage sustained for which written notice is not given within the time limit specified in the preceding sentence, even though similar in character to work or damage with respect to which notice is timely given.

(2) On or before the fifteenth day of the month succeeding that in which any such extra work shall have been done or any such damage shall have been sustained, the Contractor shall file to the extent possible with the Resident Engineer, itemized statements of the details and costs of such work performed, or damage sustained. If the Contractor shall fail to make such statement to the extent possible, then the Contractor shall not be entitled to additional compensation for any such work or damages.

4. <u>False Claims. Statutory Provisions Regarding Changes.</u>

A. Criminal Penalties: The Contractor's attention is directed to M.G.L. c. 30, sec. 39I which provides criminal penalties for unauthorized deviations from the Plans and Specifications, and to M.G.L. c. 30, sec. 39J, and if performing work on a capital facility project, M.G.L. c. 7, sec. 42E-42I. The Contractor's attention is also directed to M.G.L. c. 266, sec. 67B which provides criminal penalties for false claims by Contractor under this Contract: *"Whoever makes or presents to any employee, department, agency or public instrumentality of the commonwealth, or of any political subdivision thereof, any claim upon or against any department, agency, or public instrumentality of the commonwealth, or any political subdivision thereof, knowing such claim to be false, fictitious, or fraudulent, shall be punished by a fine of not more than ten thousand dollars or by imprisonment in the state prison for not more than five years, or in the house of correction for not more than two and one-half years, or both."*

B. Differing Site Conditions (M.G.L. c. 30, sec. 39N): "*If, during the progress of the work, the contractor or the awarding authority discovers that the actual subsurface or latent physical conditions encountered at the Site differ substantially or materially from those shown on the plans or indicated in the contract documents either the contractor or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing Site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a contractor, or upon its own initiative, the contracting authority shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the performance of the work which results in an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly.*"

C. Timely Decision by Awarding Authority. (M.G.L. c. 30, sec. 39P): *"Every contract subject to section thirty-nine M of this chapter or section forty-four A of chapter one hundred forty-nine which requires the awarding authority, any official, its architect or engineer to make a decision on interpretation of the specifications, approval of equipment, material or any other approval, or progress of the work, shall require that the decision be made promptly and, in any event, no later than thirty days after the written submission for decision; but if such decision requires extended investigation and study, the awarding authority, the official, architect or engineer shall, within thirty days after the receipt of the submission, give the party making the submission written notice of the reasons why the decision cannot be made within the thirty day period and the date by which the decision will be made."*

D. Change Order / Contract Interpretation Appeal Procedure (M.G.L. c. 30, sec. 39Q): The following provisions apply to every contract awarded by any state agency as defined by M.G.L. c. 7, sec. 39A for the construction, reconstruction, alteration, remodeling, repair, or demolition of any capital facility as defined by the aforesaid section 39A:

"*(a) Disputes regarding changes in and interpretations of the terms or scope of the contract and denials of or failures to act upon claims for payment for extra work or materials shall be resolved according to the following procedures, which shall constitute the exclusive method for resolving such disputes. Written notice of the matter in dispute shall be submitted promptly by the claimant to the chief executive official of the state agency which awarded the contract or his designee. No person or business entity having a contract with a state agency shall delay, suspend, or curtail performance under that contract because of any dispute subject to this section. Any*

disputed order, decision or action by the agency or its authorized representative shall be fully performed or complied with pending resolution of the dispute.

"(b) Within thirty days of submission of the dispute to the chief executive official of the state agency or his designee, he shall issue a written decision stating the reasons therefore and shall notify the parties of their right of appeal under this section. If the official or his designee is unable to issue a decision within thirty days, he shall notify the parties to the dispute in writing of the reasons why a decision cannot be issued within thirty days and of the date by which the decision shall issue. Failure to issue a decision within the thirty-day period or within the additional time specified in such written notice shall be deemed to constitute a denial of the claim and shall authorize resort to the appeal procedure described below. The decision of the chief executive official or his/her designee shall be final and conclusive unless an appeal is taken as provided below.

"(c) Within twenty-one calendar days of the receipt of a written decision or of the failure to issue a decision as stated in the preceding subparagraph, any aggrieved party may file a notice of claim for an adjudicatory hearing with the division of hearing officers or the aggrieved party may file an action directly in a court of competent jurisdiction and shall serve copies thereof upon all other parties in the form and manner prescribed by the rules governing the conduct of adjudicatory proceedings of the division of hearing officers. In the event an aggrieved party exercises his option to file an action directly in court as provided in the previous sentence, the twenty-one-day period shall not apply to such filing and the period of filing such action shall be the same period otherwise applicable for filing a civil action in superior court. The appeal shall be referred to a hearing officer experienced in construction law and shall be prosecuted in accordance with the formal rules of procedure for the conduct of adjudicatory hearings of the division of hearing officers, except as provided below. The hearing officer shall issue a final decision as expeditiously as possible, but in no event more than one hundred and twenty calendar days after conclusion of the adjudicatory hearing, unless the decision is delayed by a request for extension of time for filing post-hearing briefs or other submissions assented to by all parties. Whenever, because an extension of time has been granted, the hearing officer is unable to issue a decision within one hundred and twenty days, he shall notify all parties of the reasons for the delay and the date when the decision will issue. Failure to issue a decision within the one-hundred-and-twenty-day period or within the additional period specified in such written notice shall give the petitioner the right to pursue any legal remedies available to him without further delay.

"(d) When the amount in dispute is less than ten thousand dollars, a contractor who is party to the dispute may elect to submit the appeal to a hearing officer experienced in construction law for expedited hearing in accordance with the informal rules of practice and procedure of the division of hearing officers. An expedited hearing under this subparagraph shall be available at the sole option of the contractor. The hearing officer shall issue a decision no later than sixty days following the conclusion of any hearing conducted pursuant to this subparagraph. The hearing officer's decision shall be final and conclusive and shall not be set aside except in cases of fraud."

5. <u>Mediation.</u>

In the case of every dispute where the dollar amount in dispute (or the estimated dollar value of the extension of time in dispute) is $50,000 or more and the Contractor appeals the decision of the DCR or his designee described in Section 4.B above, the DCR shall retain the option at its sole discretion of initiating a process whereby the DCR and the Contractor shall engage in good faith in a non-binding mediation process, which process shall be concluded within sixty days from the date that the Contractor files an appeal from said decision as provided in Section 4.B above.

ARTICLE VIII: PAYMENT PROVISIONS

1. <u>Schedule of Values.</u>

Before the first application for payment the Contractor shall submit to the DCR a schedule of values allocated to various portions of the Work in sufficient detail to reflect the various major components of each trade (with filed Subcontractors as well as MBE/WBE noted), including quantities when requested, aggregating the total Contract Price, and divided so as to facilitate payments for work under each section of the Specifications. The schedule shall be prepared in such form and supported by such data to substantiate its accuracy as the DCR may require. Each item in the schedule shall include its proper share of overhead and profit. When approved by the DCR, it shall constitute the Schedule of Values and shall be used only as a basis for the Contractor's requests for payments.

2. Payment Liabilities of Contractor.

A. The Contractor shall pay to the DCR all expenses, losses, and damages, as determined by the DCR, incurred in consequence of any default, defect, omission or mistake of the Contractor or his/her employees or Subcontractors or the making good thereof.

B. If the Work (or a portion thereof) is not completed to Substantial Completion and the Contractor has not fully completed the Work by the date specified in Article 2 of the Department of Conservation and Recreation - Contractor Agreement, the Contractor shall pay to the DCR liquidated damages as provided in Article VI, Section 2 of these General Conditions of the Contract.

3. Retention of Moneys by the DCR.

A. The DCR may keep any moneys which would otherwise be payable at any time hereunder, and apply the same, or so much as may be necessary therefor, to (1) the DCR's expenditures for the Contractor's account, (2) to secure the DCR's remedies against the Contractor for the Contractor's breach of its obligations under this Contract or the breach of any person performing any part of the Work and (3) the payment of any expenses, losses or damages incurred by the DCR as a result of the failure of the Contractor to perform its obligations hereunder. The DCR may retain, until all claims are settled, such moneys as the DCR estimates to be the fair value of the DCR's claims against the Contractor, and of all claims for labor performed or furnished and for materials used or employed in or in connection with the Work and for the rental of vehicles, appliances and equipment employed and for the employment of substitute contractors and labor in connection with the Work, in accordance with M.G.L. c. 30, sections 39A and 39F. The DCR may make such settlements and apply thereto any moneys retained under this Contract.

B. The Contractor shall each week examine all claims so filed, and if the same are in any respect incorrect or do not correctly show the amount due from the Contractor to the claimant for such labor and materials, the Contractor shall forthwith file with the DCR a separate written statement of all inaccuracies in each claim and of the correct amount due from the Contractor to each claimant therefor, and shall immediately file a statement of all payments thereafter made to such claimants. Each such statement shall be sworn to and contain a detailed breakdown as required by M.G.L. c. 30 s. 39F(d). Unless such statements are so filed by the Contractor the amount shown by the claims filed shall at the option of the DCR be conclusively deemed to be the accurate amount due from the Contractor therefor in all accounting with the DCR. If the moneys retained under this Contract are insufficient to pay the sums found by the DCR to be due under the claims for labor and materials filed as aforesaid, the DCR may, at its discretion, pay the same, and the Contractor shall repay to the DCR all sums paid out. The DCR may also at its discretion use any moneys retained, due or to become due under this Contract, for the purpose of paying for both labor and materials used or employed in the Work for which claims have not been filed with the DCR.

C. No moneys retained under the provisions of this Article shall be held to be statutory security for the payment of claims filed in accordance with the provisions of M.G.L. c. 149, sec. 29, as amended, for which security is provided by bond.

4. Applications for Payment.

A. The Contractor shall, once in each month on the day of the month corresponding to the day of the month specified in the Notice to Proceed referenced in Article 2 of the Department of Conservation and Recreation - Contractor Agreement, in writing and in the manner prescribed by the DCR, submit to the Resident Engineer a statement showing the total amount of Work done to the time of such estimate and the value thereof as approved by the Resident Engineer and the Project Engineer. It shall be the sole responsibility of the Contractor to deliver or cause to be delivered to the Resident Engineer said periodic estimate in proper form, approved as provided above and arithmetically correct. All periodic estimates shall contain such certifications and other evidence supporting the Contractor's right to payment as the DCR may require, including without limitation, lien waivers and other evidence, on such forms as the DCR may require, establishing that title to the equipment or materials is unencumbered and has been transferred to the Department of Conservation and Recreation. If there is no Resident Engineer assigned to the Contract, the DCR shall designate a person at the project field office or alternatively the home office of the DCR. The Contractor shall include in such periodic estimate only such materials as are incorporated in the Work, except as provided in paragraph C below. The DCR shall retain no more than five percent of such estimated value as part security for the completion of the Work and shall pay to the Contractor while carrying on the Work the balance not retained as aforesaid, subject to the approval of the DCR after deducting therefrom all previous payments and all sums to be kept under the provisions of this Contract.

B. Each periodic estimate shall constitute the Contractor's representation that (1) the payment then requested to be disbursed has been incurred by the Contractor on account of the Work and is justly due to Subcontractors or, to the Contractor in the case of other Work performed by the Contractor on account thereof, (2) the materials, supplies and equipment for which Application for Payment is being submitted have been installed or incorporated into the Work or have been stored at the Site or at such off Site storage locations as the DCR shall have Approved, (3) the materials, supplies and equipment are insured in accordance with the provisions of this Contract, (4) the materials, supplies and equipment are owned by the Department of Conservation and Recreation and are not subject to any liens or encumbrances, (5) the Work which is the subject of such periodic estimate has been performed in accordance with the Contract Documents and (6) that all due and payable bills with respect to the Work have been paid to date or shall be paid from the proceeds of such periodic estimate. The Contractor's attention is directed to the criminal penalties for false claims referenced in paragraph A above.

C. The Contractor may include in a periodic estimate the value of materials or equipment delivered at the Site (or at some location agreed to in writing) only upon delivery to the DCR of: (1) an acceptable transfer of title on the form provided by the DCR; (2) written certification by the Contractor (or applicable subcontractor) on the form provided by the DCR that the Contractor (or the Subcontractor which executed the transfer of title) is the lawful owner and that the materials or equipment are free from all encumbrances, accompanied by receipted invoices or other acceptable proof of encumbrance-free ownership if such proof is deemed necessary by the DCR; (3) a stored materials insurance binder that covers the materials for which payment is requested, that names the Department of Conservation and Recreation as an insured party should the stored materials be subjected to any casualty, loss, or theft prior to their inclusion in the Work. The material(s) or equipment must, in the judgment of the DCR (1) meet the requirements of the Contract, including prior drawing, product data, and sample approval, (2) be ready for use, and (3) be properly stored by the Contractor and be adequately protected until incorporated into the Work. See also Article V.5.C of these General Conditions of the Contract concerning the cost of inspections.

D. The DCR may make changes in any periodic estimate submitted by the Contractor in accordance with M.G.L. c. 30, sec. 39K for building projects (see below), and in accordance with M.G.L. c. 30, sec. 39G for public works projects (see below), and the payment due shall be computed in accordance with the changes so made. The provisions of said section 39K shall govern payments for building projects on which the DCR has made changes, and the provisions of said section 39G shall govern payments for public works projects on which the DCR has made changes.

E. No certificate for payment and no progress payment shall constitute acceptance of Work that is not in accordance with the Contract Documents.

F. The Contractor and all Subcontractors furnishing labor on this Contract agree to furnish certified payroll reports if requested to do so, at no additional expense to the DCR. The DCR may at all reasonable times audit such reports.

5. <u>Periodic Payments (M.G. L. c. 30, sec. 39K) for Building Projects.</u>

For building contracts, the DCR shall make payment to the Contractor in accordance with M.G.L. c. 30, sec. 39K, which provides as follows:

" Within fifteen days (30 days in the case of the commonwealth, including local housing authorities) after receipt from the contractor, at the place designated by the awarding authority if such a place is so designated, of a periodic estimate requesting payment of the amount due for the preceding month, the awarding authority will make a periodic payment to the contractor for the work performed during the preceding month and for the materials not incorporated in the work but delivered and suitably stored at the site (or at some location agreed upon in writing) to which the contractor has title or to which a subcontractor has title and has authorized the contractor to transfer title to the awarding authority upon certification by the contractor that he is the lawful awarding authority and that the materials are free from all encumbrances, but less (1) a retention based on its estimate of the fair value of its claims against the contractor and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and less (3) a retention not exceeding five percent of the approved amount of the periodic payment. After the receipt of a periodic estimate requesting final payment and within sixty-five days after (a) the contractor fully completes the work or substantially completes the work so that the value of the work remaining to be done is, in the estimate of the awarding authority, less than one percent of the original contract price, or (b) the contractor substantially completes the work and the awarding authority takes possession for occupancy, whichever occurs first, the awarding authority shall pay the contractor the entire balance due on the Contract less (1) a retention based on its estimate of the fair value of its claims against the

contractor and of the cost of completing the incomplete and unsatisfactory items of work and less (2) a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, or based on the record of payments by the contractor to the subcontractors under this contract if such record of payment indicates that the contractor has not paid subcontractors as provided in section thirty-nine F. If the awarding authority fails to make payment as herein provided, there shall be added to each such payment daily interest at the rate specified in in G.L. c. 29, §29C , commencing on the first day after said payment is due and continuing until the payment is delivered or mailed to the contractor; provided, that no interest shall be due, in any event, on the amount due on a periodic estimate for final payment until fifteen days (twenty-four days in the case of the commonwealth) after receipt of such period estimate from the contractor, at the place designated by the awarding authority if such a place is so designated. The contractor agrees to pay to each subcontractor a portion of any such interest paid in accordance with the amount due each subcontractor.

The awarding authority may make changes in any periodic estimate submitted by the contractor and the payment due on said periodic estimate shall be computed in accordance with the change so made, but such changes or any requirement for a corrected periodic estimate shall not affect the due date for the periodic payment or the date for the commencement of interest charges on the amount of the periodic payment computed in accordance with the changes made, as provided herein; provided, that the awarding authority may, within seven days after receipt, return to the contractor for correction, any periodic estimate which is not in the required form or which contains computations not arithmetically correct and, in that event, the date of receipt of such periodic estimate shall be the date of receipt of the corrected periodic estimate in proper form and with arithmetically correct computations. The date of receipt of a periodic estimate received on a Saturday shall be the first working day thereafter. The provisions of section thirty-nine G shall not apply to any contract for the construction, reconstruction, alteration, remodeling, repair, or demolition of any public building to which this section applies.

All periodic estimates shall be submitted to the awarding authority, or to its designee as set forth in writing to the contractor, and the date of receipt by the awarding authority or its designee shall be marked on the estimate. All periodic estimates shall contain a separate item for each filed sub-trade and each sub-sub-trade listed in sub-bid form as required by specifications and column listing the amount paid to each filed subcontractor as of the date of the periodic estimate is filed. The person making payment for the awarding authority shall add the daily interest provided for herein to each payment for each day beyond the due date of receipt marked on the estimate.

A certificate of the architect to the effect that the contractor has fully or substantially completed the work shall, subject to the provisions of section thirty-nine J, be conclusive for the purposes of this section.

Notwithstanding the provisions of this section, at any time after the value of the work remaining to be done is, in the estimation of the awarding authority, less than 1 per cent of the adjusted contract price, or the awarding authority has determined that the contractor has substantially completed the work and the awarding authority has taken possession for occupancy, the awarding authority may send to the general contractor by certified mail, return receipt requested, a complete and final list of all incomplete and unsatisfactory work items, including, for each item on the list, a good faith estimate of the fair and reasonable cost of completing such item. The general contractor shall then complete all such work items within 30 days of receipt of such list or before the contract completion date, whichever is later. If the general contractor fails to complete all incomplete and unsatisfactory work items within 45 days after receipt of such items furnished by the awarding authority or before the contract completion date, whichever is later, subsequent to an additional 14 days' written notice to the general contractor by certified mail, return receipt requested, the awarding authority may terminate the contract and complete the incomplete and unsatisfactory work items and charge the cost of same to the general contractor and such termination shall be without prejudice to any other rights or remedies the awarding authority may have under the contract. The awarding authority shall note any such termination in the evaluation form to be filed by the awarding authority pursuant to the provisions of section 44D of chapter 149."

6. Payment of Subcontractors (M.G.L. c. 30, sec. 39F).

The Contractor shall make payments to Subcontractors in accordance with the provisions of M.G.L c. 30, sec. 39F, which is quoted in this section below, where applicable. (M.G.L. c. 30, sec. 39F requires that subparagraphs (a) through (h) be set forth in contracts awarded under M.G.L. c. 30, sec. 39M and M.G.L. c. 149, sections 44A-44H; said statute requires that subparagraph (i) be set forth in contracts awarded under M.G.L. c. 149, sections 44A-44H).

"1(a) Forthwith after the general contractor receives payment on account of a periodic estimate, the general Contractor shall pay to each subcontractor the amount paid for the labor performed and the materials furnished by that subcontractor, less any amount specified in any court proceedings barring such payment and also less any amount claimed due from the subcontractor by the general contractor.

(b) Not later than the sixty-fifth day after each subcontractor substantially completes his work in accordance with the Plans and Specifications, the entire balance due under the subcontract less amounts retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, shall be due the subcontractor; and the awarding authority shall pay that amount to the general contractor. The general contractor shall forthwith pay to the subcontractor the full amount received from the awarding authority less any amount specified in any court proceedings barring such payment and less any amount claimed due from the subcontractor by the general contractor.

(c) Each payment made by the awarding authority to the general contractor pursuant to subparagraphs (a) and (b) of this paragraph for the labor performed and the materials furnished by a subcontractor shall be made to the general contractor for the account of that subcontractor; and the awarding authority shall take reasonable steps to compel the general contractor to make each such payment to each such subcontractor. If the awarding authority has received a demand for direct payment from a subcontractor for any amount which has already been included in a payment to the general contractor or which is to be included in a payment to the general contractor for payment to the subcontractor as provided in subparagraphs (1) and (2) the awarding authority shall act upon the demand as provided in this section.

(d) If, within seventy days after the subcontractor has substantially completed the subcontract work, the subcontractor has not received from the general contractor the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount retained by the awarding authority as the estimated cost of completing the incomplete and unsatisfactory items of work, the subcontractor may demand direct payment of that balance from the awarding authority. The demand shall be by a sworn statement delivered to or sent by certified mail to the awarding authority, and a copy shall be delivered to or sent by certified mail to the general contractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract and a statement of the status of completion of the subcontract work. Any demand made after substantial completion of the subcontract work shall be valid even if delivered or mailed prior to the seventieth day after the subcontractor has substantially completed the subcontract work. Within ten days after the subcontractor has delivered or so mailed the demand to the awarding authority and delivered or so mailed a copy to the general contractor, the general contractor may reply to the demand. The reply shall be by a sworn statement to or sent by certified mail to the awarding authority and a copy shall be delivered to or sent by certified mail to the subcontractor at the same time. The reply shall contain a detailed breakdown of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor and of the amount due for each claim made by the general contractor against the subcontractor.

(e) Within fifteen days after receipt of the demand by the awarding authority, but in no event prior to the seventieth day after substantial completion of the subcontract work, the awarding authority shall make direct payment to the subcontractor of the balance due under the subcontract including any amount due for extra labor and materials furnished to the general contractor, less any amount (i) retained by the awarding authority as the estimated cost of completing the incomplete or unsatisfactory items of work, (ii) specified in any court proceedings barring such payment, or (iii) disputed by the general contractor in the sworn reply; provided that the awarding authority shall not deduct from a direct payment any amount as provided in part (iii) if the reply is not sworn to, or for which the sworn reply does not contain the detailed breakdown required by subparagraph (d). The awarding authority shall make further direct payments to the subcontractor forthwith after the removal of the basis for deduction from direct payments made as provided in parts (i) and (ii) of this subparagraph.

(f) The awarding authority shall forthwith deposit the amount deducted from a direct payment as provided in part (iii) of subparagraph (5) in an interest-bearing joint account in the names of the general contractor and the subcontractor in a bank in Massachusetts selected by the awarding authority or agreed upon by the general contractor and the subcontractor and shall notify the general contractor and the subcontractor of the date of the deposit and the bank receiving the deposit. The bank shall pay the amount in the account, including accrued interest, as provided in an agreement between the general contractor and the subcontractor or as determined by decree of a court of competent jurisdiction.

(g) All direct payments and all deductions from demand for direct payments deposited in an interest-bearing account or accounts in a bank pursuant to subparagraph (6) shall be made out of amounts payable to the general

contractor at the time of receipt of a demand for direct payment from a subcontractor and out of amounts which later become payable to the General contractor and in the order of receipt of such demands from subcontractors. All direct payments shall discharge the obligation of the awarding authority to the general contractor to the extent of such payment.

(h) The awarding authority shall deduct from payments to a General contractor amounts which, together with the deposits in interest bearing accounts pursuant to subparagraph (6) are sufficient to satisfy all unpaid balances of demands for direct payment received from subcontractors. All such amounts shall be earmarked for such direct payments, and the subcontractors shall have a right in such deductions prior to any claims against such amounts by creditors of the general contractor.

(i) If the subcontractor does not receive payment as provided in subparagraph (1) or if the general contractor does not submit a periodic estimate for the value of the labor or materials performed or furnished by the subcontractor and the subcontractor does not receive payment for same when due less the deductions provided for in subparagraph (1), the subcontractor may demand direct payment by following the procedure in subparagraph (4) and the general contractor may file a sworn reply as provided in that same subparagraph. A demand made after the first day of the month following that for which the subcontractor performed or furnished the labor and materials for which the subcontractor seeks payment shall be valid even if delivered or mailed prior to the time payment was due on a periodic estimate from the general contractor. Thereafter the awarding authority shall proceed as provided in subparagraph (e), (f), (g) and (h).

(2) Any assignment by a subcontractor of the rights under this section to a surety company furnishing a bond under the provisions of section twenty-nine of chapter one hundred forty-nine shall be invalid. The assignment and subrogation rights of the surety to amounts included in a demand for direct payment which are in the possession of the awarding authority, or which are on deposit pursuant to subparagraph (6) shall be subordinate to the rights of all subcontractors who are entitled to be paid under this section and who have not been paid in full.

(3) "subcontractor" as used in this section (l) for contracts awarded as provided in sections forty-four A to forty-four L, inclusive, of chapter one hundred forty-nine shall mean a person who files a sub-bid and received a subcontract as a result of that filed sub-bid or who is approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the general contractor, (ii) for contracts awarded as provided in paragraph (1) of section thirty-nine M of chapter thirty shall mean a person approved by the awarding authority in writing as a person performing labor or both performing labor and furnishing materials pursuant to a contract with the general contractor, and (iii) for contracts with the commonwealth not awarded as provided in sections forty-four A to forty-four L, inclusive, of chapter one hundred forty-nine shall also mean a person contracting with the general contractor to supply materials used or employed in a public works project for a price in excess of five thousand dollars.

(4) A general contractor or a subcontractor shall enforce a claim to any portion of the amount of a demand for direct payment deposit as provided in subparagraph (6) by a petition in equity in the superior court against the other and the bank shall not be a necessary party. A subcontractor shall enforce a claim for direct payment or a right to require a deposit as provided in subparagraph (6) by a petition in equity in the superior court against the awarding authority and the general contractor shall not be a necessary party. Upon motion of any party the court shall advance for speedy trial any petition filed as provided in this paragraph. Sections fifty-nine and fifty-nine B of chapter two hundred thirty-one shall apply to such petitions. The court shall enter an interlocutory decree upon which execution shall issue for any part of a claim found due pursuant to sections fifty-nine and fifty-nine B and, upon motion of any party, shall advance for speedy trial the petition to collect the remainder of the claim. Any party aggrieved by such interlocutory decree shall have the right to appeal therefrom as from a final decree. The court shall not consolidate for trial the petition of any subcontractor with the petition of one or more subcontractors or the same general Contract unless the court finds that a substantial portion of the evidence of the same events during the course of construction (other than the fact that the claims sought to be consolidated arise under the same general contract) is applicable to the petitions sought to be consolidated and that such consolidation will prevent unnecessary duplication of evidence. A decree in any such proceeding shall not include interest on the disputed amount deposited more than the interest earned for the period of any such deposit. No person except a subcontractor filing a demand for direct payment for which no funds due the general contractor are available for direct payment shall have a right to file a petition in court of equity against the awarding authority claiming a demand for direct payment is premature and such subcontractor must file the petition before the awarding authority has made a direct payment to the subcontractor and has made a deposit of the disputed portion as provided in part (iii) of subparagraph (5) and in subparagraph (6).

(5) In any petition to collect any claim for which a subcontractor has filed a demand for direct payment the court shall, upon motion of the general contractor, reduce by the amount of any deposit of a disputed amount by the awarding authority as provided in part (iii) of subparagraph (5) and in subparagraph (6) any amount held under a trustee writ or pursuant to a restraining order or injunction."

7. <u>Contracts for Public Works Governed by M.G.L. c. 30, sec. 39G:</u>

The following statutory provision applies only to contracts for public works governed by M.G.L. c. 30, sec. 39G: *"Upon substantial completion of the work required by a Contract with the Owner, or any agency or political subdivision thereof, for the construction, reconstruction, alteration, remodeling, repair or improvement of public ways, including bridges, and other highway structures, sewers and water mains, airports and other public works, the contractor shall present in writing to the awarding authority its certification that the work has been substantially completed. Within twenty-one days thereafter, the awarding authority shall present to the contractor either a written declaration that the work has been substantially completed or an itemized list of incomplete or unsatisfactory work items required by the Contract sufficient to demonstrate that the work has not been substantially completed. The awarding authority may include with such a list a notice setting forth a reasonable time, which shall not in any event be prior to the Contract completion date, within which the contractor must achieve substantial completion of the work. If the awarding authority fails to respond, by presentation of a written declaration or itemized list as aforesaid, to the contractor's certification within the twenty- one-day period, the contractor's certification shall take effect as the awarding authority's declaration that the work has been substantially completed.*

Within sixty-five days after the effective date of a declaration of a substantial completion, the awarding authority shall prepare and forthwith send to the contractor for acceptance a substantial completion estimate for the quantity and price of the work done and all but one percent retainage of that undisputed part of each work item and extra work item in dispute but excluding the disputed part thereof, less the estimated cost of completing all incomplete and unsatisfactory work items and less the total periodic payments made to date for the work. The awarding authority also shall deduct from the substantial completion estimate an amount equal to the sum of all demands for direct payments filed by subcontractors and not yet paid to subcontractors or deposit d in joint accounts pursuant to section thirty-nine F, but no Contract subject to said section thirty-nine F shall contain any other provision authorizing the awarding authority to deduct any amount by virtue of claims asserted against the Contract by subcontractors, material suppliers or others.

If the awarding authority fails to prepare and send to the contractor any substantial completion estimate required by this section on or before the date herein above set forth, the awarding authority shall pay to the contractor interest on the amount which would have been due to the contractor pursuant to such substantial completion estimate at the rate of three percentage points above the rediscount rate than charged by the Federal Reserve Bank of Boston from such date to the date on which the awarding authority sends that substantial completion estimate to the contractor for acceptance or to the date of payment therefor, whichever occurs first. The awarding authority shall include the amount of such interest in the substantial completion estimate.

Within fifteen days after the effective date of the declaration of substantial completion, the awarding authority shall send to the contractor by certified mail, return receipt requested, a complete list of all incomplete or unsatisfactory work items, and, unless delayed by causes beyond his control, the contractor shall complete all such work items within forty-five days after the receipt of such list or before the then Contract completion date, whichever is later. If the contractor fails to complete such work within such time, the awarding authority may, after seven days' written notice to the contractor by certified mail, return receipt requested, terminate the Contract, and complete the incomplete or unsatisfactory work items and charge the cost of same to the contractor.

Within thirty days after receipt by the awarding authority of a notice from the contractor stating that all of the work required by the Contract has been completed, the awarding authority shall prepare and forthwith send to the contractor for acceptance a final estimate for the quantity and price of the work done and all retainage on that work less all payments made to date, unless the awarding authority's inspection shows that work items required by the Contract remain incomplete or unsatisfactory, or that documentation required by the Contract has not been completed. If the awarding authority fails to prepare and send to the contractor the final estimate within thirty days after receipt of notice of completion, the awarding authority shall pay to the contractor interest on the amount

which would have been due to the contractor pursuant to such final estimate at the rate hereinabove provided from the thirtieth day after such completion until the date on which the awarding authority sends the final estimate to the contractor for acceptance or the date or payment therefore, whichever occurs first, provided that the awarding authority's inspection shows that no work items required by the Contract remain incomplete or unsatisfactory. Interest shall not be paid hereunder on amounts for which interest is required to be paid in connection with the substantial completion estimate as hereinabove provided. The awarding authority shall include the amount of the interest required to be paid hereunder in the final estimate.

The awarding authority shall pay the amount due pursuant to any substantial completion or final estimate within thirty-five days after receipt of written acceptance for such estimate from the contractor and shall pay interest on the amount due pursuant to such estimate at the rate hereinabove provided from that thirty-fifth day to the date of payment. Within 15 days, 30 days in the case of the commonwealth, after receipt from the contractor, at the place designated by the awarding authority, if such place is designated, of a periodic estimate requesting payment of the amount due for the preceding periodic estimate period, the awarding authority shall make a periodic payment to the contractor for the work performed during the preceding periodic estimate period and for the materials not incorporated in the work but delivered and suitably stored at the Site, or at some location agreed upon in writing, to which the contractor has title or to which a subcontractor has title and authorized the contractor to transfer title to the awarding authority, upon certification by the contractor that he is the lawful owner and that the materials are free from all encumbrances. The awarding authority shall include with each such payment interest on the amount due pursuant to such periodic estimate at the rate herein above provided from the due date. In the case of periodic payments, the contracting authority may deduct from its payment a retention based on the estimate of the fair value of its claims against the contractor, a retention for direct payments to subcontractors based on demands for same in accordance with the provisions of section thirty-nine F, and a retention to secure satisfactory performance of the contractual work not exceeding five per cent of the approved amount of any periodic payment, and the same right to retention shall apply to bonded subcontractors entitled to direct payment under section thirty-nine F of chapter thirty; provided that a five per cent value of all items that are planted in the ground shall be deducted from the periodic payments until final acceptance.

No periodic, substantial completion or final estimate or acceptance or payment thereof shall bar a contractor from reserving all rights to dispute the quantity and amount of, or the failure of the awarding authority to approve a quantity and amount of, all or part of any work item or extra work item.

Substantial completion, for the purposes of this section, shall mean either that the work required by the Contract has been completed except for work having a Contract Price of less than one percent of the then adjusted total Contract Price, or substantially all of the work has been completed and opened to public use except for minor incomplete or unsatisfactory work items that do not materially impair the usefulness of the work required by the contract"

8. <u>Liens</u>

Neither the final payment nor any part of the retained percentage shall become due until the Contractor, if required, delivers to the DCR a complete release of all liens arising out of this Contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as he/she has knowledge or information, the releases and receipts include all labor and material for which a lien could be filed; but the Contractor may, if any Subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to the DCR, to indemnify him against any lien. If any lien remains unsatisfied after all payments are made, the Contractor shall refund to the DCR, all moneys that the latter may be compelled to pay in discharging such a lien, including all costs and a reasonable attorney's fee.

9. <u>Final Payment; Release of Claims by Contractor.</u>

Upon Final Acceptance of the Work the Contractor shall be entitled to payment of the balance of the Contract Price. Final payment shall be as provided in this Article above and in accordance with any process set forth in the Special Conditions. The Contractor agrees to execute a Certificate of Final Inspection, Release (with Contractor's own exceptions listed thereon) and Acceptance as a condition precedent to Final Payment. The acceptance by the Contractor of the Final Payment made as aforesaid, or the execution of the Certificate of Final Acceptance by the Contractor, shall constitute a release of the Department of Conservation and Recreation, and every member and agent of it, from all claims of and liability to the Contractor for anything done or furnished for or relating to the

Work, or for any act or neglect of the Department of Conservation and Recreation, or of any person relating to or affecting the Work, except the claim against the Department of Conservation and Recreation for the remainder, if any there be, of the amounts set forth by the Contractor in the Certificate of Final Inspection, Release and Acceptance. Final Acceptance shall not relieve the Contractor of the requirements of Articles IX, XIV, and XV of these General Conditions of the Contract, or of other provisions of this Contract, to the extent that the same are intended to survive Final Acceptance.

ARTICLE IX. GUARANTEES AND WARRANTIES

1. General Warranty.

If at any time during the period of one (1) year from the date of Final Acceptance, any part of such Work shall in the reasonable opinion of the DCR be defective or require replacing or repairing, or damage to other property of the DCR is caused by any defect in the Work, the DCR shall notify the Contractor in writing to make the required repairs or replacements and repair such damage. If the Contractor shall neglect to commence such repairs or replacements to the satisfaction of the DCR within ten (10) days from the date of the giving of such notice, then the DCR may employ other persons to make the same. The Contractor agrees, upon demand, to pay to the DCR all amounts which it expends for such repairs, replacements, and/or damages. During this one-year guarantee period any corrective work shall be performed under all the applicable terms of this Contract, and if Change Orders are issued in accordance with the terms of this Contract, the Contractor shall be entitled to compensation for special insurance, as required. This one-year guarantee shall not limit any express guaranty or warranty provided elsewhere in the Contract.

2. Special Guarantees and Warrantees.

A. The Contractor's obligation to correct Work as set forth in paragraph 1 above is in addition to, and not in substitution of, such guarantees or warranties as may be required in the various sections of the Specifications.

B. Guarantees and warranties required in the various sections of the Specifications must be delivered to the DCR before final payment to the Contractor may be made, or in the case of guarantees and warranties which originate with a subcontractor 's section of the Work, before final payment for that sub-trade or for the phase of Work to which the guarantee or warranty relates.

C. The failure to deliver a required guarantee or warranty shall constitute a failure to fully complete the Work in accordance with the Contract Documents.

ARTICLE X: MISCELLANEOUS LEGAL REQUIREMENTS.

1. Contractor to be Informed.

The Contractor shall inform itself of all existing and future Laws in any manner affecting those engaged or employed in the Work, or the materials used or employed in the Work, or in any way affecting the conduct of the Work, and of all orders and decrees of bodies or tribunals having any applicable jurisdiction or authority over the Work.

2. Compliance with all Laws.

The Contractor shall cause all persons employed in the performance of the Work to comply with all existing and future Laws, including but not limited to those set forth below:

A. Corporate Disclosures. The Contractor if a foreign corporation, shall comply with M.G.L. c. 30, sec. 39L.

B. Veterans Preference. In the employment of mechanics and apprentices, teamsters, chauffeurs, and laborers in the performance of Work in the Commonwealth, preference shall first be given to citizens of the Commonwealth who have been residents of the Commonwealth for at least six months at the commencement of their employment and who are veterans as defined M.G.L. c. 4, sec. 7(43), and who are qualified to perform the work to which the employment relates; and secondly, to citizens of the Commonwealth generally who have been residents of the Commonwealth for at least six months at the commencement of their employment, and if they cannot be obtained in sufficient numbers, then to citizens of the United States.

C. Prevailing Wages. The Contractor shall comply with M.G.L. c. 149, sections 26- 27H. The prevailing wage schedule is found in Exhibit A to the Instructions to Bidders, listing the prevailing minimum wage rates that must be paid to all workers employed in the Work. The DCR is not responsible for any errors, omissions, or misprints in said schedule. Such

Schedule shall continue to be the minimum rate of wages payable to workers employed in the Work throughout the term of this Contract, subject to the exceptions provided in M.G.L c. 149, sections 26-27H. The Contractor shall not have any claim for extra compensation from the Department of Conservation and Recreation if the actual wages paid to workers employed in the Work exceeds the rates listed on the schedule or as otherwise provided by law. The Contractor shall cause a copy of said Schedule to be kept in a conspicuous place at the Site during the term of the Contract. If reserve police officers are employed by the Contractor, they shall be paid the prevailing wage of regular police officers. (See M.G.L c.149, sec. 34B).

D. Payroll Records and Statement of Compliance. The Contractor shall comply and shall cause its Subcontractors to comply with Massachusetts General Law c. 149, sec. 27B, which requires that a true and accurate record be kept of all persons employed on a project for which the prevailing wage rates have been provided. The Contractor and all Subcontractors shall keep these records and preserve them for a period of three years from the date of completion of the Contract. Such records shall be open to inspection by any authorized representative of the Department of Conservation and Recreation at any reasonable time, and as often as may be necessary. The Contractor shall, and shall cause its subcontractors to, submit weekly copies of their weekly payroll records to the DCR. In addition, the Contractor and each Subcontractor shall furnish to the Executive Department of Labor within fifteen days after completion of its portion of the Work a signed statement in the form required by the DCR.

E. Vehicle operators. If the Director of the Department of Labor and Workforce Development has established a Schedule of wage rates to be paid to the operators of trucks, vehicles or equipment for the Work, the Contractor shall be obligated to pay such operators at least the minimum wage rate contained on such Schedule. (See M.G.L. c.149, sections 26-27H).

F. Eight Hour Day. The Contractor shall comply with M.G.L. c. 149, sections 30 and 34, which provide that no laborer, workman, mechanic, foreman or inspector working within the Commonwealth in the employ of the Contractor, subcontractor or other person doing or contracting to do the whole or part of the Work shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in cases of extraordinary emergency.

G. Timely Payment of Wages. The Contractor shall comply with and shall cause its Subcontractors to comply with M.G.L. c. 149, sec. 148 which requires the weekly or biweekly payment of employees within six days of the end of the pay period during which wages were earned if employed for five or six days of a calendar week, and within other periods of time under certain circumstances as set forth therein.

H. Lodging, etc. The Contractor shall comply with, and shall cause its Subcontractors to comply with, M.G.L. c. 149, sec. 25 which provides that every employee under this Contract shall lodge, board, and trade where and with whom he elects, and neither the Contractor nor his agents or employees shall, either directly or indirectly, require as a condition of the employment of any person that the employee shall lodge, board, or trade at a particular place or with a particular person.

I. Truck Rates. The use by the Contractor of trucks or other motor vehicles hired from either common or contract motor carriers in the course of performance of this Contract is subject to such minimum rates and charges, and rules and regulations as may from time to time be promulgated by the Department of Public Utilities of the Commonwealth of Massachusetts or other agency of the State or Federal government which may be authorized by law to set rates or otherwise regulate the use of such vehicles. The Contractor expressly assumes the risk of any additional expense that may arise by reason of any change in such minimum rates and charges, and rules and regulations, and shall be entitled to no additional compensation or reimbursement by reason thereof.

J. Anti-Boycott Covenant (Executive Order #130). The Contractor warrants, represents and agrees that during the time this Contract is in effect, neither it nor any affiliated company, as hereafter defined, participates in or cooperates with an international boycott, as defined in Section 999(b) (3) and (4) of the Internal Revenue Code of 1954, as amended, or engages in conduct declared to be unlawful by M.G.L. c. 151E, sec. 2. If there shall be a breach in the warranty, representation or agreement contained in this paragraph, then without limiting such other rights as it may have the DCR shall be entitled to rescind this contract. As used herein, an affiliated company shall be any business entity of which at least 51% of the ownership interests are directly or indirectly owned by the Contractor or by a person or persons or business entity or entities directly or indirectly owning at least 51% of the ownership interests of the Contractor; or which directly or indirectly owns at least 51% of the ownership interests of the Contractor.

K. Contractor's Agreements with Suppliers--Anti-Boycott and Anti-Discrimination Provisions.

(1) The Contractor shall not purchase or rent any materials, equipment, machinery, vehicles or supplies for or in connection with the Work from any person or entity who does not sign, under pains and penalties of perjury, a certificate that recites: “the undersigned warrants, represents and agrees that during the time its agreement with (insert contractor’s name) is in effect for materials, supplies or equipment to be used in connection with the Department of Conservation and Recreation Contract No. (insert contract number), neither the undersigned or any affiliated company, as hereafter defined, participates in or cooperates with an international boycott, as defined in Section 999(b)(3) and (4) of the Internal Revenue Code of 1954, as amende3d, or engages in conduct declared to be unlawful by Section 2 of Chapter 151E of the Massachusetts General Laws. As used herein, an affiliated company shall be any business entity of which at least 51% of the ownership interests are directly or indirectly owned by the undersigned or by a person or persons or business entity or entities directly or indirectly owning at least 51% of the ownership interests of the undersigned; or which directly or indirectly owns at least 51% of the ownership interests of the undersigned.”

(2) The DCR shall not be obligated to pay the Contractor for the cost of any materials, supplies, or equipment purchased or rented from any individual or entity from whom the Contractor has not previously obtained and delivered to the DCR the certificate that the previous paragraph requires. The Contractor will immediately terminate its contract with any supplier who breaches the warranty, representation and agreement contained in the previous paragraph.

(3) The Contractor shall include in the Contractor's agreement with any person or entity from whom the Contractor intends to purchase or rent any materials, equipment, machinery, vehicles or supplies for or in connection with the Work, (a) a notice that this Contract obligates the Contractor to terminate the supply contract upon discovery of such breach of the sworn certificate delivered under subparagraph (1) and such termination shall be without liability to the Contractor or the DCR and (b) a provision which states: "The Governor or his designee, the secretary of administration and finance, and the state auditor or his designee shall have the right at reasonable times and upon reasonable notice to examine the books, records and other compilations of the undersigned vendor which pertain to the performance and requirements of this agreement to provide materials of any nature to the undersigned contractor in connection with DCR Contract No. (insert contract number)."

L. Access to Contractor's Records (Executive Order #195). The Governor or his/her designee, the secretary of administration and finance, and the state auditor or his/her designee shall have the right at reasonable times and upon reasonable notice to examine the books, records, and other compilations of data of the Contractor which pertain to the performance and requirements of this Contract.

ARTICLE XI: CONTRACTOR'S ACCOUNTING METHOD REQUIREMENTS (M.G.L. c. 30, sec. 39R)

1. Definitions.

The words defined herein shall have the meaning stated below whenever they appear in this Article XI:

--"Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a Contract pursuant to M.G.L. c. 30, sec. 39M, and M.G.L. c. 149, sections 44A-H.

--"Contract" means any Contract awarded or executed pursuant to M.G.L. c. 30, sec. 39M, M.G.L. c. 149, sections 44A-H.

--"Independent Certified Public Account" means a person duly registered in good standing and entitled to practice as a certified public accountant under the laws of the place of his/her residence or principal office and who is in fact independent. In determining whether an accountant is independent with aspect to a particular person, appropriate consideration should be given to all relationships between the accountant and that person or any affiliate thereof. Determination of an accountant's independence shall not be confined to the relationships existing in connection with the filing of reports with the awarding authority.

--"Records" means books of original entry, accounts, checks, bank statements and all other banking documents, correspondence, memoranda, invoices, computer printouts, tapes, discs, papers and other documents or transcribed information of any type, whether expressed in ordinary or machine language.

--"Audit", when used regarding financial statements, means an examination of records by an independent certified public accountant in accordance with generally accepted accounting principles and auditing standards for the purpose of expressing a certified opinion thereon, or, in the alternative, a qualified opinion or a declination to

express an opinion for stated reasons.

Accounting terms, unless otherwise defined herein, shall have a meaning in accordance with generally accepted accounting principles and auditing standards.

2. Record Keeping.

A. The Contractor shall make, and keep for at least six years after final payment, books, records, and accounts that in reasonable detail accurately and fairly reflect the transactions and dispositions of the Contractor.

B. Until the expiration of six years after final payment, the Inspector General and the DCR shall have the right to examine any books, documents, papers or records of the Contractor and Subcontractors that directly pertain to and involve transactions relating to the Contractor and Subcontractors.

C. The Contractor shall describe any change in the method of maintaining records or recording transactions which materially affects any statements filed with the DCR including the date of the change and reasons therefor and shall accompany said description with a letter from the Contractor's independent certified public accountant approving or otherwise commenting on the changes.

D. The Contractor represents that it has, prior to the execution of the Contract, filed a statement of management on internal accounting controls as set forth in Section 3 below.

E. The Contractor represents that it has, prior to the execution of the Contract, filed an audited financial statement for the most recent completed fiscal year as set forth in section 4 below and will continue to file such statement annually during the term of the Contract.

3. Statement of Management Controls.

A. The Contractor shall file with the DCR a statement of management as to whether the system of internal accounting controls of the Contractor and its subsidiaries reasonably assures that:

(1) transactions are executed in accordance with management's general and specific authorization.

(2) transactions are recorded as necessary: (a) to permit preparation of financial statements in conformity with generally accepted accounting principles, and (b) to maintain accountability for assets.

(3) access to assets is permitted only in accordance with management's general or specific authorization; and

(4) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action was taken with respect to any difference.

B. The Contractor shall file with the DCR a statement prepared and signed by an independent certified public accountant, stating that the accountant has examined the statement of management on internal accounting controls, and expressing an opinion as to:

(1) whether the representations of management in response to subparagraph 3 above are consistent with the results of management's evaluation of the system of internal accounting controls; and

(2) whether such representations of management are reasonable with respect to transactions and assets in amounts which would be material when measured in relation to the applicant's financial statement.

4. Annual Financial Statement.

A. Every Contractor awarded a contract under M.G.L. c. 30, sec. 39M or M.G.L. c. 149, sections 44A-44H shall annually file with the Commissioner of the Division of Capital Asset Management and Maintenance during the term of the Contract a financial statement prepared by an independent certified public accountant based on an audit by such accountant. The final statement filed shall include the date of final payment. All statements shall be accompanied by an accountant's report. Such statements shall be made available to the DCR upon request.

B. The office of Inspector General and the DCR shall have the right to enforce the provisions of this Article. A Contractor's failure to satisfy any of the requirements of this section may be grounds for debarment pursuant to M.G.L. c. 149, sec. 44C.

5. Bid Pricing Materials.

The Contractor shall save the written calculations, pricing information, and other data that the Contractor used to calculate the bid that induced the DCR to enter this Contract (the "Bid Pricing Materials") for at least six years after the DCR makes final payment under this Contract.

ARTICLE XII: EQUAL EMPLOYMENT OPPORTUNITY, NON-DISCRIMINATION, AND AFFIRMATIVE ACTION PROGRAM.

This Contract includes the provisions of the DCR's "Equal Employment Opportunity, Non-Discrimination, and

Affirmative Action Program," attached as Appendix A to these General Conditions of the Contract and incorporated herein by reference.

ARTICLE XIII: GOALS FOR PARTICIPATION BY MINORITY BUSINESS ENTERPRISES AND WOMEN BUSINESS ENTERPRISES

This Contract includes the provisions of the DCR's ”Goals for Participation by Minority Business Enterprises and Women Business Enterprises (Executive Order 390), attached as Appendix B to these General Conditions, and as set forth in Section 8 of the Instructions to Bidders, and incorporates same herein by reference**.**

ARTICLE XIV: INSURANCE REQUIREMENTS

The Contractor shall carry insurance, in the amounts and types specified in Section 7 of the Instructions for Bidders for this Contract and shall comply with all provisions relating to insurance set forth in said Section 7.

ARTICLE XV: INDEMNIFICATION

1. Generally.

To the fullest extent permitted by law, the Contractor shall indemnify, defend (with counsel subject to the supervision of the Attorney General of the Commonwealth of Massachusetts as required by M.G.L. c. 12, sec. 3) and hold harmless the Commonwealth of Massachusetts, its Department of Conservation and Recreation, and its officers, agents, divisions, employees, representatives, successors and assigns from and against all claims, damages, losses and expenses, including but not limited to court costs and attorneys’ fees, arising out of or resulting from the performance of the Work, including but not limited to those arising or resulting from:

-labor performed or furnished and/or materials used or employed in the performance of the Work.
-violations by the Contractor, any subcontractor, or by any person directly or indirectly employed or used by any of them in the performance of the Work or anyone for whose acts any of them may be liable (Contractor, subcontractor and all such persons herein collectively called "Contractor's Personnel") of any Laws.
-violations of any provision of this Contract by any of Contractor's Personnel.
-injuries to any persons or damage to any property in connection with the Work.
-any act, omission, or neglect of Contractor's Personnel.

The Contractor shall be obligated as provided above, regardless of whether such claims, damages, losses and/or expenses are caused in whole or in part by the actions or inactions of a party indemnified hereunder. In all claims by Contractor's Personnel against parties indemnified hereunder, the Contractor's indemnification obligation set forth above shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Contractor or any subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this Article XV.

2. DCR's Actions.

The obligations of the Contractor under Section 1 above shall not extend to the liability of the DCR, its agents or employees, arising out of (i) the preparation or approval of maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications by the DCR, or (ii) the giving of or the failure to give directions or instructions by the DCR, its agents or employees provided such giving or failure to give is the primary cause of the injury or damage.

3. Survival.

The provisions of this Article XV are intended to survive Final Acceptance and/or any termination of this Contract.

ARTICLE XVI: PERFORMANCE AND PAYMENT BONDS

1. Contractor Bonds.

A. The Contractor shall provide performance and payment (labor and materials) bonds in the form provided by the DCR, executed by a surety licensed by the Commonwealth of Massachusetts Division of Insurance. Each such bond shall be in the amount of the Contract Price.

B. If at any time prior to final payment to the Contractor, the Surety:

-is adjudged bankrupt or has made a general assignment for the benefit of its creditors.
-has liquidated all assets and/or has made a general assignment for the benefit of its creditors.
-is placed in receivership.
-otherwise petitions a state or federal court for protection from its creditors; or
-allows its license to do business in Massachusetts to lapse or be revoked.

then the Contractor shall, within 21 days of any such action listed above, provide the DCR with new performance and payment bonds as described in Paragraph A above. Such bonds shall be provided solely at the Contractor's expense.

2. Subcontractor Bonds.

The Contractor is responsible for the costs of the payment and performance bonds of the sub-contractors for the full amount of their respective Subcontracts.

ARTICLE XVII: TERMINATION OF CONTRACT

1. Termination for Cause.

A. The DCR may without prejudice to any other right or remedy deem this Contract terminated for cause if any of the following defaults shall occur and not be cured within five days (5) days after the giving of notice thereof by the DCR to the Contractor and any surety that has given bonds in connection with this Contract:

(1) The Contractor has filed a petition, or a petition has been filed against the Contractor with its consent, under any federal or state law concerning bankruptcy, reorganization, insolvency or relief from creditors, or if such a petition is filed against the Contractor without its consent and is not dismissed within sixty (60) days; or if the Contractor is generally not paying its debts as they become due; or if the Contractor becomes insolvent; or if the Contractor consents to the appointment of a receiver, trustee, liquidate, custodian or the like of the Contractor or of all or any substantial portion of its assets and such appointment or possession is not terminated within sixty (60) days; or if the Contractor makes an assignment for the benefit of creditors;

(2) The Contractor refuses or fails, except in cases for which extension of time is provided under this Contract's express terms, to supply enough properly skilled workers or proper materials to perform its obligations under this Contract, or the DCR has determined that the rate of progress required for the timely completion of the Work is not being met.

(3) The Contractor fails to make prompt payment to Subcontractors or for materials, equipment, or labor.

(4) All or a part of the Work has been abandoned.

(5) The Contractor has sublet or assigned all or any portion of the Work, the Contract, or claims thereunder, without the prior written consent of the Department of Conservation and Recreation, except as expressly permitted in this Contract.

(6) The Contractor has failed to comply with Laws.

(7) The Contractor fails to maintain, or provide to the DCR evidence of the insurance or bonds required by this Contract, or

(8) The Contractor has failed to prosecute the Work or any portion thereof to the standards required under this Contract or has otherwise breached any material provision of this Contract.

B. The DCR shall give the Contractor, and any surety notice of such termination for cause, but the giving of notice of such termination shall not be a condition precedent or after the termination's effectiveness. In the event of such termination, and without limiting any other available remedies, the DCR may, at its option:

(1) hold the Contractor and its sureties liable in damages for a breach of Contract.

(2) notify the Contractor to discontinue all work, or any part thereof, and the Contractor shall discontinue all work, or any part thereof, as the Department of Conservation and Recreation may designate.

(3) complete the Work, or any part thereof, and charge the expense of completing the Work or part thereof, to the Contractor.

(4) require the surety or sureties to complete the Work and perform all the Contractor's obligations under this Contract.

If the DCR elects to complete all or any portion of the Work as specified in (3) above, it may take possession of all materials, equipment, tools, machinery, implements owned by the Contractor at or near the Site and finish the Work at the Contractor's expense by whatever means the DCR may deem expedient; and the Contractor shall cooperate

at its expense in the orderly transfer of the same to a new contractor or to the DCR as directed by the DCR. In such case the DCR shall not make any further payments to the Contractor until the Work is finished. The Department of Conservation and Recreation shall not be liable for any depreciation, loss, or damage to said materials, machinery, implements or tools during said use and the Contractor shall be solely responsible for their removal from the Site after the Department of Conservation and Recreation has no further use for them. Unless so removed within fifteen days after notice to the Contractor to do so, they may be sold at public auction, after publication of notice thereof at least twice in any newspaper published in the county where the Work is being performed, and the proceeds credited to the Contractor's account; or they may, at the option of the DCR, be stored at the Contractor's expense subject to a lien for the storage charges.

C. Damages and expenses incurred under paragraph B above shall include, but not be limited to, costs for the DCR's extra services and Project representative services required, in the opinion of the DCR, to successfully inspect and administer the construction contract through final completion of the Work.

D. Expenses charged under paragraph B above may be deducted and paid by the DCR out of any moneys then due or to become due the Contractor under this Contract.

E. All sums, damages, and expenses incurred by the Department of Conservation and Recreation to complete the Work shall be charged to the Contractor. In case the damages and expenses charged are less than the sum that would have been payable under this Contract if the same had been completed by the Contractor, the Contractor shall be entitled to receive the difference. In case such expenses shall exceed the said sum, the Contractor shall pay the amount of the excess to the Department of Conservation and Recreation.

2. Termination For Convenience.

A. The DCR may terminate this Contract for convenience even though the Contractor is not in default by giving notice to the Contractor specifying in said notice the date of termination.

B. In case of such termination without cause, the Contractor shall be paid:
(1) all sums due and owing under this Contract through the date of termination, including any retainage withheld to the date of termination, less any amount which the DCR determines is necessary to correct or complete the Work performed to the date of termination; plus (2) a reasonable sum to cover the expenses which the Contractor would not have incurred but for the early termination of the Contract, such as demobilization of the work force, restocking charges, and termination fees payable to Subcontractors.

C. The payment provided in paragraph B above shall be considered to fully compensate the Contractor, and any consultants, Subcontractors, and suppliers, for all claims and expenses directly or indirectly attributable to the termination, including any claims for lost profits.

3. Contractor's Duties Upon Termination for Convenience.

Upon termination of this Contract for convenience as provided in Section 2 of this Article, the Contractor shall: (1) stop the Work; (2) stop placing orders and Subcontracts in connection with this Contract; (3) cancel all existing orders and Subcontracts; (4) surrender the Site to the DCR in a safe condition; (5) transfer to the DCR all materials, supplies, work in process, appliances, facilities, equipment and machinery of this Contract, and all plans, Drawings, Specifications and other information and documents used in connection with this Contract.

ARTICLE XVIII: MISCELLANEOUS PROVISIONS

1. No Assignment by Contractor.

The Contractor shall not assign by power of attorney or otherwise, or sublet or subcontract, the Work, or any part thereof, without the previous written consent of the DCR and shall not, either legally or equitably, assign any of the moneys payable under this Contract, or Contractor's claims hereunder, unless with the like consent of the DCR, whether said assignment is made before, at the time of, or after the execution of the Contract. The Contractor shall remain responsible for satisfactory performance of all Work sublet or assigned. Consent of the DCR shall not be deemed to constitute a representation or waiver of any right hereunder by the DCR as to the qualifications or the responsibility of the Contractor or Subcontractor(s).

2. Non-Appropriation.

The Commonwealth certifies that at the time of the execution of this Contract, sufficient appropriations exist and shall be encumbered to fund the Contract Price. Payments are subject to appropriation and shall be made only for work performed in accordance with the terms of this Contract. The Contractor shall not be obligated to perform,

and shall not perform, work outside the scope of this Contract without an appropriate amendment to this Contract, and a sufficient appropriation(s) to support such additional work. The Commonwealth may immediately terminate or suspend this Contract if the appropriation(s) funding this Contract is eliminated or reduced to an amount which will be insufficient to support anticipated future obligations under this Contract. Such termination shall be deemed a termination for convenience subject to the provisions of paragraph 2 of Article XVII of this Contract.

3. Claims by Others Not Valid.
No person other than the Contractor and the surety on any bond given pursuant to the terms of this Contract shall acquire any interest in this Contract or any claim against the DCR hereunder, and no claim by any other person shall be valid except as provided in M.G.L. c. 30, sec. 39F of the General Laws.

4. No Personal Liability of Public Officials.
No public official, employee, or agent of the DCR shall have any personal liability for the obligations of the DCR set forth in this Contract.

5. Severability.
The provisions of this Contract are severable, and if any of these provisions shall be held unconstitutional or unenforceable by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the other provisions of this Contract.

6. Choice of Laws.
This Contract shall be governed by the laws of the Commonwealth of Massachusetts for all purposes, without regard to its laws on choice of law. All proceedings under this Contract or related to the Project shall be brought in the courts of the Commonwealth of Massachusetts.

7. Standard Forms.
Unless directed otherwise in writing by the DCR, the Contractor shall use the standard forms in use by the Department of Conservation and Recreation.

8. No Waiver of Subsequent Breach.
No waiver of any breach or obligation of this Contract shall constitute a waiver of any other or subsequent breach or obligation.

9. Remedies Cumulative.
All remedies of the DCR provided in this Contract shall be construed as cumulative and may be exercised simultaneously or in any order as determined by the DCR in its sole discretion. The DCR shall also be entitled as of right to specific performance and equitable relief including the right to an injunction against any breach of any of the provisions of this Contract

10. Notices.
Notices to the Contractor shall be deemed given when hand delivered to the Contractor's temporary field office at or near the Site, or when deposited in the U.S. mail addressed to the Contractor at the Contractor's address specified in the Department of Conservation and Recreation - Contractor Agreement, or when delivered by courier to either location. Unless otherwise specified in writing by the DCR, notices and deliveries to the DCR shall be effective only when delivered to the DCR at the address specified in the Department of Conservation and Recreation - Contractor Agreement and date-stamped at the reception desk or for which a receipt has been signed by the agent or employee designated by the DCR to receive official notices.

APPENDIX A to General Conditions of the Contract

The following provisions from Article XII of the General Conditions of the Contract where DCR is the Awarding Authority.

EQUAL EMPLOYMENT OPPORTUNITY, NON-DISCRIMINATION, AND AFFIRMATIVE ACTION

PROGRAM.

1. Compliance Generally.

For purpose of this Article, "minority" refers to Asians, Blacks, Western Hemisphere Hispanics, Native Americans, and Cape Verdeans; "Commission" refers to the Massachusetts Commission Against Discrimination. During the performance of this Contract, the Contractor and all its Subcontractors (hereinafter collectively referred to as the Contractor) shall comply with all applicable equal employment opportunity, non-discrimination and affirmative action requirements, including but not limited to the following:

2. Non-Discrimination and Affirmative Action.

A. The Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, age, handicap, sexual orientation, or sex. The aforesaid provision shall include, but not be limited to, the following: employment rates of pay or other forms of compensation; conditions or privileges of employment; and selection for apprenticeship. The Contractor shall comply with the provisions of MGL, c. 151B and all other applicable anti-discrimination and equal opportunity laws.

B. The Contractor shall comply with the provisions of Executive Order No. 478 entitled Revoking and Superseding Executive Orders Numbers 253 and 452, with respect to affirmative action programs for handicapped individuals, which is herein incorporated by reference and made a part of this Contract.

C. In connection with the performance of the Work, the Contractor shall undertake in good faith affirmative action measures designed to eliminate any discriminatory religious creed, national origin, age, sexual orientation, or sex and to eliminate and remedy any effects of such discrimination in the past. Such affirmative action shall entail positive and aggressive measures to ensure equal opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation, and in-service or apprenticeship training programs. This affirmative action shall include all action required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, age, sexual orientation, or sex. A purpose of this provision is to fully ensure possible an adequate supply of skilled tradesmen for future public construction projects.

D. If the Contractor shall use any subcontractor on any work performed under this Contract, the Contractor shall take affirmative steps to negotiate with qualified minority and women subcontractors. These affirmative steps shall cover both pre-bid and post-bid periods. It shall include notification to the State Office of Minority and Women Business Assistance or its designee, while bids are in preparation, of all products, work, or services for which the Contractor intends to negotiate bids. In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential subcontractor or supplier shall be notified in writing by the Contractor of the Contractor's obligations under this Contract relative to non-discrimination and affirmative action.

E. As part of its obligation of remedial action under this Article, the Contractor shall maintain on this project not less than the percent ratio set forth in the Owner – Contractor Agreement of minority employee worker hours to total worker hours in each job category including but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers, and those "classes of work" enumerated in MGL, c. 149, Sec. 44F.

F. In the hiring of minority journeypersons, apprentices, trainees and advanced trainees, the Contractor shall rely on referrals from a multi-employer affirmative action program approved by the Commission, traditional referral methods utilized by the construction industry, and referrals from agencies, not more than three in number at any one time, designated by the Liaison Committee or the Awarding Authority.

3. Liaison Committee, Reports and Records.

A. At the option of the Awarding Authority, there may be established for the term of this Contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of one

representative each from the Awarding Authority, the Commission and such other representatives as may be designated by the Commission in conjunction with the Awarding Authority. The Contractor (or his agent, if any, designated by him as the on-site equal employment opportunity officer) shall recognize the Liaison Committee as an affirmative action body, and shall establish a continuing working relationship with the Liaison Committee, consulting with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.

B. The Contractor shall prepare projected staffing tables on a quarterly basis. These shall be broken down into projections, by week, of workers required in each trade. Copies shall be furnished one week in advance of the commencement of the period covered, and when updated, to the Awarding Authority and Liaison Committee. The Contractor shall prepare weekly reports in a form approved by the Awarding Authority of hours worked in each trade by each employee, identified as minority or non-minority. Copies of these shall be provided at the end of each such week to the Awarding Authority and to the Liaison Committee.

C. Records of employment referral orders, prepared by the Contractor, shall be made available to the Awarding Authority and to the Liaison Committee on request.

D. A designee of the Awarding Authority and a designee of the Liaison Committee shall each have right to access to the Site.

E. The Contractor shall comply with the provisions of MGL, c. 151B as amended, of the Massachusetts General Laws, both of which are herein incorporated by reference and made a part of this Contract.

F. The Contractor shall provide all information and reports required by the Awarding Authority or the Commission on forms and in accordance with instructions issued by either of them and will permit access to its facilities and any books, records, accounts, and other sources of information which may be determined by the Awarding Authority or the Commission to affect the employment of personnel. This provision shall apply only to information pertinent to the Owner's supplementary affirmative action Contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the Awarding Authority or the Commission as appropriate and shall set forth what efforts he has made to obtain the information.

4. <u>Sanctions</u>.

A. Whenever the Awarding Authority, the Commission, or the Liaison Committee believes the Contractor, or any Subcontractor may not be operating in compliance with the terms of this Article, the Commission shall directly, or through its designated agent, conduct an appropriate investigation, and may confer with the parties to determine if such Contractor is operating in compliance with the terms of this Article. If the Commission or its agent finds the Contractor or any Subcontractor not in compliance, it may make a preliminary report on non-compliance and notify such Contractor in writing of such steps as will in the judgment of the Commission or its agent bring such Contractor into compliance. If such Contractor fails or refuses to fully perform such steps, the Commission may make a final report of non-compliance and recommend to the Awarding Authority the imposition of one or more of the sanctions listed below. If, however, the Commission believes the Contractor or any Subcontractor has taken or is taking every possible measure to achieve compliance, it shall not make a final report of non-compliance. Within fourteen days of the receipt of the recommendations of the Commission, the Awarding Authority shall move to impose one or more of the following sanctions, as it may deem appropriate to attain full and effective enforcement:

(l) The recovery by the Awarding Authority from the Contractor of 1/100 of 1% of the Contract award price or $1,000 whichever sum is greater, in the nature of liquidated damages or, if a Subcontractor is in non-compliance, the recovery by the Awarding Authority from the Contractor, to be assessed by the Contractor as a back charge against the subcontractor, of 1/10 of 1% of the sub-contract price, or $400 whichever sum is greater, in the nature of liquidated damages, for each week that such party fails or refuses to comply.

(2) The suspension of any payment or part thereof due under the Contract until such time as the Contractor or any subcontractor can demonstrate his compliance with the terms of the Contract.

(3) The termination, or cancellation, of the Contract, in whole or in part, unless the Contractor or any Subcontractor can demonstrate within a specified times his compliance with the terms of the contract.
(4) The denial to the Contractor or any subcontractor of the right to participate in any future contracts awarded by the Awarding Authority for a period of up to three years.

B. If any time after the imposition of one or more of the above sanctions a Contractor can demonstrate that it follows this Article, the Contractor may request the Awarding Authority, in consultation with the Commission, to suspend the sanctions conditionally, pending a final determination by the Commission as to whether the Contractor complies. Upon final determination of the Commission, the Awarding Authority, based on the recommendation of the Commission, shall either lift the sanctions or reimpose them.

C. Sanctions recommended by the Commission and enumerated under Section 4 above shall not be imposed by the Awarding Authority except after an adjudicatory proceeding, as that term is used in MGL, c. 30A, has been conducted. No investigation by the Commission or its agent shall be initiated without prior notice to the Contractor.

D. Notwithstanding the provisions of 4A-4C above, if the Awarding Authority determines after investigation that the Contractor or any Subcontractor is not in compliance with the terms of this Article, it may suspend any payment or portion thereof due under the Contract until the contractor demonstrates to the satisfaction of the Awarding Authority compliance with the terms of this Article. This temporary suspension of payments by the Awarding Authority is separate from the sanctions set forth in Section 4A-4C of this Article above, which are determined by MCAD and recommend to the Awarding Authority. Payment may be suspended only after the Contractor and any other interested party shall have been given the opportunity to present evidence in support of its position at an informal hearing held by the Awarding Authority, and the Awarding Authority has concluded upon review of all the evidence that such penalty is justified. Payment shall not be suspended if the Awarding Authority finds that the Contractor made its best efforts to comply with this Article, or that some other justifiable reason exists for waiving the provisions of this Article in whole or in part.

APPENDIX B to General Conditions of the Contract

The following provisions from Article XIII of the General Conditions of the Contract where DCR is the Awarding Authority.

GOALS FOR PARTICIPATION BY MINORITY BUSINESS ENTERPRISES AND WOMEN BUSINESS ENTERPRISES (EXECUTIVE ORDER 390, MGL, c. 7, s. 40N)

1. Goals.

A. The goals for minority business enterprise and women business enterprise participation established for this Contracts are as set forth in the Owner – Contractor Agreement.

B. The Contractor and all Subcontractors, sub-subcontractors, and materials suppliers shall comply with all the terms and conditions of this Article, which include the provisions pertaining to M/WBE participation set forth in the Owner – Contractor Agreement to meet the M/WBE participation goals established for this Contract.

2. M/WBE Participation Credit.

A. If the Contractor is itself an MBE or WBE, M/WBE participation credit will be given in an amount equal to the entire Contract Price. If the Contractor is not an MBE or WBE then M/WBE participation credit will be given for the value of the Work that is performed by each MBE or WBE subcontractor or subcontractor.

B. If the Contractor is a joint venture with one or more M/WBE joint venturers, M/WBE participation credit shall be given to the joint venture as follows:
(1) If the joint venture is certified by SOMBWA as an MBE or WBE, M/WBE participation credit shall be given in an amount equal to the Contract Price.
(2) If the joint venture is not certified as an MBE or WBE by SOMWBA, M/WBE participation credit shall be given to the joint venture for the value of the Work that is performed by the M/WBE joint ventures(s), and for the value of the Work that is performed by each MBE or WBE subcontractor or sub-subcontractor.

C. MBE participation credit shall be given for the work performed by MBEs only, and WBE participation credit shall be given for the work performed by WBEs only. MBE participation may not be substituted for WBE participation, nor may WBE participation be substituted for MBE participation.

3. Establishing M/WBE Status.

A. A minority-owned business shall be considered an MBE only if it has been certified as a minority business enterprise by the State Office of Minority and Women Business Assistance ("SOMWBE").

B. A woman-owned business shall be considered a WBE only if it has been certified as a woman business enterprise by SOMWBA.

C. Certification as a disadvantaged business enterprise ("DBE"), certification as an M/WBE by any agency other than SOMWBA, or submission of an application to SOMWBA for certification as an M/WBE shall not confer M/WBE status on a firm for the purposes of this Contract.

4. Subcontracts with M/WBEs.

Within thirty (30) days after the award of this Contract, the Contractor shall (i) execute a subcontract with each M/WBE Subcontractor which has executed a Letter of Intent approved by the Awarding Authority, (ii) cause its Subcontractors to execute a sub-subcontract with each M/WBE sub-subcontractor, and (iii) furnish the Awarding Authority with a signed copy of each such subcontract and sub-subcontract.

5. Performance of Contract Work by M/WBEs.

A. The Contractor shall not perform with its own organization or subcontract or assign to any other firm work designated to be performed by any W/MBE in the Letters of Intent or Schedule of M/WBE Participation without the prior Approval of the Awarding Authority, nor shall any M/WBE assign or subcontract to any other firm or permit any other firm to perform any of its M/WBE Work without the prior Approval of the Awarding Authority. Any such unapproved assignment, subcontracting, sub-subcontracting, or performances of M/WBE Work by others shall be a change in the M/WBE Work for the purposes of this Contract. The Awarding Authority WILL NOT APPLY TO THE M/WBE PARTICIPATION GOALS(S) ANY SUMS ATTRIBUTABLE TO SUCH UNAPPROVED ASSIGNMENTS, SUB-CONTRACTS, SUB-SUBCONTRACTS, OR PERFORMANCE OF M/WBE WORK BY OTHERS.

B. The Contractor shall be responsible for monitoring the performance of M/WBE Work to ensure that each scheduled M/WBE performs its own M/WBE Work with its own workforce.

C. The Contractor and each M/WBE shall provide the Awarding Authority with all information and documentation that the Awarding Authority determines is necessary to ascertain whether an M/WBE has performed its own M/WBE Work. At the discretion of the Awarding Authority, failure to submit such documentation to the Awarding Authority shall establish conclusively for the purpose of giving M/WBE participation credit under this Contract that such M/WBE did not perform such work.

6. Notification of Changes in M/WBE Work.

A. If any time during the performance of the Contract the Contractor determines or has reason to believe that a scheduled M/WMBE is unable to unwilling to perform its M/WBE Work, or that there has been or will be a change in any M/WMBE Work, or that the Contractor will be unable to meet the M/WBE participation goal(s) for this Contract for any reason, the Co0ntractor shall immediately notify the Awarding Authority Contract Compliance Office in writing of such circumstances.

B. Any notice of a change in M/WBE Work pursuant to subparagraph "A: above shall include a revised Schedule of M/WBE Participation, and additional or amended Letters of Intent and subcontracts.

7. Actions Required if there is a Reduction in M/WBE Participation.

A. In the event there is a change or reduction in any M/WBE Work which will result in the Contractor failing to meet the M/WBE participation goal(s) for this Contract, other than a reduction in

M/WBE Work resulting from a Change Order initiated by the Awarding Authority, then the Contractor shall immediately undertake a diligent, good faith effort to make up the shortfall in M/WBE participation as follows:
(1) The Contractor shall identify all items of the Work remaining to be performed under the Contract that may be made available for subcontracting to W/MBEs. The Contractor shall send a list of such items of work to the Awarding Authority, together with a list of the remaining items of the Work that was not made available to M/WBEs and the reason for not making such work available for subcontracting to M/WBEs.
(2) The Contractor shall send written notices soliciting proposals to perform the items of the Work that may be made available for subcontracting to W/MBEs to all W/MBEs qualified to perform such work. The Contractor shall advise the Awarding Authority of (i) each W/MBE solicited, and (ii) each W/MBE listed in the SOMWBA directory under the applicable trade category who was not solicited and the reasons, therefore. The Contractor shall also advise the Awarding Authority of the dates notices were mailed and provide a copy of the written notice(s) sent.
(3) The Contractor shall make reasonable efforts to follow up the written notices sent to M/WBEs with telephone calls or personal visits to determine with certainty whether the M/WBEs were interested in performing the work. Phone logs or other documentation must be submitted to the Awarding Authority evidencing this effort.
(4) The Contractor shall make reasonable efforts to assist M/WBEs that need assistance in obtaining insurance, bonds, or lines of credit to perform work under the Contract and shall provide the Awarding Authority with evidence that such efforts were made.

(5) The Contractor shall provide the Awarding Authority with a statement of the response received from each M/WBE solicited, including the reason for rejecting any M/WBE who submitted a proposal.
(6) The Contractor shall take any additional measures reasonably requested by the Awarding Authority to meet the M/WBE participation goal(s) established for this Contract, including, without limitation, placing advertisements in appropriate media and trade association publications announcing the Contractor's interest in obtaining proposals from M/WBEs, and/or sending written notification to M/WBE economic development assistance agencies, trade groups and other organizations notifying them of the project and of the work available to be subcontracted by the Contractor to M/WBEs.
B. If the Contractor is unable to meet the M/WBE participation goals for this Contract after complying fully with each of the requirements of paragraph "A" above, and the Contractor is otherwise in full compliance with the terms of this Article, the Awarding Authority may reduce the M/WBE participation goals for this Contract to the extent that such goals cannot be achieved.

8. <u>Suspension of Payment and/or Performance for Noncompliance</u>.

A. If at any time during the performance of this Contract, the Awarding Authority determines or has reason to believe that (1) there has been a change or reduction in any M/WBE Work which will result in the Contractor failing to meet the M/WBE participation goal(s) for this Contract, other than a reduction in M/WBE Work resulting from a change in the Contract work ordered by the Awarding Authority, and (2) the Contractor has failed to comply fully with all of the terms and conditions of paragraphs 1 through 7 above, the Awarding Authority may:
(1) suspend payment to the Contractor of an amount equal to the value of the work which was to have been performed by an M/WBE pursuant to the Contractor's Schedule of M/WBE Participation, but which was not so performed, to ensure that sufficient Contract funds will be available if liquidated damages are assessed pursuant to paragraph 9 and/or
(2) suspend the Contractor's performance of this Contract in whole or in part.

B. The Awarding Authority shall give the Contractor prompt written notice of any action taken pursuant to paragraph A above and shall give the Contractor and any other interested party, including any M/WBEs, an opportunity to present evidence to the Awarding Authority that the Contractor is in compliance with the requirements of this Article, or that there is some justifiable reason for waiving the requirements of this Article in

whole, or in part. The Awarding Authority may invite SOMWBA and the Massachusetts Commission Against Discrimination to participate in any proceedings undertaken pursuant to this paragraph.

C. Upon a showing that the Contractor is in full compliance with the requirements of this Article, or that the Contractor has met or will meet the M/WBE participation goals for this Contract, the Awarding Authority shall release any funds withheld pursuant to clause A(1) above and lift any suspension of the Contractor's performance under clause A(2) above.

9. Liquidated Damages; Termination.

A. If payment by the Awarding Authority or performance by the Contractor is suspended by the Awarding Authority as provided in paragraph 8 above, the Awarding Authority shall have the following rights and remedies if the Contractor thereafter fails to take all action necessary to bring the Contractor into full compliance with the requirements of this Article, or if full compliance is no longer possible because the default of the Contractor is no longer susceptible to cure, if the Contractor fails to take such other action as may be required by the Awarding Authority to meet the M/WBE participation goals set forth in this Contract:

(1) the Awarding Authority may terminate this Contract, and/or

(2) the Awarding Authority may retain from final payment to the Contractor, as liquidated damages, an amount equal to the difference between (x) the total of the M/WBE participation goals set forth in this Contract, and (y) the amount of M/WBE participation credit earned by the Contractor for M/WBE Work performed under this Contract as determined by the Awarding Authority, the parties agreeing that the damages for failure to meet the M/WBE participation goals are difficult to determine and that the foregoing amount to be retained by the Awarding Authority represents the parties' best estimate of such damages. Any liquidated damages will be assessed separately for MBE and WBE participation.

B. Before exercising its rights and remedies hereunder, the Awarding Authority may, but the Awarding Authority shall not be obligated to, give the Contractor and any other interested party another opportunity to present evidence to the Awarding Authority that the Contractor is in compliance with the requirements of this Article or that there is some justifiable reason for waiving the requirements of this Article in whole or in part. The Awarding Authority may invite SOMWBA and the Massachusetts Commission Against Discrimination to participate in any proceedings undertaken hereunder.

10. Reporting Requirements.

The Contractor shall submit to the Awarding Authority al information or documentation that is necessary in the judgment of the Awarding Authority to ascertain whether the Contractor has complied with any of the provisions of this Article.

11. Awarding Authority's Right to Waive Provisions of this Article in Whole or in Part.

The Awarding Authority reserves the right to waive any provision or requirement of this Article if the Awarding Authority determines that such waiver is justified and in the public interest. No such waiver shall be effective unless in writing and signed by a representative of the Awarding Authority's Compliance Office or the office of its General Counsel. No other action or inaction by the Awarding Authority shall be construed as a waiver of ay provision of this Article.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATON AND RECREATION

SPECIAL GOOD FAITH REQUIREMENTS FOR PARTICIPATION BY VETERAN OWNED BUSINESS ENTERPRISES
(Implementing Executive Order No. 546, Establishing the Veteran Owned Business Enterprise Program).
BIDDER'S INSTRUCTIONS

THE APPARENT LOW BIDDER'S COMPLIANCE WITH THE REQUIREMENTS OF THIS SECTION IS A PREREQUISITE FOR RECEIVING THE AWARD OF THE CONTRACT.

1) Participation Goals and Program Operation

In order to be an eligible VOBE for the participation goals of this Contract, the business enterprise must be listed as a veteran-owned business within the VetBiz database, located at www.VetBiz.gov, at the time of the bid submission deadline. Only a VOBE identified as a veteran-owned small business via the VetBiz database shall count towards meeting the Program participation goal.

The Contractor must demonstrate that VOBEs are eligible for the following participation goals via its listing as a veteran-owned small business within the VetBiz database, located at www.VetBiz.gov, at the time said VOBE seeks to participate in business provided under this Contract; provided, that it shall also be the responsibility of the Awarding Authority to verify the status of the SDVOBE via said VetBiz database prior to the awarding of the Contract.

a) Design Services Contracts – In furtherance of the goals and objectives of the program, commencing July 1, 2013 until such time as the Secretary for Administration and Finance has adopted a new participation goal, the participation goal, which shall be expressed in the form of a benchmark for each design services contract, shall be three (3) percent; provided, that said participation goal may be met by the veteran-owned business enterprise performing as either a general or prime contractor, a subcontractor, or both; provided further, that the awarding agency shall verify the status of business enterprise participation on a design services contract.

b) Public Construction Contracts – In furtherance of the goals and objectives of the Program, commencing July 1, 2013 until such time as the Secretary of Administration and Finance has adopted a new participation goal, the participation goal, which shall be expressed in the form of a benchmark for each public construction contract, shall be three (3) percent; provided, that said participation goal may be met by the veteran-owned business enterprise performing as either a general or prime contractor, a subcontractor, or both; provided further, that the awarding agency shall verify the status of a service veteran-owned business enterprise prior to said business enterprise participation on a public construction contract.

2) Goal Reduction/Waiver

A) The Awarding Authority reserves the right to reduce or waive the SDVOBE participation goals established for this Contract upon written request made by a Bidder using the VOBE Waiver Request Form provided by the Awarding Authority.

B) If filed Sub-Bids are solicited for this Contract, requests from prospective general Bidders to reduce or waive the VOBE participation goals for this Contract should be received by the Awarding Authority no later than four (4) working days after the list of filed Sub- Bidders is mailed by the Awarding Authority to persons who have taken out plans for the Contract, using the VOBE Waiver Request Form provided by the Awarding Authority.

C) If there are no filed sub-Bids solicited for this Contract, requests to reduce or waive the SDVOBE participation goals for this Contract should be received by the Awarding Authority no later than five (5) working days before the date set for the receipt of general Bids. **THE AWARDING AUTHORITY RESERVES THE RIGHT TO REJECT ANY REQUEST TO REDUCE OR WAIVE THE VOBE PARTICIPATION GOALS FOR THIS CONTRACT THAT IS RECEIVED AFTER THESE DEADLINES.** Such written request must demonstrate to the satisfaction of the Awarding Authority that it is not feasible for a non- VOBE or non- VOBE general Bidder to meet the goals established for this Contract based upon any or all the following:

a) actual VOBE availability.

b) the geographic location of the project to the extent related to SDVOBE availability.

c) the scope of the work.

d) the percentage of work available for subcontracting to VOBEs; and/or

e) other relevant factors, including a **documented** inability by the prospective Bidder to obtain commitments from VOBE subcontractors sufficient to meet the VOBE goals after having made a diligent, good faith effort to do so. All the foregoing documentation shall accompany the completed Waiver Request Form. Such documentation shall include, at a minimum, the following:

- A list of all items of work under the Contract that the Bidder made available for subcontracting to VOBEs. The Bidder shall identify all items of work, other than work to be performed by filed sub-Bidders, that the Bidder did not make so available and shall state the reasons for not making such work available for subcontracting to VOBEs. The Bidder shall also demonstrate that, where commercially reasonable, subcontracts were divided into units capable of being performed by VOBEs.

- Evidence that the Bidder sent written notices soliciting Bids or proposals to perform the items of work made available by the Bidder for subcontracting to all available VOBEs qualified to perform such work. The Bidder shall identify each VOBE solicited, state the dates that notices were mailed, provide a copy of the written notice(s) sent, and provide a copy of any statement or response received from each VOBE solicited, including the reason for rejecting and VOBE who submitted a bid or proposal.

- Evidence that the Bidder made reasonable efforts to follow up on the written

notices sent to VOBEs with telephone calls or personal visits to determine with certainty whether the VOBEs were interested in performing the work. Phone logs or other documentation must be submitted.

- Evidence of efforts made to assist VOBE's that needed assistance in obtaining bonding or insurance, or lines of credit with suppliers if the inability of SDVOBE to obtain bonding, insurance, or lines of credit is the reason given for the Bidder's inability to meet the VOBE goals.

D) The Bidder may also submit any other information supporting its request for a waiver or reduction in the VOBE participation goals, including without limitation evidence that the Bidder placed advertisements in appropriate media and trade association publications announcing the Bidder's interest in obtaining bids or proposals from VOBEs, and/or sent written notification to VOBE economic development assistance agencies, trade groups and other organizations notifying them of the Contract and the work to be subcontracted by the Bidder to VOBEs. The Bidder shall also submit any other information reasonably requested by the Awarding Authority to show that the Bidder has taken all actions that could reasonably be expected to achieve the VOBE participation goals.

3) No later than five (5) working days after the opening of general Bids, the apparent low Bidder shall submit the following documents to the Awarding Authority's Contract Officer:

(i) a completed Schedule for Participation by VOBEs ("Schedule for Participation") in the form provided by the Awarding Authority showing VOBE participation in amounts equal to or exceeding the VOBE participation goals for this Contract; and

(ii) a completed Letter of Intent in the form provided by the Awarding Authority for each SDVOBE listed in the Schedule for Participation.

4) Each Letter of Intent shall identify and describe the work to be performed by the named VOBE (the "VOBE Work") with enough specificity to permit the Awarding Authority to identify the items of contract work that the VOBE will perform for VOBE participation credit. The Awarding Authority reserves the right to reject any Letter of Intent if the price to be paid for the VOBE Work does not bear a reasonable relationship to the value of such work under the Contract as determined by the Awarding Authority.

5) Within five (5) working days after receipt of the Schedule for VOBE Participation and Letters of Intent, the Awarding Authority shall review and either approve or disapprove the apparent low Bidder's submissions. If the apparent low Bidder has not submitted an appropriate Schedule for VOBE Participation and appropriate Letters of Intent establishing that the VOBE participation goal for the project will be met, the apparent low Bidder will be considered ineligible for Award of the Contract and the Awarding Authority will Award the Contract to the second lowest Bidder, subject to said Bidder's compliance with these conditions.

6) The Contractor is required to submit to the Awarding Authority signed subcontracts with all subcontractors prior to the commencement of work to be performed under these contracts, and/or a purchase order or invoice from each material supplier and/or manufacturer listed on the Schedule for VOBE Participation within thirty (30) days of the issuance of the Notice to Proceed by the Awarding Authority.

7) A filed Sub-Bidder is not required to submit a Schedule for VOBE Participation with its Bid. A filed Sub-Bidder may, at its option, submit a Letter of Intent with its Bid if it is a VOBE. If a filed sub-Bidder intends to sub-subcontract work to a VOBE, and the filed sub-Bidder wishes

that sub-subcontract to be credited toward the participation goals for this Contract, the filed sub-Bidder should submit a Letter of Intent from that VOBE with its Bid. A filed sub-Bidder can subcontract out up to 20% of its work to VOBEs, unless such work is designated as sub-subcontract Paragraph E work in the Bid Documents, in which case the 20% cap does not apply.

This is a:

D **Design Contract**
D **Construction contract**

The goal for this contract is Three (3 %) percent of the value of the contract unless waived in part or whole by DCR in writing.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATON AND RECREATION

SPECIAL GOOD FAITH REQUIREMENTS FOR PARTICIPATION BY VETERAN OWNED BUSINESS ENTERPRISES
(Implementing Executive Order No. 638, Promoting the Equitable Participation of Women and Underrepresented Groups in Construction

BIDDER'S INSTRUCTIONS

THE APPARENT LOW BIDDER'S COMPLIANCE WITH THE REQUIREMENTS OF THIS SECTION IS A PREREQUISITE FOR RECEIVING THE AWARD OF THE CONTRACT.

Pursuant to Executive Order No. 638: Promoting the Equitable Participation of Women and Underrepresented Groups in Construction ("EO No. 638"), bidders shall include in their bid submission a Plan of the how they plan to:

1. encourage the use of registered apprentices for the performance of the Work.
2. develop strong workforce equity practices.
3. partner with worker-serving organizations with a track record of reaching women and underrepresented groups; and
4. provide support services, including childcare, to facilitate the participation of women and underrepresented groups on the Work to be performed under the contract.

In addition, bidders are hereby notified that the contract shall include, and it shall be a requirement that any subcontract shall include, the following data collection and reporting obligations, at appropriate intervals, required by EO No. 638:

1. workforce needs, which may include the expected number of jobs, job hours, and job hours by occupation.
2. workforce demographics, consistent with but not limited to the requirements of M.G.L. c. 7C, §6 and M.G.L. c. 149, §44A, which may include race, gender, zip code, and other workforce characteristics.
3. benefits and supportive services provided to workers.
4. Hours worked by all employees, including women and people of color, by trade and position; and
5. Apprenticeship participation and pre-apprenticeship program completion statistics.

The Contractor shall submit to the Awarding Authority all information or documentation that is necessary in the judgment of the Awarding Authority to ascertain whether the Contractor has complied with any of the provisions of this Article.

APPENDIX C to the General Conditions of the Contract

INDEX OF THE COMMONLY USED FORMS

(Forms used during bidding are in Attachment B to the Instructions to Bidders)

Contractor's Weekly Workforce Report
Minorities/Women in Contractor's Weekly Workforce Report
Weekly Payroll Report Form and Statement of Compliance
Certification of Payment by Contractor to MBE/WBE and Instructions
Certificate of Completion by Minority/Women Business Enterprise
Certificate of Final Inspection, Release and Acceptance – E-2

CONTRACTOR'S WEEKLY WORKFORCE REPORT
THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION AND RECREATION

DCR Project No._____Project Name _____ Project Location _____

Name of General Contractor_____Minority Goal %_____Women Goal %

Name of Contractor Filing Report_____Address _____

Week Ending_____Report No._____Date Work Began_____Date work completed _____

NOTE: **Min. = Minority** **Wom. = Women** ☐ Check here if this is a final report

Job Category	Number of Employees	Number of Employees Who Are		Total Weekly Workforce Hours	Total Weekly Workforce Hours		Weekly % Workforce Hours		Total Workforce Hours To Date	Total Workforce Hours to Date		% Of Workforce Hours to Date	
		Min.	Wom.		Min.	Wom.	Min.	Wom.		Min.	Wom.	Min.	Wom.
TOTALS:													

Mail with Weekly Payroll report to the assigned Project Manager at:

Department of Conservation & Recreation
Project Manager Name
10 Park Plaza
Boston, MA 02116

The undersigned hereby certifies under pains and penalties of perjury that the above information is true and accurate.

Authorized Signature_____Date_____

Print Name _____ Title_____

Telephone No._____FAX No._____

MINORITIES/WOMEN IN CONTRACTOR'S WEEKLY WORKFORCE REPORT
THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION AND RECREATION

DCR Project No._____ Project Name _____

Name of General Contractor _____

Project Location _____

Name of Contractor Filing Report _____

Address _____

Week Ending _____ Report No. _____

JOB CATEGORY	NAME OF EMPLOYEE	MINORITY GROUP	GENDER

In contract Article XII, "Minority" refers to: Asian-Americans, Blacks, Western Hemisphere Hispanics, Native Americans, and Cape Verdeans

WEEKLY PAYROLL REPORT FORM
THE COMMONWEALTH OF MASSSCHUSETTS
DEPARTMENT OF CONSERVATION AND RECREATION

DCR Project No._____ Project Name_____

Project Location _____

Name of General Contractor_____

Name of Contractor Filing Report_____

Address_____

Week Ending_____ Date Work Began_____ Date work completed_____

Report No._____ ☐ Check here if this is a final report

Employee Name & Address	Work Classification	Hours Worked							(A) Total Hours	(B) Hourly Base Wage	Employer Contributions			(F) [B+C+D+E] Hourly Total Wage (prev.	(G) [A*F] Weekly Total Amount
		S	M	T	W	T	F	S			(C) Health & Welfare	(D) Pension	(E) Supp. unemployed		

NOTE: Every contractor and subcontractor are required to submit a copy of their weekly payroll records to DCR.
The undersigned states under the pains & penalties of perjury that the above provided and attached information is a true and accurate record of each person employed on the project and the hours worked and wages paid to each such employee, including payments to the referenced benefits. M.G.L. c. 149 §27B.

Authorized signature _____ Print Name_____

Print Title_____

Mail to: Department of Conservation and Recreation
Project Manager Name
10 Park Plaza
Suite 6620
Boston, MA 02116

WEEKLY PAYROLL RECORDS REPORT
& STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c. 149, §27B, a true and accurate record must be kept of all persons employed on the public works construction project for which the enclosed rates have been provided. The ***Weekly Payroll Report Form*** includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the project.

In addition, every contractor and subcontractor are required to submit a copy of their weekly payroll records to the awarding authority. This is required to be done on a weekly basis. Once collected, the awarding authority is also required to preserve those records for three years.

In addition, each such contractor, subcontractor, or public body shall furnish **to the Executive Office of Labor**, within fifteen days after completion of its portion of the work, a statement, executed by the contractor, subcontractor or public body who supervises the payment of wages, in the following form:

STATEMENT OF COMPLIANCE

Date:_____/_____/_____

I,_____, _____
(Name of signatory party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by

_____on the _____
(Contractor, subcontractor, or public body) (Building or project)

and that all mechanics and apprentices, teamsters, chauffeurs, and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty-nine of the General Laws.

Signature _____

Title _____

CERTIFICATE OF PAYMENT

BY CONTRACTOR/DESIGNER TO MINORITY, WOMEN BUSINESS
& VETERAN OWNED BUSINESS ENTERPRISES

TO: Supplier Diversity Reports
Department of Conservation and
Recreation ,10 Park Plaza
Suite 6620,Boston,MA 02116

Reporting Period: Fiscal Year 20__

RE: Project:
Project Number:

Contract Start Date:

The undersigned hereby certifies under the pains and penalties of perjury that the vendor named below has made the following payments to the named Minority, Women Business and Veteran Owned Enterprises for work performed on the above project:

Firm Name of General Contractor:

Authorized Signature | Date

Print Name | Print Title

Phone Number | Email address

Work performed/payments made (use additional pages if needed):

	Firm Name	**Work Performed**	**Subcontract Amount**	**Payments This Quarter**	**FY Payments to date** (This fiscal year)	**Cumulative Payments** (Total payments over the life of the contract)
☐ MBE ☐ WBE ☐ VOBE			$	$	$	$
☐ MBE ☐ WBE ☐ VOBE			$	$	$	$
☐ MBE ☐ WBE ☐ VOBE			$	$	$	$
☐ MBE ☐ WBE ☐ VOBE			$	$	$	$
☐ MBE ☐ WBE ☐ VOBE			$	$	$	$
☐ MBE ☐ WBE ☐ VOBE			$	$	$	$
☐ MBE ☐ WBE ☐ VOBE			$	$	$	$

* MBE, WBE and VOBE payment reports are required for each quarter of the fiscal year for each of your DCR projects. Reports are to cover the following three-month periods: 1st quarter, July 1st – September 30th; 2nd quarter, October 1st – December 31st; 3rd quarter, January 1st – March 31st; 4th quarter, April 1st – June 30th. Reports must be submitted within 10 business days of your receipt of this form.

NOTICE: *Intentionally submitting false information in this document may subject the contractor/ designer to criminal prosecution and/or debarment from public contracting.*

INSTRUCTIONS FOR COMPLETING CERTIFICATE OF PAYMENT

As part of its effort to ensure reliable, up-to-date information concerning the actual payments made to certified MBE, WBE and VOBE subcontractors on all DCR projects, we have prepared these instructions to assist you in completing the enclosed form. PLEASE READ THESE INSTRUCTIONS CAREFULLY. DCR WILL RETURN ANY CERTIFICATION OF PAYMENT THAT IS INCOMPLETE OR INACCURATE.

PLEASE NOTE: IF THIS PROJECT IS COMPLETE, ON HOLD, OR YOUR FIRM PREVIOUSLY SUBMITTED A **FINAL** CERTIFICATION OF M/WBE/VOBE PAYMENT FOR THIS PROJECT, PLEASE SO, INDICATE ON THE FORM AND RETURN IT TO: SUPPLIER DIVERSITY REPORTS, DEPARTMENT OF CONSERVATION AND RECREATION, 10 Park Plaza,Suite 6620
Boston, MA 02116

PLEASE INCLUDE THE FOLLOWING INFORMATION IN THE DESIGNATED SECTIONS OF THE FORM:

FIRM NAME: Include the M/WBE/VOBEs listed on the project's approved Schedule for Participation and any additional M/WBE/VOBEs that worked on the project. Be sure to check M/WBE/VOBE category for which they are certified. Note that any change in M/WBE/VOBEs participation used to meet the project goals must be pre-approved by the Project Manager or Engineer responsible for this project and a revised M/WBE/VOBE Schedule of Participation will be required. Contact the DCR Supplier Diversity coordinator immediately if you anticipate or have any changes in M/WBE/VOBE participation on this project.

WORK PERFORMED: Include a brief description of the work performed by each subcontractor listed. The description should match the M/WBE/VOBE Letter of Intent and approved Schedule of Participation. M/WBE/VOBEs must be certified in the category of work performed on this project for firms used to meet the project M/WBE/VOBE goals.

SUBCONTRACT AMOUNT: Include the contract or subcontract amounts listed on the M/WBE/VOBE Letters of Intent and approved Schedule of Participation. If the value of an MBE/WBE/VOBE contract or subcontract has
decreased or increased for any reason, you must contact the Project Manager or Engineer responsible for this project immediately. If additional M/WBE/VOBE firms not listed on the Schedule for Participation worked on this project list the amount of their subcontracts.

PAYMENTS THIS QUARTER: Include the amount you paid the M/WBE/VOBE subcontractor, either directly or indirectly, for work performed on this project during the three-month period covered by this Certification of Payment. If the amount paid was zero, please indicate that. Do not include payments from previous periods or estimated future payments in this column. Please note that you may be required to submit copies of cancelled checks to verify the amounts reported for firms used to meet the project's M/WBE/VOBE goals.

FY PAYMENTS TO DATE: Include the total amount you paid the M/WBE/VOBE subcontractor, either directly or indirectly, for work performed on this project for all quarters in **this fiscal year**. To ensure accurate reporting, please review the prior Certifications of Payments previously submitted for this project. Where necessary, correct any earlier mathematical or reporting errors and submit revised Certifications of Payment.

CUMULATIVE PAYMENTS: Include the total amount you paid the M/WBE/VOBE subcontractor, either directly or indirectly, for work performed over the entire life of this project (all quarters).

IF YOU HAVE ANY QUESTIONS, CONTACT DCR Supplier Diversity coordinator at 617.626.4925

CERTIFICATE OF COMPLETION

BY MINORITY/WOMEN BUSINESS/VETERAN OWNED BUSINESS ENTERPRISE
DEPARTMENT OF CONSERVATION AND RECREATION

TO: Supplier Diversity Reports
Department of Conservation and
Recreation 10 Park Plaza
Suite 6620, Boston, MA 02116

Reporting Period: Fiscal Year

RE: Project:
Project Number:
General Contractor:

Contract Start Date:

The undersigned hereby certifies under the pains and penalties of perjury that the vendor named below has received the payments to the named Minority, Women Business and Veteran Owned Enterprises for work performed on the above project:

Firm Name of Subcontractor:

Print Name | Print Title

Phone Number | Email address

DESCRIPTION OF WORK (AS SHOWN IN LETTER OF INTENT)

BRIEF DESCRIPTION OF ACTIVITY: (Note "Labor Only," "Material Only," "Material and Labor," "Complete")

_____

_____

_____

Original Subcontract Amount $ _____

Adjusted Subcontract Amount (Change Orders, etc.) $ _____

Total Payments Received to Date from Prime Contractor $ _____

Balance Due from Prime Contractor $ _____

If the completed activity is different from that listed on the Letter of Intent, please explain: _____

(If more space is needed, continue back of sheet)

The individuals signing below hereby certify under the pains and penalties of perjury that all work listed on the Contract Letter of Intent (or approved changes thereto as explained above) was completed by the MBE/WBE/VOBE firm on_____, 20_____and the above amounts listed for these services are true and accurate.

FOR CONTRACTOR

_____
Authorized Signature

_____
Print Name

FOR MBE/WBE/VOBE FIRM

_____
Authorized Signature

_____
Print Name

NOTE: To be submitted to the DCR Compliance Office within ten (10) days after completion of work by MBE/WBE/VOBE.

E-2 Final Acceptance
Certificate of Final Inspection, Release and Acceptance

Title: _____

Location: _____

Contractor: _____

This is to certify that a complete inspection of the above-referenced project was made on _____ by the undersigned, and that the entire work was completed in accordance with the plans and specifications. The undersigned recommends acceptance of the project.

_____ by: _____ Title: _____ Date:
_____ Designer Authorized
Signature

_____ _____
Resident Engineer Date Project Manager Date

_____
Project Engineer Date

CERTIFICATE OF RELEASE

1.) The undersigned hereby certifies that all work has been completed in accordance with the plans, specifications, and contract documents and that all change orders have been supported pursuant to Article VII of the General Conditions of the Contract.

2.) Contract Award Price: $ Adjusted Contract Price: $
Authorized Additions: $ Paid to Date:$
Authorized Deductions:$ Balance Due: $

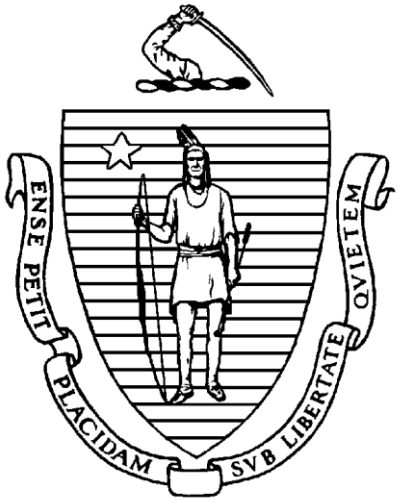
3.) The undersigned further certifies that in addition to the amount set forth above, there are outstanding and unsettled the following change orders as submitted to the DCR.

Request No.	Date:	Amount:
Request No.	Date:	Amount:
Request No.	Date:	Amount:

Subject to satisfactory disposition of change orders listed in Item 3 above, the undersigned releases the Commonwealth of Massachusetts from all further claims for wages or payments to subcontractors or suppliers except: (list on attached sheet).

_____ by: _____
Contractor Authorized Signature
The above-referenced project is accepted as of _____
Date

Deputy Commissioner, Engineering
Deputy Director
Project Manager Resident
Engineer
Office of Contract Administration
Contractor



BID PACKAGE

PART IV

SPECIAL CONDITIONS OF THE CONTRACT

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

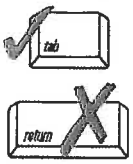
WPA Form 7 – Extension Permit for Orders of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number: 038-0460 Provided by DEP

A. General Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

Patrice Kish. MASS DCR
Name

251 Causeway Street, Suite 700
Mailing Address

Boston | MA | 02114
City/Town | State | Zip Code

2. Property Owner (if different):

Name

Mailing Address

City/Town | State | Zip Code

B. Authorization

The Order of Conditions (or Extension Permit) issued to the applicant or property owner listed above on:

12/6/2022 (Date) Issued by: Lynn Conservation Commission (Conservation Commission)

for work at: 172 Lynnway - Lynn Heritage State Park | Assessor's Map/Plat Number | Parcel/Lot Number

recorded at the Registry of Deeds for:

Essex South District Registry of Deeds (County) | 41969 (Book) | 256 (Page)

Certificate (if registered land)

is hereby extended until: 02/22/2027 (Date) N/A (Date the Order was last extended (if applicable))

This date can be no more than 3 years from the expiration date of the Order of Conditions or the latest extension. Only unexpired Orders of Conditions or Extension may be extended.

This Extension Permit must be signed by a majority of the Conservation Commission and a copy sent to the applicant and the appropriate DEP Regional Office (https://www.mass.gov/service-details/massdep-regional-offices-by-community).

B. Authorization (cont.)

02/22/2024
Issue Date (mm/dd/yyyy)

Signatures:

Signature	Printed Name
Mary Lester	Mary Lester
M. Toomey	MIchael Toomey
Daniel Silverman	Daniel Silverman
Danielle Chambliss	Danielle Chambliss

C. Recording Confirmation

The applicant shall record this document in accordance with General Condition 8 of the Order of Conditions (see below), complete the form attached to this Extension Permit, have it stamped by the Registry of Deeds, and return it to the Conservation Commission.

Note: General Condition 8 of the Order of Conditions requires the applicant, prior to commencement of work, to record the final Order (or in this case, the Extension Permit for the Order of Conditions) in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, it shall be noted in the Registry's Granter Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, it shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done.

Detach this page and submit it to the Conservation Commission prior to the expiration of the Order of Conditions subject to this Extension Permit.

To:

Conservation Commission

Please be advised that the Extension Permit to the Order of Conditions for the project at:

Project Location | DEP File Number

has been recorded at the Registry of Deeds of:

County

for:

Property Owner

and has been noted in the chain of title of the affected property in accordance with General Condition 8 of the original Order of Conditions on:

Date | Book | Page

If recorded land the instrument number which identifies this transaction is:

Instrument Number

If registered land, the document number which identifies this transaction is:

Document Number

Signature of Applicant

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
038-460
MassDEP File #

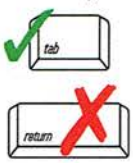
eDEP Transaction #

City/Town

A. General Information

Please note: this form has been modified with added space to accommodate the Registry of Deeds Requirements

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. From: Lynn
Conservation Commission

2. This issuance is for (check one): a. ☒ Order of Conditions b. ☐ Amended Order of Conditions

3. To: Applicant:

Patrice	Kish
a. First Name	b. Last Name

MDCR
c. Organization

251 Causeway Street, Suite 700
d. Mailing Address

Boston	MA	02114-2104
e. City/Town	f. State	g. Zip Code

4. Property Owner (if different from applicant):

Refer to Attached List	
a. First Name	b. Last Name

c. Organization

d. Mailing Address

e. City/Town	f. State	g. Zip Code

5. Project Location:

172 Lynnway - Heritage State Park	Lynn
a. Street Address	b. City/Town
Refer to Attached List	
c. Assessors Map/Plat Number	d. Parcel/Lot Number

Latitude and Longitude, if known: 42.457987d m s - 70.943404d m

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
038-460
MassDEP File #

eDEP Transaction #

City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
Refer to Attached List
a. County | b. Certificate Number (if registered land)
c. Book | d. Page

7. Dates: a. Date Notice of Intent Filed | b. Date Public Hearing Closed | c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
Lynn Heritage State Park
a. Plan Title
Foth Infrastructure & Environment, LLC | Jennifer Green
b. Prepared By | c. Signed and Stamped by
November 5, 2019 | varies
d. Final Revision Date | e. Scale
Project Narrative by LEC Environmental Consultants, Inc. | November 7, 2019
f. Additional Plan or Document Title | g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

a. ☐ Public Water Supply
b. ☐ Land Containing Shellfish
c. ☒ Prevention of Pollution
d. ☐ Private Water Supply
e. ☐ Fisheries
f. ☐ Protection of Wildlife Habitat
g. ☐ Groundwater Supply
h. ☒ Storm Damage Prevention
i. ☐ Flood Control

2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

a. ☒ the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
038-460
MassDEP File #

eDEP Transaction #

City/Town

B. Findings (cont.)

Denied because:

b. ☐ the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**

c. ☐ the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**

3. ☐ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) _____ a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. ☐ Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. ☐ Bordering Vegetated Wetland	a. square feet	b. square feet	c. square feet	d. square feet
6. ☐ Land Under Waterbodies and Waterways	a. square feet	b. square feet	c. square feet	d. square feet
	e. c/y dredged	f. c/y dredged		
7. ☐ Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. ☐ Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. ☐ Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP: 038-460
MassDEP File #

eDEP Transaction #

City/Town

B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. ☐ Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. ☐ Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. ☐ Coastal Beaches	a. square feet	b. square feet	c. nourishment (cu yd)	d. nourishment (cu yd)
14. ☐ Coastal Dunes	a. square feet	b. square feet	c. nourishment (cu yd)	d. nourishment (cu yd)
15. ☒ Coastal Banks	a. linear feet	b. linear feet		
16. ☐ Rocky Intertidal Shores	a. square feet	b. square feet		
17. ☐ Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18. ☐ Land Under Salt Ponds	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
19. ☐ Land Containing Shellfish	a. square feet	b. square feet	c. square feet	d. square feet
20. ☐ Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	a. c/y dredged	b. c/y dredged		
21. ☒ Land Subject to Coastal Storm Flowage	a. square feet	b. square feet		
22. ☐ Riverfront Area	a. total sq. feet	b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
038-460
MassDEP File #

eDEP Transaction #

City/Town

B. Findings (cont.)

* **#23**. If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here.

23. ☐ Restoration/Enhancement *:

a. square feet of BVW | b. square feet of salt marsh

24. ☐ Stream Crossing(s):

a. number of new stream crossings | b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
   a. The work is a maintenance dredging project as provided for in the Act; or
   b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
   c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 11/19/2022 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
038-460
MassDEP File #

eDEP Transaction #

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.

9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.

10. A sign shall be displayed at the site not less then two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]

"File Number 38-460 "

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.

12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.

13. The work shall conform to the plans and special conditions referenced in this order.

14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.

15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.

16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
038-460
MassDEP File #

eDEP Transaction #

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

19. The work associated with this Order (the "Project")
    (1) ☒ is subject to the Massachusetts Stormwater Standards
    (2) ☐ is NOT subject to the Massachusetts Stormwater Standards

    If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

    a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.

    b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
    i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
    ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
    iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement) for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
038-460
MassDEP File #

eDEP Transaction #

City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.

h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.

i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.

j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.

k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.

l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
038-460
MassDEP File #

eDEP Transaction #

City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☐ Yes ☐ No
2. The _____ hereby finds (check one that applies):
   Conservation Commission
   a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

      _____ _____
      1. Municipal Ordinance or Bylaw 2. Citation

      Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

   b. ☐ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

      _____ _____
      1. Municipal Ordinance or Bylaw 2. Citation
3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.
   The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
038-460
MassDEP File #

eDEP Transaction #

City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

11-19-19
1. Date of Issuance

Please indicate the number of members who will sign this form.
This Order must be signed by a majority of the Conservation Commission.

4
2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

Mary Lee Ester
Jeremy Smallegan
M J Toomey
Nelson Lowe

☐ by hand delivery on

Date

☒ by certified mail, return receipt requested, on

11/22/19
Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
038-460
MassDEP File #

eDEP Transaction #

City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Project Location | MassDEP File Number

Has been recorded at the Registry of Deeds of:

County | Book | Page

for: Property Owner

and has been noted in the chain of title of the affected property in:

Book | Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

Provided by DEP

A. Request Information

1. Location of Project

a. Street Address

b. City/Town, Zip

c. Check number

d. Fee amount

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

4. DEP File Number:

B. Instructions

1. When the Departmental action request is for (check one):

☐ Superseding Order of Conditions – Fee: $120.00 (single family house projects) or $245 (all other projects)

☐ Superseding Determination of Applicability – Fee: $120

☐ Superseding Order of Resource Area Delineation – Fee: $120

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

Provided by DEP

B. Instructions (cont.)

Send this form and check or money order, payable to the *Commonwealth of Massachusetts,* to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see http://www.mass.gov/eea/agencies/massdep/about/contacts/).

4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

GENERAL CONDITIONS

1. Failure to comply with all conditions stated herein and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.

2. This Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.

3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable Federal, State, or local statutes, ordinances, by-laws, or regulations.

4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply: (a) the work is a maintenance dredging project as provided for in the Act; or (b) the time for completion has been extended to a specified date more than three years, but less than five years from the date of issuance and both that date and the special circumstances warranting the extended time period are set forth in this Order.

5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order.

6. Any fill used in connection with this project shall be clean fill, containing no trash, refuse, rubbish or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.

7. No work shall be undertaken until all administrative appeal period from this Order have elapsed or, if such an appeal has been filed, until all proceedings before the Department has been completed.

8. No work shall be undertaken until the Final Order has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is to be done. The recording information shall be submitted to the Lynn Conservation Commission prior to commencement of the work.

9. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words, "Massachusetts Department of Environmental Protection and the File Number".

10. Where the Department of Environmental Protection is requested to make a determination and to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before the Department.

11. Upon completion of the work described herein, the applicant shall forthwith request in writing that a Certificate of Compliance be issued stating that the work has been satisfactorily completed.

12. The work shall conform to the following plans and special conditions: Plans: Title Dated Signed and Stamped by On File with: _____

_____

_____

_____

13. The Order of Conditions must be registered in the Registry of Deeds, Essex County, within four (4) weeks or prior to commencement of work and prior to obtaining a building permit, if necessary, whichever comes first. The recording information shall be submitted to the Lynn Conservation Commission. Failure to comply shall be deemed cause to revoke this Order of Conditions.

14. All work shall conform to the Notice of Intent and above- referenced plans and supporting documents unless otherwise specified in this Order. In case of a conflict, the conditions of this Order shall prevail.

15. If necessary, in advance of any work on this project, the applicant shall notify the LCC and at the request of the LCC, shall arrange an on-site conference among the LCC, the contractor, the engineer, and the applicant to ensure that all of the conditions of this order are understood. This Order shall be included in all construction contracts and shall supersede any conflicting contract.

16. Issuance of these Conditions does not in any way imply or certify that the site or down-stream areas will not be subject to flooding, storm damage or any other form of damage due to wetness.

17. This Order of Conditions does not relieve the permittee or any other person of the necessity of complying with all other applicable Federal, State, or Local statutes ordinances, By- Laws, or regulations.

18. The applicant assumes all liability arising from his/her construction activities and project performance.

19. The LCC shall be notified in writing prior to start, at mid- point, and completion of work.

20. Prior to the start of work, the edge of bordering vegetated wetland (or the top of bank in areas where there is no BVW) shall be clearly marked in the field by stakes or flags placed at no

greater than twenty-five (25) foot intervals. These markers shall be maintained in place throughout construction.

21. A continuous limit of construction barrier shall be established between all construction areas, including proposed replication areas and wetland resource areas. Said barrier shall consist of a staked hay bale dike, siltation fence, and/or orange construction fence.

22. Prior to the start of work, filter fabric fencing (or a double row of staked hay bales), shall be installed up gradient of all resource areas along the limit of activity between areas to be disturbed and down gradient streams and wetlands. The location of this barrier shall be shown on the approved plan. This barrier shall define the limit of disturbance and shall be maintained in good repair until all disturbed areas have been stabilized with vegetation or other means. This barrier shall be inspected and approved by the LCC or its agent prior to start of work and be maintained until the LCC or its agent determines that control measures are no longer necessary.

23. Prior to start of work, filter fabric shall be placed under the grate of all catch basins within the 100 foot buffer to prevent sediments from entering the wetland (or stream, river, marsh, etc.). All newly constructed catch basins also shall be covered with filter fabric. Basins shall be maintained in this manner until parking areas and roadways have been permanently stabilized.

24. The applicant shall have on hand at the start of soil disturbance removal or stockpiling, a minimum of hay bales and sufficient stakes for staking these bales. Said bales shall be used only for the control of emergency erosion problems and shall not be used for the normal control of erosion, as described in the Erosion Control Plan submitted with the Notice of Intent or the hay bale barrier described.

25. During all phases of construction, all disturbed or exposed soil surfaces shall be brought to final finished grade and stabilized bare ground that cannot be permanently stabilized within thirty (30) days shall be stabilized with mulch or any other protective covering and/or method approved by the USDA Soil Conservation Service and the LCC. Areas to be seeded shall be loamed with not less than four (4) inches of good quality loam. Before seeding, ground limestone shall be applied at a rate sufficient to bring the soil test to pH 6.5. In addition, 10-6-4 fertilizer, or its equivalent, shall be applied at a rate of fifteen (15) pounds per one thousand (1,000) square feet, in accordance with Soil Conservation Service guidelines.

26. No earthen embankment in the buffer zone shall have a slope steeper than 3:1.

27. All erosion control devices shall be maintained to ensure their effectiveness. At no time shall any sediment be deposited in any resource area. The Applicant shall immediately control any erosion problems that occur on-site and also shall immediately notify the LCC. Any debris which falls into a wetland or waterway shall be removed immediately by hand, and the area restored to the satisfaction of the LCC. The LCC reserves the right to require additional erosion and/or damage prevention controls it may deem necessary.

28. Stripping of vegetation, clearing and grubbing of trees, grading or other solid disturbance shall be done in a manner that will minimize soil erosion. To the extent practical, limited portions of the area should be cleared at one time to allow construction to proceed and the area to stabilize.

29. All debris or excavated material shall be disposed of in a legal manner. No fill, construction materials, or brush shall be stockpiled on-site once construction is completed.

30. All retaining walls (concrete, rip-rap, etc.) over ten (10) feet in height shall be designed by a structural engineer and a letter from the structural engineer stating the wall has been built according to the designed plan shall be presented to the LCC before a Certificate of Compliance is issued.

31. Slope stabilization and sequencing of excavation and fill shall follow the specifications set forth in the above- referenced plans.

32. Whether from on-site or off-site sources, any fill used in connection with this project shall be clean fill as described below: Clean Acceptable Fill: Must be earthen, permeable material; exclusive of peat; clay; tight till; hardpan; metals; boulders larger than twelve (12) inches in diameter; wood; tree branches; potential leachable hazardous materials (petroleum by-product); or construction debris. These materials must be compactable to 65% of original profile.

33. Hay bales shall be placed down-gradient of work to be performed.

34. Pruning shall be performed only as necessary and slash shall be removed offsite.

35. Trees and debris left from previous work over the years shall be cleaned up in the areas covered under this Order.

36. Where stone or rock fill has been used in areas that are to be seeded, minimum coverage of this fill shall be twelve (12) inches of compacted clear borrow, gravel, or soil, and it shall be topped after grading with not less than four (4) inches of good quality loam.

37. There shall be no stockpiling of soil or other materials within twenty-five (25) feet of any resource area.

38. All demolition debris will be disposed off-site.

39. The applicant, owner, successor, or assignee(s) shall be responsible for maintaining all on-site drainage structures and outfalls, assuring the lasting integrity of vegetative cover on the site and the site activities so as to prevent erosion, sedimentation, chemical contamination or other detrimental impact to the on-site wetland and/or off site resource areas.

40. All underground utilities, etc. that are located within a resource area shall have a clay barrier every one hundred (100) feet so as to prevent the resource area from being artificially drained. A

plan showing the locations of the clay barriers shall be submitted to the LCC prior to commencement of any work.

41. Pavement must be sloped as necessary to collect run-off water into catch basins.

42. A stone rip-rap apron shall be installed at the outfalls of all discharge pipes immediately after installation of the pipe. Velocity breakers, as approved by the LCC, shall be used in all places where directed run-off enters the brook, compensatory area or grassed areas. Rip-rap and dissipaters shall not be placed within the wetland or waterway.

43. All headwalls with pipes ten (10) inches in diameter and larger are to be fitted with trash racks and/or child-proof grates of a type approved by the LCC. The applicant and/or owner shall be responsible for removing trash or other obstructions from the trash racks or grate on a regular basis. This Condition shall remain in perpetuity and be recorded as such in the Certificate of Compliance.

44. All temporary and/or permanent waterways and water holding areas must be in place and substantially protected from erosion before any road, parking area, or roof water can be discharged into these areas. Approval of the LCC also must be obtained before discharging water into the above areas. 48. During and upon completion of this project, there shall be no increase in the rate of surface water run-off from this project for the ten (10) and/or one hundred (100) year storms.

45. Any work below the one hundred (100) year flood plain requires full one hundred (100) percent compensation for any lost flood storage. Oil\gasoline traps shall be installed in all catch basins. The owner shall be responsible for ensuring that the catch basins and the traps are cleaned at least two times per year. Records of this maintenance shall be made available to the LCC upon request. This Condition shall remain in force permanently and shall be recorded as such on the Certificate of Compliance.

46. Used petroleum products from the maintenance of construction equipment and construction debris shall be collected and disposed off-site. No on-site disposal of these items is allowed.

47. No underground fuel tanks shall be allowed in any of the areas referenced in this Order of Conditions. This Condition shall remain in perpetuity and be recorded in the Certificate of Compliance.

48. During and after work on this project, there shall be no discharge or spillage of fuel, oil, or other pollutant into any area of statutory interest.

49. Dust control shall be limited to water -- no salts or other wetting agents shall be used.

50. No sodium based product shall be used during or after construction for the control of ice and snow on paving areas and driveways, and any arrangement for snow removed shall so stipulate.

This Condition shall remain in perpetuity and be recorded as such in the Certificate of Compliance.

51. Fertilizers utilized for landscaping and lawn care shall be of the low-nitrogen content variety and shall be used in moderation. Pesticides and herbicides shall not be used on any of the areas referenced in this Order of Conditions within one hundred (100) feet of a wetland resource area.
52. Any changes in the submitted plans, Notice of Intent, or resulting from the aforementioned Conditions must be submitted to the LCC for approval prior to implementation. If, by majority vote, the LCC finds said changes to be significant and/or deviate from the original plans, Notice of Intent or this Order of Conditions to such an extent that the interests of the Wetland Protection Act and By-Law cannot be protected by the Order and would best be served by the issuance of additional Conditions, then the LCC will call for another public hearing within twenty-one (21) days -- at the EXPENSE of the APPLICANT - in order to take testimony from all interested parties. Within twenty-one (21) days of the close of said public hearing, the LCC will issue an amended or new Order of Conditions.

53. Any errors found in the plans or information submitted by the applicant shall be considered as changes, and procedures outlined above for changes shall be followed.

54. Members and agents of the LCC shall have the right to enter and inspect the premises to evaluate compliance with the Order of Conditions and the LCC may require submittal of any data deemed necessary by the LCC for that evaluation.

55. Prior to issuance of a Certificate of Compliance, the applicant shall submit a letter to the LCC from a registered professional engineer certifying that the work is in compliance with the plans referenced, and all of the Conditions herein. Said letter will certified, but not be limited to, the following: A. "As-Built" elevations of all drainage ways constructed within onehundred (100) feet of any wetland resource area. B. "AS-Built" elevations and grades of all filled or altered and resource areas. C. Distances to all structures and alterations within one-hundred feet (100) of any wetland resource areas. Nine (9) "As-Built" topographic plans of all areas within jurisdiction of the Wetlands Protection Act and By-Law shall be submitted when a Certificate of Compliance is requested.

56. The provisions of this Order shall apply to and be binding upon the applicant, its employees, and all successors and assigns in interest or control.

57. Pruning and clearing: The protection of vegetation is important to slow percolation of rain water into the ground and to reduce erosion.

MassDEP
Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

100 Cambridge Street 9th Floor Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

MAR 20 2024

Massachusetts Department of Conservation and Recreation
Patrice Kish, Chief, Design & Engineering
State Transportation Building
10 Park Plaza, Suite 6480
Boston, MA, 02116

Re: "Re-Issuance" of Chapter 91 Waterways License No. 15584: Lynn Heritage State Park, 0, 172, and 180 Lynnway, Filled and Flowed Tidelands of the Lynn Harbor, Lynn, Essex County

Dear Ms. Kish:

The Department of Environmental Protection hereby issues the above-referenced Waterways License, enclosed, authorizing you to perform certain activities pursuant to M.G.L. Chapter 91, the Public Waterfront Act, and its regulations 310 CMR 9.00. Any change in use or alteration of any structure or fill not authorized by this License shall render this License void.

No work shall be undertaken until the License and accompanying Mylar Plans have been duly recorded in the applicable County Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property.

RECORDING OF THE LICENSE

This License and accompanying Mylar Plans must be recorded within the chain of title of all affected properties at the appropriate Registry of Deeds or, if registered land, with the Land Registration Office within sixty (60) days from the date of license issuance. In the case of recorded land, the License shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the project is located. In the case of the registered land, the License shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the project is located. Failure to record this License within the chain of title of the affected property within sixty (60) days of the date of issuance will render this License void pursuant to 310 CMR 9.18.

A Notification of Waterways License Recordation Form has been enclosed for your use. Failure to notify the Department of the recording of this license is a violation of 310 CMR 9.00 and is subject to enforcement action by the Department.

CERTIFICATE OF COMPLIANCE

Pursuant to 310 CMR 9.19, once the licensed project is complete, the Licensee must file a Request for a Certificate of Compliance form, BRP WW05, within sixty (60) days of completion but in no event later than five (5) years from the License issuance date, or any extension thereof, in accordance with 310 CMR 9.19(1). The license for any project for which such a request is not filed and certificate issued may be revoked pursuant to 310 CMR 9.26.

If you have any questions, please contact the Waterways Regulation Program at DEP.Waterways@mass.gov.

Sincerely,

Daniel J. Padien
Program Chief
Waterways Regulation Program

cc: City of Lynn Office of the Mayor
City of Lynn Planning Board
City of Lynn Harbormaster
City of Lynn Conservation Commission

Program Coordinator
Department of Environmental Protection
Waterways Regulation Program
1 Winter Street, 5th Floor
Boston, MA 02108
dep.waterways@mass.gov

RE: NOTIFICATION OF RECORDING CHAPTER 91 WATERWAYS LICENSE №: 15584
Lynn Heritage State Park, Filled and Flowed Tidelands of the Lynn Harbor,
Lynn, Essex County

This is to notify you that the above referenced Waterways License and accompanying Mylar License Plans were duly recorded within the chain of title for all affected properties within the appropriate Registry of Deeds/ Land Court for this project location and to provide your Office with the following recordation information.

Date Recorded: _____

County Registry of Deeds/ Land Court: _____

Book Number _____**, Page Number(s)** _____ **and**

Plan Book Number _____ ____**, Page Number(s)** _____

Sincerely,

_____
Chapter 91 Waterways Licensee or Designee
(print and sign name)

LICENSE VOID IF NOT RECORDED WITHIN 60 DAYS OF ISSUANCE

The Commonwealth of Massachusetts

No. 15584

Whereas, Massachusetts Department of Conservation and Recreation

of -- Boston -- in the County of -- Suffolk -- and Commonwealth aforesaid, has applied to the Department of Environmental Protection for license to -- license and maintain site improvements and maintain existing licensed structures and fill at Lynn Heritage State Park, as further described below ----------

and has submitted plans of the same; and whereas due notice of said application, ~~and of the time and place fixed for a hearing thereon,~~ has been given, as required by law, to the -- Municipal Official -- of the -- City of Lynn ----------

Now, said Department, having heard all parties desiring to be heard, and having fully considered said application, hereby, subject to the approval of the Governor, authorizes and licenses the said

Massachusetts Department of Conservation and Recreation -- subject to the provisions of the ninety-first chapter of the General Laws, and of all laws which are or may be in force applicable thereto, to: demolish existing site features including landscaped areas, the walking path, portions of the pier, boardwalk, retaining wall and seawall, and timber platform; to authorize removal, replacement, and maintenance of fill material, underground utilities (e.g., water, storm drainage, electrical, gas, and communication), mooring piles (in-kind), and the pavilion on the southwest corner of the boardwalk; and to install and maintain landscaping, new paved walkways and paved publicly accessible features, lighting and amenities, 314 linear feet of new sheet pile bulkhead along the southern end of the property, installation of filter fabric, soil, and plant material within the riprap slope for the 2,334-square foot coastal planting edge treatment, replacement in-kind of the 13,813-square foot pile-supported timber pier and landing platform along the south end of the property, ----------

in and on filled and flowed tidelands of -- Lynn Harbor -- at 0, 172, and 180 Lynnway in the City of -- Lynn -- and in accordance with the locations shown and details indicated on the accompanying License Plan No. 15584, signed and sealed by Jennifer S. Green P.E.#48585 on January 22, 2024 (Sheets 1-11).

Specific Licenses and/or Legislative Authorizations issued previously at the project site include Department of Public Works License Nos. 4567 issued on March 27, 1962, 4951 issued on July 7, 1965, 5537 issued on November 26, 1969, and Department of Environmental Protection License Nos. 1013 issued on August 29, 1983, 1029 issued on October 18, 1983, and 1346 issued on November 26, 1985, and Department of Environmental Quality Engineering No. 959 issued on February 25, 1983. The authorized structures and/or fill shall be maintained in accordance with the terms and conditions of said Licenses and plans, or as modified herein.

The fill and structures hereby authorized shall be limited to the following uses: public access to the waterfront for passive and active recreation, shoreline stabilization, and underground utilities.

This License is valid for an unlimited term pursuant to 310 CMR 9.15(1)(c).

This License is subject to the following Special Conditions and Standard Conditions.

SPECIAL WATERWAYS LICENSE CONDITIONS

1. The Licensee shall ensure that use by the general public is fully and safely allowed, free of charge, twenty-four (24) hours a day, year-round throughout the project site. The Licensee may adopt reasonable rules for the shared-use path, subject to prior review and written approval by the Department, as are necessary for the protection of public health and safety, and to ensure public use and enjoyment by minimizing conflicts between user groups. No amendment to said rules shall be made without prior written approval by the Department.

2. The Licensee shall install and maintain in good repair at least three (3) informational and wayfinding signs of an adequate size to be clearly visible to pedestrians within 60 days of completion of the licensed work. The signs shall inform the public of the park and waterfront pier and boardwalk, and be designed in accordance with all local laws, regulations, and with the Department's Sign Specifications attached hereto. Prior to fabrication and installation of signs, the Licensee shall submit a Draft Signage Plan to the Department for review and approval. Said plan shall detail the proposed sign specifications and installation locations.

3. The use by the public of the publicly accessible areas at the project site shall be considered a permitted use, to which the limited liability provisions of M.G.L. Chapter 21, § 17c shall apply.

4. The use of unencapsulated polystyrene during in-water construction or as part of any permanent or temporary component of the structures and/or fill authorized herein is prohibited.

5. The Licensee shall maintain all structures in accordance with the terms and conditions specified herein or this License may expire, pursuant to 310 CMR 9.25(1)(c).

6. In accordance with any license condition, easement, or other public right of lateral passage that exists in the area of the subject property lying below the high-water mark, the Licensee shall allow the public in the exercise of such rights for all lawful purposes to pass freely from the either side of property lines, and over/around all structures within such area.

7. Any structural alteration or change in use, or any other modification from that explicitly authorized herein and contained on the License Plans, shall require prior review of the Department to determine whether additional licensing is required pursuant to M.G.L. Chapter 91 and the Waterways Regulations at 310 CMR 9.00.

8. All fill and structures authorized under this License shall be constructed to meet the Engineering and Construction Standards pursuant to 310 CMR 9.37.

9. The Licensee shall allow agents of the Department to enter the project site to verify compliance with the conditions of this License.

10. All work authorized herein shall be completed within five (5) years of the date of license issuance. Said construction period may be extended by the Department for one (1) or more one (1) year periods without public notice, provided that the Applicant submits to the Department thirty (30) days prior to the end of the construction period, a written request to extend the period and provides adequate justification for said extension.

11. The Licensee shall request in writing that the Department issue a Certificate of Compliance within sixty (60) days completion of the licensed project, but in no event later than five (5) years from the date of License issuance, or any extension thereof, in accordance with 310 CMR 9.19(1). The request shall be accompanied by a certification by a registered professional engineer licensed to do business in the Commonwealth that the project was completed in accordance with the plans, specifications, and conditions of this License.

See page 4 for additional conditions to this License.

STANDARD WATERWAYS LICENSE CONDITIONS

1. Acceptance of this Waterways License shall constitute an agreement by the Licensee to conform with all terms and conditions stated herein.
2. This License is granted upon the express condition that any and all other applicable authorizations necessitated due to the provisions hereof shall be secured by the Licensee prior to the commencement of any activity or use authorized pursuant to this License.
3. Any change in use or any substantial structural alteration of any structure or fill authorized herein shall require the issuance by the Department of a new Waterways License in accordance with the provisions and procedures established in Chapter 91 of the Massachusetts General Laws. Any unauthorized substantial change in use or unauthorized substantial structural alteration of any structure or fill authorized herein shall render this License void.
4. This License shall be revocable by the Department for noncompliance with the terms and conditions set forth herein. This License may be revoked after the Department has given written notice of the alleged noncompliance to the Licensee and those persons who have filed a written request for such notice with the Department and afforded them a reasonable opportunity to correct said noncompliance. Failure to correct said noncompliance after the issuance of a written notice by the Department shall render this Waterways License void and the Commonwealth may proceed to remove or cause removal of any structure or fill authorized herein at the expense of the Licensee, its successors and assigns as an unauthorized and unlawful structure and/or fill.
5. The structures and/or fill authorized herein shall be maintained in good repair and in accordance with the terms and conditions stated herein and the details indicated on the accompanying license plans.
6. Nothing in this License shall be construed as authorizing encroachment in, on or over property not owned or controlled by the Licensee, except with the written consent of the owner or owners thereof. The Licensee stated that the Massachusetts Department of Conservation and Recreation was the owner at the time of application.
7. This License is granted subject to all applicable Federal, State, County, and Municipal laws, ordinances and regulations including but not limited to a valid final Order of Conditions issued pursuant to the Wetlands Protection Act, M.G.L. Chapter 131, §40.
8. This License is granted upon the express condition that the use of the structures and/or fill authorized hereby shall be in strict conformance with all applicable requirements and authorizations of the MassDEP.
9. This License authorizes structure(s) and/or fill on:

_____Private Tidelands - In accordance with the public easement that exists by law on Private Tidelands, the Licensee shall allow the public to use and to pass freely upon the area of the subject property lying between the high and low water marks, for the purposes of fishing, fowling, navigation, and the natural derivatives thereof.

__X__Commonwealth Tidelands - The Licensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, upon lands lying seaward of the low water mark. Said lands are held in trust by the Commonwealth for the benefit of the public.

_____Great Pond of the Commonwealth - The Licensee shall not restrict the public's right to use and to pass freely upon lands lying seaward of the high water mark for any lawful purpose.

_____Navigable River or Stream - The Licensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, in the waterway.

No restriction on the exercise of these public rights shall be imposed unless otherwise expressly provided in this License.

10. Unless otherwise expressly provided by this License, the Licensee shall not limit the hours of availability of any areas of the subject property designated for public passage, nor place any gates, fences, or other structures on such areas in a manner that would impede or discourage the free flow of pedestrian movement thereon.

The amount of tidewater displaced by the work hereby authorized has been ascertained by said Department, and compensation thereof has been made by the said -- Massachusetts Department of Conservation and Recreation -- by paying into the treasury of the Commonwealth -- two dollars ($2.00) -- for each cubic yard so displaced, being the amount hereby assessed by said Department -- *exempt pursuant to 310 CMR 9.16(4)(a)*.

Nothing in this License shall be so construed as to impair the legal rights of any person.

This License shall be void unless the same and the accompanying Mylar plan are recorded within the chain of title of all affected properties within sixty (60) days from the date hereof, in the Registry of Deeds for -- the County of -- Essex.

In witness whereas, said Department of Environmental Protection have hereunto set their hands this 20th day of March in the year 2024.

Commissioner _____

Program Chief _____

Department of Environmental Protection

THE COMMONWEALTH OF MASSACHUSETTS

This License is approved in consideration of the payment into the treasury of the Commonwealth by the said – Massachusetts Department of Conservation and Recreation -- the further sum of -- *exempt pursuant to 310 CMR 9.16(4)(a)* -- the amount determined by the Governor as a just and equitable charge for rights and privileges hereby granted in the land of the Commonwealth.

BOSTON,

Approved by the Governor.

Governor _____

SIGN SPECIFICATIONS
OF THE MASSDEP WATERWAYS REGULATION PROGRAM

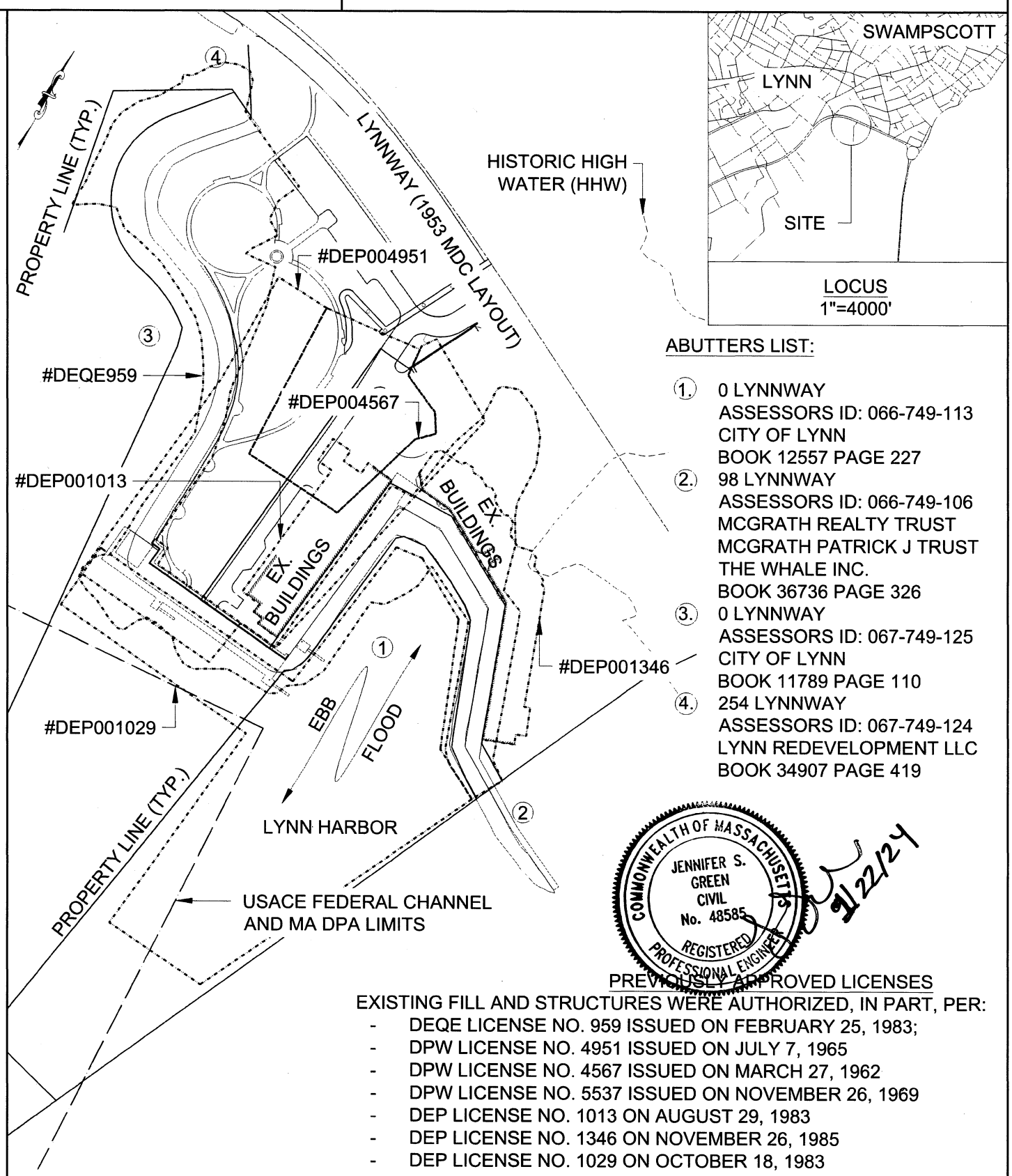
Unless otherwise expressly provided in a license or other written authorization of the Department, all required signage shall conform to the following specifications, as applicable.

1. All signs shall utilize durable materials and methods of construction and be a minimum of 18" by 18" in size. Letter height shall be a minimum of 1/2".
2. Signs shall conform to all local laws and regulations.
3. If the site is located on a waterfront public project site, a minimum area of 5" diameter shall be reserved for any identifying state or municipal logo.
4. The Licensee shall maintain all signs in good condition and repair for the term of the License.
5. The signs shall encourage public patronage and access of the facilities required by the license conditions (using directional graphics, if necessary) and state the hours of public access.
6. At least one sign shall be placed in a prominent location and identify that the public facilities were authorized by a Chapter 91 and include the Waterways License Number of the project.
7. Signage shall be permanently posted and unobstructed from the view of passersby.

GENERAL LAW 36 SECTION 13-A

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

1/22/24



ABUTTERS LIST:

1. 0 LYNNWAY
   ASSESSORS ID: 066-749-113
   CITY OF LYNN
   BOOK 12557 PAGE 227
2. 98 LYNNWAY
   ASSESSORS ID: 066-749-106
   MCGRATH REALTY TRUST
   MCGRATH PATRICK J TRUST
   THE WHALE INC.
   BOOK 36736 PAGE 326
3. 0 LYNNWAY
   ASSESSORS ID: 067-749-125
   CITY OF LYNN
   BOOK 11789 PAGE 110
4. 254 LYNNWAY
   ASSESSORS ID: 067-749-124
   LYNN REDEVELOPMENT LLC
   BOOK 34907 PAGE 419

COMMONWEALTH OF MASSACHUSETTS
JENNIFER S. GREEN
CIVIL
No. 48585
REGISTERED PROFESSIONAL ENGINEER
1/22/24

PREVIOUSLY APPROVED LICENSES

EXISTING FILL AND STRUCTURES WERE AUTHORIZED, IN PART, PER:

- DEQE LICENSE NO. 959 ISSUED ON FEBRUARY 25, 1983;
- DPW LICENSE NO. 4951 ISSUED ON JULY 7, 1965
- DPW LICENSE NO. 4567 ISSUED ON MARCH 27, 1962
- DPW LICENSE NO. 5537 ISSUED ON NOVEMBER 26, 1969
- DEP LICENSE NO. 1013 ON AUGUST 29, 1983
- DEP LICENSE NO. 1346 ON NOVEMBER 26, 1985
- DEP LICENSE NO. 1029 ON OCTOBER 18, 1983

NOTE: SEE SHEET 2 FOR LEGEND

0' 100' 200'

LOCUS PLAN SCALE: 1 INCH =200 FEET

01 OF 11 DATE: 9/7/23

PLAN ACCOMPANYING PETITION OF:

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION & RECREATION

TO LICENSE SITE IMPROVEMENTS AND MAINTAIN EXISTING LICENSED STRUCTURES AND FILL AT
LYNN HERITAGE STATE PARK
172/180 LYNNWAY, LYNN, MASSACHUSETTS
COUNTY OF ESSEX, LYNN HARBOR

LICENSE PLAN NO. 15584

Approved by Department of Environmental Protection of Massachusetts

MAR 20 2024

GENERAL LAW 36 SECTION 13-A

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

1/22/24

GENERAL NOTES:

1. RESULTS OF TOPOGRAPHY & HYDROGRAPHIC SURVEYS ALONG WITH EXISTING CONDITIONS, SITE FEATURES, PROPERTY LINES, AND UTILITIES BASED ON INFORMATION PROVIDED BY BROWN, RICHARDSON, & ROWE, INC. AND SURVEYS BY SURVEYING AND MAPPING CONSULTANTS ON OCTOBER 2018 & UPDATED NOVEMBER 2020 AND FOTH INFRASTRUCTURE & ENVIRONMENTAL, INC. ON SEPTEMBER 5, 2018.
2. COORDINATES, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983, (2011), Epoch 2010.00, BASED ON THE KeyNet GPS VIRTUAL REFERENCE SYSTEM (VRS).
3. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) BASED ON THE KeyNet GPS VIRTUAL REFERENCE SYSTEM (VRS) NETWORK.
4. CONTOURS ARE IN FEET, AND REFER TO ELEVATIONS IN NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
5. SUBSURFACE UTILITY LINES AND FEATURES, AS SHOWN HEREON, WERE COMPILED FROM FIELD EVIDENCE OR AVAILABLE RECORD INFORMATION (SEE REFERENCES), AND THEIR LOCATIONS ARE ONLY APPROXIMATE. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.
6. THE HISTORIC HIGH WATER (HHW) LOCATION, AS SHOWN ON THE PLAN ARE FROM MA GIS DATABASE TIDELANDS JURISDICTION (M.G.L. Ch 91) DATALAYERS, AS DETERMINED BY MASSACHUSETTS CHAPTER 91 MAPPING PROJECT, PREPARED BY BSC GROUP, 2006.
7. PROJECT SITE IS IN FEMA ZONE VE (EL. 18 NAVD88) IN ACCORDANCE TO FEMA FIRM MAP #25009C0529G, EFFECTIVE DATE JULY 16, 2014.
8. MASSACHUSETTS STATE HARBOR LINES, AS DELINEATED BY THE COMMONWEALTH OF MASSACHUSETTS CHAPTER 313 OF THE ACTS OF 1867 & AMENDED 1985, FALL OUTSIDE OF THE OVERALL PROJECT LIMITS (APPROX. 900-FEET OFFSHORE), THEREFORE STATE HARBOR LINES ARE NOT SHOWN ON THESE PLANS.
9. THE INFORMATION DEPICTED ON THIS PLAN REPRESENTS THE RESULTS OF SURVEYS MADE ON THE DATES SHOWN ABOVE, AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITIONS AT THAT TIME. OBSTRUCTIONS, UTILITIES, OR OTHER DIFFERING CONDITIONS MAY EXIST.
10. POSSESSION AND USE OF THE MATERIAL CONTAINED ON THESE DRAWINGS IS GRANTED ONLY IN CONNECTION WITH ITS USE AS IT RELATES TO THE TITLED PROJECT, ANY OTHER USE, REPRODUCTION OR DISCLOSURE OF THE INFORMATION CONTAINED HEREON IS EXPRESSLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF FOTH INFRASTRUCTURE & ENVIRONMENTAL, INC.

NOTES

HYDROGRAPHIC NOTES:

1. RTK CORRECTIONS FOR THIS SURVEY PROVIDED BY KEYNET - VRS (GEOID 12A).

LEGEND

- MEAN LOW WATER (MLW); EL. -4.98' NAVD88
- MEAN HIGH WATER (MHW); EL. +4.18' NAVD88
- HISTORIC HIGH WATER
- PROPERTY LINES
- FEDERAL NAVIGATION CHANNEL (LYNN HARBOR LINES)
- PROJECT LIMITS
- PERMIT LIMITS

DATUM OFFSETS

MLLW	NAVD88	
12.12	6.80	HTL
9.94	4.62	MHHW
9.50	4.18	MHW
5.32	0	
0.34	-4.98	MLW
0	-5.32	MLLW
-0.78	-6.10	LYNN MA CITY BASE

OFFSETS TAKEN FROM VDATUM VERSION 3.8
LAT: 42.45763
LONG: -70.94337

COMMONWEALTH OF MASSACHUSETTS
JENNIFER S. GREEN
CIVIL
No. 48585
REGISTERED PROFESSIONAL ENGINEER

1/22/24

15584

Approved by Department of Environmental Protection
Date: MAR 20 2024

DATE: 9/7/23

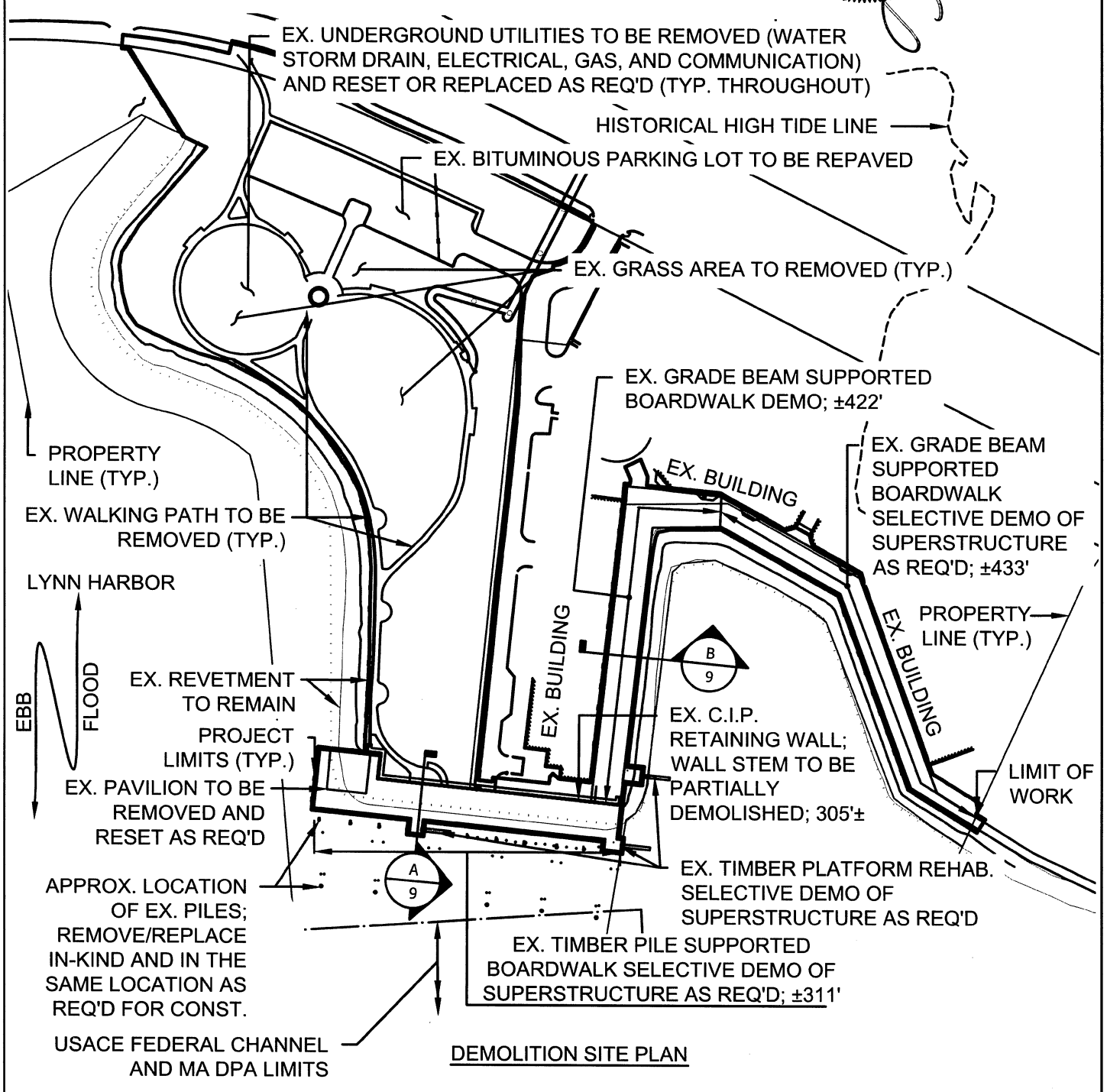
GENERAL LAW 36 SECTION 13-A

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

1/22/24

COMMONWEALTH OF MASSACHUSETTS
JENNIFER S. GREEN
CIVIL
No. 48585
REGISTERED PROFESSIONAL ENGINEER

1/22/24



DEMOLITION SITE PLAN

0' 75' 150'
SCALE: 1 INCH =150 FEET

03 OF 11

DATE: 9/7/23

15584

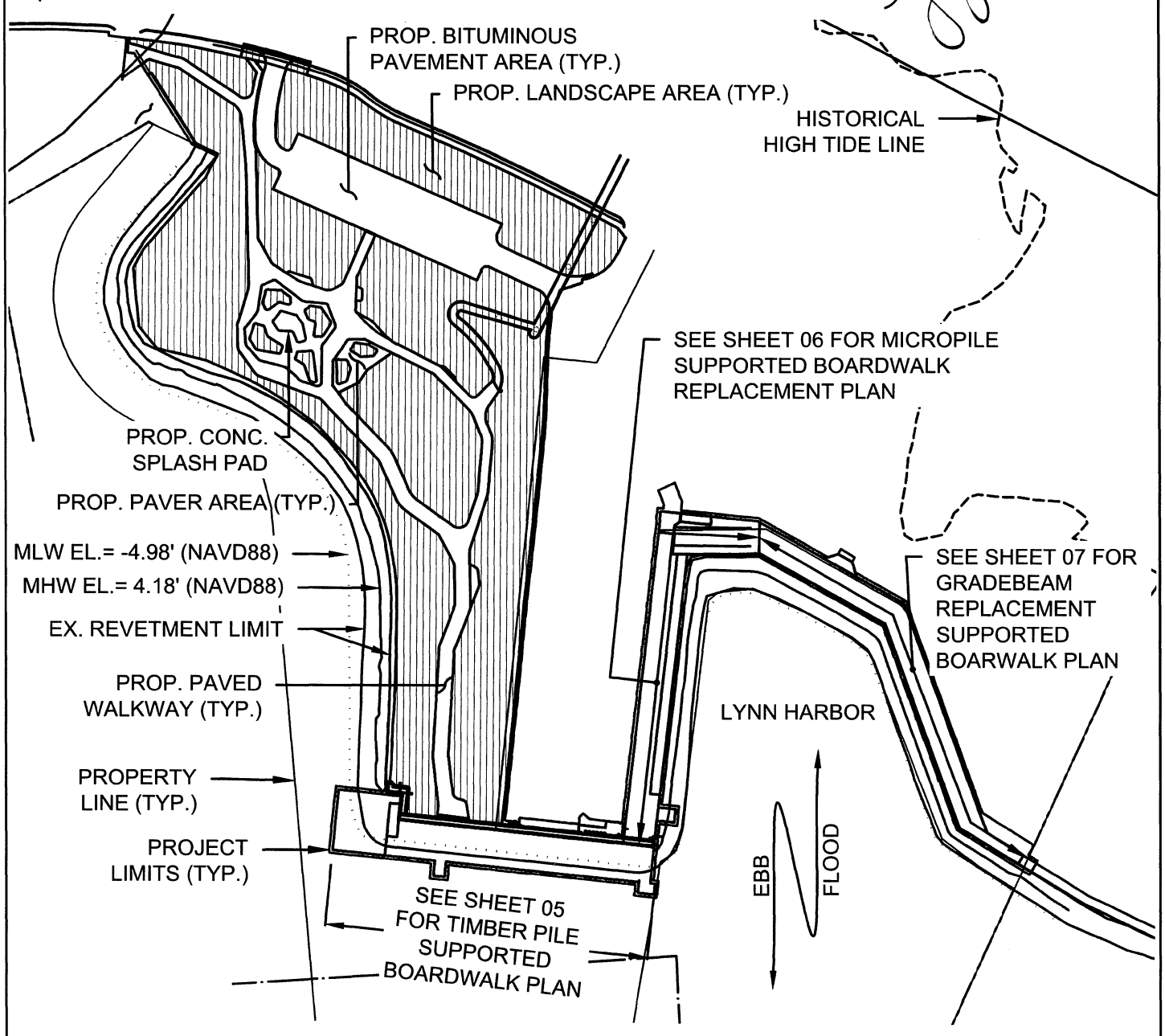
Approved by Department of Environmental Protection
Date; MAR 20 2024

GENERAL LAW 36 SECTION 13-A

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

1/22/24

COMMONWEALTH OF MASSACHUSETTS
JENNIFER S. GREEN
CIVIL
No. 48585
REGISTERED PROFESSIONAL ENGINEER
1/22/24



PROPOSED SITE PLAN

0' 75' 150'
SCALE: 1 INCH =150 FEET

04 OF 11

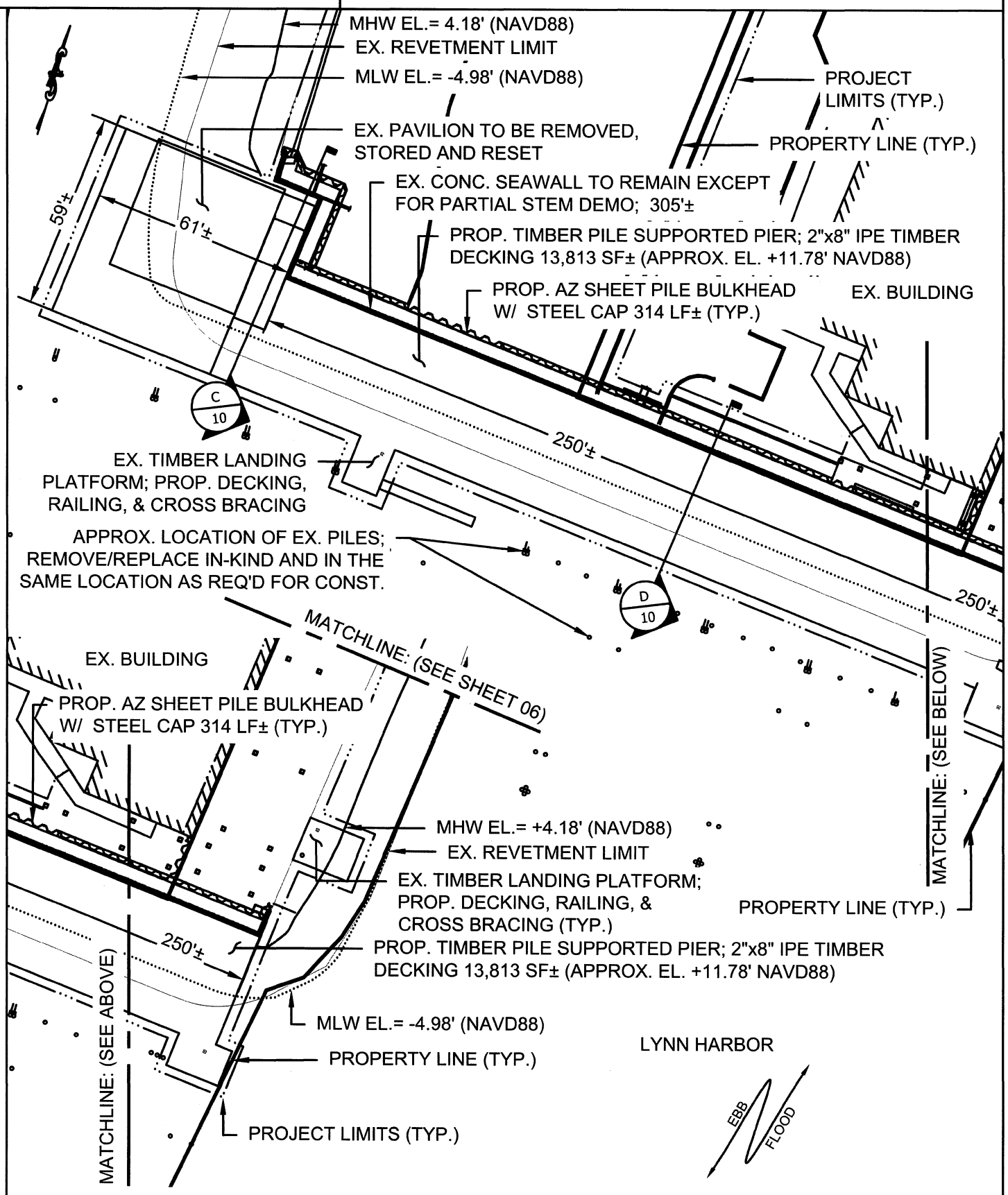
DATE: 9/7/23

WPM No. 15584
Approved by Department of Environmental Protection
Date: MAR 20 2024

GENERAL LAW 36 SECTION 13-A

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

1/22/24



COMMONWEALTH OF MASSACHUSETTS
JENNIFER S. GREEN
CIVIL
No. 48585
REGISTERED PROFESSIONAL ENGINEER

1/22/24

0' 20' 40'

SCALE: 1 INCH =40 FEET

PROPOSED PARTIAL SITE PLAN 1-3

05 OF 11

DATE: 9/7/23

LICENSE PLAN NO. 15584

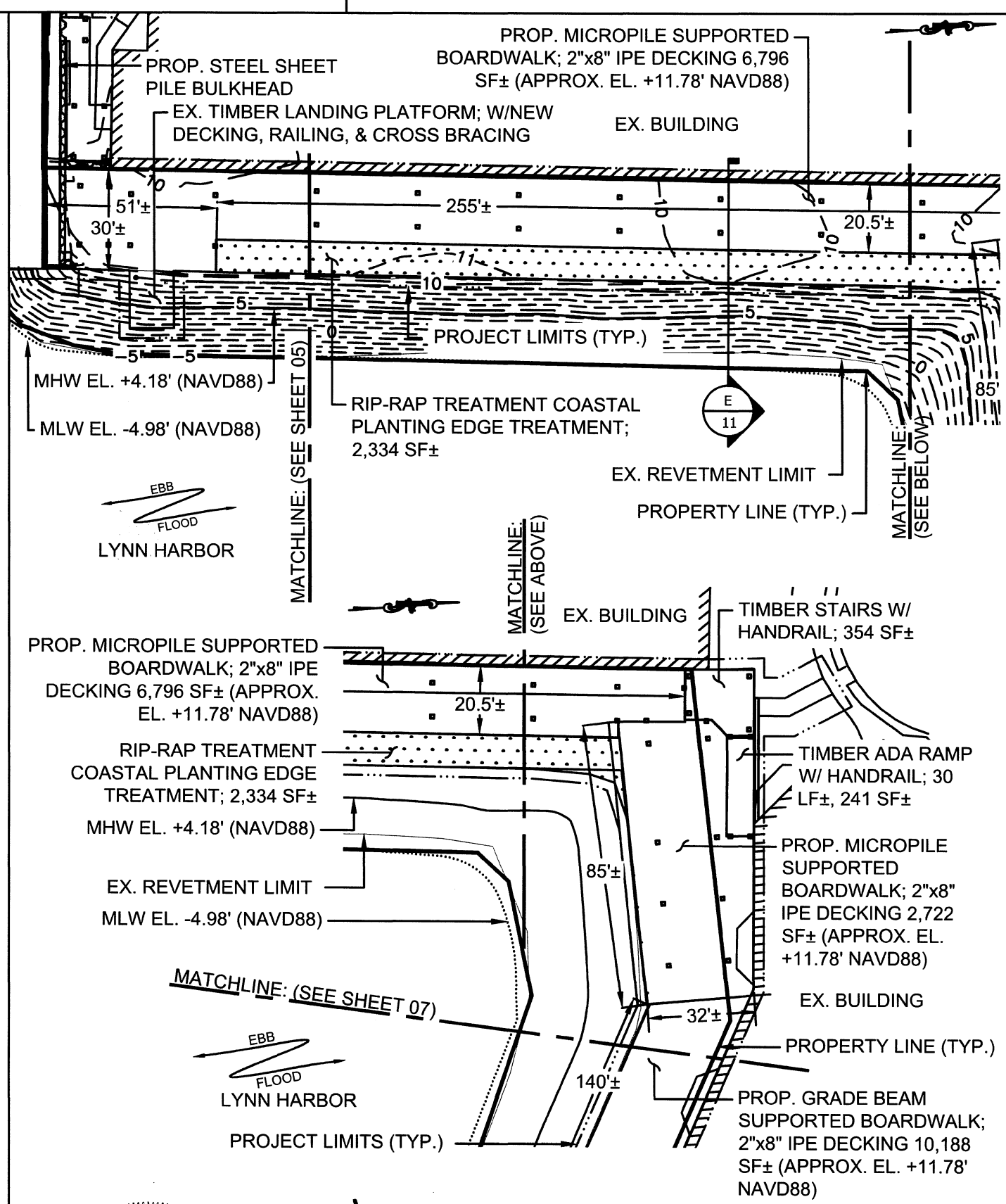
Approved by Department of Environmental Protection

Date; MAR 20 2024

GENERAL LAW 36 SECTION 13-A

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

1/22/24



COMMONWEALTH OF MASSACHUSETTS
JENNIFER S. GREEN
CIVIL
No. 48585
REGISTERED PROFESSIONAL ENGINEER

1/22/24

PROPOSED PARTIAL SITE PLAN 2-3

0' 20' 40'

SCALE: 1 INCH =40 FEET

06 OF 11

DATE: 9/7/23

WATER PLAN NO. 15584

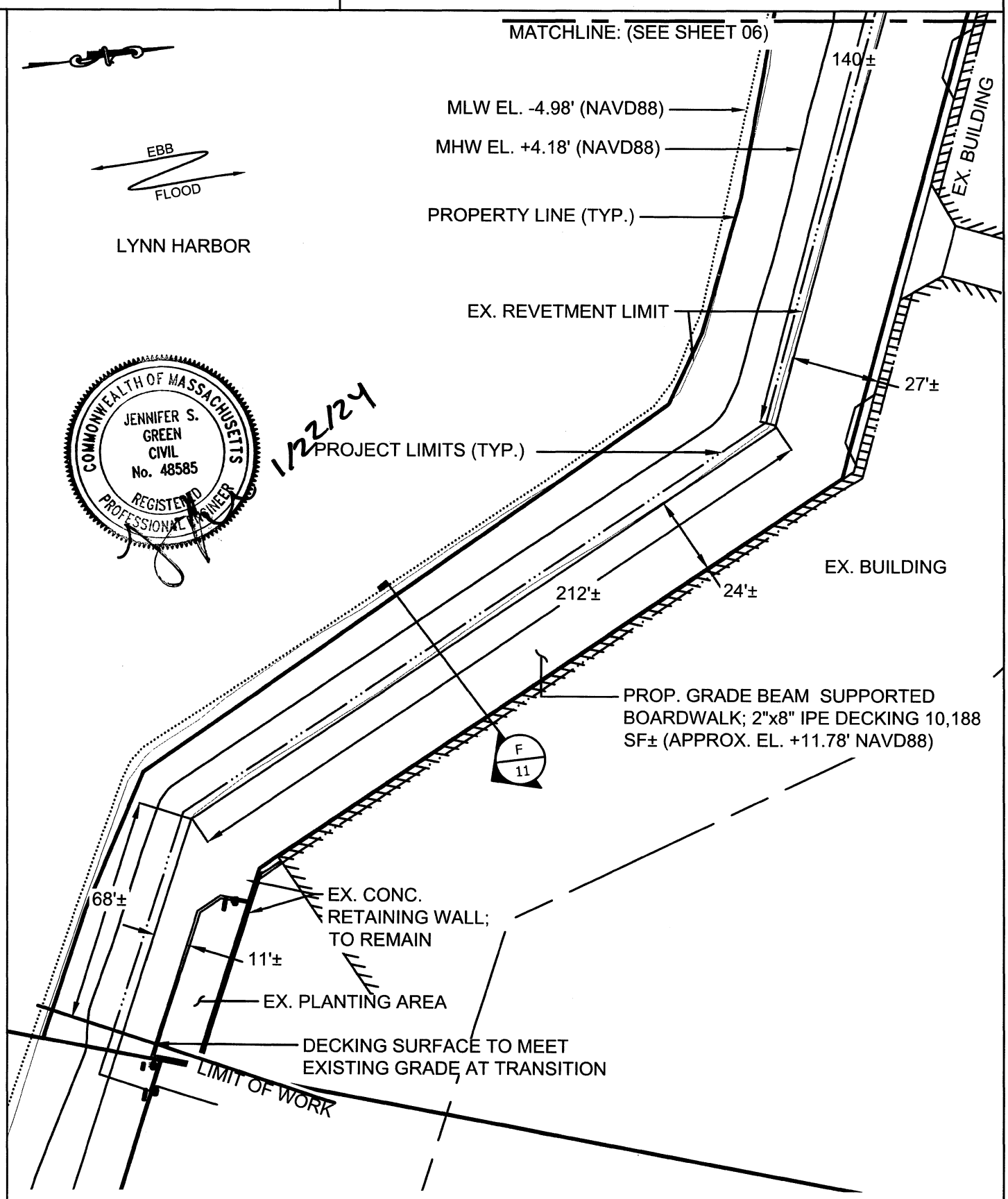
Approved by Department of Environmental Protection

Date; MAR 20 2024

GENERAL LAW 36 SECTION 13-A

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

1/22/24



PROPOSED PARTIAL SITE PLAN 3-3

0' 20' 40'

SCALE: 1 INCH =40 FEET

07 OF 11

DATE: 9/7/23

LICENSE PLAN NO. 15584

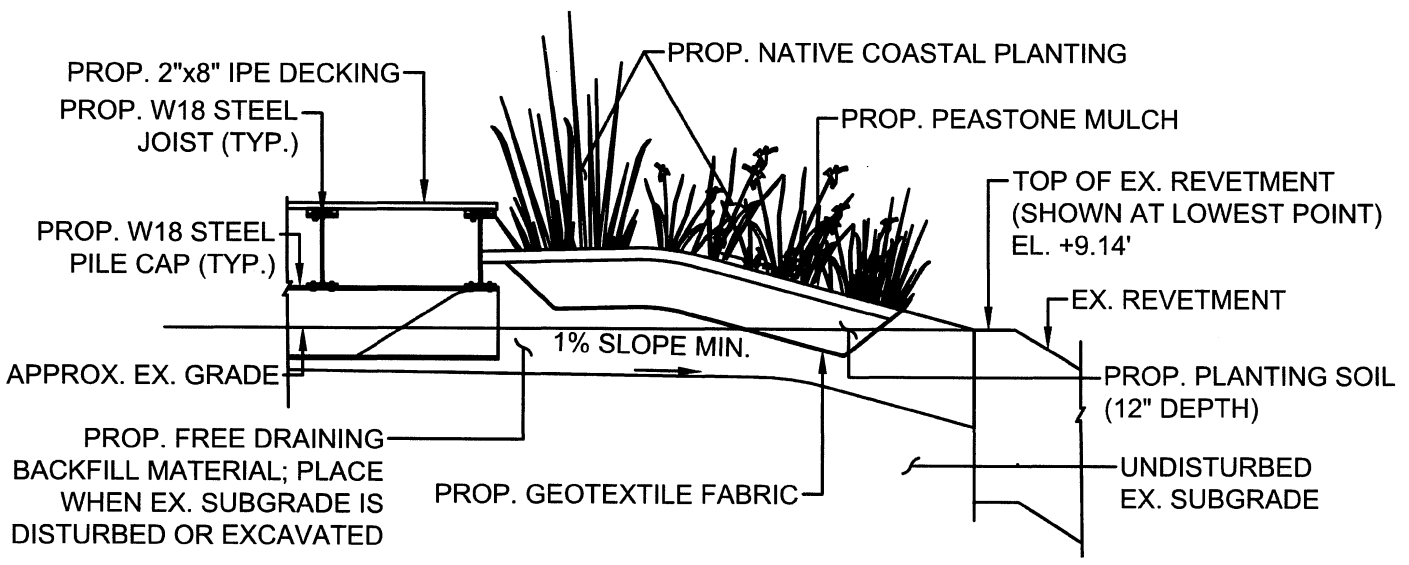
Approved by Department of Environmental Protection

Date; MAR 20 2024

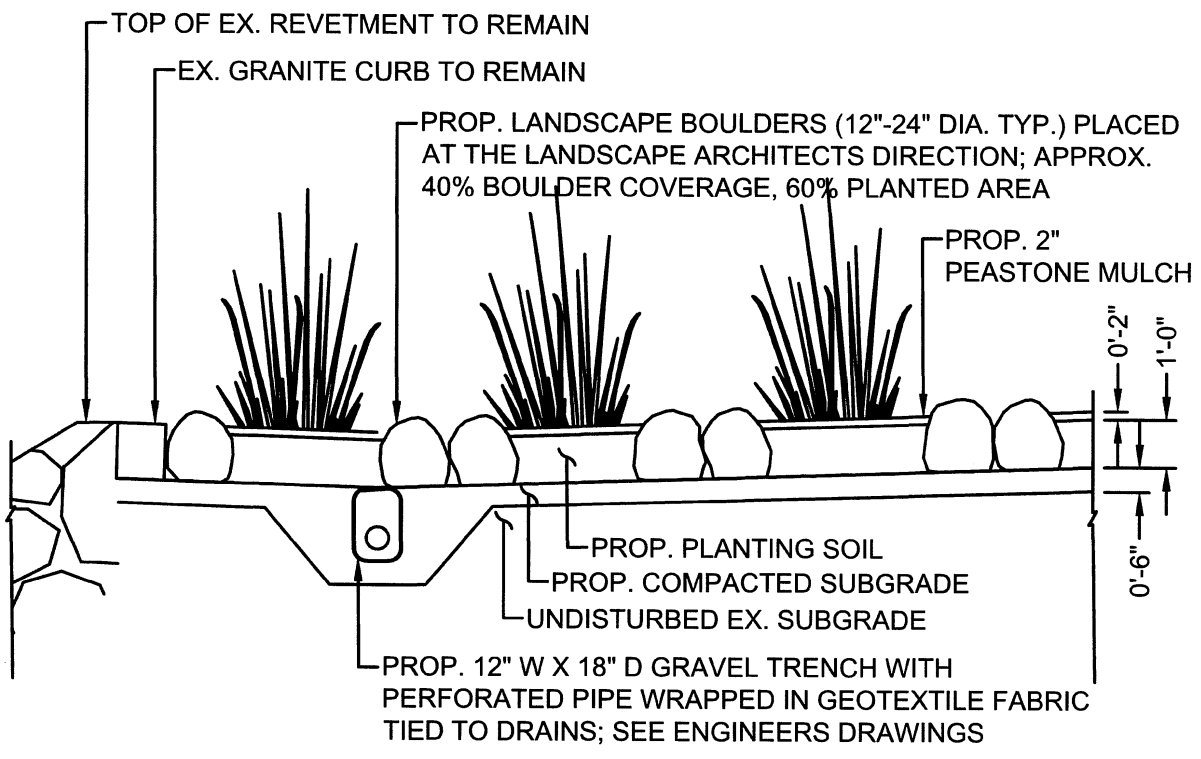
GENERAL LAW 36 SECTION 13-A

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

1/22/24



DETAIL1: COASTAL PLANTING EDGE TREATMENT
SCALE 1" = 4'-0"



DETAIL 2: REINFORCED PLANTING EDGE
SCALE 1" = 4'-0"

PROPOSED LANDSCAPING DETAILS

COMMONWEALTH OF MASSACHUSETTS
JENNIFER S. GREEN
CIVIL
No. 48585
REGISTERED PROFESSIONAL ENGINEER
1/22/24

0' 2' 4'
SCALE: 1 INCH = 4 FEET

08 OF 11

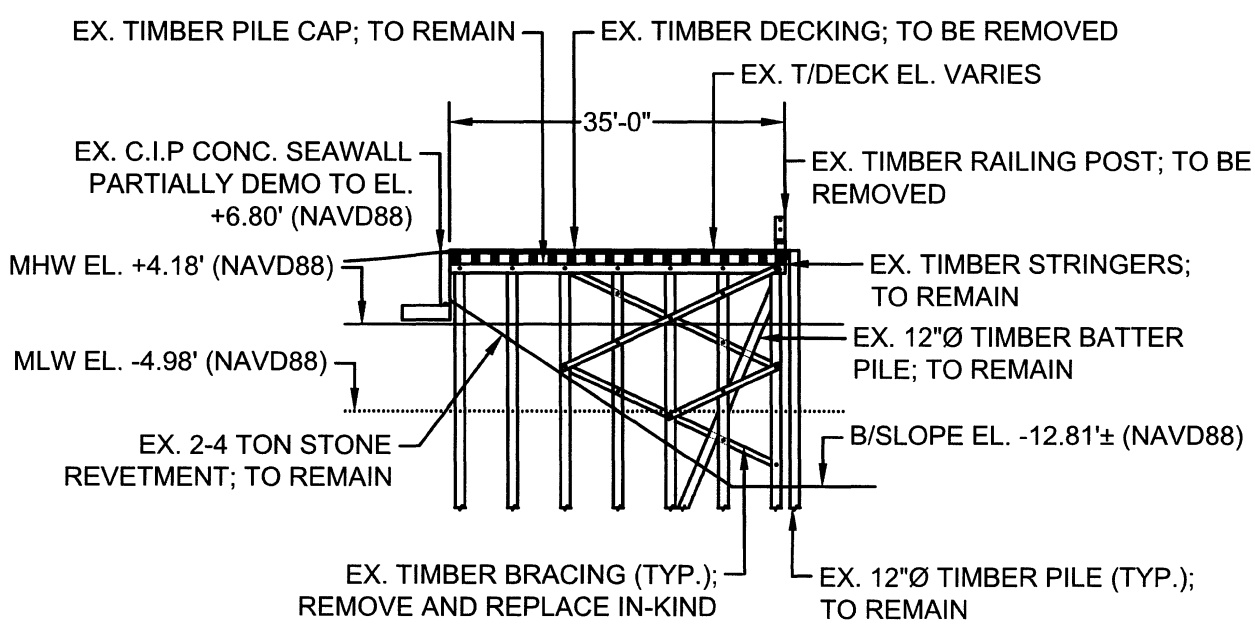
DATE: 9/7/23

LICENSE PLAN NO. 15584
Approved by Department of Environmental Protection
Date; MAR 20 2024

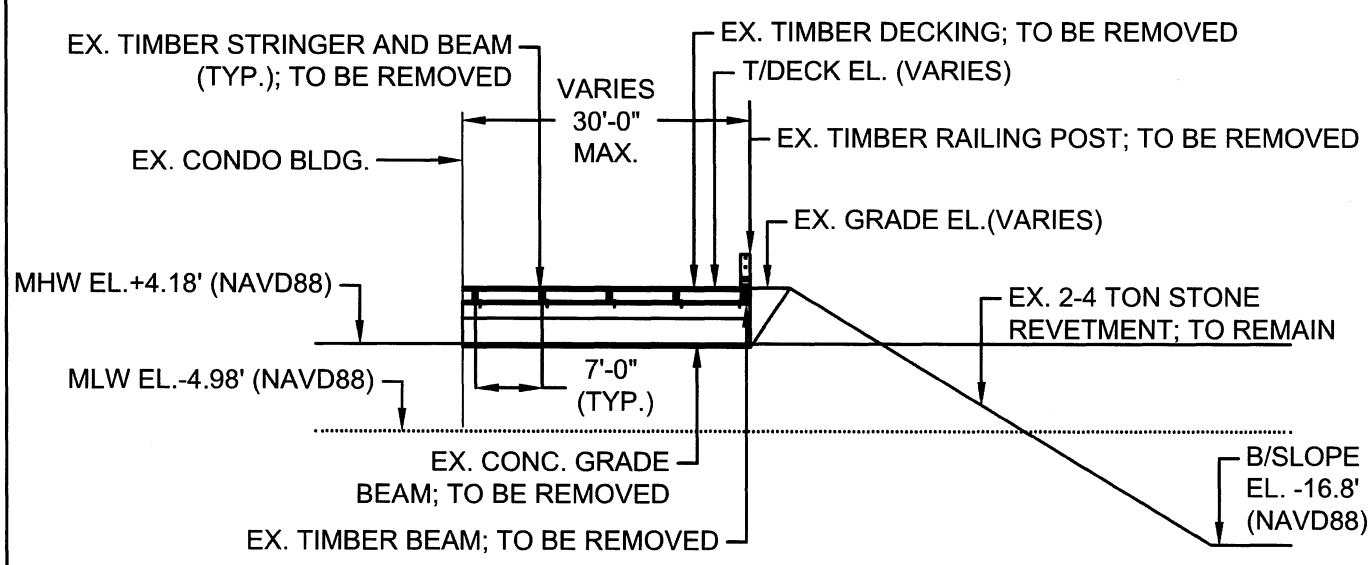
GENERAL LAW 36 SECTION 13-A

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

1/22/24



SECTION A: PILE SUPPORTED PIER DEMO
SCALE 1" = 20'-0"



SECTION B: GRADE BEAM BOARDWALK DEMO
SCALE 1" = 20'-0"

EXISTING & DEMOLITION SECTIONS

COMMONWEALTH OF MASSACHUSETTS
JENNIFER S. GREEN
CIVIL
No. 48585
REGISTERED PROFESSIONAL ENGINEER
1/22/24

0' 10' 20'
SCALE: 1 INCH = 20 FEET

09 OF 11

DATE: 9/7/23

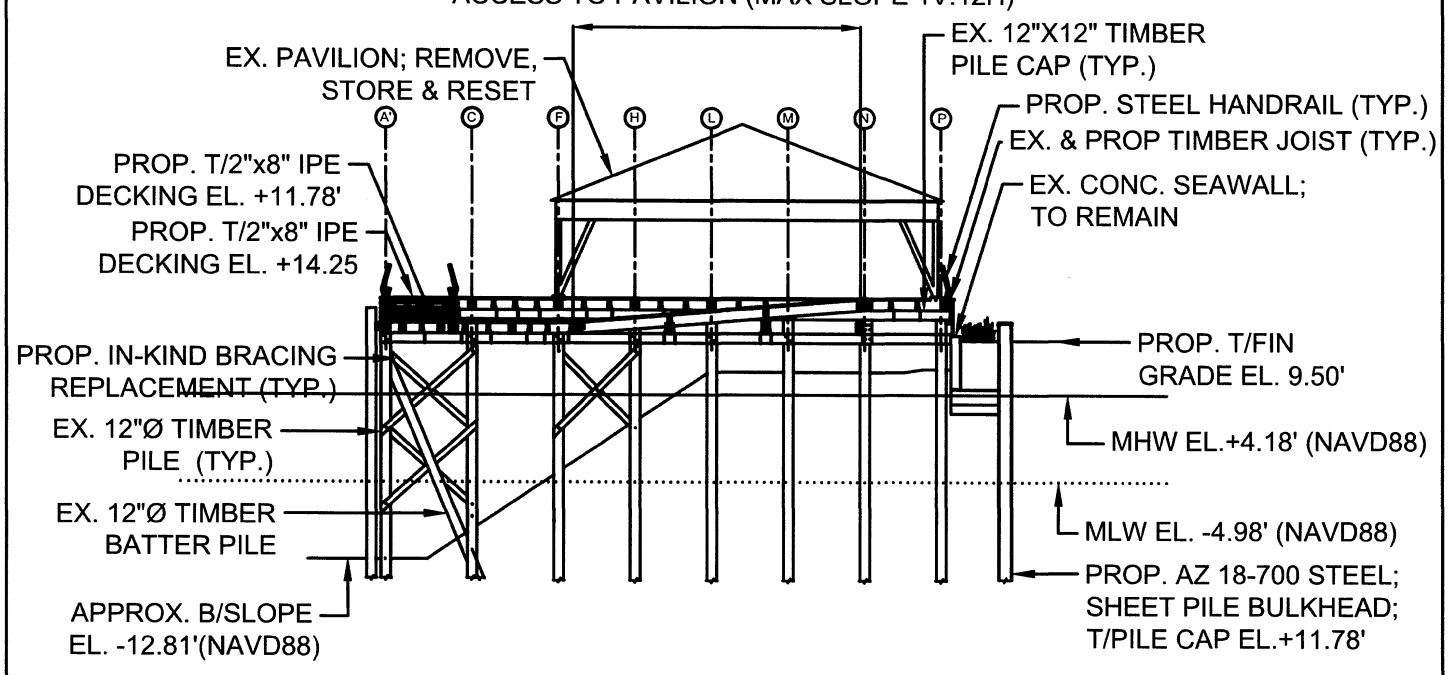
LICENSE PLAN NO. 15584
Approved by Department of Environmental Protection
Date; MAR 20 2024

GENERAL LAW 36 SECTION 13-A

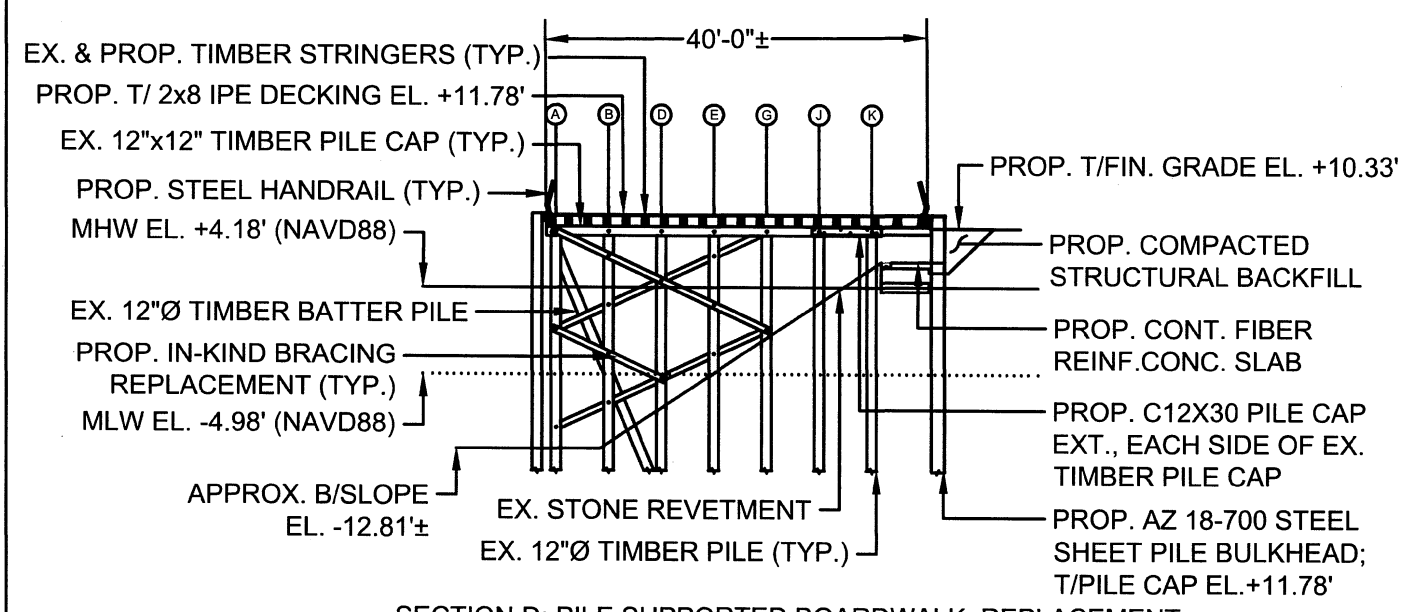
I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

1/22/24

RECONSTRUCT 29-8" ADA COMPLIANT RAMP
ACCESS TO PAVILION (MAX SLOPE 1V:12H)



SECTION C: PILE SUPPORTED BOARDWALK REPLACEMENT
SCALE 1" = 20'-0"



SECTION D: PILE SUPPORTED BOARDWALK REPLACEMENT
SCALE 1" = 20'-0"

PROPOSED SECTIONS

COMMONWEALTH OF MASSACHUSETTS
JENNIFER S. GREEN
CIVIL
No. 48585
REGISTERED PROFESSIONAL ENGINEER

1/22/24

0' 10' 20'
SCALE: 1 INCH =20 FEET

10 OF 11

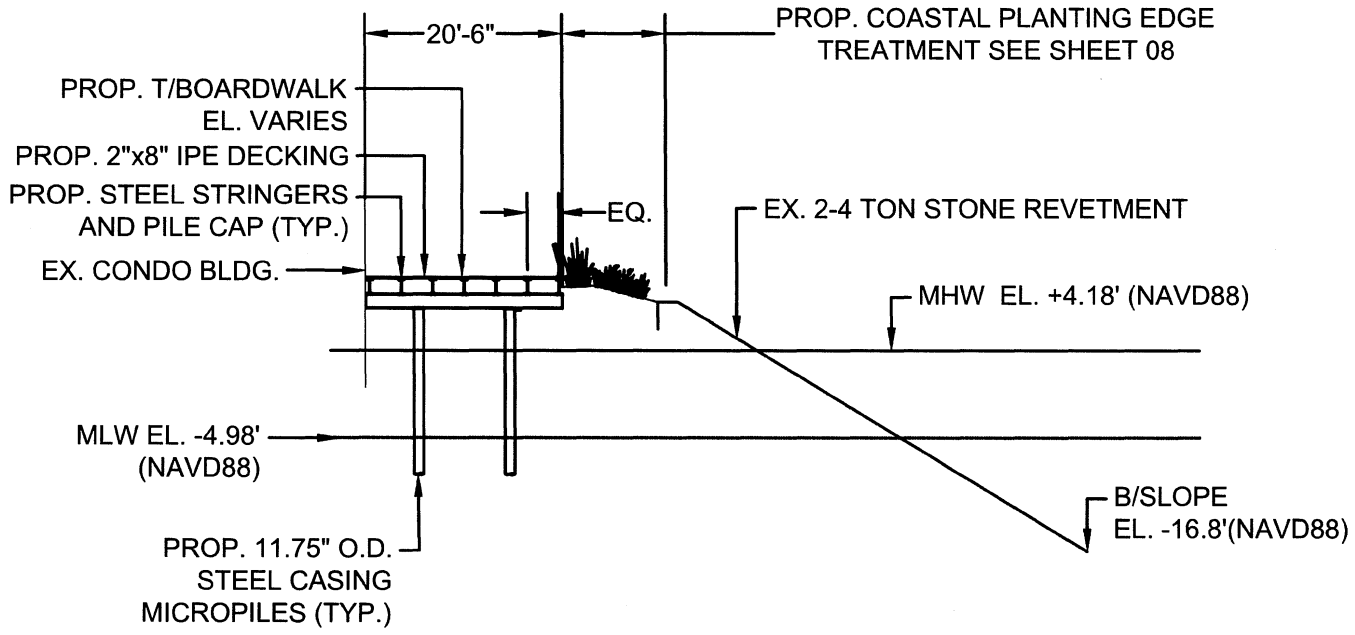
DATE: 9/7/23

LICENSE PLAN No. 15584
Approved by Department of Environmental Protection
Date; MAR 20 2024

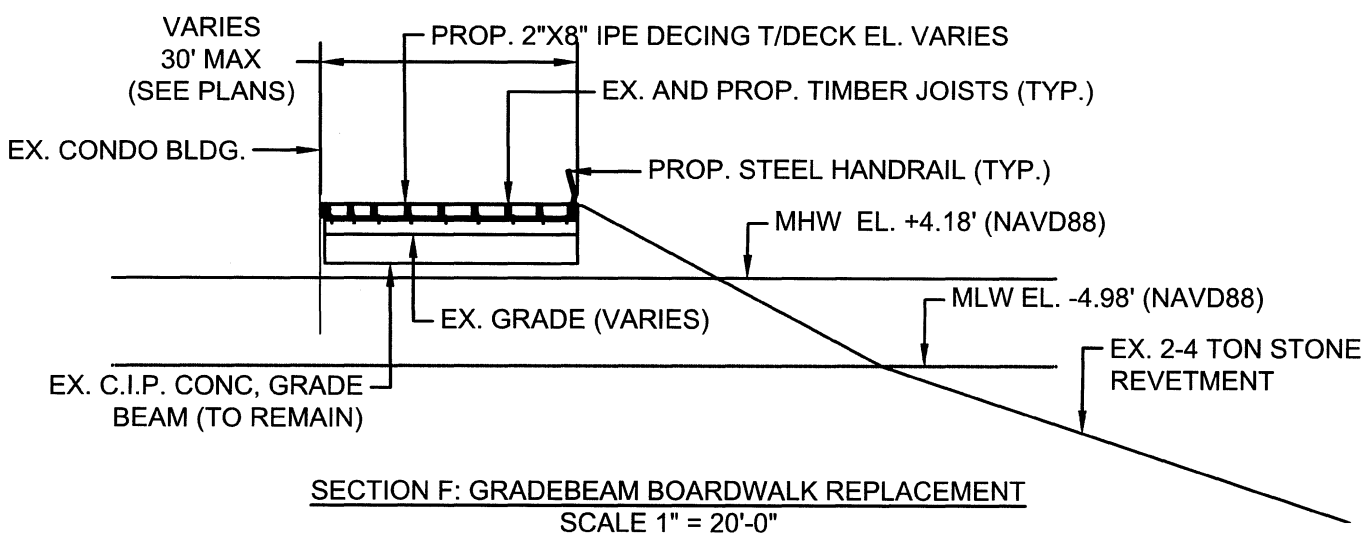
GENERAL LAW 36 SECTION 13-A

I CERTIFY THAT THIS PLAN CONFORMS WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

1/22/24



SECTION E: MICROPILE SUPPORTED BOARDWALK
SCALE 1" = 20'-0"



SECTION F: GRADEBEAM BOARDWALK REPLACEMENT
SCALE 1" = 20'-0"

COMMONWEALTH OF MASSACHUSETTS
JENNIFER S. GREEN
CIVIL
No. 48585
REGISTERED PROFESSIONAL ENGINEER
1/22/24

PROPOSED SECTIONS

0' 10' 20'
SCALE: 1 INCH = 20 FEET

11 OF 11

DATE: 9/7/23

LICENSE PLAN NO. 15584
Approved by Department of Environmental Protection
Date; MAR 20 2024

The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Charles D. Baker
GOVERNOR

Karyn E. Polito
LIEUTENANT GOVERNOR

Kathleen A.Theoharides
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1081
http://www.mass.gov/eea

January 23, 2020

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME	: Lynn Heritage State Park
PROJECT MUNICIPALITY	: Lynn
PROJECT WATERSHED	: North Coastal
EEA NUMBER	: 16137
PROJECT PROPONENT	: Department of Conservation and Recreation
DATE NOTICED IN MONITOR	: December 23, 2019

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G. L. c. 30, ss. 61-62I) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I hereby determine that this project **does not require** an Environmental Impact Report (EIR).

Project Description

As described in the Environmental Notification Form (ENF), the project consists of renovations and improvements to Lynn Heritage State Park. The park is located on filled tidelands consisting of decomposing organic soils and debris to a depth of 20 ft which has resulted in significant site settlement. The project proposes to address safety concerns associated with uneven topography and ensure compliance with the Americans with Disabilities Act (ADA). Specifically, the project proposed to restore site topography, replace and reconfigure paved walkways, reconfigure the parking lot, renovate the boardwalk and pavilion and repair a concrete seawall. A splash pad will be added as well as new seating, lighting, native plantings, and stormwater quality measures. The parking lot will be reconstructed in the same general footprint with the addition of a new access driveway off of the

Lynnway to help improve traffic circulation. The project also includes the replacement of two stormwater outfall pipes on the riprap bank on the west side of the project site.

The regrading of the park includes surficial excavation within a 1.5-acre area of the park with the most pronounced site settlement. This includes excavation to a depth of 4 feet (ft) below the proposed 15-ft walkways and surrounding areas (approximately 4 ft on either side for total width of 23 ft) and surficial excavation to a depth of 1 ft for the remaining area. Excavated soil will be screened for debris, underlying soil will be compacted, and a geogrid will be installed over the excavation subgrade. Screened soil will then be used to backfill the excavated areas. A 10-ft wide strip of land behind the south facing seawall will be excavated to a depth of 4 ft and restored using the above approach. Walkways will be relocated away from coastal bank. The bracing, decking, and railings of the existing pile supported boardwalk and pavilion will be replaced in-kind. A 120 linear feet (lf) section of at-grade beam supported boardwalk located on the east side of the Seaport Landing condominium building will be replaced and reduced in width from 30 ft to 20 ft. This section of the boardwalk will be supported by new micropilings drilled into bedrock. The remainder of the boardwalk not subject to settlement will have decking and railings replaced and supplemental joists added. A deteriorating concrete seawall on the southside of the site will be reinforced with a steel sheet pile and concrete cap.

As described in the ENF, the Lynn Heritage State Park anchors the northern end of the City of Lynn's waterfront and improvements to the park will play a crucial role in both reconnecting the public with the Lynn Harbor and activating waterfront development.

Project Site

The 4.7-acre project site known as Lynn Heritage State Park consists of an existing waterfront park with greenspace, 5 ft wide paved walkways, a 46-space parking lot, and a 1,100 lf timber boardwalk and timber pavilion under the care and control of the Department of Conservation and Recreation (DCR). Access to the site is provided via a vehicular access/egress drive off of the Lynnway as well as a pedestrian bridge over the Lynnway which provides access to the park from downtown Lynn. The park is bounded by the Lynnway to the north, Seaport Landing condominiums to the east and north and 254 Lynnway (EEA# 15575) to the west and Lynn Harbor to the south and southwest.

The shoreline of the park in protected by a granite stone revetment and concrete seawall. The project is located within a velocity zone (VE Zone) with base flood elevation (BFE) 18 ft NAVD88 according to the Federal Emergency Management Act (FEMA)'s Flood Insurance Rate Map (FIRM) No. 25009C0529G effective July 16, 2014. The project site consists entirely of Land Subject to Coastal Storm Flowage (LSCSF) and also includes Coastal Bank. The project is located within the northern portion of the City of Lynn's Waterfront Zone, an approximately 305-acre zone that extends southeast of the Lynnway between the General Edwards Bridge/Saugus River and DCR's Nahant Beach Reservation.

Environmental Impacts and Mitigation

As described in the ENF, potential environmental impacts associated with the project include impacts to 218,950 sf of LSCSF and 40 ft of Coastal Bank. The project will increase onsite impervious area by 15,752 sf (0.36 acres).

Measures to avoid, minimize and avoid environmental impacts include the installation of additional stormwater quality controls and use of erosion and sedimentation controls during the construction period.

Jurisdiction and Permitting

This project is subject to MEPA review and requires the preparation of an ENF pursuant to 301 CMR 11.03(3)(b)(f) and because it requires a State Agency Action and involves the alteration of ½ or more acres of any other wetland. The project is being undertaken by DCR and will require a Chapter 91 (c. 91) License from the Massachusetts Department of Environmental Protection (MassDEP).

The project received an Order of Conditions from the Lynn Conservation Commission on November 7, 2019 (DEP File No. 038-0460) which was not appealed. The project will require the submission of a Self-Verification Notification from the U.S. Army Corp of Engineers (ACOE) and a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) from the Environmental Protection Agency (EPA).

Because the project will be undertaken by a State Agency, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Review of the ENF

The ENF provided a description of existing and proposed conditions, preliminary project plans, and an alternatives analysis, and identified measures to avoid, minimize and mitigate environmental impacts.

Alternatives Analysis

The alternatives analysis considered a No-Build Alternative, a Master Planning Alternative and four alternatives for improving soil conditions and subsidence issues as part of the Preferred Alternative. The No-Build Alternative would not address existing site deficiencies that limit safe use of the park. The site would continue to degrade, and existing infrastructure would continue to deteriorate ultimately leading to the closure of park and restriction of waterfront access. The Master Planning Alternative consisted of a waterfront park which incorporated large shade structures, restrooms, kiosk/café space and playground. This alternative was dismissed in response to worsening site settlement which makes features like large structures more difficult to construct and in consideration of additional costs to address site settlement.

The Preferred Alternative includes the partial excavation and replacement of structured fill within the southernmost 1.5 acres of the project site where settlement was most pronounced. The alternatives analysis considered four options to address site settlement within this area. Option 1

included surficial excavation of this area to a depth of 10 ft. This option would be the most expensive option but would require less frequent maintenance. This option would require the installation of sheet piling to support the excavation area which would have significant impacts to the revetment and adjacent property. All existing trees would be lost, and utilities would be impacted. Option 2 would include the surficial excavation of 1.5 acres of the park to a depth of 3ft. This option would be less expensive but would require more frequent maintenance than Option 1 and would result in the loss of all trees and impact all utilities within the excavation area. Option 3 would involve surficial excavation to a depth of 1 ft. This option represented the least expensive alternative but was determined to be less effective in stabilizing the soil. The Preferred Alternative includes surficial excavation to a depth of 4 ft below the proposed walkways and ft one either side and surficial excavation to a depth of 1ft for the remaining 1.5-acre area. The excavation option included in the Preferred Alternative provides increased stabilization of soil beneath the walkway while still addressing the lawn area and allowing existing trees to be retained.

Waterways, Wetlands and Stormwater

The project will temporarily impact Coastal Bank associated with the installation of two replacement drainage outfalls. The project site is located within LSCSF and therefore both temporary and permanent impacts to LSCSF are associated with regrading portions of the site and the addition of 15,752 sf of impervious area as a result of wider paved walkways, the splash pad and new entrance way. The project should continue to minimize impervious area to the maximum extent feasible.

The project site includes filled and flowed tidelands and therefore requires c. 91 authorization. MassDEP will review the project to determine its consistency with the c. 91 regulations (310 CMR 9.00). Comments from MassDEP and CZM note that the width reduction proposed for the boardwalk will require further review during the c. 91 review process.

The project includes the installation of stormwater management system consistent with MassDEP's Stormwater Management Standards. Under existing conditions, runoff from the parking lot is conveyed to catch basins with limited water quality treatment. The project proposed to incorporate catch basins with deep sumps and hoods and water quality units resulting in a total suspended solid (TSS) removal of 85%. Runoff from walkways will be mitigated by vegetated buffers.

Climate Change Adaptation and Resiliency

The project is proposing to relocate walkways away from the coastal bank and will reinforce an existing seawall that is being undermined. The project proposes to regrade the park to its original elevation and is not proposing to raise the elevation of coastal infrastructure. As noted in CZM's comment letter, topography, permeability, and vegetation characteristics of the coastal floodplain are critical to ensure that the area can effectively reduce storm damage and flooding of inland areas by slowing down moving water. Because the site is expected to continue to be subject to flooding which will likely increase over time with climate change and sea level rise, plant species chosen should be able to tolerate both existing and future conditions. The project should consider a natural planted buffer area along the top of the coastal bank that is not mown to reduce the likelihood of erosion from both coastal and overland flood conditions. As discussed at the site visit held on January 3, 2020, the project design should ensure that waves will not exacerbate scour behind the existing revetment and below the

redeveloped boardwalk during coastal storm surge events, specifically where the width of the boardwalk may be shortened.

The ENF included tidal data for Lynn Harbor within the project vicinity which they use to establish present and future flood elevations for the 10-year, 50-year and 100-year storm events. The elevations presented in the ENF are lower than BFE identified in the FEMA FIRM. I encourage the City or DCR to submit a Letter of Map Revision (LOMR) for future resiliency planning.

The City of Lynn has been designated as a participating community in the Commonwealth's Municipal Vulnerability Preparedness (MVP) program which provides support for the process of planning for climate change resiliency. Through the MVP program, the City received funding to conduct a planning process for climate change resiliency and implementing priority projects. The results of the initial community-driven process were presented in the *"Community Resiliency Building Workshop – Summary of Findings Report"* (dated June 2019). The Report identified coastal flooding and shoreline erosion as a concern. DCR should continue to maintain the functions of the coastal floodplain in order to minimize damage to landward areas during coastal storm events.

Construction Period

All construction should be managed in accordance with applicable MassDEP Solid Waste and Air Pollution Control regulations pursuant to M.G.L. c.40, §54 and 310 CMR 7.00. I encourage the Proponent to require contractors to install emission control devices on all off-road construction vehicles in an effort to reduce emissions of volatile organic compounds (VOCs), carbon monoxide (CO) and particulate matter (PM) from diesel-powered equipment. Off-road vehicles are required to use ultra-low sulfur diesel fuel (ULSD). All construction activities should be undertaken in compliance with the conditions of all State and local permits.

Conclusion

The ENF has adequately described and analyzed the project and its alternatives, and assessed its potential environmental impacts and mitigation measures. Based on review of the ENF and comments received on it, and in consultation with State Agencies, I have determined that an EIR is not required.

January 23, 2020
Date

K. Theoharides
Kathleen A. Theoharides

Comments received:

01/13/2019 Massachusetts Department of Environmental Protection (MassDEP) Waterways Regulation Program (WRP)
01/10/2020 Office of Coastal Zone Management (CZM)

KAT/EFF/eff

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Kathleen A. Theoharides
Secretary

Martin Suuberg
Commissioner

Memorandum

To: Erin Flaherty MEPA

From: Chrissy Hopps, Waterways Regulation Program, MassDEP/Boston

Re: **Comments from the Chapter 91 Waterways Regulation Program** — EEA #16137 Environmental Notification Form – Lynn Heritage State Park, Lynn, Essex County

Date: January 13, 2020

Project Description:

The Department of Environmental Protection Waterways Regulation Program (the "WRP") has reviewed the referenced Environmental Notification Form submitted by LEC Environmental Consultants, Inc. on behalf of the Commonwealth of Massachusetts Department of Conservation and Recreation ("the Proponent") on December 16, 2019 to address site settlement, improve existing park conditions, and add new park amenities at the Lynn Heritage State Park. The proposed project site is located within filled and flowed tidelands of Lynn Harbor at Lynn Heritage State Park along Lynnway, Lynn, Essex County (the "proposed project site").

Chapter 91 Jurisdiction:

The project is located within filled and flowed tidelands of Lynn Harbor and will require authorization through a Chapter 91 Waterways Program (c.91) license.

Water Dependency:

Based on the initial WRP review, the project appears to be water-dependent in accordance with 310 CMR 9.12(2)(a)4. Additional details regarding the proposed reduction in the width of the boardwalk and proposed use of the area are required, and the project will be further reviewed for water-dependency and conformance with the applicable performance standards at 310 CMR 9.00 as part of the c.91 application process.

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.
TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

Printed on Recycled Paper

Chapter 91 Regulatory Analysis:

WRP staff did not identify substantive concerns related to the proposed project; however, additional information is required in order for WRP staff to complete an evaluation. The following comments are offered as guidance for submittal of a c.91 license application. The WRP evaluation of the application will include, but not be limited to the following, in addition to a review for conformance with all applicable performance standards at 310 CMR 9.00

The licensing history included in the ENF filing does not accurately or completely represent the c.91 authorizations relative to the project site. Prior to submittal of an application, the Proponent shall identify all prior c.91 authorizations for all fill and structures located within c.91 jurisdiction. Once that information is compiled, WRP staff will provide the Proponent with guidance on the requisite licensing process for the proposed project.

The ENF identifies the potential for the removal of pilings in association with the project construction, which will be required to be licensed, and may be included in the c.91 application. The information on the plans should include the minimum necessary information for a c.91 review, and clearly identify the complete scope of work relative to property boundaries and the limits of the project site. WRP staff are available to provide pre-application guidance with respect to the additional information needed to be included on plans.

Based on a review of available public records and the plans provided with the ENF, it appears the work will occur on property owned by other entities, in addition to the Proponent. Pursuant to 310 CMR 9.11(3)(a) an applicant for a license or permit shall submit a written application on the forms provided by the WRP, signed by the applicant and the landowner if other than the applicant. Please be reminded that the Waterways License Application Form is required to be properly executed by all landowners of property where work will occur within c.91 jurisdiction.

The WRP looks forward to the filing of a c.91 Waterways License Application which meets the minimum filing standards as set forth in 310 CMR 9.11(3) and includes the Secretary's Certificate concluding the MEPA review process.

If you have any questions regarding the WRP comments, please contact Chrissy Hopps at Christine.Hopps@mass.gov or at (617) 348-4084.

THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
OFFICE OF COASTAL ZONE MANAGEMENT
251 Causeway Street, Suite 800, Boston, MA 02114-2136
(617) 626-1200 FAX: (617) 626-1240

MEMORANDUM

TO:	Kathleen A. Theoharides, Secretary, EEA
ATTN:	Erin Flaherty, MEPA Office
FROM:	Lisa Berry Engler, Director, CZM
DATE:	January 10, 2020
RE:	EEA-16137, Lynn Heritage State Park; Lynn

The Massachusetts Office of Coastal Zone Management (CZM) has completed its review of the above-referenced Environmental Notification Form (ENF), noticed in the Environmental Monitor dated December 23, 2019, and offers the following comments.

Project Description

The proposed project is the renovation and re-design of an existing public park on the Lynn waterfront. The project will address fill settlement that has created uneven and unstable topography within the proposed walkway areas of the park by excavating and screening debris from the existing fill material, compacting the underlying soil with a vibratory roller, and installing a geogrid over the prepared excavation subgrade. Screened soil will then be used as an engineered fill, placed and compacted in 12-inch thick lifts to backfill the excavation areas. The base course materials for the walkways would be a minimum of 18 inches of imported granular soil. In addition, a 10-foot wide strip of land behind the south-facing seawall will be excavated to a depth of 4 feet and restored using the above approach. The remaining portions of the park are proposed to be landscaped/grass lawn. These areas will be excavated to a 1-foot depth and compacted, with the screened soil to be replaced over a geogrid with 4- to 6-foot thick topsoil to final grade. The project will also replace two existing stormwater outfall pipes in the riprap bank on the west side of the project, as these have become misaligned as a result of the site settlement over time, and no longer function appropriately. The bracing, decking and railings on the existing pile-supported boardwalk and pavilion will be replaced in kind, and 120 linear feet of grade beam supported boardwalk will be reduced in with from approximately 30 feet to 20 feet, and replaced on the east side of the site. This portion of the boardwalk will be supported on new micro-pilings drilled into bedrock for stability. Those areas of the boardwalk that have not experienced settling in this area of the site will have decking and railings replaced and supplemental joists added for support. The area closest to the coastal bank in this location will be planted with coastal species. A deteriorating concrete seawall on the south side of the site will remain in place, but a steel sheet pile bulkhead with a concrete cap will be installed directly landward of the structure to provide stability. The parking lot will be reconstructed within the existing footprint, with slight modifications to accommodate a new entrance drive from the Lynnway to improve traffic circulation. Impervious area is proposed to increase by 15,752 square feet due to wider paved walkways, a new splash pad, and the new entrance way. Stormwater from the new entranceway will be directed to deep sump and hooded catch basins and into water quality units (Stormceptors) to remove 85% of total suspended solids (TSS).

Project Comments

CZM supports this project to renovate and improve public access and site amenities consistent with the goals and recommendation of the city's 2019 Waterfront Open Space Plan. The site has experienced significant settlement of fill over time, which has led to the uneven topography that affects the safety of the park, boardwalk, and pavilion for public access. The proposed renovation and updated amenities are likely to improve the usage of the park as well as the resilience of the site to coastal storm damage and flooding impacts.

The project site functions as coastal floodplain, or land subject to coastal storm flowage (LSCSF), with the immediate shoreline subject to high velocity waves, and the areas further inland within the limits of moderate wave action. The coastal floodplain reduces storm damage and flooding to inland areas by diminishing and buffering the high energy effects of storms. Topography, permeability, and vegetation characteristics are all critical to ensuring that the area can effectively slow down moving water to provide this important function. Moving the main walkways away from the immediate top of bank and increasing the vegetation as proposed will help to improve these functions. Because the site is expected to continue to be subject to flooding, and this is likely to increase over time with climate change and anticipated sea level rise, plant species should be chosen that can tolerate not only the existing conditions, but the changes over time. Where possible, particularly along the immediate top of bank, consideration should be given to maintaining a natural planted buffer area that is not mown, to reduce the likelihood of erosion from both coastal and overland flooding conditions. In addition, any opportunity to reduce impervious areas in the design will improve the ability of the site to detain storm and flood waters.

As discussed at the MEPA site walk on January 3, the area adjacent to the coastal bank on the site is vulnerable to velocity waves during coastal storms. The design of the boardwalk on the east side of the parcel, which will be reduced in width, should ensure that waves will not exacerbate scour behind the existing revetment and below the redeveloped boardwalk during coastal storm surge events. In addition, CZM recommends that the existing Chapter 91 licenses for this structure and the immediately adjacent residential development be consulted to ensure that the reduction in width for this area of the boardwalk is consistent with previous license conditions.

Federal Consistency Review

The proposed project may be subject to CZM federal consistency review and if so must be found to be consistent with CZM's enforceable program policies. For further information on this process, please contact Robert Boeri, Project Review Coordinator, at 617-626-1050, or visit the CZM web site at www.mass.gov/czm.

LE/kg

cc: Kathryn Glenn, CZM
Rachel Freed, DEP NERO
Chrissy Hopps, DEP Waterways
Gregory Robbins, DCR

The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Charles D. Baker
GOVERNOR

Karyn E. Polito
LIEUTENANT GOVERNOR

Bethany A. Card
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1081
http://www.mass.gov/eea

September 16, 2022

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
NOTICE OF PROJECT CHANGE

PROJECT NAME	: Lynn Heritage State Park
PROJECT MUNICIPALITY	: Lynn
PROJECT WATERSHED	: North Coastal
EEA NUMBER	: 16137
PROJECT PROPONENT	: Department of Conservation and Recreation
DATE NOTICED IN MONITOR	: n/a

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62L) and Section 11.10(6) of the MEPA regulations (301 CMR 11.00), I hereby determine that this project change **is insignificant and does not require** further MEPA review.

Original Project Description

As described in the Environmental Notification Form (ENF), the original project consisted of renovations and improvements to Lynn Heritage State Park. The park is located on filled tidelands consisting of decomposing organic soils and debris to a depth of 20 feet (ft) which has resulted in significant site settlement. The project is proposed to address safety concerns associated with uneven topography and ensure compliance with the Americans with Disabilities Act (ADA). Proposed improvements included restoration of site topography in areas that have settled, replacement and reconfiguration of paved walkways and parking lot, renovation of a pavilion, replacement of two stormwater outfall pipes, and renovation of a boardwalk and repairs to a concrete seawall. Work also included installation of a splash pad, new seating, lighting, native plantings, and stormwater management infrastructure.

A deteriorating concrete seawall (248 lf) was proposed to be reinforced with a steel sheet pile and a concrete cap. Specifically, a steel sheet pile bulkhead was proposed to be installed landward of the

concrete seawall, the top 1-ft of the seawall would be demolished, and a continuous concrete cap was proposed to be installed over the seawall and the new steel sheet pile bulkhead. The timber boardwalk would extend over the concrete cap.

Project Change

The project change is limited to the concrete seawall, all other components of the project remain unchanged. Specifically, the project change includes the demolition of the top 5-ft of the seawall (instead of 1-ft) so that the steel sheet pile bulkhead will function as the primary seawall. The historic fill landward of the seawall and steel sheet pile bulkhead will be removed and replaced with compacted structural backfill material to improve stability. The NPC indicates that this revised design will provide a more durable engineering structure that is better able to protect the park, adjacent Seaport Landing Condominiums, and associated infrastructure.

Project Site

The 4.7-acre project site known as Lynn Heritage State Park consists of an existing waterfront park with greenspace, 5 ft wide paved walkways, a 46-space parking lot, and a 1,100 lf timber boardwalk and timber pavilion under the care and control of the Department of Conservation and Recreation (DCR). Access to the site is provided via a vehicular access/egress drive off of the Lynnway as well as a pedestrian bridge over the Lynnway which provides access to the park from downtown Lynn. The shoreline of the park in protected by a granite stone revetment and concrete seawall. The project is located within a velocity zone (VE Zone) with base flood elevation (BFE) 18 ft NAVD88 according to the Federal Emergency Management Act (FEMA)'s Flood Insurance Rate Map (FIRM) No. 25009C0529G effective July 16, 2014. The project site consists entirely of Land Subject to Coastal Storm Flowage (LSCSF) and also includes Coastal Bank.

Environmental Impacts and Mitigation

The NPC included a comparison of the environmental impacts between the original project and the proposed project change. Environmental impacts associated with the original project include creation of approximately 0.36 acres of impervious area and alteration of 218,950 sf of LSCSF and 40 lf of Coastal Bank. Impacts associated with the project change are limited to Coastal Bank (288 lf). However, the NPC indicates that impacts to Coastal Bank were erroneously calculated in the ENF filing and notes that the impacts to Coastal Bank have not actually increased (as discussed below).

Measures to avoid, minimize and mitigate Damage to the Environment remain unchanged from previously described in the ENF and include the installation of additional stormwater quality controls and the use of erosion and sedimentation controls during the construction period.

Permitting and Jurisdiction

The original project was subject to MEPA review and preparation of an ENF pursuant to 301 CMR 11.03(3)(b)(f) because it required an Agency Action and involved the alteration of ½ or more acres of any other wetland (LSCSF). The project is being undertaken by DCR and required a Chapter 91 (c.91) License from the Massachusetts Department of Environmental Protection (MassDEP) which has not been issued yet. The project change continues to require a c.91 License.

Because the project will be undertaken by an Agency, MEPA jurisdiction is broad in scope and extends to all aspects of the project that may cause Damage to the Environment, as defined in the MEPA regulations.

Factors Considered for Significance

The NPC includes a description of the proposed changes, a comparison of these changes to the project as previously reviewed, existing plans, and proposed conditions plans. Under 301 CMR 11.10(6), I must consider the following factors in determining whether a change in a project might significantly increase environmental consequences:

a) Expansion of the Project. A change in a Project is ordinarily insignificant if it results solely in an increase in square footage, linear footage, height, depth or other relevant measures of the physical dimensions of the Project of less than 10% overestimates previously reviewed, provided the increase does not meet or exceed any review thresholds.

b) Generation of further impacts, including an increase in release or emission of pollutants or contaminants during or after completion of the Project. A change in a Project is ordinarily insignificant if it results solely in an increase in impacts of less than 25% of the level specified in any review threshold, provided that cumulative impacts of the Project do not meet or exceed any review thresholds that were not previously met or exceeded.

c) Change in expected date for Commencement of the Project, Commencement of Construction, completion date for the Project, or schedule of work on the Project.

d) Change of the Project site.

e) New application for a Permit or New request for Financial Assistance or a Land Transfer.

f) For a Project with net benefits to environmental quality and resources or public health, any change that prevents or materially delays realization of such benefits.

g) For a Project involving a lapse of time, changes in the ambient environment or information concerning the ambient environment.

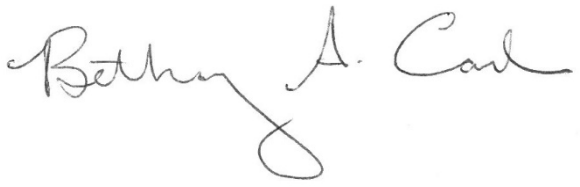
Upon consideration of these factors, I may deem the change in the project to be insignificant in terms of its environmental consequences, such that no further MEPA review would be required.

The proposed project change does not involve an expansion of the project site. In addition, the total length of the seawall demolition and new steel sheet pile bulkhead remains unchanged from that which was previously described in the ENF. Additionally, the area proposed to be impacted by the partial demolition of the top 5-ft of the seawall was already proposed to be impacted by work described in the ENF (specifically by the demolition of the top 1-ft of the seawall and installation of a continuous concrete cap over the seawall and the new steel sheet pile bulkhead). This impact was described in the ENF narrative and shown on project plans provided in the ENF but erroneously omitted from the impact calculations provided in the ENF. While the extent of Coastal Bank impact will increase to 288 lf (a change of 248 lf from previously reviewed), as indicated, the revised design is intended to provide a more durable engineering structure that is better able to protect the park and other structures from flood damage. In this way, there will be a net benefit to environmental quality and public health, and the

project change serves to enhance, and not delay, such benefits. Based on this, the NPC asserts that the project change will not increase impacts compared to what was previously proposed. The cumulative impacts of the project do not meet or exceed any review thresholds that were not previously met or exceeded, and no new Permits are required beyond those previously identified. There is no change to the project site or expected commencement date.

Conclusion

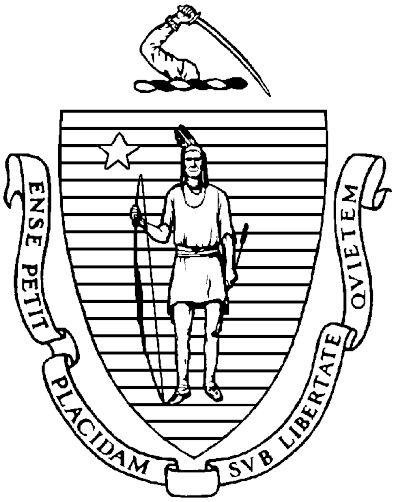
Based on the information presented in the NPC, I find that the proposed project change is insignificant in accordance with the criteria in the MEPA regulations at 301 CMR 11.10(6).



September 16, 2022
Date

Bethany A. Card

BAC/PRC/prc



BID PACKAGE

PART V

TECHNICAL SPECIFICATIONS

PART A

SECTION 00101
TABLE OF CONTENTS – TECHNICAL SPECIFICATIONS

INTRODUCTORY INFORMATION
00101 Table of Contents

PART V — TECHNICAL SPECIFICATIONS

PART A — GENERAL CONDITIONS

01000 GENERAL CONDITIONS
01010 SUMMARY OF THE WORK
01015 CONTRACTORS USE OF THE PREMISES
01045 CUTTING AND PATCHING
01050 FIELD ENGINEERING
01152 APPLICATIONS FOR PAYMENT
01153 CHANGE ORDERS
01200 PROJECT MEETINGS
01310 CONSTRUCTION SCHEDULES
01340 SUBMITTALS AND SUBSTITUTIONS
01370 SCHEDULE OF VALUES
01425 STATE POLICE AND ROADWAY FLAGGER
01500 TEMPORARY FACILITIES AND CONROLS
01520 RESIDENT ENGINEER FIELD OFFICE
01561 PEST CONTROL
01700 CONTRACT CLOSEOUT
01710 CLEANING
01720 PROJECT RECORD DOCUMENTS

PART B — TECHNICAL SPECIFICATIONS

02010 WATERFRONT SITE PREPARATION
02075 WATERFRONT SELECTIVE DEMOLITION, SALVAGE FOR REUSE, AND UTILITY PROTECTION
02100 SITE PREPARATION, DEMOLITION AND REMOVALS
02150 TREE PROTECTION AND PRUNING
02151 WATERFRONT SHORING
02200 SITE EARTHWORK
02213 WATERFRONT BUILDING CONDITION SURVEY AND VIBRATION MONITORING
02225 WATERFRONT EXCAVATING, BACKFILLING, AND COMPACTING
02280 EXCAVATED SOIL MANAGEMENT
02360 DRILLED SHAFTS
02375 WATERFRONT STEEL SHEET PILES
02470 WATERFRONT MICRO-PILES
02500 SITE PAVING
02510 VEHICULAR AREAS PAVING
02630 STORM DRAINAGE UTILITIES
02665 WATER PIPING, VALVES AND APPURTENANT WORK
02730 SANITARY SEWERS AND FORCE MAINS
02760 PAVEMENT MARKINGS
02800 SITE IMPROVEMENTS

02881 WATER PLAY EQUIPMENT
02890 TRAFFIC SIGNS
02900 PLANTING AND LAWNS
03300 CAST IN PLACE CONCRETE
03310 WATERFRONT CAST-IN-PLACE CONCRETE
03400 WATERFRONT PRECAST CONCRETE
04410 SITE GRANITE
05110 WATERFRONT STRUCTURAL STEEL
05510 WATERFRONT MISCELLANEOUS METALS
06130 WATERFRONT STRUCTURAL TIMBER
06150 WATERFRONT WOOD DECKING
09905 WATERFRONT PROTECTIVE COATING
16100 PARK AND BOARDWALK LIGHTING
16421 BOARDWALK ELECTRICAL UTILITIES
23100 FUEL SYSTEMS

APPENDICES
APPENDIX A SPLASHPAD LAYOUT, PIPING, AND ELECTRIC
APPENDIX B WATER PLAY CONTROL CABINET AND COMMAND CENTER
APPENDIX C SOUTH BOARDWALK UTILITY STUDY AND EXISTING CONDITIONS PLAN – SUMMARY OF FINDINGS MEMO
APPENDIX D FINAL GEOTECHNICAL ENGINEERING REPORT
APPENDIX E STORMWATER MANAGEMENT MEMORANDUM
APPENDIX F WATERFRONT INFRASTRUCTURE INSPECTION REPORT
APPENDIX G HAZARDOUS SCREENING MEMO – PRELIMINARY REVIEW OF ENVIRONMENTAL DATA

END OF SECTION

SECTION 01000
GENERAL CONDITIONS

1.01 Introduction

A. If, during the performance of the Work, the Contractor finds a conflict, error, or discrepancy in the Contract Documents, the Contractor shall so report to the Landscape Architect and Engineer in writing at once. Before proceeding with the Work affected thereby, the Contractor shall obtain a written interpretation or clarification from the Landscape Architect or Engineer. Any work done before the Landscape Architect or Engineer renders his decision is at the Contractor's sole risk.

B. In case of an inconsistency between Drawings and Specifications, or within either document not clarified by Addendum, the better quality or greater quantity of work shall be provided in accordance with the Landscape Architect or Engineer's interpretation.

C. The Contractor guarantees that in the performance of work, he and every person in his direct or indirect employment (i.e., subcontractors) shall abide by and comply with all Federal, State, and local laws including the Occupational Safety and Health Act.

D. The term DCR, as used throughout the Contract Documents, designates Department of Conservation & Recreation (DCR), or its duly authorized representative.

E. The term DCR Representative, as used throughout these Specifications, indicates the Owner's or DCR authorized representative for a particular activity.

F. The term Engineer or Engineer-Of-Record, as used throughout the Contract Documents, designates Foth Infrastructure and Environment, LLC, or Stantec, or its duly authorized representative.

G. The term Landscape Architect, as used throughout the Contract Documents, designates Brown, Richardson, & Rowe, LLC (BRR) or its duly authorized representative.

H. The Work shall be substantially complete no later than **503 Calendar Days after the Notice to Proceed,** with punch list items/site cleanup/demobilization completed no later than **533 Calendar Days after the Notice to Proceed**. If, in the opinion of DCR, the Contractor has not mobilized sufficient equipment or material and/or if the Contractor does not demonstrate that sufficient work is underway within 30 days after Award of

Contract, DCR reserves the right to terminate the Contract.

I. In the event of termination of the Contract pursuant to the conditions set forth herein, such termination shall not act, so as to relieve the Contractor from liability for any damages sustained by DCR as a result of any breach by the Contractor of the terms of the Contract.

J. Definitions

1. Work: Material, equipment and labor required for the project or the part of the project considered.

2. Provide: Furnish and install; provide in place.

3. Furnish: Furnish only, not including installation.

4. Install: Install in place materials or structures furnished by others.

5. Shall: Mandatory requirement (understood to be applicable whether or not "shall" is used in the sentence structure): omission of "shall" does not make the Specification or Contract Drawing non-mandatory.

6. Contract Sum: This shall be read as the Total Base Bid amount including any DCR accepted Alternates as included in the Form of Bid.

7. Day: For the purposes of this Contract a "day" shall equal a "calendar day" including weekends, holidays, and any other non-work periods.

1.02 Description of Work: the Work shall include, but not be limited to;

A. Mobilization & Demobilization to and from the site;

B. Furnishing, Installation, & Maintenance of temporary field office & equipment;

C. Site preparations including, but not limited to, survey work, staging & access, erosion control, crane matting, environmental compliance and DCR signage;

D. Selective demolition of items scheduled for removal and/or reuse;

E. Furnishing and Installation of Boardwalk Reconstruction work, including, but not limited to, all timber structure and decking, hardware, and connections;

F. Furnishing and Installation of Boardwalk Superstructure including, but not limited to, pile caps, intermediate joists/stringers, bolsters, blocking and all hardware and connections;

G. Furnishing and Replacement of Boardwalk decking including, but not limited to, decking and hardware and connections;

H. Furnishing and Replacement of Boardwalk bracing and blocking including, but not limited to timber bracing and all hardware and connections;

I. Park excavation filling, backfilling, grading and compacting as required for the construction of site work;

J. Furnishing and installing geogrid and geotextile fabric;

K. Removing and disposing of all unsuitable materials and surplus excavated materials from the site, as defined by Federal, state, and municipal laws and ordinances;

L. Field screening, excavation, handling, transport and off-site disposal of urban fill;

M. Execution of tree removals, tree pruning, and furnishing and installation of tree, shrub, and perennial plantings and seeded lawn and coastal seed mix areas;

N. Installation of drilled piers, steel sheet piles and micro piles;

O. Temporary cutting of South Boardwalk utilities, steel sheet pile penetrations, and reinstallation of utility functions;

P. Furnishing and Installation of Park and Boardwalk Improvements including, but not limited to, concrete site paving, splashpad surfacing, fieldstone and gravel surfacing, granite curbing and steps, benches, tables, bike racks, steel railings, signs, and light fixtures on boardwalk and in park;

Q. Any other scope of work items as indicated on the Contract Drawings.

1.03 Scope of Work

A. Schedule

Unless otherwise stated in Section 01340, Submittals and Substitutions, the following submittal schedule of all shop drawings, etc., for review by the Engineer or Landscape Architect, shall be as follows:

1. Contractor's Submittal

   Certain critical items are to be submitted by the Contractor within time frames listed in these Specifications. Unless specifically noted as such, the Contractor shall be responsible for the timely submittal of all required items, taking into account the Landscape Architect's and Engineer's review period as outlined herein, in order to maintain satisfactory progress of the Work.

2. Landscape Architect and Engineer Review and Comments

   Within 14 days after receipt of Contractor's submittal.

B. The Work shall be performed in a general sequence developed by the Contractor and submitted to the Landscape Architect and Engineer for review, in accordance with the requirements of the Contract. The Contractor is solely responsible for the means and methods of construction and for the sequences and procedures to be used.

C. The Contractor shall furnish and coordinate all plant, labor, supervision, materials, or shall furnish and coordinate all plant, labor, supervision, materials, equipment and appliances for all demolition and/or construction work in connection with the demolition and/or construction of the marine facilities.

D. It is the responsibility of the Contractor to coordinate work with other activities at the site to complete all work in a timely and cost-effective manner.

E. Contractor shall be held responsible for any damage to existing structures or property as a result of construction activities and shall be repaired at no additional cost to BRR, Foth, Stantec, or the DCR.

F. Temporary fencing and signage shall be installed at the work site to prevent pedestrian access from the public.

G. Temporary field office and equipment shall be supplied for DCR staff and shall be installed at the work site.

H. Installation of erosion controls measures and crane matting or similar within wetland area for construction access.

I. Provide Police Detailing as described in the contract documents.

J. Provide and install Mass DEP signage as required by the Order of Conditions.

K. The Contractor shall provide and install the DCR project sign in accordance with DCR requirements & standards.

L. The Contractor shall host and utilize an Electronic Document Submittal Service for the duration of the project.

M. The Contractor shall be responsible for complying by the terms of Section 1.07 Easements and Abutter Agreements.

1.04 Examination of Existing Conditions

Before submitting a bid, it is a requirement of this Contract that each bidder visit the site to determine the conditions under which the Work is to be done. Such examination shall include, but not be limited to:

A. Structural detail of the existing structures and related facilities.

B. Various onsite utilities and structures not within the Scope of this Contract, but that may impact the execution of the Work. These will remain fully operational throughout the construction period.

C. The layout and structural condition of the existing structures and water depths.

D. Access space and possible work areas.

1.05 List of Contract Drawings

The Contract Drawings, which form part of these Specifications, are attached to these specifications.

1.06 Permits

The DCR has secured certain permits required by Federal, and State authorities for

the proposed activities. It is the responsibility of the Contractor to perform the Work in accordance with the terms and conditions of the permits. The Contractor shall post copies of the permits at the site throughout the course of the Work. The Contractor is responsible to obtain all permits including those associated with the legal disposal of construction debris. The Contractor shall secure all required local authorizations and permits.

A. The Contractor shall submit the Self-Verification Notification form to the U.S. Army Corps of Engineers (USACOE) prior to commencement of work (See Part III, Article IV, Section 5B for additional information).

1.07 Easements and Abutter Agreements

The DCR has entered into a Right of Entry Agreement (ROEA) and Memorandum of Agreement (MOA) with the Seaport Landing Condominium Trust, an abutter of the Lynn Veterans Memorial Park. The Agreements are based on Easements recorded with the Essex County Registry of Deeds. Copies of the easements and Abutter Agreements are included in Part III, Article IV, Section C.

A. The Contractor shall comply with the terms of the Memorandum of Agreement (MOA) and the Right of Entry Agreement (ROEA) between the Seaport Landing Condominium Trust and the DCR.

B. The Contractor is solely responsible for bearing any cost associated with complying with the terms and requirements of the MOA and ROEA. See Part III, Article IV, Section 5C for additional information.

1.08 Contractor Furnished Materials

A. The Contractor shall furnish all materials for installation in the completed Work as specified hereinafter.

B. The Contractor shall handle these materials as they are delivered to the site or off-site work areas and shall store them in a designated storage area.

C. The Contractor furnished material is subject to review by the DCR, Landscape Architect, or Engineer at the plant of manufacture at the DCR option. Review by the DCR, Landscape Architect, or Engineer is not to be construed as technical in nature and in no way shall be deemed to relieve the Contractor from its obligation herein to ensure the quality and integrity of the materials supplied by the Contractor for this project.

D. Project material furnished by the Contractor shall conform to the requirements of the Specifications stated hereinafter. The Contractor shall,

as part of the Contract fee, also furnish all consumable materials necessary to complete the Work, such as, but not limited to, welding electrodes, safety equipment, etc.

1.09 Indemnity by Contractor

The Contractor shall indemnify and save harmless the DCR, Landscape Architect, and Engineer from and against all losses and all claims, demands, payments, suits, actions, recoveries, and judgments of every nature and description brought or recovered against the DCR, Landscape Architect, and Engineer by reason of any act or omission of the Contractor, or of any subcontractor to the Contractor, or of any person directly or indirectly employed by the Contractor or any such subcontractor, in the performance of any work for, or the rendering of any services to, the DCR.

1.10 Insurances

Contractor agrees that, at its own cost and expense, it shall procure and continue in force insurance coverage. Such insurance shall be written by a company or companies authorized to engage in the business of general liability insurance in the state in which the demised premises are located, and there shall be delivered to the DCR with the bid customary certificates evidencing such paid-up insurance, which certificates are to be issued by the insurance companies. Such insurance shall be written by good and responsible companies reasonably acceptable to the DCR.

1.11 Layout

A. The Contractor shall be solely responsible for the accuracy of all locations, dimensions, and levels and no plea as to instructions or order received from any other sources other than information contained on Contract Drawings, Specifications or in written orders of the DCR, Landscape Architect, or Engineer shall justify departure from the dimensions and elevations required by the Contract Drawings.

B. The Contractor shall take his own measurements at the site, verifying same with the Contract Drawings and existing facilities, and will be held responsible for the proper fit and alignment of completed work in position.

1.12 Guarantee

A. The Contractor shall guarantee to the DCR all materials and workmanship against original defects, or against injury from proper and usual wear when used for the purpose intended, for 18 months after date of final payment certifications, and shall maintain all items in perfect condition during the

period of guarantee.

B. Defects appearing during the period of guarantee shall be made good by the Contractor at his expense upon demand of the DCR, it being required that all work shall be in perfect condition when the period of guarantee shall have elapsed. In the event of default by the Contractor, the Company shall have the right to make good any and all defects and bill the Contractor cost plus 15% for administration fees.

1.13 Parking, Storage and Access to Work Area

The Contractor shall coordinate with the DCR available parking, storage and access to the work area. In no event shall these areas interrupt or disturb the DCR operations or abutter's access to their own property. The Contractor shall protect the stored equipment and material from the elements in such a manner as to be satisfactory to the manufacturer of the equipment or material and the DCR.

1.14 Subcontractors

A. A list of Subcontractors, pre-qualified by the Contractor, shall be submitted to the DCR by the Contractor with his bid. DCR has the ultimate right to accept or reject any one or more of the subcontractors, and must do so in writing after receipt of said list from the Contractor. No deviations shall be allowed from this list without approval of the DCR. Valid insurance certificates for subcontractors shall be submitted by the Contractor to the DCR with his bid.

B. The DCR shall receive, upon completion of this Contract in full from the Contractor, any reduction in the Subcontractor's price, which may result from a reduced scope of the Contractor's work.

1.15 Neatness of Site

At the Contractor's expense, the Contractor's working areas shall be cleaned by him on a day-to-day basis, with all rubbish removed from the site and all work areas cleaned at the end of each day. At final completion of all work the Contractor shall leave the entire premises, within the site of his operations, clean and free from the rubbish resulting from his construction operations.

1.16 Compensation

Compensation shall be based upon the DCR-accepted Schedule of Values (Section 01370), and the requirements of Section 01152 – Applications for Payment.

1.17 Utilities

The Contractor is responsible to provide and maintain any and all utilities he deems necessary to affect the Work. It is the responsibility of the Bidder to verify the suitability of existing site utilities for their needs.

In the case of planned utility outages, the contractor should inform the following parties with a minimum of 48 hours notice:

Seaport Marina
Hank Olbash
Marina Manager
seaportmarina@verizon.net
Office: 781-592-5821
Cell: 781-258-0967

City of Lynn
James Marsh
Community Development Director
jmarsh@lynnma.gov
Office: 781-586-6770
Cell: 339-440-2235

Seaport Landing
Alex McCoy
Facility Manager
seaportfacilities@gmail.com
Phone: 978-559-1285

1.18 Fire Protection

The Contractor shall provide and maintain at his expense all required fire protection systems and devices as necessary to safely perform the Work in accord with the applicable regulations. It shall be operational throughout the period of construction.

1.19 Compliance with Contract

The DCR shall have the right to withhold without penalty any payment described above, or sections referenced herein, for completed work should the Contractor fail to meet any obligations or requirements of the Contract. Any withheld payment shall be promptly made upon the Contractor's full compliance with the Contract.

1.20 Environmental Protection

Comply with all Local, State, and Federal requirements for protection of the environment during the Work. No later than 21 days following award of contract, submit a comprehensive plan describing the means and methods to be employed for protection, containment, and clean up. Ensure that personnel are properly trained and that sufficient equipment and materials are readily available for use if required. Abide by State and Federal spill reporting requirements.

1.21 Erosion and Sedimentation Control

During execution of the Work, the Contractor is required to install and maintain any and all required sedimentation and erosion control measures to protect adjacent waterways, streets, and properties. Measures include but are not limited to temporary berms, hay bales, silt fences, containment booms, and turbidity curtains. In accordance with State regulatory authorizations, the Contractor shall furnish, install, and maintain temporary turbidity curtains during construction. Temporary materials and equipment shall conform to requirements for Temporary Work.

1.22 Temporary Work

Labor, equipment, and materials required to perform the Work that, upon completion, are not a part of the Work, shall be furnished, installed, and subsequently removed from the site by the Contractor.

1.23 Safety Plan

No later than 21 days following award of contract, submit two (2) copies of the Contractor’s project-specific Safety Plan.

1.24 Safety Data Sheets

No later than 21 days following award of contract, submit two three-ring bound sets of all Safety Data Sheets (SDS) for materials anticipated for use in execution of the Work. As the Work progresses and new materials are used on the project, submit two (2) copies of the corresponding SDS’s for these new materials no later than the time of arrival of the materials on site.

1.25 Work Schedule Requirements

Access to the site and acceptable working hours are limited to those agreed with DCR.

1.26 Engineering Services Chargeable to the Contractor

The DCR reserves the right to charge the Contractor for additional engineering

services if required due to the Contractor's actions or inactions.

1.27 Contractor's Representative

The Contractor shall assign an individual to be the single point of contact for all job related correspondence and issues. This individual shall be assigned to the project from start to finish, and shall not be replaced without permission from the DCR. This individual shall be responsible to disseminate information to other members of the Contractor's staff and to applicable subcontractors as necessary. This individual shall be the Contractor's designated representative at the site, and shall be authorized to conclude all matters, financial and otherwise, on the Contractor's behalf. The Contractor's Representative shall attend all project meetings and shall be on site at all times while the Contractor or his Subcontractors are present on site.

1.28 Means and Methods

The structures have been designed to be self-supporting and stable after construction is complete. The stability of the structures prior to completion is solely the responsibility of the Contractor. This responsibility extends to related aspects of the construction activity including, but not limited to, erection methods, erection sequence, connections, temporary bracing, forms, shoring, use of equipment, and similar construction procedures. Review of construction by the DCR, Landscape Architect, and Engineer is for general conformance with the Contract Documents only. Lack of comment by the DCR, Landscape Architect, and Engineer with regard to construction procedures shall not be interpreted as approval or acceptance of any such procedures.

1.29 Precedence

It is expressly understood and agreed that failure by the DCR, Landscape Architect, or Engineer to exercise his authority or prerogative to order the Contractor for any duly authorized purpose shall not be considered to set a precedent for any other activities.

1.30 Safety of Persons and Property

The Contractor is solely responsible for the safety of his operations. The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury, or loss to:

A. Persons employed by the Contractor in performance of the Work, and persons nearby that may be affected by the Contractor's operations or the Work.

B. The Work, including all equipment and materials which will be incorporated

in the Work.

C. Other properties and structures at the site, or on adjacent properties.

1.31 Uncovering Work

If any Work is covered prior to acceptance by the DCR, Landscape Architect, or Engineer, the Work shall, if requested by the DCR, be uncovered for the DCR's observation and then be re-covered at the Contractor's sole cost and expense.

1.32 Electronic Document Submittal Service

The Contractor is required to host and utilize an Electronic Document Submittal Service that can receive, log, and store documents, provide electronic stamping and signatures, and notify addressees by email.

A. The Service shall be used for all project submittals, Requests for Information, Change Orders, Payment Applications, Field Reports, Construction Schedules, Meeting Minutes, and any other project related documentation that any participant wishes to make part of the project record.

B. The Service shall be hosted and managed by the Contractor at the Contractor's sole cost and expense.

C. All Subcontractors, suppliers, DCR Representatives, Engineers, and Landscape Architect will use the system and shall be permitted to use the Service at no additional charge.

D. The Contractor shall be required to provide one, one-hour, web-based training session, arranged for all participating parties.

E. At project closeout, the Engineer or Landscape Architect will determine when to terminate the Service for the project. An archived copy of the files shall be submitted to DCR for their permanent record.

F. Submittal Service examples are as follows:

1. Newforma ConstructEX: https://www.newforma.com/newforma-constructex/
2. Procore: www.procore.com
3. Or similar system approved by the Engineer and DCR.

1.33 Daily Construction Reports

For each day that Work is performed at the site, prepare and submit a Daily Construction Report to the Landscape Architect or Engineer. Include the following information in the report, as a minimum:

A. Project name

B. Contractor name

C. Date

D. Hours worked

E. Weather conditions

F. Subcontractors working on site

G. Material deliveries (material, quantity, and vendor)

H. Trades working on site (trade and number of workers per trade)

I. Equipment on site (manufacturer and model number, with notation of whether the equipment was idle or was used in the Work)

J. Specific work performed, location and type of work

K. Visitors to the site

L. Materials or Equipment leaving the site (including debris removal)

M. Photographs of daily work activities and general site conditions

Submit reports no later than 12 o'clock noon for the previous day's work

1.34 Monitoring of Existing Structures During Construction

The DCR reserves the right to establish an independent monitoring program in order to evaluate the effect of the Work on the existing structures to remain on site. Such monitoring may include, but are not necessarily limited to settlement gauges, tilt plates, and crack gauges.

The DCR reserves the right to suspend the Contractor's operations at any time based upon the monitoring data.

1.35 Subsurface Obstructions

Obstructions are defined as unforeseen objects, which impede progress. Objects that are made known to the Contractor will not be considered to be obstructions. Notify the Landscape Architect or Engineer immediately upon encountering unforeseen objects. No consideration will be given for additional compensation on this account without this timely notification.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

PART 4 – MEASUREMENT & PAYMENT

4.01 MEASUREMENT

A. Measurement for Item 01000-01 MOBILIZATION AND DEMOBILIZATION will be made on a LUMP SUM basis for all work described in this section not otherwise listed below.

4.02 PAYMENT

A. Item 01000-01 MOBILIZATION AND DEMOBILIZATION shall be measured and paid as a LUMP SUM item and shall include all costs in connection with, but not limited to: obtaining any necessary building permits and approvals for the work specified in accordance with the Contract, full reimbursement for the premiums actually paid for performance and payment bonds, moving the Contractor's equipment to the site; accomplishing the work required by the Permits with respect to protection of the environment; coordination with the DCR, the City of Lynn, Building and Water Departments, and the removal of all equipment from the site upon completion of the work. Payment shall be made in accordance with Bid Item 01000-01 "Mobilization and Demobilization" of the Unit Price Schedule which shall be full compensation for the work performed. The Project Engineer and/or DCR may request from the Contractor and Contractor must provide documentation to fully and adequately account for and demonstrate actual funds, labor, invoices, purchase orders, or other appropriate records as deemed necessary by the Project Engineer and/or DCR for mobilization. If upon application for payment, the Contractor fails to demonstrate with verified documentation funds expended for mobilization then the Project Engineer and/or DCR reserves the right to only pay the Contractor for actual expenditures or an approximation as determined by the Project Engineer relating to Mobilization with the balance of Mobilization to be paid to the Contractor upon full and complete Demobilization from the project site. A maximum of 60% of the total Mobilization/ Demobilization in Bid Item 1 shall be paid upon completion of mobilization and verification of costs incurred. Contractor shall provide an itemized cost breakdown of the LUMP SUM cost of this item as a submittal prior to start of construction.

B. Mobilization and Demobilization for all Waterfront work is described in, and is the work of, Section 02010 WATERFRONT SITE PREPARATION.

C. There will be no other separate measurements of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01010
SUMMARY OF THE WORK

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. The “Project,” of which the “Work” of this Contract is a part, is titled “Veterans Memorial Park Waterfront Improvements and Boardwalk Reconstruction."

2. The “Work” of this Contract is titled, “Veterans Memorial Park Waterfront Improvements and Boardwalk Reconstruction” and consists of the rehabilitation of the existing park and boardwalk at the Veterans Memorial Park project site.

END OF SECTION

SECTION 01015
CONTRACTOR'S USE OF THE PREMISES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included: This Section applies to situations in which the Contractor or his representatives including, but not necessarily limited to, suppliers, subcontractors, employees, and field engineers, enter upon the Project Location.

1.02 QUALITY ASSURANCE

A. Promptly upon award of the Contract, notify all pertinent personnel regarding requirements of this Section.

B. Require that all personnel who will enter upon the Project Location certify their awareness of and familiarity with the requirements of this Section.

C. Require that all personnel (including subcontractors, visitors, suppliers, etc.) who will enter upon the Project Location abide by the insurance requirements set forth in "General Conditions."

1.03 SUBMITTALS

Submit a detailed Site Utilization Plan containing a drawing depicting, as a minimum, the following:

A. Staging areas for equipment, both upland and waterborne,

B. Parking areas for project personnel,

C. Material storage areas,

D. Location of Contractor's field office(s),

E. Location of DCR Resident Engineer field office,

F. Access roads throughout the site,

G. Lay-out of temporary utilities and erosion control measures,

H. Location of refuse container(s).

Note: Contractor's Site Utilization Plan shall also adhere to the requirements set forth in the Memorandum of Agreement between DCR and the Seaport Landing Condominium Trust, particularly, the requirements set forth in Section 9, Item C Preliminary Site Utilization Plan.

1.04 TRANSPORTATION FACILITIES

A. Truck and equipment access:

1. Provide adequate protection for curbs and sidewalks over which trucks and equipment pass to reach the Project Location.

B. Contractor's vehicles:

1. Require Contractor's vehicles, vehicles belonging to employees of the Contractor, and all other vehicles entering upon the Project Location in performance of the Work of the Contract, to use only the DCR designated site access way and parking areas.

2. Do not permit such vehicles to park on any street or other area of the Project Location except in the area or areas designated by the DCR for such use.

1.05 SECURITY

A. Restrict the access of all persons entering upon the Project Location in connection with the Work to the DCR designated areas.

B. Use of existing buildings on site is restricted. Should the Contractor need access to these areas, permission must be requested and granted in advance by the DCR.

1.06 SITE ACCESS

A. Maintain clear vehicular access to all portions of the site at all times, at no time shall access be restricted. Access ways shall be detailed in the Site Utilization Plan described in Paragraph 1.03 above.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01045
CUTTING AND PATCHING

PART 1 - GENERAL

1.01 DESCRIPTION

Work included: This Section establishes general requirements pertaining to cutting (including excavating), fitting, and patching of the Work required to:

A. Make the several parts fit properly;

B. Uncover work to provide for installing, review, or both, of ill-timed work;

C. Remove and replace work not conforming to requirements of the Contract Documents; and

D. Remove and replace defective work.

1.02 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.03 SUBMITTALS

A. Request for Engineer's consent:

1. Prior to cutting which affects structural safety, submit written request to the Engineer and secure written authorization to proceed cutting.

2. Should conditions of the Work, or schedule, indicate a required change of materials or methods for cutting and patching, so notify the Engineer and secure his written authorization and the required Change Order prior to proceeding.

B. Notices to the Engineer:

1. Prior to cutting and patching performed pursuant to the Landscape Architect or Engineer's instructions, submit cost estimate to the Landscape Architect or Engineer. Secure the Landscape Architect or Engineer's written authorization before proceeding with cutting and patching.
2. Submit written notice to the Landscape Architect and Engineer

designating the time the Work will be uncovered, to provide for the Landscape Architect or Engineer's observation.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. For replacement of items removed, use materials complying with pertinent Sections of these Specifications.

2.02 PAYMENT FOR COSTS

A. DCR will reimburse the Contractor for cutting and patching performed pursuant to the written Change Order, after claim for such reimbursement is submitted by the Contractor. Perform other cutting and patching needed to comply with the Contract Documents at no additional cost to the DCR.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

A. Inspection by the Contractor:

1. Inspect existing conditions, including elements subject to movement or damage during cutting, excavating, patching, and backfilling.

2. After uncovering the work, inspect conditions affecting installation of new work.

B. Discrepancies:

1. If uncovered conditions are not as anticipated, immediately notify the Landscape Architect or Engineer in writing and secure the Landscape Architect or Engineer's written directions.

2. Do not proceed until unsatisfactory conditions are corrected.

3.02 PREPARATION PRIOR TO CUTTING

A. Provide required protection including, but not necessarily limited to, shoring, bracing, and support to maintain structural integrity of the Work.

B. Prior to cutting new or existing elements, carefully lay out the work required. Verify that the layout is correct and accurate as necessary to perform the construction safely and within the tolerances required.

3.03 PERFORMANCE

A. Perform required excavating and backfilling as required under pertinent other Sections of these Specifications.

B. Perform cutting and demolition by methods that will prevent damage to other portions of the Work and provide proper surfaces to receive installation of repair and new work.

C. Perform fitting and adjusting of products to provide finished installation complying with the specified tolerances and finishes.

D. Prevent migration of soils into waterways. Do not affect water quality of waterways.

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01050
FIELD ENGINEERING

PART 1 - GENERAL

1.01 DESCRIPTION

Work included: Provide such field engineering services as are required for proper completion of the Work including, but not necessarily limited to:

A. Establishing and maintaining lines and levels;

B. Structural design of shores, forms, and similar items provided by the Contractor as part of his means and methods of construction.

1.02 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.03 SUBMITTALS

A. Comply with pertinent provisions of Section 01340, Submittals and Substitutions.

B. Upon request of the Landscape Architect or Engineer, submit:

1. Data demonstrating qualifications of persons proposed to be engaged for field engineering services.

2. Documentation verifying accuracy of field engineering work.

3. Certification, signed by the Contractor’s retained field engineer, certifying that elevations and locations of improvements are in conformance or non-conformance with requirements of the Contract Documents.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Provide materials, not specifically described but required for a complete and

proper execution of the Work, as selected by the Contractor subject to the review of the Landscape Architect or Engineer.

PART 3 - EXECUTION

3.01 PROCEDURES

In addition to procedures directed by the Contractor for proper performance of the Contractor's responsibilities:

A. Locate and protect control points before starting work on the site.

B. Preserve permanent reference points during progress of the Work.

C. Do not change or relocate reference points or items of the Work without specific direction from the Landscape Architect or Engineer.

D. Promptly advise the Landscape Architect or Engineer when a reference point is lost or destroyed, or requires relocation because of other changes in the Work.

1. Upon direction of the Landscape Architect or Engineer, require the field engineer to replace reference stakes or markers.

2. Locate such replacements according to the original survey control.

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01152
APPLICATIONS FOR PAYMENT

PART 1 - GENERAL

1.01 DESCRIPTION

Work included: Comply with procedures described in this Section when applying for progress payment and final payment under the Contract.

1.02 QUALITY ASSURANCE

A. Prior to start of construction, secure the Landscape Architect's review of the schedule of values required to be submitted and described in Section 01370, Schedule of Values.

B. During progress of the Work, modify the schedule of values as reviewed by the Landscape Architect or Engineer to reflect changes in the Contract Sum due to Change Orders or other modifications of the Contract.

C. Base requests for payment on the accepted schedule of values.

1.03 SUBMITTALS

A. Informal submittal: Unless otherwise directed by the Landscape Architect or Engineer:

1. Make an informal submittal of request for payment by filling in with erasable pencil, pertinent portions of the accepted schedule of values.

2. Submit certified payroll with each payment application.

3. Make this preliminary submittal to the Landscape Architect or Engineer at least one week prior to the date of formal submittal.

4. Revise the informal submittal of request for payment as agreed, initialing all copies.

B. Formal submittal: Unless otherwise directed by the Landscape Architect or Engineer:

1. Make formal submittal of request for payment by filling in the agreed data, by typewriter upon the forms reviewed and accepted by the Landscape Architect or Engineer.

2. Sign and notarize the Application and Certificate for Payment.

3. Submit the original of the Application and Certificate for Payment to the Owner plus one identical copy to the Landscape Architect or Engineer.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Provide materials, not specifically described but required for a complete and proper execution of the Work, as selected by the Contractor subject to the review of the Landscape Architect or Engineer.

PART 3 - EXECUTION

3.01 PROCEDURES

A. Prepare and submit applications as outlined in Article 1.03 above.

B. Progress payment applications are to be submitted at a frequency of not more than one application per month.

C. DCR may require conditional and/or unconditional lien releases from the General Contactor or Subcontractors prior to final processing of payments.

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01153
CHANGE ORDERS

PART 1 - GENERAL

1.01 DESCRIPTION

Work included: Make such changes in the Work, in the Contract Sum, in the Contract Time of Completion, or any combination thereof, as are described in written Change Orders signed by DCR and issued after execution of the Contract, in accordance with the provisions of this Section.

A. Landscape Architect's and Engineer's Field Orders:

1. From time to time during progress of the Work the Consultant may issue a "Field Change Order" which interprets the Contract Documents or orders minor changes in the Work without change in Contract Sum or Contract Time.

2. Should the Contractor consider that a change in Contract Sum or Contract Time is required, he shall submit an itemized proposal to the Landscape Architect or Engineer immediately and before proceeding with the Work. If the proposal is found to be satisfactory and in proper order, the Field Change Order in that event will be superseded by a Change Order.

B. Proposal Requests:

1. From time to time during progress of the Work the Landscape Architect or Engineer may issue a "Proposal Request" for an itemized quotation for changes or additions in the Contract Sum and/or Contract Time incidental to proposed modifications to the Contract Documents.

2. This will not be a Change Order, and will not be a direction to proceed with the changes described therein.

1.02 QUALITY ASSURANCE

A. Include within the Contractor's quality assurance program such measures as are needed to assure familiarity of the Contractor's staff and employees with these procedures for processing Change Order data.

1.03 SUBMITTALS

A. Make submittals directly to the Landscape Architect.

B. Submit the number of copies called for under the various items listed in this Section.

C. Submit quotes for any material costs with Change Orders, including quantity and cost of materials.

1.04 PRODUCT HANDLING

A. Maintain copies of "Permits, Register of Proposal Requests, Field Orders, and Change Orders" at the job site, accurately reflecting current status of all pertinent data.

B. Make the Register available to the Landscape Architect and Engineer for review at his request.

1.05 PROCESSING CHANGES INITIATED BY DCR

A. Should DCR contemplate making a change in the Work or a change in the Contract Time of Completion, the Landscape Architect or Engineer will issue a "Proposal Request" or "Field Order" to the Contractor.

B. If the Contractor has been directed by the Landscape Architect or Engineer to make the described change in the Work at no change in the Contract Sum and no change in the Contract Time of Completion, but the Contractor wishes to make a claim for one or both of such changes, the Contractor shall proceed with the change and shall immediately notify the Landscape Architect or Engineer of the claim.

C. If the Contractor has been directed by the Landscape Architect or Engineer to make the described change subject to later determination of cost or credit, the Contractor shall:

1. Take such measure as needed to make the change.

2. Consult with the Landscape Architect or Engineer and reach agreement on the most appropriate method for determining credit or cost for the change.

D. If the Contractor has been directed by the Landscape Architect or Engineer to promptly advise him as to credit or cost proposed for the described change, the Contractor shall:

1. Analyze the described change and its impact on costs and time.

2. Secure the required information and forward it on to the Landscape Architect or Engineer for review.

3. Meet with the Landscape Architect or Engineer as required to explain costs and, when appropriate, determine other acceptable ways to achieve the desired objective.

4. Alert pertinent personnel and subcontractors as to the impending change and, to the maximum extent possible, avoid such work as would increase DCRs cost for making the change, advising the Landscape Architect or Engineer in writing when such avoidance no longer is practicable.

1.06 PROCESSING CHANGES INITIATED BY THE CONTRACTOR

A. Should the Contractor discover a discrepancy among the Contract Documents, a concealed condition, or other cause for suggesting a change in the Work, a change in the Contract Sum, or a change in the Contract Time of Completion, he shall notify the Landscape Architect or Engineer in writing as required by pertinent provisions of the Contract Documents.

B. Upon agreement by the Engineer and/or Landscape Architect that there is reasonable cause to consider the Contractor's proposed change, the Landscape Architect or Engineer will issue a Proposal Request in accordance with the provisions described above.

C. If the Contractor proceeds without making the required written notification, he waives any possible claims for additional costs or Contract time and proceeds at his own risk.

1.07 PROCESSING PROPOSAL REQUESTS

A. Make written reply to the Landscape Architect or Engineer in response to each Proposal Request no later than five days following the date of the Proposal Request.

1. State proposed change in the Contract Sum, if any.

2. State proposed change in the Contract Time of Completion, if any.

3. Clearly describe other changes in the Work, if any, required by the proposed change or desirable therewith.

4. Include full backup data including subcontractor's letter of proposal, materials quotation, and similar information to the satisfaction of the Landscape Architect or Engineer.

5. Submit this response in single copy.

B. When cost or credit for the change has been agreed upon by DCR and the Contractor, or DCR has directed that cost or credit be determined in accordance with provisions of the Contract Documents, the Landscape Architect or Engineer will issue a "Change Order" to the Contractor.

1.08 PROCESSING CHANGE ORDERS

A. Change Orders will be dated and will be numbered in sequence.

B. The Change Order will describe the change or changes will refer to the Proposal Requests or Field Orders involved, and will be signed by DCR.

C. The Landscape Architect or Engineer will issue two (2) copies of each Change Order to the Contractor.

1. The Contractor promptly shall sign both copies and return them to the Landscape Architect or Engineer.

2. After signature by DCR, the DCR will retain one copy, and one fully executed copy will be returned to the Contractor.

D. Should the Contractor disagree with the stipulated change in Contract Sum or change in Contract Time of Completion, or both:

1. The Contractor promptly shall return both copies of the Change Order, unsigned by him, to the Landscape Architect or Engineer with a letter signed by the Contractor and stating the reason or reasons for the Contractor's disagreement.

2. The Contractor's disagreement with the Change Order shall not in any way relieve the Contractor of his responsibility to proceed with the change as ordered and to seek settlement of the dispute under pertinent provisions of the Contract Documents.

E. Rates for labor, equipment, and materials shall remain unchanged for the duration of the Project, including additional Work resulting from a Change Order.

1.09 "COST PLUS" WORK

A. DCR, at his/her prerogative, may direct the Contractor to proceed with necessary work on a "Cost Plus" basis. "Cost Plus" basis is defined as the Contractor's cost to perform the Work, plus a pre-determined rate for overhead and profit.

On a daily basis, the Contractor shall submit, for the Landscape Architect or Engineer's review and acknowledgment, a daily work report containing a summary of all labor, equipment, and materials expended on the Work in question.

B. The Contractor shall not proceed with "Cost Plus" Work until he has secured the appropriate written direction of Change Order to do so from the Landscape Architect or Engineer.

1.10 ALLOWABLE MARK-UP

A. The maximum percentages for overhead and profit, to be applied for all Change Order work, are as follows:

B. For work performed by the Contractor's own forces: Ten (10) percent overhead and ten (10) percent profit.

C. For work performed by Sub-contractors: Five (5) percent overhead and five (5) percent profit.

1.11 DEDUCTS AND CREDITS

A. The Contractor shall credit DCR for any such change that results in a net decrease in cost the amount of the actual net decrease, plus ten (10) percent of the net decrease.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Provide materials, not specifically described but required for a complete and proper execution of the Work, as selected by the Contractor subject to the review of the Landscape Architect or Engineer.

PART 3 - EXECUTION

3.01 PROCEDURES

A. Procedures are outlined in Part 1 above.

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01200
PROJECT MEETINGS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included: To enable orderly review during progress of the Work, and to provide for systematic discussion of problems, the Engineer will conduct project meetings throughout the construction period.

1.02 QUALITY ASSURANCE

A. For those persons designated by the Contractor to attend and participate in project meetings, provide required authority to commit the Contractor to solutions agreed upon in the project meetings.

1.03 SUBMITTALS

A. Agenda items: To the maximum extent practicable, advise the Landscape Architect or Engineer at least 24 hours in advance of project meetings regarding items to be added to the agenda.

B. Minutes:

1. The Landscape Architect will compile minutes of each project meeting, and will furnish one copy to the Contractor and required copies to DCR.

2. Recipients of copies may make and distribute such other copies as they wish.

PART 2 - PRODUCTS

(Not Used)

PART 3 - EXECUTION

3.01 MEETING SCHEDULE

A. Except as noted below for Pre-construction Meeting, project meetings will be held weekly.

B. Coordinate as necessary to establish mutually acceptable schedule for meetings.

3.02 MEETING LOCATION

A. The DCR Resident Engineer will establish meeting location. To the maximum extent practicable, meetings will be held at the job site.

3.03 PRE-CONSTRUCTION MEETING

A. Pre-construction Meeting will be scheduled to be held within 21 days after DCR has issued the Contract.

1. Provide attendance by authorized representatives of the Contractor, including the Contractor's Representative and major subcontractors.

2. The Landscape Architect or Engineer will advise other interested parties, including DCR, and request their attendance.

B. Minimum agenda: Data will be distributed and discussed on at least the following items.

1. Organizational arrangement of Contractor's forces and personnel, and those of subcontractors, materials suppliers, Landscape Architect, and Engineer.

2. Channels and procedures for communication.

3. Construction schedule, including sequence of critical work.

4. Contract Documents, including distribution of required copies of original Documents and revisions.

5. Processing of Shop Drawings and other data submitted to the Landscape Architect or Engineer for review.

6. Processing of Bulletins, field decisions, and Change Orders.

7. Rules and regulations governing performance of the Work; and

8. Procedures for safety and first aid, security, quality control, housekeeping, and related matters.

3.04 PROJECT MEETINGS

A. Attendance:

1. As a minimum, the Contractor's Representative is required to represent the Contractor at project meetings throughout progress of the Work.

2. Subcontractors, materials suppliers, and others may be invited to attend those project meetings in which their aspect of the Work is involved.

B. Minimum Agenda:

1. Review and revise as necessary the minutes of previous meetings.

2. Review progress of the Work since last meeting, including status of submittals for review and overall project schedule.

3. Identify problems that impede planned progress and assign action items as needed.

4. Develop corrective measures and procedures to regain planned schedule.

5. Complete other current business.

C. Revisions to Minutes:

1. Unless published minutes are challenged in writing within two (2) business days of issuance, they will be accepted as properly stating the activities and decisions of the meeting.

2. Persons challenging published minutes shall submit the challenge to the Landscape Architect or Engineer in writing.

3. Challenge to minutes shall be settled as priority portion of "old business" at the next regularly scheduled meeting.

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01310
CONSTRUCTION SCHEDULES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included: To assure adequate planning and execution of the Work so that the Work is completed within the time allowed in the Contract, and to assist DCR, Landscape Architect, and Engineer in appraising the reasonableness of the proposed schedule and in evaluating progress of the Work, prepare and maintain the schedules and reports described in this Section.

B. Definitions:

1. "Day," as used throughout the Contract unless otherwise stated, means "calendar day."

1.02 QUALITY ASSURANCE

A. Employ a scheduler who is thoroughly trained and experienced in compiling construction schedule data, and in preparing and issuing periodic reports as required below.

B. Perform data preparation, analysis, charting, and updating in accordance with standards acceptable to the Landscape Architect or Engineer.

C. Reliance upon the reviewed schedule:

1. The construction schedule as reviewed by the Landscape Architect or Engineer will be an integral part of the Contract and will establish interim completion dates for the various activities under the Contract.

2. Should any activity not be completed within 15 days after the stated scheduled date, the DCR shall have the right to require the Contractor to expedite completion of the activity by whatever means the DCR deems appropriate and necessary, without additional compensation to the Contractor.

3. Should any activity be 30 days or more behind schedule, the DCR shall have the right to perform the activity or have the activity performed by whatever method the DCR deems appropriate.

4. Costs incurred by the DCR in connection with expediting construction activity under this Section shall be reimbursed by the Contractor and may be withheld from payments due the Contractor.

5. It is expressly understood and agreed that failure by the DCR to exercise the option either to order the Contractor to expedite an activity or to expedite the activity by other means shall not be considered to set a precedent for any other activities.

1.03 SUBMITTALS

A. Comply with pertinent provisions of Section 01340, Submittals and Substitutions.

B. Construction schedule: Within 21 days after the Contractor has received the Contract, submit four prints and an electronic version of a construction schedule prepared in accordance with Part 3 of this Section. This submittal shall be a refinement of the schedule submitted with the Bid.

C. Periodic reports: On the first working day of each month following the submittal described in Paragraph 1.03-B above, submit four prints and an electronic version of the construction schedule updated as described in Part 3 of this Section.

PART 2 - PRODUCTS

2.01 CONSTRUCTION ANALYSIS

A. Graphically show by bar chart the order and interdependence of all activities necessary to complete the Work, and the sequence in which each activity is to be accomplished, as planned by the Contractor and his project field superintendent in coordination with all subcontractors whose work is shown on the diagram.

B. Include, but do not necessarily limit indicated activities to:

1. Project mobilization;

2. Submittal and review of Shop Drawings and Samples;

3. Procurement of equipment and critical materials;

4. Fabrication of material and equipment, and its installation and testing;

5. Final cleanup;

6. Final inspecting and testing; and

7. All activities by the DCR, Landscape Architect and Engineer that affect progress, required dates for completion, or both, for all and each part of the Work.

PART 3 – EXECUTION

3.01 CONSTRUCTION SCHEDULE

A. As soon as practicable after receipt of Notice to Proceed, complete the construction analysis in preliminary form, meet with the Landscape Architect or Engineer, review contents of the proposed construction schedule, and make all revisions agreed upon.

B. Include a detailed written methodology; a detailed description of the methods the Contractor proposes to use to perform the Work including a description of all major equipment that will be used.

C. Submit in accordance with Paragraph 1.03-B above.

3.02 PERIODIC REPORTS

A. As required under Paragraph 1.03-C above, update the construction schedule.

B. Indicate “actual” progress in percent completion for each activity;

C. Provide written narrative summary of revisions causing delay in the program, and an explanation of corrective actions taken or proposed.

D. Include a detailed written methodology; a detailed description of the methods the Contractor proposes to use to perform the Work including a description of all major equipment that will be used.

3.03 REVISIONS

A. Make only those revisions to approved construction schedule as are reviewed and accepted in advance by the Landscape Architect or Engineer.

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01340
SUBMITTALS AND SUBSTITUTIONS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included: Make submittals required by the Contract Documents, and revise and resubmit as necessary to establish compliance with the specified requirements.

B. Work not included:

1. Non-required submittals will not be reviewed by the Landscape Architect.

2. The Contractor may require his subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the Work, but such data shall remain between the Contractor and his subcontractors and will not be reviewed by the Landscape Architect or Engineer.

C. Definitions:

1. "Or equivalent":

a. Where the phrase "or equivalent," or "or equivalent as accepted by the Landscape Architect or Engineer," or "approved equal" occurs in the Contract Documents, do not assume that the materials, equipment, or methods will be approved as equivalent unless the item has been specifically so accepted for this Work by the Landscape Architect or Engineer. The Contractor is responsible for providing documentation showing that the product submittal meets or exceeds the materials, equipment, or methods as stated in the Contract Documents.

b. The decision of the Landscape Architect or Engineer shall be final.

1.02 QUALITY ASSURANCE

A. Coordination of submittals:

1. Prior to each submittal, carefully review and coordinate all aspects of each item being submitted.

2. Verify that each item and the submittal for it conform in all respects with the specified requirements.

3. The Contractor shall procure a rubber stamp with identical wording to the sample Contractor's submittal stamp shown below.

CONTRACTOR: _____

THIS SUBMITTAL IS REQUIRED PER SECTION_____OF THE SPECIFICATIONS. THE SUBMITTED ITEMS HAVE BEEN REVIEWED IN DETAIL AND ARE CORRECT AND IN STRICT CONFORMANCE WITH THE CONTRACT DOCUMENTS. THE SUBMITTED ITEMS HAVE BEEN COORDINATED WITH OTHER WORK OF THIS CONTRACT, EXISTING STRUCTURES, AND WORK OF OTHER CONTRACTS.

BY: _____

DATE: _____

4. By affixing the Contractor's submittal stamp to each submittal, certify that this coordination has been performed. Submittals which do not bear the requisite stamp will be returned to the Contractor non-reviewed.

B. Substitutions:

1. The Contract is based on the standards of quality established in the Contract Documents. Substitutions will be considered only when listed at time of bidding, on the form provided therefore in the bidding documents, and when substantiated by the Contractor's submittal of required data.

2. Do not substitute materials, equipment, or methods unless such substitution has been specifically accepted in writing for this Work by the Landscape Architect or Engineer.

1.03 SUBMITTALS

A. Make submittals of Shop Drawings, Samples, substitution requests, and other items in accordance with the provisions of this Section.

PART 2 - PRODUCTS

2.01 SHOP DRAWINGS

A. Scale and measurements: Make Shop Drawings accurately to a scale sufficiently large to show all pertinent aspects of the item and its method of

connection to the Work.

B. Types of prints required:

1. Submit Shop Drawings in the form of four (4) blue line or black line prints of each sheet.

2. If agreed to by DCR, Landscape Architect, and Engineer, electronic submittals may be acceptable.

3. Blueprints will not be acceptable.

C. One (1) print with the Landscape Architect or Engineer's review comments will be returned to the Contractor. The Contractor may make and distribute such copies as are required for his purposes.

2.02 MANUFACTURERS' LITERATURE

A. Where contents of submitted literature from manufacturers include data not pertinent to the submittal, clearly show which portions of the contents is being submitted for review.

B. Submit four (4) copies of manufacturers' data for review. One (1) copy with the Landscape Architect or Engineer's review comments will be returned to the Contractor. The Contractor may make and distribute such copies as are required for his purposes.

2.03 SAMPLES

A. Provide Sample or Samples identical to the precise article proposed to be provided. Identify as described under "Identification of Submittals" below.

B. Number of Samples required:

1. Unless otherwise specified, submit Samples in the quantity, which is required to be returned, plus one, which will be retained by the Landscape Architect or Engineer.

2. By prearrangement in specific cases, a single Sample may be submitted for review and, when accepted, be installed in the Work at a location agreed upon by the Landscape Architect or Engineer.

2.04 COLORS AND PATTERNS

A. Unless the precise color and pattern is specifically called out in the Contract Documents, and whenever a choice of color or pattern is available in the specified products, submit accurate color and pattern charts to the Landscape Architect or Engineerfor selection.

PART 3 - EXECUTION

3.01 IDENTIFICATION OF SUBMITTALS

A. Consecutively number all submittals.

1. When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.

2. On re-submittals, cite the original submittal number for reference.

B. Clearly label each submittal with a reference to the appropriate Specification Section for which the submittal is made.

C. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.

D. On at least the first page of each submittal, and elsewhere as required for positive identification, show the submittal number in which the item was included.

E. Maintain an accurate submittal log for the duration of the Work, showing current status of all submittals at all times. Make the submittal log available to the Landscape Architect and Engineer for his review upon request.

3.02 GROUPING OF SUBMITTALS

A. Unless otherwise specified, make submittals in groups containing all associated items to assure that information is available for checking each item when it is received.

B. Partial submittals may be rejected as not complying with the provisions of the Contract.

C. The Contractor may be held liable for delays so occasioned.

3.03 TIMING OF SUBMITTALS

A. Make submittals far enough in advance of scheduled dates for installation to provide

time required for reviews, for securing necessary approvals, for possible revisions and re-submittals, and for placing orders and securing delivery.

B. In scheduling, allow at least 14 days for review by the Landscape Architect and Engineer following his receiptof the submittal

3.04 LANDSCAPE ARCHITECT'S AND ENGINEER'S REVIEW

A. Review by the Landscape Architect and Engineer does not relieve the Contractor from responsibility for errorsor omissions that may exist in the submitted data.

B. Revisions:

1. Make revisions required by the Landscape Architect or Engineer.

2. If the Contractor considers any required revision to be a change, he shall so notify the Landscape Architect or Engineer as provided for in Section 01153, Change Orders.

3. Make only those revisions directed or accepted by the Landscape Architect or Engineer.

C. Reimbursement of Landscape Architect's Costs:

1. In the event substitutions are proposed to the Landscape Architect or Engineer after the Contract hasbeen awarded, the Landscape Architect will record all time used by him and by his consultants in evaluation of each such proposed substitution.

2. Whether or not the Landscape Architect accepts a proposed substitution, the Contractorshall be responsible for the costs of the Landscape Architect or Engineer and his consultants for alltime spent by them in evaluating the proposed substitution, plus administrative fees. The costs will be deducted from outstanding pay requestsdue to the Contractor by way of a Change Order.

D. Landscape Architect's Review Stamp: The Landscape Architect's review stamp will indicate the status ofthe submittal, and corresponding action to be taken by the Contractor as follows:

1. No Exceptions Taken: When the Landscape Architect or Engineer marks the submittal "No Exceptions Taken", the Work covered by the submittal may proceed, provided it complies with the requirements of the Contract Documents. Finalpayment depends on that compliance.

2. Revise, Re-submittal Not Required: When the Landscape Architect or Engineer marks the submittal "Revise, Re-submittal Not Required," the Work covered by the submittal may proceed provided it complies with the notations on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.

3. Revise, Resubmit For Record: When the Landscape Architect or Engineer marks the submittal "Revise, Resubmit For Record," the Work covered by the submittal may proceed provided it complies with the notations on the submittal andrequirements of the Contract Documents. The submittal must be revised tocomply with the notations on the submittal and requirements of the Contract Documents, and must then resubmitted to the Landscape Architect or Engineer. Final payment depends on that compliance.

4. Resubmit: When the Landscape Architect or Engineer marks the submittal "Resubmit," do not proceed with the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise and prepare a new submittalaccording to the notations, resubmit without delay. Repeat if necessary to obtain a different action mark.

   a. Do not use, or allow others to use submittals marked "Resubmit" at the Project Site or elsewhere where Work is in progress.

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01370
SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included: Provide a detailed breakdown of the agreed Contract Sum showing value allocated to each of the various parts of the Work, as specified herein and in other provisions of the Contract Documents.

1.02 QUALITY ASSURANCE

A. Use required means to assure arithmetical accuracy of the sums described.

B. When so required by the Landscape Architect, provide copies of the subcontracts or other data acceptable to the Landscape Architect, substantiating the sums described.

1.03 SUBMITTALS

A. Prior to first application for payment, but not later than 21 days after the Contractor has received the Contract, submit a proposed schedule of values to the Landscape Architect or Engineer.

B. Meet with the Landscape Architect or Engineer and determine additional data, if any, required to be submitted.

C. Secure the Landscape Architect's or Engineer's review of the schedule of values prior to submitting first application for payment.

PART 2 – PRODUCTS (NOT

USED) PART 3 - EXECUTION

3.01 SUBMITTAL

A. Submittal process is described in PART 1 above.

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01425
STATE POLICE AND ROADWAY FLAGGER

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. Include the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges and the Supplemental Specifications and the 2009 Manual of Uniform Traffic Control Devices (MUTCD), as amended.

1.02 DESCRIPTION OF WORK

The Contractor shall provide State Police Details and or flaggers required as necessary for the direction and control of traffic within the site.

PART 2 – PRODUCTS – NOT USED

PART 3 - EXECUTION

The Contractor shall provide the number of State Police Details and or flaggers required in either the appropriate Traffic Management Plan (TMP) (see MassDOT website at https://www.mass.gov/files/documents/2017/10/24/tcp.pdf) or that the Engineer deems necessary for the direction and control of traffic within the site.

A flagger shall be used as required by the Engineer in accordance with 701CMR 7.00, this section, and the TMP. Any flagger determined by the Engineer to be ineffective in controlling traffic may be removed at the discretion of the Engineer. If a flagger is required to be removed, the Contractor shall immediately comply with the directive from the Engineer and shall suspend operations as necessary until a qualified replacement can be provided. Such a suspension of operations shall not be considered as a basis for a claim or an extension of time.

Flaggers utilized during the performance of the work must possess a certificate of satisfactory completion from a MassDOT-approved flagger training program, such as, but not limited to, those offered by the Associated General Contractors (AGC), the American Traffic Safety Services Association (ATSSA), American Flagging and Traffic Control (AFTC), or the National Safety Council (NSC), within the previous three (3) years. Prior to the start of work, the Contractor shall provide to the Engineer a written list of certified flaggers to be used, including the most recent date of certification or re-certification for each person listed. All flaggers shall carry their approved flagging training program certification card with them while performing flagging duties. All flaggers shall have completed Cardiopulmonary Resuscitation (CPR) and First Aid training according to the standards and guidelines of the American Heart Association or the American Red Cross. All flaggers shall carry their CPR/First Aid certification cards with them while performing flagging duties. All certifications shall remain valid for the duration of the project or the flagger shall be removed from the project.

Each flagger shall be equipped with the following high visibility clothing, signaling, and safety devices:

(1) A white protective hard hat with a minimum level of reflectivity per the requirements of ANSI, Type I, Class E&G;

(2) A clean, unfaded, untorn lime/yellow reflective safety vest and safety pants meeting the requirements of ANSI 107 Class 3 with the words “Traffic Control” on the front and rear panels in minimum two (2) inch (50 millimeter) high letters;

(3) A “STOP / SLOW” traffic paddle conforming to the requirements of Part 6E.03 of the Manual on Uniform Traffic Control Devices (MUTCD), a reflectorized red flag, flagger station advance warning signage, and two-way radios capable of providing clear communication within the work zone between flaggers, the Contractor, and the Engineer. The traffic paddle shall be mounted on a pole of sufficient length to be seven (7) feet above the ground as measured from the bottom of the paddle;

(4) A working flashlight with a minimum of 15,000 candlepower and a six (6) inch red attachable wand, a whistle with an attached lanyard, and a First Aid kit that complies with the requirements of ANSI Z308.1.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement of STATE POLICE will be per the hours from the daily logs as prepared by the State Trooper with Contractor signature for each shift.

B. Measurement of ROADWAY FLAGGERS will be on an hourly basis for only the actual time spent flagging and shall be inclusive of incidentals as described above.

4.02 PAYMENT

A. Payment of STATE POLICE shall be in accordance with the invoices submitted with no contractor markup.

B. Payment of ROADWAY FLAGGER shall on an hourly rate per certified payment records for the individual performing the work.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
01425.01	STATE POLICE	ALLOWANCE
01425.02	ROADWAY FLAGGER	ALLOWANCE

END OF SECTION

SECTION 01500
TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included: Provide temporary facilities and controls needed for the Work including, but not necessarily limited to:

1. Temporary utilities such as heat, water, electricity, and telephone;

2. Field office(s) for the Contractor's personnel;

3. Field office for DCR Resident Engineer;

4. Sanitary facilities;

5. Enclosures such as tarpaulins, barricades, and canopies;

6. Temporary fencing of the construction site; and

7. Temporary access and project signage.

8. The Contractor shall provide and install the DCR project sign in accordance with DCR requirements & standards.

B. Definitions:

1. Temporary: Labor, equipment, and materials required for the installation of facilities and controls which, upon completion of the Work, are not a part of the completed Work, shall be furnished, installed, and subsequently removed from the site by the Contractor.

1.02 PRODUCT HANDLING

A. Maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

PART 2 - PRODUCTS

2.01 UTILITIES

A. Water:

1. Limited fresh water supply is available at the site.

2. Provide necessary temporary service and piping.

B. Electricity:

1. Provide and pay for temporary electrical service and electricity used in construction.

2. Provide necessary temporary wiring.

3. Provide temporary area distribution boxes so located that the individual trades may furnish and use extension cords to obtain power and lighting at points where needed for work, inspection, and safety.

C. Heating:

1. Provide and maintain temporary heat necessary for proper conduct of operations needed in the Work.

D. Telephone:

1. Provide and maintain temporary telephone service to the Contractor's office at the site.

2.02 FIELD OFFICES AND SHEDS

A. Contractor's facilities:

1. Provide a temporary field office(s) building and sheds adequate in size and accommodation for Contractor's offices, supply, and storage. As a minimum, equip the Contractor's field office with a telephone, telephone answering machine, facsimile machine, and photocopier which shall remain in operation throughout the Work.

B. Sanitary facilities:

1. Provide temporary sanitary facilities in the quantity required by applicable health regulations for use by all personnel.

2. Maintain in a sanitary condition at all times.

2.03 ENCLOSURES

A. Provide and maintain for the duration of construction all temporary scaffolds,

tarpaulins, canopies, warning signs, steps, platforms, bridges, and other temporary construction necessary for proper completion of the Work in compliance with pertinent safety and other regulations.

2.04 CONTAINERS FOR DEBRIS & REFUSE REMOVAL

A. Provide and maintain suitable containers for the collection and disposal of trash and debris generated from demolition and construction. Do not use containers that are the property of DCR, or the property of others that may be present on site.

2.05 SIGNAGE

A. Provide and maintain for the duration of construction all project signage including DCR project signage, DEP signage, and any other signage required for access warnings, or public direction and other temporary construction signage necessary for proper completion of the Work in compliance with pertinent safety and other regulations.

PART 3 - EXECUTION

3.01 MAINTENANCE AND REMOVAL

A. Maintain temporary facilities and controls as long as needed for safe and proper completion of the Work.

B. Remove such temporary facilities and controls as rapidly as progress of the Work will permit, or as directed by the Landscape Architect or Engineer.

PART 4 – MEASUREMENT & PAYMENT

4.02 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01520
RESIDENT ENGINEER FIELD OFFICE

PART 1 - GENERAL

1.01 DESCRIPTION

A. Contractor shall provide a secure temporary field office (Field Office) at the work site for the duration of field work for use by the DCR Resident Engineers and other DCR personnel assigned to the project. If the Field Office is collocated with other office space, the office space and equipment specified herein shall be for the exclusive use of DCR personnel.

B. The Field Office shall be in good working condition and appearance for the exclusive use of, and occupancy by the Resident Engineers. The buildings shall be habitable environments, free of any recognizable health or safety hazards. The work shall also consist of providing and maintaining equipment for use by Resident Engineer.

C. Work under this section will also include providing technology related materials and supplies for use by the Resident Engineer.

1.02 TECHNICAL SPECIFICATIONS/PUBLICATIONS

A. For all items within this Contract without specific technical specifications and/or publications denoted, and to supplement all conditions of this Contract above and beyond all references mentioned, refer to the Commonwealth of Massachusetts, Department of Public Works, Standard Specifications for Highways and Bridges 1988 Edition, and all amendments; which is herein made part of this Contract in its entirety. Hereinafter known as the Standard Specifications.

1.03 GENERAL

A. Contractor shall furnish all labor, equipment and materials as required to perform all work necessary to install, equip and maintain the Field Office, to remove the Field Office upon project completion, and to restore the site to its original condition or better. Maintenance shall include weekly janitorial cleaning services and snow removal from parking spaces, walkways and steps/ramps immediately after snowstorms.

B. Contractor shall obtain all permits and permission; pay all fees and related costs to have the Field Office connected and disconnected to water, sewer, telephone, electric and internet providers. If on site water and sewer services are not readily available, the office trailer shall be equipped with a self-contained water supply and sanitary disposal system to be maintained by the Contractor, insulated and

enclosed to the extent necessary to prevent freezing in cold weather.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 FIELD OFFICE

A. The Field Office shall be within a secured, weatherproof building. The Contractor may furnish equivalent facilities in an existing building, provided that the building is located to provide convenient service. The Contractor shall supply the Landscape Architect and Engineer with a copy of the Certificate of Occupancy for the existing building. The Field Office shall be in accordance with the requirements of the Massachusetts State Building Code, and any applicable local codes. The electrical system shall be able to continuously operate all equipment and be provided with adequate receptacles.

B. An ambient air temperature of 70°F ±5°F shall be maintained.

C. Fire extinguishers and smoke and carbon monoxide detectors shall be provided and installed.

D. The Field Office shall be provided and ready for occupancy as soon as practicable. Before this time, if deemed necessary in the opinion of the Landscape Architect Engineer, the Contractor shall provide other satisfactory, temporary accommodations. The location of the Field Office is subject to Landscape Architect or Engineer approval.

E. The Field Office shall be supplied with 120V power, lavatory and supplies, lighting, and be temperature controlled to maintain a temperature of 70 degrees Fahrenheit. Contractor shall maintain this office in a clean, orderly condition and provide the following new or like-new furnishings, at a minimum; 2 desks, 2 swiveling desk chairs with adjustable height and arms, slant top drafting/plan table measuring 36”x72” or larger, swiveling drafting stool with back, 2 tables measuring 96” x 30” (or equivalent), 10 folding or stackable chairs, 2 legal size 4-drawer locking file cabinet, refrigerator (3 cubic ft. minimum), microwave oven (900 watt minimum), 2 dry erase boards (36” x 48” minimum), 2 sets of dry erase markers (4 colors), 2 waste baskets , electric sanitary hot/cold water cooler supplied with cups and water, wall mounted fire extinguisher, wall mounted first aid kit (per MA Dept. of Labor & Industry standards). All items to remain the property of Contractor.

F. All furniture and equipment shall be fully assembled, operational, clean and serviceable. The Contractor shall remove and dispose of all rubbish generated in the office and shall keep the office free from pests. The Contractor shall remove snow from all areas subject to vehicular circulation and parking.

PART 4 – MEASUREMENT & PAYMENT

4.01 MEASUREMENT

A. Measurement for Item 01520-1: TEMPORARY FIELD OFFICE SPACE & EQUIPMENT will be made on a MONTHLY (MO) basis for all work described in this section not otherwise listed below, complete as indicated by the Contract Drawings and Specifications.

4.02 PAYMENT

A. Payment for Item 01520-1: TEMPORARY FIELD OFFICE SPACE & EQUIPMENT will be at the MONTHLY (MO) contract price. This price shall include full compensation for furnishing, installation, and maintenance of a secure temporary field office (Field Office) at the work site for the duration of field work for use by the DCR resident engineers and other DCR personnel assigned to the project necessary to meet the 01520-1: TEMPORARY FIELD OFFICE SPACE & EQUIPMENT requirements as shown on the Drawings and as specified herein.

B. .

4.03 PAYMENT ITEMS:

ITEM	DESCRIPTION	UNIT
01520-1	Temporary Field Office Space & Equipment	MO

END OF SECTION

SECTION 01561
PEST CONTROL

PART 1 - GENERAL

1.01 DESCRIPTION

A. Develop and implement an integrated pest management (IPM) program to control rodents prior to any site disruptions, followed by a maintenance program that ensures continued control until completion of all Work on site.

B. Perform initial rodent control and pest control prior to demolition, excavation, and site preparation.

C. Meet rodent control and general pest control requirements within work areas.

1.02 RELATED SECTIONS

A. SECTION 02100 SITE PREPARATION, DEMOLITION AND REMOVALS.

1.03 SUBMITTALS

A. Submit the Following:

1. Documentation of pest control firm qualifications, certifications and licenses within 30 days after Notice to Proceed.

2. Proposed pest control procedures, indicating materials, quantities, methods, and schedules and a plan showing location where pesticide, bait stations, traps and census bait will be placed within 21 days of Notice to Proceed. Include a copy of the pesticide manufacturer's pesticide label and Material Safety Data Sheet (MSDS) for each pesticide to be used.

3. Documentation of pest control activities and results as follows:

a. Monthly - Submit data sheets to DCR Resident Engineer as specified in Paragraph 3.05 for the preceding month at the bi-weekly progress meeting.

b. Monthly - Revise and resubmit plan showing locations where pesticide, bait stations, traps and census bait will be placed every 30 days thereafter for the duration of the work on Site.

1.04 QUALIFICATIONS

A. The firm performing the Work of this section shall have completed at least three (3) pest management programs of similar size and complexity as the pest control services to be furnished under this contract for the last two (2) consecutive years. Submit evidence of prior experience for DCR approval.

B. Personnel performing the Work of this section shall:

1. Have experience and technical training in commercial vertebrate pest management and integrated pest management; have experience with various rodent control techniques, equipment, and strategies; have training and experience with insect control; and have experience with techniques to reduce non-target hazards.

2. Be licensed by the Massachusetts Pesticide Bureau in General Pest Control (category 41).

1.05 COORDINATION AND SCHEDULING

A. Do not proceed with the work of this section until the Engineer has reviewed the pest control program.

B. Establish the program to control rodents before mobilization begins for the construction and with adequate timing to achieve control before environmental disruptions and site work begin. Assume the initial program will be two (2) weeks in durations, depending upon construction methods, field conditions and the need for subsurface baiting.

C. Maintain the program until all work on site is completed.

PART 2 - PRODUCTS

2.01 PEST CONTROL PRODUCTS

A. Furnish and use only pesticide formulations registered by the U.S. Environmental Protection Agency (EPA) and the Massachusetts Department of Food and Agriculture. Use rodenticide that does not pose a secondary poisoning risk to birds of prey and mammals.

B. Furnish and use devices and supplies (e.g., traps, bait stations, and census bait) in accordance with the pest control program.

C. Toxicant and other control tools shall not pose a hazard to persons, domestic animals, or non-target wildlife.

PART 3 - EXECUTION

3.01 SURVEYS AND INSPECTIONS

A. For each work area and before pesticide application begins, conduct a thorough baseline

survey of the proposed work areas, as well as accessible or observable bordering areas and premises within 500 feet of the centerline of the water mains. These areas will be referred to as the Pest Control Work Area Limits (PCWAL). Record signs of rodent activity and sanitation deficiencies. Closely inspect all embankments, edge areas, and properties within and adjoining the PCWAL. Review subsurface utility maps, surface conditions, and topography and determine necessary subsurface baiting locations.

B. Beginning the week after completion of the baseline survey, conduct a thorough inspection of the Pest Control Work Area Limits and record signs of rodent activity (e.g., burrows, droppings, dead rodents, sightings) and sanitation deficiencies (e.g., refuse storage, exposed garbage, debris, weeds). Repeat this inspection weekly throughout the duration of the work onsite. Perform this survey at night once per month (between one hour after sunset and one hour before sunrise).

3.02 BAITING, TRAPPING, AND MONITORING

A. Document rodent activity (e.g., bait consumed, animals trapped). Customize the control program using survey, baiting, and monitoring data to determine distribution of baiting locations and quantities. Replenish bait, re-set traps, and shift bait or trap placements to control rodent populations. Bait or trap edge and accessible bordering areas within the Pest Control Work Area Limits, to ensure rodents will not be dispersed by construction activities and rodents will not infest construction areas.

B. Apply rodenticides in strict accordance with label directions and the Rules and Regulations of the U.S. Environmental Protection Agency and the Massachusetts Department of Food and Agriculture. Assign a unique number to each baiting location and shall be tamper-resistant.

1. Where bait stations are not used, suspend bait by wire or place it in voids or confined spaces where rodent activity is found. Use census (non- toxic) bait to help monitor these locations for activity or re-infestation.

C. Baiting, trapping, and monitoring rodent activity shall be in accordance with all applicable federal and state regulations.

3.03 CLEANUP

A. Remove visible animal carcasses daily and dispose of them consistent with pesticide label directions and applicable codes, laws, and regulations.

B. Upon completion of work on site, remove remaining bait and dispose of it according to the pesticide label and applicable codes, laws, and regulations, and remove all wires used for catch basin and manhole baiting, bait stations, traps, and any other equipment or tools associated with pest control activities.

3.04 COMPLAINT CALLS

A. Respond to pest-related complaints within 6 hours. Inspect the particular premises and adjacent areas for sanitation and structural deficiencies and also signs of historic and recent pest activity. Use pesticides or traps to resolve the complaint.

3.05 RECORD KEEPING

A. Use standardized data sheets to maintain accurate records of date, time period of work, locations, and type and amount of pesticide or other control tools (e.g., traps) applied. This includes records of surveys, inspections, baiting, trappings, and changes in pest activity, sanitation conditions, and complaint calls. Submit data sheets monthly to the Engineer. Data sheets shall be in a format acceptable to the Engineer.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 01561-01 PEST CONTROL will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 01561-01 PEST CONTROL will be at the LUMP SUM contract price. This price shall include full compensation for monitoring, labor, materials, equipment, remedial work during construction, removal after approval and all other incidental work necessary to complete PEST CONTROL as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM NO.	ITEM	UNIT
01561-01	PEST CONTROL	LUMP SUM

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included: Provide an orderly and efficient transfer of the completed Work to DCR.

1.02 QUALITY ASSURANCE

A. Prior to requesting review by the Landscape Architect or Engineer, use adequate means to assure that the Work is completed in accordance with the specified requirements and is ready for the requested review.

B. Submit written certification that Contract Documents have been reviewed by the Contractor, the Work has been inspected by the Contractor, and that the Work is complete and in accordance with the Contract Documents.

1.03 PROCEDURES

A. Substantial Completion:

1. Substantial Completion is defined as the stage in the progress of the Work when the Work or designated portion thereof is sufficiently complete in accordance with the Contract Documents so DCR can occupy or utilize the Work for its intended use.

2. When the Contractor considers that the Work, or a portion thereof which DCR agrees to accept separately, is substantially complete, the Contractor shall prepare and submit to the Landscape Architect and Engineer a comprehensive list of items to be completed or corrected.

3. Prepare and submit the list required by Paragraph 1.03-A-2 above.

4. Within a reasonable time after receipt of the list, the Landscape Architect will review to determine status of completion.

5. Should the Landscape Architect or Engineer determine that the Work is not substantially complete:

a. The Landscape Architect or Engineer promptly will so notify the Contractor, in writing, giving the reasons therefore.

b. Remedy the deficiencies and notify the Landscape Architect or Engineer when ready for additional review.

c. The Landscape Architect or Engineer will review the Work.

6. When the Landscape Architect or Engineer concurs that the Work is substantially complete:

a. The Landscape Architect or Engineer will prepare a "Certificate of Substantial Completion," accompanied by the Contractor's list of items to be completed or corrected, as verified by the Landscape Architect or Engineer.

b. The Landscape Architect or Engineer will submit the Certificate to DCR and to the Contractor for their written acceptance of the responsibilities assigned to them in the Certificate.

B. Final Completion:

1. Prepare and submit to the Landscape Architect or Engineer a notice that the Work is complete and ready for final review and acceptance.

2. Certify that:

a. Contract Documents have been reviewed.

b. Work has been reviewed for compliance with the Contract Documents.

c. Work has been completed in accordance with the Contract Documents.

d. Equipment and systems have been tested as required, and are operational.

e. Work is completed and ready for final review.

3. The Landscape Architect or Engineer will make a review to verify status of completion.

4. Should the Landscape Architect or Engineer determine that the Work is incomplete or defective:

a. The Landscape Architect promptly will so notify the Contractor, in writing, listing the incomplete or defective work.

b. Remedy the deficiencies promptly and notify the Landscape Architect or Engineer when ready for additional review.

5. When the Landscape Architect or Engineer determines that the Work is acceptable under the Contract Documents, he will request the Contractor to make closeout submittals.

C. Closeout submittals include, but are not necessarily limited to:

1. Project Record Documents described in Section 01720, Project Record Documents.

2. Operation and maintenance data for items so listed in pertinent other Sections of these Specifications, and for other items when so directed by the Landscape Architect or Engineer.

3. Warranties and bonds.

4. Spare parts and materials extra stock.

5. Evidence of compliance with requirements of governmental agencies having jurisdiction including, but not necessarily limited to:

a. Certificates of Inspection.

b. Certificates of Occupancy.

6. Certificates of Insurance for products and completed operations.

7. Evidence of payment and release of liens.

8. List of subcontractors, service organizations, and principal vendors, including names, address, and telephone numbers where they can be reached for emergency service at all times including nights, weekends, and holidays.

9. As built drawings and surveys.

D. Final adjustment of accounts:

1. Submit a final statement of accounting to the Landscape Architect or Engineer, showing all adjustments to the Contract Sum.

2. If so required, the Landscape Architect or Engineer will prepare a final Change Order showing adjustments to the Contract Sum that were not made previously by Change Orders.

1.04 INSTRUCTION

A. Instruct DCR's personnel in proper operation and maintenance of systems, equipment, and similar items which were provided as part of the Work.

PART 2 – PRODUCTS (NOT

USED) PART 3 - EXECUTION

3.01 CLOSEOUT

A. Closeout procedures are described in Part 1 above.

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01710
CLEANING

PART 1 – GENERAL

1.01 DESCRIPTION

A. Work included: Throughout the construction period, maintain the buildings and site in a standard of cleanliness as described in this Section.

1.02 QUALITY ASSURANCE

A. Conduct daily inspection, and more often if necessary, to verify that requirements for cleanliness are being met.

B. In addition to the standards described in this Section, comply with pertinent requirements of governmental agencies having jurisdiction.

PART 2 – PRODUCTS

2.01 CLEANING MATERIALS AND EQUIPMENT

A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.02 COMPATIBILITY

A. Use only the cleaning materials and equipment that are compatible with the surface being cleaned, as recommended by the manufacturer of the material.

PART 3 – EXECUTION

3.01 PROGRESS CLEANING

A. General:

1. Retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage, and providing required protection of materials.

2. Do not allow accumulation of scrap, debris, waste material, and other items not required for construction of this Work.

3. At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the job site.

4. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.

B. Site:

1. Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.

2. Weekly, and more often if necessary, inspect all arrangements of materials stored on the site. Re-stack, tidy, or otherwise service arrangements to meet the requirements of subparagraph 3.01-A-1 above.

3. Maintain the site in a neat and orderly condition at all times.

C. Structures:

1. Weekly, and more often if necessary, inspect the structures and pick up all scrap, debris, and waste material. Remove such items to the place designated for their storage.

2. As required preparatory to installation of succeeding materials, clean the structures or pertinent portions thereof to the degree of cleanliness recommended by the manufacturer of the succeeding material, using equipment and materials required to achieve the necessary cleanliness.

3.02 FINAL CLEANING

Prior to completion of the Work, remove from the job site all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final progress cleaning as described in Article 3.01 above.

A. Site:

1. Unless otherwise specifically directed by the Landscape Architect or Engineer, broom clean paved areas on the site and public paved areas adjacent to the site.

2. Completely remove resultant debris.

B. Structures:

1. Exterior:

a. Visually inspect exterior surfaces and remove all traces of soil, cement based materials, waste materials, smudges, and other foreign matter.

b. Remove all traces of splashed materials from adjacent surfaces.

c. If necessary to achieve a uniform degree of cleanliness, hose down the exterior of the structure.

d. In the event of stubborn stains not removable with water, the Landscape Architect or Engineer may require light sandblasting or other cleaning at no additional cost to DCR.

C. Schedule final cleaning as approved by the Landscape Architect or Engineer to enable DCR to accept a completely clean Work.

3.03 CLEANING DURING OWNER'S OCCUPANCY

A. Should DCR occupy the Work or any portion thereof prior to its completion by the Contractor and acceptance by DCR, responsibilities for interim and final cleaning shall be as determined by the Landscape Architect or Engineer in accordance with the General Conditions of the Contract.

PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 01720
PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work included:

1. Throughout progress of the Work, maintain an accurate record of changes in the Contract Documents, as described in Article 3.01 below.

2. Upon completion of the Work, transfer the recorded changes to a set of Record Documents, as described in Article 3.02 below.

1.02 QUALITY ASSURANCE

A. Accuracy of records:

1. Thoroughly coordinate changes within the Record Documents, making adequate and proper entries on each page of Specifications and each sheet of Drawings and other Documents where such entry is required to show the change properly.

2. Accuracy of records shall be such that future searches for items shown in the Contract Documents may rely reasonably on information obtained from the approved Project Record Documents.

B. Make entries within 24 hours after receipt of information that the change has occurred.

1.03 SUBMITTALS

A. Comply with pertinent provisions of Section 01340, Submittals and Substitutions.

B. The Landscape Architect or Engineer's review of the current status of Project Record Documents may be a prerequisite to the Landscape Architect or Engineer's review of requests for progress payment and request for final payment under the Contract.

C. Prior to submitting each request for progress payment, secure the Landscape Architect or Engineer's review of the current status of the Project Record Documents.

D. Prior to submitting request for final payment, submit the final Project Record Documents to the Landscape Architect or Engineer and secure his review.

1.04 PRODUCT HANDLING

A. Maintain the job set of Record Documents completely protected from deterioration and from loss and damage until completion of the Work and transfer of all recorded data to the final Project Record Documents.

B. In the event of loss of recorded data, use means necessary to again secure the data to the Landscape Architect's review.

1. Such means shall include, if necessary in the opinion of the Landscape Architect, removal and replacement of concealing materials.

2. In such case, provide replacements to the standards originally required by the Contract Documents.

PART 2 - PRODUCTS

2.01 RECORD DOCUMENTS

A. Job set: Promptly following receipt of the Contract, secure from the Landscape Architect or Engineer at no charge to the Contractor one complete set of all Documents comprising the Contract.

B. Final Record Documents: At a time nearing the completion of the Work, secure from the Landscape Architect or Engineer at no charge to the Contractor one complete set of Drawings in the Contract.

PART 3 - EXECUTION

3.01 MAINTENANCE OF JOB SET

A. Immediately upon receipt of the job set described in Paragraph 2.01-A above, identify each of the Documents with the title, "RECORD DOCUMENTS - JOB SET."

B. Preservation:

1. Considering the Contract completion time, the probable number of occasions upon which the job set must be taken out for new entries and for examination, and the conditions under which these activities

will be performed, devise a suitable method for protecting the job set.

Do not use the job set for any purpose except entry of new data and for review by the Landscape Architect or Engineer, until start of transfer of data to final Project Record Documents.

2. Maintain the job set at the site of Work as designated by the Landscape Architect or Engineer.

C. Making entries on Drawings:

1. Using an erasable colored pencil (not ink or indelible pencil), clearly describe the change by graphic line and note as required.

2. Date all entries.

3. Call attention to the entry by a "cloud" drawn around the area or areas affected.

4. In the event of overlapping changes, use different colors for the overlapping changes.

D. Make entries in the pertinent other Documents.

E. Conversion of schematic layouts:

1. In some cases on the Drawings, arrangements of conduits, circuits, piping, ducts, and similar items are shown schematically and are not intended to portray precise physical layout.

a. Final physical arrangement is determined by the Contractor, subject to the Landscape Architect or Engineer's review.

b. However, design of future modifications of the facility may require accurate information as to the final physical layout of items that are shown only schematically on the Drawings.

2. Show on the job set of Record Drawings, by dimension accurate to within one inch, the centerline of each run of items such as is described in subparagraph 3.01-E-1 above.

a. Clearly identify the item by accurate note such as "cast iron drain," "galv. water," and the like.

b. Show, by symbol or note, the vertical location of the item ("under slab," "in ceiling plenum," "exposed," and the like).

c. Make all identification sufficiently descriptive that it may be related reliably to the Specifications.

3. The Landscape Architect or Engineer may waive the requirements for conversion of schematic layouts where, in the Landscape Architect or Engineer's judgment, conversion serves no useful purpose. However, do not rely upon waivers being issued except as specifically issued in writing by the Landscape Architect or Engineer.

3.02 FINAL PROJECT RECORD DOCUMENTS

A. The purpose of the final Project Record Documents is to provide factual information regarding all aspects of the Work, both concealed and visible, to enable future modification of the Work to proceed without lengthy and expensive site measurement, investigation, and examination.

B. Landscape Architect or Engineer's review of recorded data prior to transfer:

1. Following receipt of the Drawings described in Paragraph 2.01-B above, and prior to start of transfer of recorded data thereto, secure the Landscape Architect or Engineer's review of all recorded data.

2. Make required revisions.

C. Transfer of data to Drawings:

3. Carefully transfer change data shown on the job set of Record Drawings to the corresponding final set of Record Drawings, coordinating the changes as required.

4. Clearly indicate at each affected detail and other Drawings, a full description of changes made during construction, and the actual location of items described in subparagraph 3.01-E-1 above.

5. Call attention to each entry by drawing a "cloud" around the area or areas affected.

6. Make changes neatly, consistently, and with the proper media to assure longevity and clear reproduction.

D. Transfer of data to other Documents:

1. If the Documents other than Drawings have been kept clean during progress of the Work, and if entries thereon have been orderly to the acceptance of the Landscape Architect or Engineer, the job set

of those Documents other than Drawings will be accepted as final Record Documents.

2. If any such Document is not so accepted by the Landscape Architect or Engineer, secure a new copy of that Document from the Landscape Architect or Engineer at the Landscape Architect or Engineer's usual charge for reproduction and handling, and carefully transfer the

change data to the new copy to the acceptance of the Landscape Architect or Engineer.

E. Review and submittal:

1. Submit the completed set of Project Record Documents to the Landscape Architect or Engineer as described in Paragraph 1.03-D above.

2. Participate in review meetings as required.

3. Make required changes and promptly deliver the final Project Record Documents to the Landscape Architect or Engineer.

3.03 CHANGES SUBSEQUENT TO ACCEPTANCE

A. The Contractor has no responsibility for recording changes in the Work subsequent to Final Completion, except for changes resulting from work performed under Warranty.

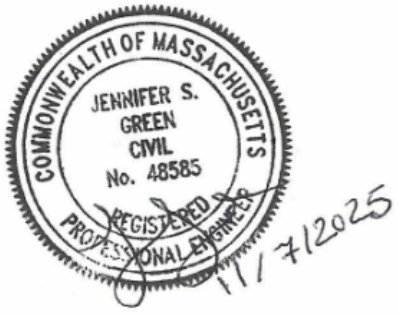
PART 4 – MEASUREMENT & PAYMENT

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

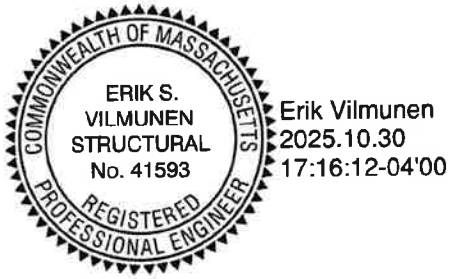
END OF SECTION

PART B

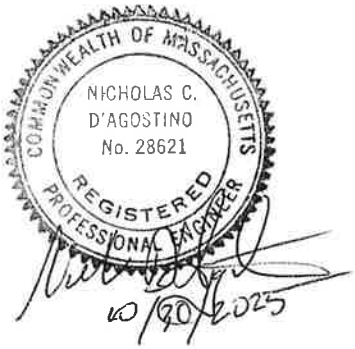

COMMONWEALTH OF MASSACHUSETTS
JENNIFER S.
GREEN
CIVIL
No. 48585
REGISTERED
PROFESSIONAL ENGINEER
11/7/2025

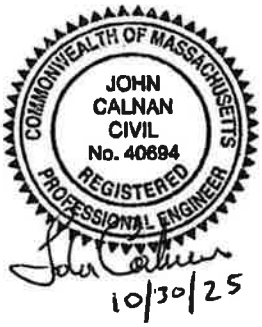
MASSACHUSETTS
WILLIAM D ANDREWS
NO. 4239
REGISTERED LANDSCAPE ARCHITECT
11/7/25

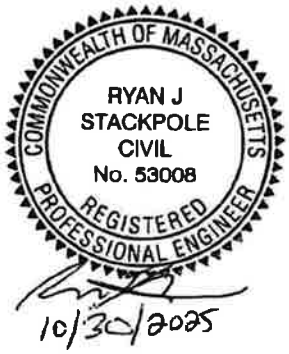
COMMONWEALTH OF MASSACHUSETTS
ZACHARY M.
RICH
MECHANICAL
No. 58170
REGISTERED
PROFESSIONAL ENGINEER
10/30/2025

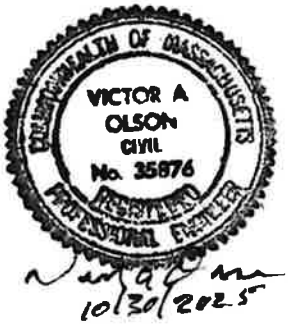

COMMONWEALTH OF MASSACHUSETTS
ERIK S.
VILMUNEN
STRUCTURAL
No. 41593
REGISTERED
PROFESSIONAL ENGINEER
Erik Vilmunen
2025.10.30
17:16:12-04'00

COMMONWEALTH OF MASSACHUSETTS
DAVID M.
GLENNON
ELECTRICAL
No. 48926
REGISTERED
PROFESSIONAL ENGINEER
10/30/2025


COMMONWEALTH OF MASSACHUSETTS
NICHOLAS C.
D'AGOSTINO
No. 28621
REGISTERED
PROFESSIONAL ENGINEER
10/30/2025


COMMONWEALTH OF MASSACHUSETTS
JOHN
CALNAN
CIVIL
No. 40684
REGISTERED
PROFESSIONAL ENGINEER
10/30/25


COMMONWEALTH OF MASSACHUSETTS
RYAN J
STACKPOLE
CIVIL
No. 53008
REGISTERED
PROFESSIONAL ENGINEER
10/30/2025


COMMONWEALTH OF MASSACHUSETTS
VICTOR A
OLSON
CIVIL
No. 35876
REGISTERED
PROFESSIONAL ENGINEER
10/30/2025

COMMONWEALTH OF MASSACHUSETTS
DANA BERGMAN
ELECTRICAL
No. 58627
REGISTERED
PROFESSIONAL ENGINEER
10/30/2025

SECTION 02010

WATERFRONT SITE PREPARATION

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

A. The work to be done under this section shall consist of furnishing all materials, labor, supervision, tools and equipment and performing all operations necessary to complete all work as shown on the Contract Drawing and as specified as required to complete site preparation.

B. Work under this Section, without limiting the generality thereof, consists of the furnishing and installation of all materials, equipment, labor, testing, transportation facilities, and all operations and adjustments required for the complete and operating installation as indicated on the Drawings, stipulated in the Specifications, and as reasonably implied by either or both.

C. This includes, but is not limited to the following:

1. Mobilization and demobilization of all equipment, labor, materials, supervision, survey, and any incidentals required to satisfactorily complete this project in accordance with these Specifications, the Contract Drawings and as directed by the Engineer.
2. Comply fully with all requirements and conditions of all project permits in accordance with Part III, Article IV, Notices and Permits, including performance of any miscellaneous work required to ensure full compliance and not otherwise covered by individual items in the contract.
3. Perform all other miscellaneous work obviously required to complete the project but not covered by individual items in the contract.

4. Temporary support or relocation and re-establishment of utilities to the extent required to complete the work.
5. Temporary removal and reinstallation of miscellaneous hardware.
6. Protection of existing mural on the western condominium building.
7. Protection of all existing building door entrances and windows which could be impacted by the work.
8. Protection of all landscaping elements not scheduled for replacement.
9. Protection of any utilities to remain.
10. Provide temporary measures to restrict access to marina floats (to remain in place).
11. Remove and store existing marina gangways. Coordinate storage location of gangways with DCR and the City of Lynn. Gangways are to be removed, properly stored, and re-installed after the work is complete. Repair for any damage that occurs to gangways as a result of the work will be the responsibility of the Contractor.

    a. **Work may occur between November 1 and April 30. Outside of this timeframe, safe public access to harbor master's room and both marina gangways, including completely installed, refurbished, or replaced in-kind gangway gateway and fence panels, is required. Additionally, the Contractor shall provide periodic, scheduled access to harbor master room for harbor master or building staff at all points of the project. Any phasing or sequencing that is required to work within the time frame constraints and restoration of the marina access by the specified date is a requirement of the contract. The Contractor shall ensure that all gangway reinstallation is complete in accordance with the schedule requirements to allow for marina access set forth by DCR.**

12. Provide plan for rodent control measures prior to commencement of work. See Specification Section 01561: Pest Control.
13. Perform site work operations and the removal of debris and waste materials to assure minimum interference with streets, walks, parking facilities, buildings, and all other adjacent facilities.

14. Obtain governing authorities written permission, when required, to close or obstruct streets, walks and adjacent facilities. Provide alternate routes around closed or obstructed traffic ways, when required by governing authorities.

15. Obtain written permission from property owners to trespass and/or transgress their properties where an easement has not been granted.

16. The Contractor has the option to remove some or all the existing timber fender piles and timber fender pile clusters as required to perform the work. Timber piles shall be removed in their entirety and not cut. Any fender piles or fender clusters removed for barge access, or any other reason, shall be replaced in-kind, at the exact location where they were removed at the expense of the Contractor. The Contractor is responsible for providing a survey prior to removal of any piles to determine exact as-built coordinates, such that piles can be replaced in its original location. Any piles removed shall be properly disposed of in accordance with Specification Section 02075 Waterfront Selective Demolition, Salvage for Reuse, And Utility Protection.

17. Control dust caused by the work. Dampen surfaces as required. Comply with pollution control regulations of governing authorities.

18. If the Contractor, in the course of excavation, uncovers or otherwise encounters any artifacts, whether historic or prehistoric, they shall bring them to the immediate attention of the Engineer, and stop all work in that vicinity of said artifacts until directed by the Engineer.

19. If the Contractor, in the course of excavation, uncovers or otherwise encounters any suspected hazardous or unidentified substances, they shall bring them to the immediate attention of the Engineer, and stop all work in that vicinity of said until directed by the Engineer.

20. Perform building condition survey of existing condo buildings in accordance with Specification Section 022130 - Waterfront Building Condition Survey and Vibration Monitoring.

21. Any other site preparation work, not specifically listed herein, that is required in order to complete the scope of work as indicated on the Contract Drawings.

1.02 REFERENCES

1. Specification Section 01561 - Pest Control

2. Specification Section 02705 - Waterfront Selective Demotion, Salvage for Reuse and Utility Protection
3. Specification Section 02213 - Waterfront Vibration Monitoring

1.03 OSHA REQUIREMENTS

A. Pursuant to M.G.L. c.30, §39S, any person signing a contract to work on a public building or public works project estimated to cost more than $10,000, will certify under the pains and penalties of perjury that all employees employed on the worksite, or in work subject to the bid, have successfully completed at least ten hours of OSHA approved training. Proof of OSHA certification of all workers onsite will be required by the Authority prior to the start of work.

1.04 SUBMITTALS

A. Location and phasing plan of staging areas and construction areas and schedule for moving materials or equipment into those areas shall be submitted for Engineer's approval prior to mobilization and related site preparation operations. Contractor’s Plan shall comply with the requirements of the Preliminary Site Utilization Plan required by the Memorandum of Agreement between the Seaport Landing Condominiums and DCR. See General Conditions Article 1.06 Permits.

B. Phasing plan for restoration of marina access.

C. Plan detailing storage areas for any items scheduled for removal and re-installation, in accordance with the Contract Documents.

D. Details of floating booms and any other environmental controls as required by Project Permits.

E. Details of platforms and temporary staging as required to prevent debris and dust from falling into the water.

F. Location of staging areas and equipment storage (Construction Materials and Equipment Staging Plan).

G. Spill management plan as required in Project Permits.

H. Construction schedule and phasing plan shall be submitted to the DCR prior to mobilization and related work preparation operations.

I. Timber fender pile and timber fender pile cluster replacement details, as required and in-kind replacement details for any timber fender piles or timber fender pile clusters removed.

J. Provide daily updates to schedule and phasing plan as applicable.

K. Confirmation and copies of all notifications.

1.05 PROTECTION

A. Protection of persons and property:

B. Barricade or secure equipment staging areas occurring as part of this work and post with warning lights.

C. Protect structures, utilities, pavements, and other facilities from damage caused by equipment, undermining, washout, transportation, disposal, and other hazards created by work operations.

D. Details of plan to protect existing mural located on condo building.

E. Protect existing structures and facilities that are adjacent to the work area from damage caused by the project operations. Repair all damage caused to the satisfaction of the Engineer, at the sole expense of the Contractor.

F. Do not interfere with the use of adjacent buildings or facilities. Maintain free and safe passage to and from adjacent buildings and facilities or both and between them and the public way.

G. Cease operations and notify Engineer immediately if safety of adjacent structures, workers, or the general public appears to be endangered. Take precautions to properly support structures and protect workers and the general public. Do not resume operations until safety is restored.

H. The Contractor shall erect a safety barrier around the limit of work areas as defined in the staging and phasing plan.

1.06 JOB CONDITIONS

A. The Contractor shall coordinate all work at the site with DCR and shall not obstruct any areas, roads or gates unless otherwise approved.

1.07 EXISTING SERVICES

A. Arrange and pay for disconnecting, removing, capping, and plugging utility services as indicated on the Contract Documents. Disconnect and stub off. Notify the affected utility company in advance and obtain approval before starting this work.

B. Place markers to indicate the location of disconnected services.

1.08 MAINTAINING TRAFFIC

A. Do not close or obstruct roadways or other public access areas without authorization or permits.

B. Conduct operations with minimum interference to public or private roadways. Coordinate with local and state officials, police, and emergency agencies regarding all operations on public roadways.

1.09 ENVIRONMENTAL PROTECTION

A. Comply with all requirements of environmental regulations and Project Permits.

B. Provide measures to prevent any construction debris from falling into the water. Any material falling into the water shall be retrieved immediately.

C. Provide suitable enclosed washdown area for concrete trucks at location approved by the Engineer. The washdown area shall confine and filter runoff containing cement and other suspended solids as detailed on the drawings.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Materials shall be as selected by the Contractor and approved by the Engineer, except as indicated on the Contract Drawings and/or in the Specifications.

B. Construction Fence

1. Unless otherwise specified on the Construction documents, Construction Fence shall be heavy duty UV stabilized, orange safety fence with a minimum 4-foot height. The weight of the fence shall be 20 pounds and be 100 feet or greater.
2. Fence shall be installed around all areas dedicated for construction activities to prevent public access and provide for public safety.

PART 3 – EXECUTION

3.01 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. Notify "Dig Safe" and local utilities and services as applicable prior to conducting any work in order to have all known utilities and services marked out before work begins.

B. Existing structures and utilities shall be suitably protected from damage, including but not limited to existing pavements and curbs, lighting, fencing, concrete vault, manholes, and utility lines.

3.02 PROTECTION OF CONSTRUCTION SITE

A. It is the Contractor’s responsibility to secure the construction site, both for the protection of the ongoing work and the protection of the public. The location of construction fencing used for this purpose shall be approved by the Engineer.

3.03 INSPECTION

A. DCR will assign inspectors and/or resident engineers to this project on either a full time or part time basis, as required to cover the work under this Contract, as justified by DCR. The inspector or resident engineer shall be DCR’s representative for this project.

B. The Engineer shall be notified at least 48 hours in advance of all material shipments in order to make arrangements for the shipment to be inspected as they arrive to the site.

C. All materials that are not suitable for placement on this project and/or have been rejected by the Engineer shall be removed from the site immediately; the cost of the removal of these materials shall be the responsibility of the Contractor.

D. Unless otherwise agreed upon by the Engineer, no work shall be done with materials that are partially or completely buried or hidden from view without the presence of the Engineer. The Engineer reserves the right to have all materials uncovered for inspection if placed without direct supervision, at the sole expense of the Contractor. No materials shall be paid for under this Contract that have not been examined and passed by the Engineer, or for any reason are placed outside the prescribed limits of the work.

E. The Engineer shall be permitted at all times to check the lines, grades, elevations, reference marks, batter boards, etc. set by the Contractor. Any errors or discrepancies in these items discovered by checks shall be corrected by the Contractor. Such checks shall not be construed as to be an approval of the Contractor's work and shall not relieve or diminish in any way the responsibilities of the Contractor for the accurate and satisfactory completion of the entire work. The Contractor shall be available to assist the Engineer with these checks as needed.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02010-1 WATERFRONT MOBILIZATION/DEMOBILIZATION will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 02075-1 WATERFRONT DEMOLITION AND DISPOSAL will be at the LUMP SUM contract price. This price shall include mobilization, demobilization and all items not otherwise called out for individual price breakdown. Payment under this item shall be made in two installments, 60% at time of project startup and 40% after substantial completion and removal of all Contractors equipment and personnel.

B. There will be no separate measurement of quantities or payments for other work described in this Section.

C. Site related Mobilization/Demobilization is the work of General Conditions Section 01000.

4.02 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02010-1	WATERFRONT MOBILIZATION AND DEMOBILIZATION	LUMP SUM

END OF SECTION

SECTION 02075

WATERFRONT SELECTIVE DEMOLITION, SALVAGE FOR REUSE, AND UTILITY PROTECTION

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Carefully demolish and remove from the site those items scheduled to be so demolished and removed.
B. Carefully remove and store off or on site those items scheduled to be reused. Store these items so as not to cause damage. Replace these items as indicated on the drawings such that they are undamaged and fit for their intended purpose. This includes, but is not limited to the following:
C. This includes, but is not limited to the following:
   1. Remove and dispose of existing timber decking to the limits indicated on the Contract Drawings.
   2. Remove and dispose of existing timber stringers, where indicated on the Contract Drawings.
   3. Remove and dispose of existing timber pile caps, where indicated on the Contract Drawings.
   4. Remove and dispose of existing miscellaneous blocking as required to perform the work.
   5. Remove and dispose of existing upper level of timber cross bracing under the pile supported timber boardwalk, as indicated on the Contract Drawings.
   6. Remove and dispose of existing railing system for the entire project limits.
   7. Remove and dispose of existing concrete seawall and seawall footing at the northeast corner of the timber pile supported boardwalk for sheet pile installation to the limits indicated on the Contract Drawings.
   8. Sawcut, remove and dispose of existing seawall stem to the limits indicated on the Contract Drawings.
   9. Remove and dispose of existing pavilion platform cladding/lagging.
   10. Remove and dispose of junction box support at pavilion.
   11. Remove and dispose of gate support post mounted to Pavilion decking.

12. Temporary removal, storage, and re-installation of the Pavilion Shade Structure as indicated on the Contract Drawings.
13. Document locations of existing solar lights installed on top of existing deck surface. Once documentation is complete, remove, store, and reinstall to match original locations.
14. Remove and dispose of ramp at harbor master entrance.
15. Remove and dispose of ramps to access timber pile supported boardwalk.
16. Remove and store fuel sump access cover located on timber pile supported boardwalk. Access cover to be-reinstalled after deck replacement is complete.
17. Remove, store and re-install two (2) existing marina access steel gates, gate connections and hardware. Replace vertical gate posts.
18. Remove, store, and re-install all existing marine gangways (Quantity 3).
19. Remove boat planter, stockpile, and deliver to a location as selected by the City of Lynn.
20. The Contractor may elect to remove existing timber fender piles and timber fender pile clusters as required to perform the work or for barge access. Any timber fender piles removed shall be properly disposed of.
    a. Any timber piles shall be removed in their entirety and not cut.
    b. Any fender piles or fender clusters removed must be replaced in-kind, at the exact location where they were removed at the expense of the Contractor.
    c. The Contractor is responsible for providing a survey prior to removal of any piles in order to determine exact as-built coordinates, such that piles can be replaced in its original location.
21. Remove and dispose of existing concrete grade beams as indicated and to the limits shown on the Contract Drawings.
22. Inclinometer at Boring HP-6, Fill with grout, cut as required, and cap existing inclinometer and abandon in place.
23. Inclinometer at Boring HP-3, Fill with grout, cut as required, and cap existing inclinometer and abandon in place.
24. Art murals, located along the face of the Western Condo Building, to remain in place. The Contractor shall protect the murals for the duration of work. The Contractor shall submit a mural protection plan. The Contractor will be responsible to repair any damage that occurs to the murals as a result of the work.
25. Remove and dispose of any ramps or thresholds at existing building entrance doors.

26. Remove and dispose of existing timber curbing to the limits indicated on the Contract Drawings
27. Remove, store, and reset flagpole after deck replacement. Contractor to submit decking details adjacent to flagpole foundation for DCR review and approval prior to re-installation.
28. Remove and dispose of existing benches on timber boardwalk.
29. Remove and dispose of existing bike racks on timber boardwalk.
30. Any other miscellaneous items not specifically listed but required to complete the work as indicated on the Contract Drawings.

D. All utility lines that are altered or relocated during the construction are to be of an equal standard to those now existing and are to be acceptable to DCR and the appropriate Utility Company. The Contractor is to inform and liaise with DCR regarding all work that may affect the existing utilities. DCR will make arrangements with the Utility Company for services to be cut-off if required during construction. The Contractor is responsible for notification of local utilities (Call Before You Dig or equivalent).

E. Any other demotion work, not specifically listed herein, that is required in order to complete the scope of work as indicated on the Contract Drawings.

1.02 QUALITY ASSURANCE

Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.

1.03 REFERENCES

1. Specification Section 02010: Waterfront Site Preparation
2. Specification Section 02150: Waterfront Shoring
3. Specification Section 02213: Waterfront Building Condition Survey and Vibration Monitoring

1.04 SUBMITTALS

A. Shoring Plan and Plan for Temporary Removal of the Pavilion Shade Structure including temporary shoring and/or bracing calculations stamped by a Professional Engineer, licensed in the State of Massachusetts. The submittal shall also include the proposed storage location.

B. The Contractor shall submit a detailed disposal plan to the Engineer and DCR for review prior to commencement of demolition. The disposal plan shall include the name, address, and telephone number of the disposal site. Except for items specifically scheduled for reuse, demolished material shall be considered to be property of the Contractor and shall be completely removed from the job site and disposed of in a legal manner.

C. The Contractor describing proposed measures to protect the murals from damage throughout the duration of work. The work plan shall include obtaining and submitting photographic documentation of the existing condition of the murals prior to commencement of work.

D. The Contractor shall submit to the Engineer a signed manifest and trip ticket stating that the debris was disposed at the stated site within 24 hours after the material has left the site.

PART 2 - PRODUCTS

2.01 MATERIALS

Provide materials, not specifically described but required for the complete and proper execution of the Work, as selected by the Contractor subject to the review of the Engineer.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

Examine the areas and conditions under which Work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until satisfactory conditions are corrected.

3.02 DEMOLITION

A. By careful study of the Contract Documents, determine the location and extent of selective demolition to be performed.

B. In company with the Engineer, visit the site and verify the extent and location of selective demolition required.

1. Carefully identify limits of selective demolition and any items that are to be removed, stored, and reinstalled.

2. Secure the Engineer's review of the items scheduled for selective demolition prior to commencement of the work.
3. Demolish and remove the scheduled items.
4. Items scheduled for re-installation shall be properly stored in a location as agreed to by DCR, such as to not cause damage to these items prior to reinstallation.

C. Prepare and follow an organized plan for demolition and removal of items.
1. Shut off, cap, and otherwise protect existing utility lines in accordance with the requirements of the public agency or utility having jurisdiction.
2. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere or excavation.
3. In all activities, comply with pertinent regulations of governmental agencies having jurisdiction.

D. Exercise all necessary care so as not to damage items scheduled to remain in place for re-use in addition to those that are scheduled to be removed, stored and reinstalled.

E. Except for items specifically scheduled for reuse or to be turned over to DCR, demolished material shall be considered to be property of the Contractor and shall be completely removed from the job site and disposed of in accordance with all Federal, State, and local regulations. Provide documentation to the Engineer that material has been disposed of in such a manner.

3.03 REPLACEMENTS

In the event of demolition or damage caused to items not so scheduled to be demolished, promptly replace such items to the approval of DCR and at no additional cost to DCR.

3.04 ALTERATIONS TO REUSED ITEMS

All alterations to reused items are to be of an equal standard to their original construction, or as otherwise indicated in these Specifications. The Contractor is responsible for ensuring that the dimensions of reused items are adjusted to suit the new construction. Drawings are to be presented to the Engineer for review prior to making any alterations; however, this review does not relieve the Contractor of his responsibilities as indicated elsewhere in this Contract.

3.05 RELOCATION OF UTILITIES

Relocate existing utilities as required during construction such that services to the site are maintained to DCR's satisfaction. The Contractor is responsible for liaison with DCR on all aspects of utility service maintenance and relocation. If replacement of utilities is undertaken by a Utility Company or others, the Contractor shall coordinate these activities with its own work.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02075-1 WATERFRONT DEMOLITION AND DISPOSAL will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.
B. Measurement for Item 02075-2 TEMPORARY REMOVAL AND RE-INSTALLATION OF THE PAVILION SHADE STRUCTURE will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 02075-1 WATERFRONT DEMOLITION AND DISPOSAL will be at the LUMP SUM contract price. This price shall include full compensation for excavation as required, and the furnishing of all labor including survey, transportation and disposal, certifications, supervision, materials, tools, and equipment, and all other incidental work necessary to complete the WATERFRONT DEMOLITION AND DISPOSAL as shown on the Drawings and as herein specified. Where indicated on the Drawings, this payment item shall also include coordination, removal, transportation to determined storage location, and proper storage.
B. Payment for Item 02075-2 TEMPORARY REMOVAL AND RE-INSTALLATION OF THE PAVILION SHADE STRUCTURE will be at the LUMP SUM contract price. This price shall include full compensation for all shoring calculations stamped by a PE licensed in the Commonwealth of Massachusetts, temporary shoring, labor, equipment, materials, certification, preparation, transportation, survey, and supervision, any repair required after re-installation, and all other incidental work necessary to complete the TEMPORARY REMOVAL AND RE-INSTALLATION OF THE PAVILION SHADE STRUCTURE as shown on the Drawings and as herein specified and in accordance with the Contract Drawings.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02075-1	WATERFRONT DEMOLITION AND DISPOSAL	LUMP SUM
02075-2	TEMPORARY REMOVAL AND RE-INSTALLATION OF THE PAVILION SHADE STRUCTURE	LUMP SUM

END OF SECTION

SECTION 02100
SITE PREPARATION, DEMOLITION, AND REMOVALS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Include GENERAL CONDITIONS and all parts of Division 1 as part of this Section.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. Refer to Section 01561 PEST CONTROL prior to demolition and removals.

E. Refer to Section 02150 TREE PROTECTION AND PRUNING for Protection of trees in work zone.

F. Refer to Section 02510 VEHICULAR AREAS PAVING for all work pertaining to the removal and disposal of existing bituminous concrete paving for the existing vehicular parking lot area. All demolition and removal work associated with the pedestrian bituminous concrete pathways internal to the park's pedestrian pathways, are a part of this section, 02100 SITE PREPARATION, DEMOLITION, AND REMOVALS.

G. Refer to Section 02630 STORM DRAINAGE UTILITIES for all work pertaining to the removal and disposal of Drainage Structures, Drainage Castings, Drainage Pipe and Pipe Sediments and the removal and replacement of storm drains at the south boardwalk seawall.

H. Refer to Section 02665 WATER PIPING, VALVES AND APPURTENANT WORK for all work pertaining to disconnecting and draining the existing irrigation system and for removing and reinstating water lines and air lines.

I. Refer to Section 02730 SANITARY SEWERS AND FORCE MAINS for all work pertaining to moving or removing and replacing sanitary sewer force mains and all other site preparation, demolition or removal work as defined by that Section.

J. Refer to Section 02760 PAVEMENT MARKINGS for all work pertaining to removing the existing pavement markings.

K. Refer to Section 16100 PARK AND BOARDWALK LIGHTING for all work pertaining to the excavation, removal and proper disposal of the existing lighting system.

L. Refer to Section 16421 BOARDWALK ELECTRICAL UTILITIES for all work pertaining to the site preparation, disposal, demolition, or removal work as defined by that Section.

M. Refer to Section 23100 FUEL SYSTEMS for all work pertaining to the excavation, demolition, removal and legal disposal necessary to complete the work of that section.

N. Refer to Section 02010 WATERFRONT SITE PREPARATION and 02075 WATERFRONT SELECTIVE DEMOLITION, SALVAGE FOR REUSE, & UTILITY PROTECTION for all work pertaining to the excavation, demolition, removal, and legal disposal of all boardwalk related work, as described by these sections. The removal, disposal, and demolition of the existing Boardwalk Lighting is work of section 16100 PARK AND BOARDWALK LIGHTING.

O. The abandonment and grouting of the inclinometers are the work of Section 02075 – WATERFRONT SELECTIVE DEMOLITION, SALVAGE FOR REUSE & UTILITY PROTECTION.

P. The installation of filter tubes for erosion control is the work of Section 02200 SITE EARTHWORK.

Q. The installation of silt sacks in all existing and new catch basin structures and/or inlets to drainage structures for sediment control is the work of Section 02200 SITE EARTHWORK.

R. The boring program identified a topsoil layer in the park that ranges in thickness between 3-inches to 24-inches. Contractor is responsible for establishing depth of existing topsoil from a minimum of 3 locations, to be agreed with Engineer, throughout the site prior to commencing stripping and stockpiling. Any stripping of topsoil to depths in excess of 6” must be approved, prior to stripping, by the Engineer.

1.02 SUMMARY

A. This Section specifies requirements for the following types of Work and related items, but is not limited to:

1. Clearing and grubbing of lawn and miscellaneous vegetation, with roots, rocks, and debris removed.

2. Removal, salvage and stockpiling of existing topsoil as indicated on Drawings as described in Section 02200 SITE EARTHWORK. Care shall be exercised to not include other excavated materials in stockpiles of topsoil.

3. Demolition, removal and legal disposal of bituminous concrete paving, including base materials.

4. Demolition, removal and legal disposal of concrete paving, including base materials.

5. Demolition, removal and legal disposal of existing concrete pavers, including base materials.

6. Demolition, removal and legal disposal of existing granite paving, including base materials.

7. Demolition, removal and legal disposal of existing park bench including all associated footings and base materials.

8. Removal, salvage and delivery to DCR stockpile of granite block seatwall, including demolition, removal, and legal disposal of associated footings and base material.

9. Demolition, removal and legal disposal of bollards, including footings.

10. Demolition, removal and legal disposal of metal posts, including footings.

11. Demolition, removal and legal disposal of existing trash bins, including all footings and/or associated base courses.

12. Demolition, removal and legal disposal of existing bike racks, including all footings and/or associated base courses.

13. Removal and legal disposal of existing trees including removal of stump and roots.

14. Removal and disposal of existing wood and metal steps and gravel treads, including all footings, base courses, and ancillary materials.

15. Remove and disposal of wood ramp.

16. Remove and dispose of granite curb, including base materials or footings.

17. Remove and disposal of metal ramp.

18. Removal and disposal of existing traffic signs, including all footings and/or associated base courses.

19. Removal and disposal of existing chain link fence and posts, including all footings and/or associated base courses.

20. Protection of site features and surroundings, including trees, not indicated on the Drawings to be removed, demolished, or salvaged.

1.03 RELATED WORK SPECIFIED IN OTHER SECTIONS

A. The following related work is to be performed under the designated SECTIONS:

1. Section 02010 – WATERFRONT SITE PREPARATION
2. Section 02075 – WATERFRONT SELECTIVE DEMOLITION, SALVAGE FOR REUSE, AND UTILITY PROTECTION
3. Section 02150 – TREE PROTECTION AND PRUNING
4. Section 02200 – SITE EARTHWORK
5. Section 02213 – WATERFRONT BUILDING CONDITION SURVEY AND VIBRATION MONITORING
6. Section 02280 – EXCAVATED SOIL MANAGEMENT
7. Section 02360 – DRILLED SHAFTS
8. Section 02375 – WATERFRONT STEEL SHEET PILES
9. Section 02470 – WATERFRONT MICRO-PILES
10. Section 02500 – SITE PAVING
11. Section 02510 – VEHICULAR AREAS PAVING
12. Section 02630 – STORM DRAINAGE UTILITIES
13. Section 02665 – WATER PIPING, VALVES AND APPURTENANCES
14. Section 02730 – SANITARY SEWERS AND FORCE MAINS
15. Section 02760 – PAVEMENT MARKINGS
16. Section 02881 – WATER PLAY EQUIPMENT
17. Section 02890 – TRAFFIC SIGNS
18. Section 04010 – SITE GRANITE
19. Section 06130 – WATERFRONT STRUCTURAL TIMBER
20. Section 06150 – WATERFRONT HARDWOOD DECKING
21. Section 09905 – WATERFRONT PROTECTIVE COATING
22. Section 16100 – PARK AND BOARDWALK LIGHTING
23. Section 16421 – BOARDWALK ELECTRICAL UTILITES
24. Section 23100 – FUEL SYSTEMS

1.04 QUALITY ASSURANCE

A. All work under this section shall conform to the latest edition of each of the following Reference Standards:

B. MassDOT (Massachusetts Department of Transportation) formerly Massachusetts Highway Department (MHD) Standard Specifications (for Highways and Bridges), latest edition, including all addenda.

C. TCIA: Tree Care Industry Association, Pruning Standards: "Standards for Pruning Shade Trees," and " Standards for Pesticide Application Operations" latest editions, NAA, P.O. Box 1094, Meeting Place Mall, Route 101, Amherst, NH 03031.

PART 2 - MATERIALS

2.01 BACKFILL

A. The Contractor shall provide suitable compacted gravel borrow backfill as specified under Section 02200 SITE EARTHWORK to fill holes or voids left by removal of site features.

B. The Contractor shall provide all pipe cap ends, mortar, brick and other material needed to cap off or plug pipes of various sizes and kinds. Materials used shall comply with requirements of applicable utility company and/or the Department of Conservation and Recreation (DCR).

2.02 ABANDONED UTILITIES

A. Plugs installed at the open ends of the pipe in the abandoned structures shall be 12-inch thick Class “B” cement concrete, or 8-inch thick masonry as approved by the Engineer or DCR.

B. Precast cement concrete plugs that are used shall meet the requirements for Class “B” type concrete and shall be free of cracks and spalls. Brick masonry plugs shall be made of brick meeting the requirements of ASTM C32, for grade SS, hard brick.

C. Mortar shall be composed of Portland cement, hydrated lime, and sand in the volume of sand shall not exceed three (3) times the sum of the volumes of cement and lime. The proportions of cement and lime shall be as directed and may vary from 1:1/4 for dense hard-burned brick to 1:3/4 for softer brick. In general, mortar for grade SS brick shall be mixed in the volume proportions of 1:1/2:4-1/2; Portland cement to hydrated lime to sand.

D. Material proposed as fill for abandoned structures shall be ¾" crushed stone meeting the specifications of Section 02200 SITE EARTHWORK.

2.03 PEDESTRIAN AND VEHICULAR ACCESS AND SAFETY

A. Provide construction, directional, and warning signs as indicated on the Drawings, and specified in Part 1- Special Conditions, and as required to maintain the safety of the general public.

B. Provide temporary vehicular ramps and other items required to provide construction access.

C. Pedestrian access shall occur in compliance with the approved Construction Management Plan submitted as required by 1.27 Section 01000: Special Conditions.

PART 3 – EXECUTION

3.01 DEMOLITION AND REMOVALS PROCEDURES AND GUIDELINES

A. Prior to scheduled start of demolition procedures, notify the Engineer, DIG SAFE, DCR (the Owner), and all local utilities and authorities owning conduit, wire or pipes to, through or across the site where the structures to be demolished and/or protected are located. In addition, arrange to have all services such as water, gas, steam, electricity low-tension service and telephone disconnected at the service mains in accordance with the rules and regulations governing the utilities involved. All inactive wires, electric services, drops and connections shall be removed and all storm and sanitary sewers leading from structures to be demolished shall be capped at the street line.

B. The Contractor shall, prior to conducting any demolition or removal of rubbish or debris from the site, furnish on a form supplied to the Engineer, written evidence satisfactory to the Engineer that he has an approved dumping location for debris and/or spoil from his demolition and excavation activities.

C. The Contractor shall secure all necessary and required permits and other entities before starting this project. It shall be the responsibility of the Contractor to obtain and pay for all permits and bonds as required for the execution of the Work under this Contract. Until DIG SAFE has marked the site, no work may begin.

D. The Contractor shall assume complete responsibility and liability for the safety of the Public who will traverse through the site and the structural integrity and safety of all excavations, stored items, work, and utilities to remain during demolition. Refer to the Drawings for additional requirements and parameters,

which are specific to this site. The Contract Documents are preliminary guidelines for the Contractor to achieve this end but are not complete and shall be modified to suit the requirements of construction phasing and changing access ways.

E. The Contractor shall take adequate precautions to protect all walks, roads, streets, curbs, pavements, trees and planting, on or off the premises, and shall repair and replace with the same or better materials and workmanship and as directed by the Engineer, any damage caused by construction.

F. Contractor shall insure that traffic is maintained throughout construction and that flaggers and police details are provided by the Contractor to maintain right-of-way and public safety for vehicles entering and exiting the site and during construction in the public rights-of-way and as required by DCR.

G. Provide safeguards including, but not limited to, warning signs, barricades, temporary fences and pathways, warning lights, temporary crosswalks and handicap ramps compliant with DCR requirements, secure gates and locks, and other items required for protection and convenience of personnel and the general public during performance of all work and as shown in the Drawings and specified herein.

H. All features related to protection shall be maintained until that unit of work has been completed to the point that the danger no longer exists or until the end of construction, as applicable and reviewed by the Engineer.

I. Completely remove from the project area all demolished materials not for reuse and dispose of all materials off the site in a legal manner. Disposal of the materials shall be done in such a manner that there shall be no accumulations of any demolition material, which may, in the opinion of the Engineer, the Fire Department or any other public agency having jurisdiction, constitute a hazard.

J. Items shown on the Drawings or designated by notation to be removed shall be removed from the site and properly and legally disposed of by the Contractor after review in the field by the Engineer and DCR.

K. Items indicated on the Contract Drawings or in the Specifications to be removed, transported and stored (salvaged) shall be transported to a DCR Storage Yard and unloaded and stacked as directed by the Engineer or DCR. Items to be removed and reused (i.e., existing stripped topsoil) may be stored in a protected and secure location on site or in a location off site as approved by the Engineer.

L. Completely demolish and remove all foundations, slabs, and footings and other below grade structures indicated on the Drawings unless otherwise specified or called out in the Drawings.

M. If the Contractor runs into rock or old building foundation during excavation, follow the procedures spelled out in Section 02200 SITE EARTHWORK. If the Contractor runs into old utility lines during excavation, follow the procedures specified in Sections 02010, 02075, 02200, 02280, 02630, 02665, 02730, 16100, 16421, and 23100.

N. Conform to the specifications and standard practices of the affected Utility. Coordinate with the Utility Engineers, which work shall be done by the Contractor and which work shall be done by Utility Engineers at Contractor's expense. Ensure continuity of all existing utility services to all users except when the Utility Engineer determines that temporary interruption is required.

O. Unless otherwise indicated or authorized in writing by the Engineer, maintain all utility facilities complete in place.

P. Abandoned Facilities

1. Demolish and remove abandoned utility facilities in conflict with the work.

2. Do not undertake demolition or removal of active utility service until written approval for such work has been obtained from the utility Engineer or DCR.

3. When abandoned facilities are indicated to be left in place, plug or cap the ends of conduits and pipes, as indicated. Remove abandoned utility manholes, junction boxes, and similar structures to a minimum of two feet below finish grade and the fill remaining void with sand or select fill, as specified in Section 02200 – SITE EARTHWORK, after the plugging or capping of conduits and pipes has been completed. Puncture or break the bottom slabs of manholes and similar structures to provide drainage. Backfill and compact excavations resulting from removal of utility facilities, as required.

Q. Provide, install, and maintain all temporary facilities required to provide interim utility service when a utility facility is to be relocated and when a utility facility to be replaced is abandoned prior to replacement.

R. Where an existing utility facility is encountered which is not indicated, or which is determined to be a different utility service than that indicated, promptly notify the Engineer before further action is taken.

S. If, upon exposure, the condition or location of a facility to be supported complete-in-place is found by the Engineer to be unsafe for support or for

maintenance of service, replace or reconstruct the facility as required, with prior approval of the DCR and the utility Engineer.

T. All frames, castings, and grates shall be removed prior to filling the manholes and catch basins.

U. Plugs shall be of adequate strength to withstand the full soil and groundwater pressure. Precast concrete plugs that are used must be made watertight by caulking with a suitable compound that is approved by the Engineer.

V. Plugs shall be able to withstand at least thirteen (13) pounds per square inch water pressure.

W. Plugs shall be installed flush with the interior wall of the structure.

X. Contractor shall break the bottom of structures to be abandoned with hoe-ram device or equipment approved by the Engineer and DCR.

Y. Structure shall be filled completely with ¾" crushed stone.

3.02 DUST AND NOISE CONTROL

A. The Contractor shall submit a dust and noise control plan and guidelines for review by the Engineer before construction begins.

B. Contractor shall wet down thoroughly all work during demolition and construction to prevent spread of dust twice per day, or as applicable as reviewed by the Engineer. Make all arrangements and pay for all water and necessary connections.

C. Every effort shall be made to keep noise levels down before the hour of 9 AM. Work shall not begin before 7 AM or occur after 5 PM, on weekends or holidays, except with permission of DCR obtained at least three working days in advance of expected work. Do not exceed local noise ordinances.

3.03 SALVAGED AND STORED MATERIAL

A. Granite block seatwall salvaged for reuse shall be carefully removed to minimize damage and shall be transported DCR Storage Yard, according to the Drawings and as reviewed by the Engineer. All items not designated to be salvaged, reused, or stored in the DCR Storage Yard shall be completely removed off site and disposed of in a legal manner.

B. Site items to be stored for reuse shall be protected during and after removal. Items shall be stored in a secure location, protected from theft and vandalism.

C. Existing gravel base to be reused shall be stockpiled, at the discretion of the Contractor, and shall be stored in such a way that there will be no danger from sliding or erosion.

D. Stockpiling shall occur in compliance with DCR and Engineer.

3.04 TREE REMOVAL AND GRUBBING

A. Only trees and areas of clearing designated on the Drawings shall be removed. Refer to Section 02150 – TREE PROTECTION AND PRUNING for trees to remain. No vegetation shall be removed incidentally to other Work without the Engineer's approval. Vegetation shall be removed to install seeding and plantings as shown on the Drawings and as reviewed with the Engineer in the field and according to the Order of Conditions.

B. Remove trees following TCIA Standards for safety and removal. Trees shall be cut to finished grade, as indicated on the Drawings, with stumps and roots ground and/or removed to 12” below finished grade. All materials removed shall be legally disposed of off-site. Depressions caused by removal of stumps or roots shall be filled and compacted with sandy loam material suitable for filling and compacting. Grade the area around the removed stump flush with surrounding grade, with 6” approved Planting Soil as described in Section 02900 PLANTING AND LAWNS.

C. Trees to be removed whose root zones extend into root zones of trees to remain shall have their root zones trench-cut close to the trunk before removal, so as to minimize damage to root zones of trees to remain.

D. Fell trees in a manner that avoids damaging other vegetation or structures.

E. Chipping of trees and branches to produce mulch is permitted if Engineer so desires, except for Black Locust, Elm and Walnut. Chips may be stockpiled on site only if directed by Engineer and used as mulch only after six months of aging. Remove Locust, Elm and Walnut wood to approved off-site location.

F. Protect existing trees to remain from damage during removals. If damage is done to tree crowns or root systems of trees to remain, repair immediately by an approved tree surgeon at no cost to DCR. Repair any accidental injuries to the bark, trunk and branches immediately by pruning and trace cutting with a clean, sharp knife.

G. Remove all debris within the limit of Work. Do not use heavy equipment to remove clippings and debris within the protected root zones of plants to remain.

Dispose of trees, shrubs and stumps off-site according to local laws. Burning is not permitted.

H. All site preparation actions pertaining to tree and plant removals shall be done in coordination with those methods specified in Section 02150 - TREE PROTECTION AND PRUNING.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02100-01 CLEAR AND GRUB LAWN AND MISCELLANEOUS VEGETATION will be made on a SQUARE FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 02100-02 REMOVE, SALVAGE, AND STOCKPILE EXISTING TOPSOIL (and executed to an average depth of 6" as described in Section 02200 SITE EARTHWORK) will be made on a CUBIC YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings

C. Measurement for Item 02100-03 REMOVE AND DISPOSE BITUMINOUS CONCRETE PAVING will be made on a SQUARE YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

D. Measurement for Item 02100-04 REMOVE AND DISPOSE CONCRETE PAVING will be made on a SQUARE YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

E. Measurement for Item 02100-05 REMOVE AND DISPOSE CONCRETE PAVERS will be made on a SQUARE YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

F. Measurement for Item 02100-06 REMOVE AND DISPOSE GRANITE PAVING will be made on a SQUARE YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

G. Measurement for Item 02100-07 REMOVE AND DISPOSE OF PARK BENCH will be made on a per EACH basis for all work described in this section not

otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

H. Measurement for Item 02100-08 REMOVAL, SALVAGE, AND DELIVER TO DCR STOCKPILE OF GRANITE BLOCK SEATWALL will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

I. Measurement for Item 02100-09 REMOVE AND DISPOSE BOLLARD will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

J. Measurement for Item 02100-10 REMOVE AND DISPOSE METAL POST will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

K. Measurement for Item 02100-11 REMOVE AND DISPOSE TRASH BIN will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

L. Measurement for Item 02100-12 REMOVE AND DISPOSE BIKE RACK will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

M. Measurement for Item 02100-13 REMOVE AND DISPOSE OF TREE AND STUMP will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

N. Measurement for Item 02100-14 REMOVE AND DISPOSE OF EXISTING STEPS AND GRAVEL will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

O. Measurement for Item 02100-15 REMOVE AND DISPOSE OF WOOD RAMP will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

P. Measurement for Item 02100-16 REMOVE AND DISPOSE OF GRANITE CURB will be made on a per LINEAR FOOT basis for all work described in this

section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

Q. Measurement for Item 02100-17 REMOVE AND DISPOSE OF METAL RAMP will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

R. Measurement for Item 02100-18 REMOVE AND DISPOSE OF TRAFFIC SIGN will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

S. Measurement for Item 02100-19 REMOVE AND DISPOSE OF CHAIN LINK FENCE AND POSTS will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 02100-01 CLEAR AND GRUB LAWN AND MISCELLANEOUS VEGETATION (roots to be removed) will be at the SQUARE FOOT contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools, and equipment, transportation, legal disposal and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

B. Payment for Item 02100-02 REMOVE, SALVAGE, AND STOCKPILE EXISTING TOPSOIL (and executed to an average depth of 6” as described in Section 02200 SITE EARTHWORK) will be at the CUBIC YARD contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools, and equipment, transportation, legal disposal and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

C. Payment for Item 02100-03 REMOVE AND DISPOSE BITUMINOUS CONCRETE PAVING including all associated base materials will be at the SQUARE YARD contract price. This price shall include full compensation for excavation, backfilling and the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

D. Payment for Item 02100-04 REMOVE AND DISPOSE CONCRETE PAVING including all associated base materials will be at the SQUARE YARD contract

price. This price shall include full compensation for excavation, backfilling and the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

E. Payment for Item 02100-05 REMOVE AND DISPOSE OF CONCRETE PAVERS including all associated base courses will be at the SQUARE YARD contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools and equipment, transportation, legal disposal, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

F. Payment for Item 02100-06 REMOVE AND DISPOSE OF GRANITE PAVING will be at the SQUARE YARD contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools, and equipment, transportation, legal disposal, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

G. Payment for Item 02100-07 REMOVE AND DISPOSE OF PARK BENCH including all footings and associated base courses will be at the per EACH contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools, and equipment, transportation, legal disposal, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

H. Payment for Item 02100-08 REMOVAL, SALVAGE, AND DELIVER TO DCR STOCKPILE OF GRANITE BLOCK SEATWALL will be at the LUMP SUM contract price. This price shall include full compensation for excavation, backfilling, transportation of salvaged material to DCR Storage Yard, legal disposal, and the furnishing of all labor, materials, tools and equipment, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

I. Payment for Item 02100-09 REMOVE AND DISPOSE BOLLARD including all footings and associated base courses will be at the per EACH contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools and equipment, transportation, legal disposal, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

J. Payment for Item 02100-10 REMOVE AND DISPOSE METAL POST including all footings and associated base courses will be at the per EACH contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools and equipment,

transportation, legal disposal, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

K. Payment for Item 02100-11 REMOVE AND DISPOSE TRASH BIN including all footings and associated base courses will be at the per EACH contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools and equipment, transportation, legal disposal, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

L. Payment for Item 02100-12 REMOVE AND DISPOSE BIKE RACK including all footings and associated base courses will be at the per EACH contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools and equipment, transportation, legal disposal, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

M. Payment for Item 02100-13 REMOVE AND DISPOSE OF TREE AND STUMP will be at the per EACH contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools and equipment, transportation, legal disposal, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

N. Payment for Item 02100-14 REMOVE AND DISPOSE EXISTING STEPS AND GRAVEL including all footings, associated base courses, wood and/or metal steps, and gravel treads will be at the per LUMP SUM contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools and equipment, transportation, legal disposal, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

O. Payment for Item 02100-15 REMOVE AND DISPOSE OF WOOD RAMP will be at the EACH contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools and equipment, transportation, legal disposal, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

P. Payment for Item 02100-16 REMOVE AND DISPOSE OF GRANITE CURB and all associated footings will be at the LINEAR FOOT contract price. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools and equipment, transportation, legal disposal and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

Q. Payment for Item 02100-17 REMOVE AND DISPOSE OF METAL RAMP will be at the EACH contract price7. This price shall include full compensation for excavation, backfilling, and the furnishing of all labor, materials, tools and equipment, transportation, legal disposal, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

R. Payment for Item 02100-18 REMOVE AND DISPOSE OF TRAFFIC SIGN will be at the EACH contract price. This price shall include the full compensation for removal and disposal of sign panel, sign post(s), sign foundation(s), backfill of excavation, and the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

S. Payment for Item 02100-19 REMOVE AND DISPOSE OF CHAIN LINK FENCE AND POSTS will be at the LINEAR FOOT contract price. This price shall include the full compensation for removal and disposal of fence posts, chain link fence panels, posts foundation(s), securing fence and posts to remain, backfill of excavations, and the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM NO.	ITEM	UNIT
02100-01	CLEAR AND GRUB LAWN AND MISCELLANEOUS VEGETATION	SQUARE FOOT
02100-02	REMOVE, SALVAGE, AND STOCKPILE EXISTING TOPSOIL	CUBIC YARD
02100-03	REMOVE AND DISPOSE BITUMINOUS CONCRETE PAVING	SQUARE YARD
02100-04	REMOVE AND DISPOSE CONCRETE PAVING	SQUARE YARD
02100-05	REMOVE AND DISPOSE CONCRETE PAVERS	SQUARE YARD
02100-06	REMOVE AND DISPOSE GRANITE PAVING	SQUARE YARD
02100-07	REMOVE AND DISPOSE PARK BENCH	EACH
02100-08	REMOVAL, SALVAGE AND DELIVER TO DCR STOCKPILE OF GRANITE BLOCK SEATWALL	LUMP SUM

02100-09	REMOVE AND DISPOSE BOLLARD	EACH
02100-10	REMOVE AND DISPOSE METAL POST	EACH
02100-11	REMOVE AND DISPOSE TRASH BIN	EACH
02100-12	REMOVE AND DISPOSE BIKE RACK	EACH
02100-13	REMOVE AND DISPOSE OF TREE AND STUMP	EACH
02100-14	REMOVE AND DISPOSE EXISTING STEPS AND GRAVEL	LUMP SUM
02100-15	REMOVE AND DISPOSE OF WOOD RAMP	EACH
02100-16	REMOVE AND DISPOSE OF GRANITE CURB	LINEAR FOOT
02100-17	REMOVE AND DISPOSE OF METAL RAMP	EACH
02100-18	REMOVE AND DISPOSE OF TRAFFIC SIGN	EACH
02100-19	REMOVE AND DISPOSE OF CHAIN LINK FENCE AND POSTS	LINEAR FOOT

END OF SECTION

SECTION 02150
TREE PROTECTION AND PRUNING

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

A. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

B. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

C. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

1.02 DESCRIPTION OF WORK

A. The work to be done under this Section shall require the Contractor to provide all labor, materials, equipment, and transportation necessary for protection of trees and shrubs to remain; pruning of trees to remain and be protected and as indicated on the Drawings and specified herein.

B. Refer to the Drawings for additional requirements for tree protection and pruning.

1.03 APPLICABLE STANDARDS AND REFERENCES

A. NAA: National Arborist Association Standards, National Arborist Association, 124 Route 101, Bedford, NH 03102.

B. AAN: American Association of Nurserymen "American Standard for Nursery Stock," ANSI Z60.1, latest edition.

C. TCIA: Tree Care Industry Association, Pruning Standards: "Standards for Pruning Shade Trees," and " Standards for Pesticide Application Operations" latest editions, NAA, P.O. Box 1094, Meeting Place Mall, Route 101, Amherst, NH 03031.

D. Guide for Plant Appraisal, latest edition, as published by The Council of Tree and Landscape Appraisers.

1.04 PERSONNEL QUALIFICATIONS

A. All pruning and fertilizing of trees and tree root zones to remain impacted by construction shall be maintained and protected. Pruning and fertilizing and other maintenance work shall be performed by an Arborist currently certified in Massachusetts as approved by the Landscape Architect and DCR before construction.

1.05 RELATED WORK AND REFERENCES

A. The following related work is to be performed under the designated SECTIONS.

1. Section 02100 – SITE PREPARATION, DEMOLITION, AND REMOVALS
2. Section 02200 – SITE EARTHWORK
3. Section 02280 – EXCAVATED SOIL MANAGEMENT
4. Section 02360 – DRILLED SHAFTS
5. Section 02375 – WATERFRONT STEEL SHEET PILES
6. Section 02470 – WATERFRONT MICRO-PILES
7. Section 02500 – SITE PAVING
8. Section 02510 – VEHICULAR AREAS PAVING
9. Section 02630 – STORM DRAINAGE UTILITIES
10. Section 02665 – WATER PIPING, VALVES AND APPURTENANCES
11. Section 02730 – SANITARY SEWERS AND FORCE MAINS
12. Section 02760 – PAVEMENT MARKINGS
13. Section 02881 – WATER PLAY EQUIPMENT
14. Section 02890 – TRAFFIC SIGNS
15. Section 02900 – PLANTING AND LAWNS
16. Section 04010 – SITE GRANITE
17. Section 06130 – WATERFRONT STRUCTURAL TIMBER
18. Section 06150 – WATERFRONT HARDWOOD DECKING
19. Section 09905 – WATERFRONT PROTECTIVE COATING
20. Section 16100 – PARK AND BOARDWALK LIGHTING
21. Section 16421 – BOARDWALK ELECTRICAL UTILITES
22. Section 23100 – FUEL SYSTEM

PART 2 – GENERAL

2.01 TREE PROTECTION FENCING

A. Tree Protection fencing shall be: 3/8" X 1-1/2" #1 grade spruce min. 4’ ht. snow fence secured to posts with 8 gauge galvanized wire. Posts shall be min. 6’ ht. steel channel posts or 4”x4”x6’ pressure treated wood posts to limit of canopy. Fence shall form an enclosure around trees and shrubs to be protected as designated on the Drawings. **Orange plastic fencing will not be permitted.**

B. Erosion Control Measures:

1. Refer to related articles of Section 02200 - Earthwork and to 'The Order of Conditions' for erosion control devices and requirements such as hay bales, silt socks, and silt fencing, as applicable within construction areas and wetlands or wetland buffer zones, in order to protect trees to remain and be protected from sediment buildup and potential erosion within tree root zones.

2.02 WOOD CHIP MULCH

A. Wood chip mulch shall be dark colored shredded pine bark, aged six months minimum or an approved fully composted leaf waste product meeting requirements in Section 02900 - PLANTING AND LAWNS for organic compost obtained from an approved DEP facility.

2.03 WATER

A. Potable and suitable for use on plants.

2.04 SLOW RELEASE INJECTABLE TREE ROOT FERTILIZER

A. Tree root fertilizer shall be reviewed and approved by the Landscape Architect, DCR, and the Certified Arborist.

PART 3 - EXECUTION

3.01 LIABILITY FOR CONSTRUCTION DAMAGE TO EXISTING TREES AND SHRUBS WITHIN TREE PROTECTION FENCING

A. The Contractor shall be liable for all damage by unauthorized construction activities to existing trees and shrubs within tree protection fencing not designated for clearing and removal. Actual penalties for damage to plants shall be in accordance with the schedules defined herein, with assessed damages deducted from sums payable under the Construction Contract or damaged plants replaced as described herein.

1. The Contractor shall document existing trees and shrubs designated to remain and be protected before construction, those within the tree protection fencing. Refer also to Article 3.04 of This Section. Plantings to remain and be protected shall be flagged and/or areas staked with the Contractor and Landscape Architect before construction.

2. Damage to plantings that may occur after the tree protection fencing has been erected and reviewed by the Landscape Architect and Arborist, such as damage to plants from ice or wind storms or other acts of God, this damage shall be documented by the Contractor and if accurately documented, is not his/her responsibility or those of his subcontractors to make whole to the DCR.

B. If damage is observed and has not been accurately documented with dated photos by the Contractor as occurring by 'act of God' means and has been observed and/or it is reasonably presumed that the damage has occurred by his or his subcontractors' unauthorized construction, equipment activities, parking, or dumping within the tree protection zone, the Landscape Architect and the Department of Conservation and Recreation (DCR) shall decide alone if a tree or plant is damaged and if it was damaged by unauthorized construction activities within the tree fencing protection zone.

C. If plant has been so damaged , the Contractor will be assessed for the damage in accordance with the "Guide for Plant Appraisal", latest edition, as published by The Council of Tree and Landscape Appraisers or as described herein.

D. The Landscape Architect, DCR, and a Certified Arborist will decide if the construction damage has or will significantly impact the health and/or viability of the existing tree.

1. <u>Tree and/or Shrub damage may be assessed in one of three ways:</u>

a. Trees assessed @$250 per inch DBH and Shrubs at $90 EACH or,

b. If preferred by the Contractor, Trees assessed value estimated per Trunk Size Method or,

c. Or if preferred by DCR, Trees replaced at one to one DBH (Diameter in inches at Breast Height) to Caliper inch tree replacement with 2-inch to 4-inch caliper tree(s) plus one to one shrub replaced with 24-36-inch height shrub with one year guarantee for plant replacements.

2. If a tree impacted by construction damage is so evaluated and DCR prefers monetary damages, the Contractor will be assessed for the damage at a cost of not less than two hundred and fifty dollars ($250.00) per caliper inch, with DBH measured at 5-feet above existing grade at trunk flare

a. If the tree or shrub is dying and/or or has died within the tree protection fencing during construction, the Contractor is responsible

for removing and legally disposing of the damaged tree or shrub offsite, with trunk flush cut if not being replaced or trunk removed if being replaced, all at no cost to the DCR.

E. If the Contractor disputes the assessed amount ($250 DBH/inch) of damaged tree by this simple calculation, the damaged tree will be assessed in accordance with the Trunk Size Method that assesses tree value by species, size, replacement tree size available in locale, tree health before damage and importance/location as described in the "Guide for Plant Appraisal", latest edition, as published by The Council of Tree and Landscape Appraisers. Assessment by this method typically results in a higher assessed value than $250 per DBH for large deciduous ornamental or shade trees. The Landscape Architect shall determine the tree value assessed by this method.

F. If the Tree Warden prefers some or all of the trees damaged to be replaced with new trees, the total DBH inches of the trees damaged shall be replaced with one for one Caliper inches of trees damaged plus cost of labor to plant, mulch, maintain and guarantee for one year after initial acceptance of replacements.

1. Example: an 8 - inch DBH tree damaged could equal replacement cost for two 4-inch caliper trees, or four 2-inch caliper trees. Caliper inch measurement is taken 6-inches above root flare.

2. Tree replacements furnished and installed for damaged trees shall measure not less than 2-inch caliper or greater than 4-inch caliper. Numbers, species and locations for tree and/or shrub replacements for damaged trees shall be determined by DCR and the Landscape Architect which may or may not be within the project limits.

3. Damage to shrubs that DCR wishes to replace, shall be replaced at a one for one ratio, or one damaged shrub with one new shrub at 24-36-inch height, containerized material or, if preferred by DCR, their assessed replacement value.

4. Removal of the roots and trunk of trees and shrubs that they require removal and filling with gravel borrow, installing approved loam in approved depths to finished grade, installing trees and/or shrubs, sowing seed or spreading mulching consistent with the surrounding beds, meadow or lawns, and maintaining after initial acceptance for one year with guarantee for replacement should replacements die or decline.

5. The plant replacements shall be furnished and installed, with all labor and incidentals included complete in place by the Contractor at no cost to DCR

and according to the requirements in Section 02900 – PLANTINGS AND LAWNS.

3.02 MANDATORY SITE VISIT AND FLAGGING WITH ARBORIST

A. Contractor shall request that the Landscape Architect, DCR and/or Certified Arborist visit the site with the Contractor to review, the trees and shrubs to remain and/or be protected and pruned before construction begins. The certified Arborist shall be approved by the Engineer. The location of the tree protection fencing shall be reviewed in the field at this time as well. A photographic log of each plant must be prepared.

B. This request shall be submitted at least two weeks before scheduled walk through. At this time, the certified arborist shall be prepared to review the health and status of the trees and shrubs to remain that are designated on the Drawings.

3.03 TREE PROTECTION FENCING

A. The locations of the tree protection fencing shall be reviewed and approved by the Landscape Architect and the Engineer in the field before and after fencing installation. Trees and shrubs to remain and be protected and to be removed or pruned shall be flagged in the field before fencing is erected.

B. Fencing shall be erected before construction of any kind begins. Fencing shall be securely erected, be vertically plumb and be maintained for the duration of the project and shall protect individual trees or shrubs or groups of trees or shrubs as shown on the Drawings and reviewed and adjusted in the field.

1. Tree protection fencing shall be located at minimum at the edge of the drip line of the tree or around shrubs or beyond this limit or as indicated on the Drawings and as reviewed in the field. The closest limit shall be at the limit of excavation or filling coordinated with the grading requirements and as approved by Landscape Architect, Certified Arborist and the Engineer.

C. No material shall be stored or demolition operations carried on within the drip line of any tree or shrub that is to be saved. No concrete washouts shall be permitted within the fencing limits.

D. Tree protection fencing shall be removed and disposed of at the end of construction activity as reviewed by the Engineer, Landscape Architect and Certified Arborist. Fencing located in wetlands or buffer zones shall be reviewed and removal received and approved by Lynn Conservation Commission (per Order of Conditions) and as reviewed by the Engineer, Landscape Architect and

Certified Arborist before removal. Tree Protection Fencing shall be placed as indicated on the Contract Drawings and as described in this Section.

3.04 MAINTENANCE OF TREES TO REMAIN

A. The trees which have root zones that are 20% or more affected by demolition and/or excavation, as determined by the Certified Arborist and reviewed by the Landscape Architect and the Engineer, shall be deep root watered monthly during the warm growing months of May 1st through October 1st, inclusive of rain, and deep root fertilized with a slow release fertilizer between November and April also under the direction of the Landscape Architect, and Arborist. The Arborist may also recommend any remedial insect or disease control measures that may be required for trees and shrubs that remain to preserve their health and vigor.

B. Trees scheduled to remain and be protected within the limit of work shall be pruned to Class I standards. These include light canopy pruning, removal of deadwood and rubbing or crossed branches, with standard collar cuts. The trees shall be assessed for cabling and any other remedial maintenance that the Arborist recommends and as reviewed by the Engineer and Landscape Architect.

3.05 TREE PRUNING

A. The Contractor shall engage a Massachusetts currently certified Arborist to be perform tree pruning and other maintenance work for trees to remain and be protected.

B. Tree pruning shall include:

1. All trees and shrubs to remain shall be NAA Class I industry standard light pruning, removing deadwood and crossed branches with collar cuts required before construction.

2. Pruning shall follow NAA industry standards for safe operations and pruning techniques and only with the certified Arborist to perform or to provide on-site management and overview of the work of his crew at all times.

3. Contractor shall provide follow up pruning at the end of the one year planting guarantee period by the certified Arborist to prune out dead wood and/or other remedial pruning for wind damage and/or damage from construction around root systems, should dieback or injury to trees to remain and be protected occurs during this period.

4. The Contractor shall provide a detailed memorandum with keyed plan, composed by the Certified Arborist that documents the condition of the trees

and shrubs to remain and be protected at the start of construction, the location and condition of protective fencing during construction, any damage or injuries to trees or shrubs that occurred during construction, and all remedial and maintenance work completed by his crew during construction. The Contractor shall provide memorandum to the Landscape Architect and DCR as a condition of acceptance of the items covered in this Section.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02150-01 TREE PROTECTION FENCING will be made per LINEAR FOOT for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 02150-02 PRUNING AND MAINTENANCE OF EXISTING TREES TO REMAIN will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 02150-01 TREE PROTECTION FENCING will be at the LINEAR FOOT contract price. This price shall include full compensation for providing and installing all materials complete in place, and the furnishing of all labor, materials, tools and equipment, remedial work during construction and removal after approval and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

B. Payment for Item 02150-02 PRUNING AND MAINTENANCE OF EXISTING TREES TO REMAIN will be at the LUMP SUM contract price. This price shall include full compensation for the Class I pruning of all trees within the project site, furnishing of all labor, materials, tools and equipment, disposal of all pruned material and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

C. The photographic report of existing trees shall be paid for under 02150.02.

4.03 PAYMENT ITEMS

ITEM NO.	ITEM	UNIT
02150-01	TREE PROTECTION FENCING	LINEAR FOOT
02150-02	PRUNING AND MAINTENANCE OF EXISTING TREES TO REMAIN	LUMP SUM

END OF SECTION

SECTION 02151

WATERFRONT SHORING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

Work included: Provide shoring, temporary or permanent, at excavations and elsewhere as required to protect workmen, materials, other properties, and the public.

1.02 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.

B. Retain a qualified engineer, properly permitted to provide such services at the location of the Work, to design the shoring system and to inspect and report on the quality of its construction.

C. Comply with pertinent requirements of governmental agencies having jurisdiction.

D. Coordinate the shoring design and construction with:

1. Soil Information and boring logs.
2. Structural systems and sequence of construction established for the Work.

1.03 REFERENCES

1. Specification Section 02705: Waterfront Selective Demolition, Salvage for Reuse and Utility Protection

1.04SUBMITTALS

A. Shoring Plan for Temporary Support of Pavilion: No later than 14 days prior to removal the Contract shall submit a shoring including:

1. Documentation of existing conditions with photographs, noting any existing observed defects observed.
2. A shoring, bracing, and lifting plan shall be signed and stamped by a professional engineer licensed in the Commonwealth of Massachusetts.

B. Prior to submitting a shoring design for approval of governmental agencies having jurisdiction, submit the design to the Engineer for review. Include supporting calculations stamped by a Professional Engineer registered in the State of Massachusetts.

1. The Engineer's review will not relieve the Contractor of their responsibilities under the Contract.
2. Should changes in the shoring design be required subsequent to the Engineer's review, coordinate all such changes with the Engineer.

C. Upon completion of construction of this portion of the Work, submit to the Engineer two copies of a letter signed by the approved shoring design engineer stating that, to the best of the shoring design engineer's knowledge, the shoring system was constructed in accordance with the arrangement reviewed by the Engineer.

PART 2 - PRODUCTS

2.01 DESIGN

A. Design a shoring system, which will safely and adequately prevent collapse of new and existing structures, and parts thereof, which will permit construction of the Work to the arrangement and tolerances required under the Contract Documents.

B. Secure all needed approvals, including those of governmental agencies having jurisdiction and of adjacent property owners if required, at no additional cost to DCR.

2.02 MATERIALS

A. Provide materials of all kinds as required for execution of the approved shoring system.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

A. Examine the areas and conditions under which Work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 INSTALLATION

A. Construct and install the shoring system in strict accordance with the design approved by the governmental agencies having jurisdiction, and in strict accordance with the space arrangement reviewed by the Engineer.

3.03 TEMPORARY SHORING

A. All shoring shall be considered temporary, unless specifically designated as permanent by the Contract Documents or the Engineer.

3.04 PERMANENT SHORING

A. In some cases, shoring may remain in place, as designated in the Contract Documents or by the Engineer. Permanent shoring shall not negatively affect the performance of the completed Work or anticipated future work. The Contractor shall secure the Engineer's review prior to covering permanent shoring. Permanent shoring shall become concealed upon the completed Work.

PART 4 – COMPENSATION

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 02200
SITE EARTHWORK

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

A. Include the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

1. See Section 02900: PLANTING AND LAWNS for all information relating to required topsoil testing procedures and for requirements of fine grading of all planted and seeded areas.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) *Standard Specifications for Highways and Bridges* and the *Supplemental Specifications*.

1.02 DESCRIPTION OF WORK

A. This Section specifies requirements for the following types of work and related items, but is not limited to:

1. Excavating, filling, backfilling, grading and compacting as required for the construction of site work.

2. Topsoil rehandling and spreading as required for the preparation of the lawn and planting areas.

3. Removing, salvaging, and stockpiling of existing topsoil is the work of Section 02100 SITE PREPARATION, DEMOLITION, AND REMOVALS.

4. Executing the requirements of testing, screening, amending, spreading, compaction, rehandling, and spreading final approved material is the work of this Section 02200 – SITE EARTHWORK.

5. Refer to Section 02900 – PLANTING AND LAWNS for requirements for topsoil testing, screening, amending, spreading and compaction requirements of topsoil to be re-handled and re-spread.

6. Furnishing, placing and compacting of all fill and backfill materials as specified herein, as shown on the Drawings.

7. Furnishing and installing geogrid and geotextile fabric as specified herein, as shown on the Drawings or as required within specifications.

8. Furnishing and installing all temporary earth support for excavations as required by Federal, state and municipal laws and ordinances.

9. Performing all (groundwater, surface water runoff and construction derived) dewatering necessary to maintain excavated areas free from water from any source.

10. Properly terminating, capping and plugging all abandoned or to be abandoned utility lines within excavated areas and removing and properly disposing of the lines and any associated appurtenances within the limits of excavation in accordance with applicable local, state and federal regulations.

11. The abandonment and grouting of the inclinometers is the work of Section 02075 – WATERFRONT SELECTIVE DEMOLITION, SALVAGE FOR REUSE & UTILITY PROTECTION.

12. The removal and backfilling of existing drainage structures and installation of masonry plugs is the work of Section 02630 – STORM DRAINAGE UTILITIES.

13. If rock or ledge or old brick and concrete building or wall foundations are encountered, excavating the material so that the site improvements can be installed.

14. Removing and disposing of all unsuitable materials and surplus excavated materials from the site, as defined by Federal, state and municipal laws and ordinances.

15. Protecting all existing structures, utilities, pavements, planting and other site improvements from damage due to construction.

16. Installing filter tubes for erosion control.

17. Installing silt sacks in all existing and new catch basin structures and/or inlets to drainage structures for sediment control.

1.03 DEFINITIONS

A. “Topsoil” and “loam” shall be, for the purpose of this Specification, considered interchangeable terms. “Planting Soil” is described in Section 02900 PLANTING AND LAWNS.

B. “Fill” and “backfill” shall be, for the purpose of this Specification, considered interchangeable terms and shall mean material to be used to bring existing or construction grades up to finished subgrade levels.

C. The words "finished grade" as used herein mean the required final grade elevations indicated on the Drawings. Where not otherwise directed, areas shall be given uniform slopes between points for which finish grades are shown, or between such point and existing grade, except that vertical curves or roundings shall be provided at abrupt changes in slope.

D. The word "subgrade" as used herein, means the required surface of subsoil, borrow fill or compacted fill. This surface is immediately beneath the site improvements, especially dimensioned fill, paving, topsoil or other surfacing materials.

E. "Trench" shall be defined as an excavation of any length where the width is less than twice the depth. All other excavations shall be classified as open, or unclassified excavation.

F. "Unsuitable Materials" shall include the following:

1. Pavements, concrete, utility structures, building foundations and other manmade structures.
2. Peat, muck, organic silt and other organic materials subject to decomposition, consolidation or decay.
3. Solid waste including wood, old burnt wood, masonry, glass, and metal.
4. Boulders except as specified herein for fills.
5. Hazardous materials as defined by DEP pursuant to the Massachusetts Contingency Plan (MCP) 310 CMR 40.0000.

G. Reference to the "Standard Specifications" shall mean the Commonwealth of Massachusetts Department of Transportation (MassDOT) *2020 Standard Specifications for Highways and Bridges and the Supplemental Specifications.*

1.04 EXISTING CONDITIONS

A. Surface Conditions

1. The boring program identified a topsoil layer in the park that ranges in thickness between 3-inches to 24-inches. Contractor is responsible for establishing depth of existing topsoil from a minimum of 3 locations, to be agreed with the Engineer, throughout the site prior to commencing stripping and stockpiling. If the existing conditions do not meet an average depth of 6-inches, the Contractor shall notify Engineer to receive direction prior to continuing with stripping and stockpiling operations. Any stripping of topsoil to depths in excess of 6" shall be approved prior to stripping, by the Engineer.

B. Subsurface Conditions

1. The geotechnical report and soil boring logs have been provided as part of the contract documents. It is expressly understood that the DCR will not be responsible for interpretations or conclusions drawn there from them by the Contractor.

2. Urban fill underlies the park. The fill is typically dark gray to black and granular. It is a mixture of soil, wood, plaster, and ash with minor broken brick, glass, cinders, and trash.

C. Existing Utilities

1. Before starting earthwork Contractor shall call 'DIGSAFE' at 1-888-DIGSAFE and locate existing underground utilities in areas of work. If utilities are to remain in place, provide adequate means of support and protection during earthwork operations.

2. Should uncharted or incorrectly charted piping or other utilities be encountered during excavation, notify the Engineer for instructions on how to proceed. Cooperate with the DCR, City and with utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of utility companies, City and DCR at no additional cost.

3. Do not interrupt existing utilities serving facilities occupied or used by the DCR, City, abutters and others, during occupied hours, except when permitted in writing by the DCR and City.

a. Provide minimum of 48-hour notice to the DCR, City, or abutters affected and receive written notice to proceed before interrupting any utility.

4. Coordinate with utility companies for shut off of services if lines are active. Plug and/or cap abandoned utilities as required and reviewed with the DCR and City.

1.05 EROSION CONTROL

A. It shall be the responsibility of the Contractor to render the site erosion-free. Install erosion control methods as detailed prior to any soil disturbance, or in proper sequence. Approval by the Engineer of any method to accomplish this does not relieve the Contractor of full responsibility for controlling erosion and/or sedimentation throughout the construction process.

B. Adhere to the Order of Conditions issued by the Conservation Commission of the local municipality.

C. Stabilize disturbed areas within seven (7) days of final grading or within two days if area is not to be final graded immediately.

D. Maintain disturbed areas until the establishment of permanent grass.

PART 2 – PRODUCTS

2.01 ORDINARY BORROW

A. Ordinary borrow fill shall meet the requirements of MassDOT Section M1.01.0, unless otherwise noted on the Plans.

2.02 GRAVEL BORROW

A. Gravel borrow fill shall meet the requirements of MassDOT Section M1.03.0, Type b, unless otherwise noted on the Plans.

2.03 DENSE GRADED CRUSHED STONE

A. Dense graded crushed stone shall meet the requirements of MassDOT Section M2.01.7 unless otherwise noted on the Plans.

2.04 CRUSHED STONE

B. Crushed stone shall meet the requirements of MassDOT Section M2.01.0 unless otherwise noted on the Plans.

2.05 SILT SACK FOR SEDIMENT CONTROL

A. The sediment collection sack shall be manufactured from a woven polypropylene fabric with an oil-absorbent pillow insert or made completely from an oil-absorbent fabric with a woven pillow insert that meets or exceeds the following specifications.

Properties	**Test Method**	**Units**
Grab Tensile Strength	ASTM D-4362	265 LBS
Grab Tensile Elongation	ASTM D-4362	20%
PunctureASTM D-4833	135 LBS	
Mullen Burst	ASTM D-3786	420 LBS
Trapezoid Tear	ASTM D-4533	45 LBS
UV Resistance	ASTM D-4355	90%
Apparent Opening Size	ASTM D-4751	20 US SIEVE
Flow Rate	ASTM D-4491	200 GAL/MIN/SQ FT
Permittivity	ASTM D-4491	1.5 SEC-1

2.06 FILTER TUBE FOR EROSION CONTROL

A. Material for the filter tubes shall be compost meeting M1.06.0, except that no manure or bio-solids shall be used. In addition, no kiln-dried wood or construction debris shall be allowed. Particle size analysis: 98% shall pass through a 3-inch (75mm) sieve; 30-50% shall pass 3/8 inches (10mm) sieve.

B. Tubes for compost filters shall be a minimum of 12 inches (300 mm), a maximum of 18” (450mm) in diameter. Tube material shall be a knitted mesh with 1/8” - 3/8” (3-10 mm) openings and made of 100% biodegradable (cotton, hemp, or jute) materials. Additional tubes shall be used at the direction of the Engineer.

C. Stakes for anchors, if required, shall be nominal 2 x 2 wooden stakes.

2.07 GEOTEXTILE FABRIC FOR SEPARATION

A. Geotextile fabric shall meet the requirements specified in Subsection M9.50.0 Geotextile Fabrics of Division III, Materials, of the Standard Specifications.

2.08 GEOGRID

A. Geogrid shall be Tensar TriAx® 160 or approved equal unless otherwise noted on the Plans.

PART 3 – EXECUTION

3.01 UNCLASSIFED EXCAVATION

A. Methods of execution used shall meet the requirements of Section 120 of the Standard Specifications.

B. Unclassified Excavation includes the excavation, disposal, and compaction of all materials not being removed under some other section which is encountered within the limits of excavation.

C. All excavated material shall be managed in accordance with all applicable federal, state, and local requirements.

D. During excavation activities, urban fill shall not be mixed with other material and shall be stockpiled separately on polyethylene sheeting. It shall be covered with polyethylene sheeting at the end of the workday. The Contractor shall incorporate appropriate protocols for working with the urban fill as part of their site specific environmental health and safety program. The handling of urban fill to remove wood and other unsuitable materials and reuse of the urban fill on site shall be as specified under Urban Fill Cut Material Handled and Spread (Subsection 3.08). Any unsuitable materials remaining after screening shall be legally disposed of off the project site in accordance with Section 02280 – EXCAVATED SOIL MANAGEMENT.

E. Material excavated during the installation of the drilled shafts shall be tested and disposed of off-site in accordance with Section 02280 – EXCAVATED SOIL MANAGEMENT.

3.02 REMOVE, SALVAGE, AND STOCKPILE EXISTING TOPSOIL

A. Earth excavation includes any excavation of earth necessary to do the grading and removal work specified.

B. Excavation of Planted and Seeded Areas

   a. Excavate to required depths for loam borrow and to the finished grades proposed on the Drawings.

C. Unauthorized Excavation: When suitable bearing material is encountered at subgrade elevations shown and excavation is made to greater depth, bring grade back to elevation required by providing appropriate fill material compacted to 95 percent maximum density at no additional cost to DCR.

D. Additional Excavation: When excavation has reached required subgrade

elevations, notify the Engineer.

a. If the "assumed" bearing materials are not encountered at the subgrade elevations indicated, carry excavations deeper and replace excavated material with appropriate fill material. Additional excavation work shall be authorized by the Engineer in writing before additional excavation work can be performed.

b. Removal of unsuitable "assumed" bearing material and its replacement as directed by the Engineer will be paid on basis of Contract conditions relative to changes in work.

E. Excavation within Tree Canopy

a. Contractor shall engage an Arborist licensed in the State of Massachusetts to consult on proper remedial measures required to protect existing trees to remain during and because of construction around their roots outside of tree protective fencing. Refer also to Section 02150 – TREE PROTECTION AND PRUNING.

b. When excavating or trenching within the branch spread of trees scheduled to remain and outside of the tree protective fencing, trench carefully at limit and to depth of excavation where buttress roots are not present. Hand dig at buttress roots (over 2" caliper close to surface) in a manner which will cause minimum damage to root systems beyond excavation. Excavating in these areas with backhoes, which damages roots well beyond the limit of excavation, will not be permitted within the canopy of the trees without permission of the Engineer. Excavation within tree protection fencing will not be permitted.

c. Do not leave surface roots exposed for more than 24 hours. Backfill with appropriate material as soon as possible to the satisfaction of the Engineer and DCR.

F. Materials Storage: Stockpile satisfactory excavated materials where directed by the Engineer until required for backfill or fill. The Engineer shall approve the location of all stockpiles prior to placement. Place, grade and shape stockpiles for proper drainage.

G. Locate and retain soil materials away from edge of excavations. Do not store within drip line of trees to remain within the wetlands.

H. Frost Protection

a. Make no excavations to full depth indicated when freezing temperature may be expected unless intended improvements can be accomplished immediately after the excavations have been completed. Protect bottom so excavated from frost if progress is delayed. Should protection fail, remove frozen materials and replace with gravel as directed at no cost to DCR.

b. Keep the site clear and free of accumulations of snow within the limit of the Contract lines as necessary to carry out the work of the Contract.

c. Fill materials containing frost shall not be utilized, nor shall filling be done over frozen materials.

d. Stockpile in sufficient quantities to meet Project Schedule and requirements.

e. Separate differing materials with dividers or stockpile apart to prevent mixing.

f. Direct surface water away from stockpile to prevent erosion or deterioration of materials.

g. Cover materials to prevent erosion until disposed of.

h. Remove stockpile upon completion. Leave area in clean and neat condition.

3.03 TEST PIT FOR EXPLORTION

A. Methods of execution used shall meet the requirements of Section 120 of the Standard Specifications.

3.04 CLASS B ROCK EXCAVATION

A. Methods of execution used shall meet the requirements of Section 140 of the Standard Specifications.

B. Rock is defined as boulders, buried concrete structures, concrete thrust blocks, masonry exceeding 1 cy in volume, or solid ledge rock, which require removal by drilling, wedging, sledging, barring, or breaking up with a power operated tool.

C. No hardpan, soft or disintegrated rock which can be removed with a hand pick or power-operated excavator or shovel, no loose, shaken or previously blasted rock or broken stone in rock fillings or elsewhere and no rock exterior to the maximum pay limits as indicated on the drawings, which may fall into the excavation, will be classified as "rock".

D. Once the rock is excavated, the areas shall be refilled with approved materials. No blasting or use of explosives is permitted.

E. Class B Rock Excavation shall also include cutting down existing light pole foundations to a minimum depth of 5 feet or to such depths as the Engineer may direct below the surface of the subgrade of the designated grades. Once the foundation is cut and excavated, the areas shall be refilled with approved materials.

3.05 FINE GRADING AND COMPACTION

Methods of execution used shall meet the requirements of Section 170 of the Standard Specifications.

3.06 SILT SACK FOR SEDIMENT CONTROL

A. The work to be done under this Item shall include furnishing and installing sediment collection sacks (silt sacks) in all existing and new catch basin structures and/or inlets to drainage structures for the protection of the environment.

B. All existing and new catch basin structures within the limits of work shall have sediment collection sacks installed and maintained in good working order until the completion of all construction activities within the drainage collection area of each drainage structure. Sediment collection sacks shall be replaced if damaged, if no longer working properly and / or as required by the Engineer.

C. Refer to construction plan details showing the sediment collection sack device. Contractor shall be responsible for field measuring all existing and new drainage structures to ensure that the proper size sediment collection sack is provided for each structure.

D. Sediment removed from the silt sacks shall be handled in accordance with the requirements of Section 227 of the Standard Specifications.

3.07 TOPSOIL REHANDLED AND SPREAD

A. Testing:

a. Refer to Section 02900 – PLANTING AND LAWNS for the description of requirements for topsoil testing, screening, and amending. Executing the requirements of testing, screening, amending, spreading, compaction, of the final approved material is the work of this Section 02200 – SITE EARTHWORK.

B. Compaction:

a. Contractor shall control soil compaction during construction providing minimum percentage density specified.

b. Percentage of Maximum Density Requirements: Compact soil to not less than the following percentages of maximum density of soils which exhibit a well-defined moisture density relationship in accordance with ASTM Do, Method C.

c. Do not over compact subgrades in areas to be planted and seeded and ensure that subgrade is free draining or scarifying and loosening top 6

inches of subgrade may be required at no additional cost to DCR.

d. Topsoil Re-handled and Spread shall be lightly rolled and compacted to maximum 80% dry density. Refer to Section 02900 – PLANTING AND LAWNS for additional requirements.

C. Rough Grading:

a. Uniformly grade areas within limits of grading under this Section, including adjacent transition areas. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated, or between such points and existing grades.

b. Fine Grading for seeded and planted areas is the work of Section 02900 – PLANTING AND LAWNS.

3.08 URBAN FILL MATERIAL REHANDLED AND SPREAD

A. Excavated urban fill shall be screened to remove wood and other unsuitable materials and reused on-site as backfill.

B. No urban fill soils shall be removed from the site except as approved in advance by the Engineer.

C. Soil that requires off-site disposal shall be tested and legally disposed of off-site in accordance with Section 02280 – EXCAVATED SOIL MANAGEMENT.

D. All quantities of urban fill soil and solid waste to be disposed of off-site shall be submitted to the Engineer prior to disposal.

3.09 FILTER TUBE FOR EROSION CONTROL

A. Filter tubes shall be installed as noted on the Drawings in order to prevent sediment from entering landscape areas or accessible ways, ramps or temporary pathways. Excavation for filter tube installation shall be dug to the width of the filter tube and the length of the proposed barrier to a minimum depth of 2 inches, secured with 24-inch long wooden stakes set minimum 5 feet on center.

B. Filter tubes shall be placed in a single row, lengthwise on proposed line, with ends of adjacent wattles overlapping a minimum of 12 inches and perpendicular to drainage flow.

C. Staking shall be accomplished to securely anchor tubes by driving stakes to a minimum depth of 12 inches.

D. Inspection shall be frequent and repair or replacement shall be made promptly as needed.

E. Filter tubes shall be maintained, replaced if sediment backs up against the tubes. Sediment backed up at the tubes shall be removed within 24 hours of it occurring. The filter tubes shall be maintained and functioning as intended for the duration of construction until acceptance of the paving work.

3.10 GEOGRID REINFORCEMENT

A. Geogrid reinforcement shall only be installed within the lower 1.5 acres of the park as shown on the Drawings.

B. Reinforcement shall be installed to a depth of 4 feet and 1.5 feet as shown on the Drawings. Excavation to be at a slope of 1 horizontal to 1 vertical.

C. Proof-roll subgrade with a 10-ton vibratory roller to collapse any near surface subsidence due to decomposition of underlying urban fill material until it no longer weaves or ruts.

D. Install underground utilities and new landscaping as shown on the plans within lower 1.5 acres of the park before installing geotextile fabric and geogrid.

E. Install geotextile fabric overlain by geogrid on prepared subgrade. Backfill with screened urban fill and supplement with ordinary borrow and compacted in layers as shown on the Drawings.

F. Install geotextile fabric and geogrid horizontally to the rootball of proposed plantings, foundations, and drilled shafts and to an offset of 10 feet from the trunk of existing trees to be retained.

G. The fine grading and compacting between layers shall be work of this section and installation of the surface treatment shall be the work of other sections of this specification.

3.11 EXCAVATION AND BACKFILLING FOR PIPES

A. Methods of execution used shall meet the requirements of Section 150 of the Standard Specifications.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement of items will be made in accordance with Sections 120, 140, 150 and 170 of the Standard Specifications unless otherwise stated below.

B. Measurement for UNCLASSIFIED EXCAVATION will be made on a per CUBIC YARD basis in conformance with the applicable provisions of Section 120 of the Standard Specifications and as indicated by the Contract Drawings.

C. Measurement for TEST PIT FOR EXPLORATION will be made on a per CUBIC YARD basis in conformance with the applicable provisions of Section 140 of the Standard Specifications and as indicated by the Contract Drawings.

D. Measurement for CLASS B ROCK EXCAVATION will be made on a per CUBIC YARD basis in conformance with the applicable provisions of Section 140 of the Standard Specifications and as indicated by the Contract Drawings.

E. Measurement for ORDINARY BORROW will be made on a per CUBIC YARD basis in conformance with the applicable provisions of Section 150 of the Standard Specifications and as indicated by the Contract Drawings.

F. Measurement for GRAVEL BORROW will be made on a per CUBIC YARD basis in conformance with the applicable provisions of Section 150 of the Standard Specifications and as indicated by the Contract Drawings.

G. Measurement for FINE GRADING AND COMPACTION will be made on a per SQUARE YARD basis in conformance with the applicable provisions of Section 170 of the Standard Specifications and as indicated by the Contract Drawings.

H. Measurement for DENSE GRADED CRUSHED STONE will be made on a per CUBIC YARD basis in conformance with the requirements of MassDOT Standard Specifications M2.01.7 and as indicated by the Contract Drawings.

I. Measurement for SILT SACK FOR SEDIMENT CONTROL will be made on a per EACH basis for each sediment collection sack installed and maintained in place for the duration of the contract as indicated by the Contract Drawings.

J. Measurement for TOPSOIL REHANDLED AND SPREAD will be made on a CUBIC YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

K. Measurement for URBAN FILL MATERIAL REHANDLED AND SPREAD will be made on a per CUBIC YARD basis as indicated by the Contract Drawings. Urban fill cut material shall be reused on site should the Contractor sufficiently demonstrate that it meets or exceeds the specifications for base material required. Excavated urban fill shall be processed through a *Screen-All* or equal with 3-inch maximum size to remove wood, brick and other deleterious material from the material to be reused on site.

L. Measurement for FILTER TUBE FOR EROSION CONTROL will be made on a per LINEAR FOOT basis for all filter tube installed, approved, and maintained in place for the duration of the contract and as indicated by the Contract Drawings.

M. Measurement for GEOGRID FOR SUBGRADE REINFORCEMENT NON PATHWAY AREAS will be made on a per SQUARE YARD basis and include a single layer of geotextile and Tensar Triax 160 geogrid as indicated by the Contract Drawings.

N. Measurement for GEOGRID FOR SUBGRADE REINFORCEMENT UNDER PATHWAY AREAS will be made on a per SQUARE YARD basis as indicated by the Contract Drawings. The SQUARE YARD unit of measurement for this item includes three layers of geotexile and three layers of geogrid.

4.02 PAYMENT

A. Payment of items shall be in accordance with Sections 120, 140, 150 and 170 of the Standard Specifications unless otherwise stated below.

B. Excavations outside the established pay limits and as shown on the Contract Drawings will be considered as made either through error or the Contractor's convenience and will not be included for payment under any item, nor will refilling with the required backfill be included for payment under any item.

C. Payment for UNCLASSIFIED EXCAVATION will be at the CUBIC YARD contract price. This price shall include full compensation for all excavation, backfilling, labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

D. Payment for TEST PIT FOR EXPLORATION will be at the CUBIC YARD contract price. This price shall include full compensation for all excavation, backfilling, labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

E. Payment for CLASS B ROCK EXCAVATION will be at the CUBIC YARD contract price. This price shall include full compensation for all excavation, backfilling, labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

F. Payment for ORDINARY BORROW will be at the CUBIC YARD contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

G. Payment for GRAVEL BORROW will be at the CUBIC YARD contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

H. Payment for FINE GRADING AND COMPACTION will be at the SQUARE YARD contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

I. Payment for DENSE GRADED CRUSHED STONE shall conform to the requirements of MassDOT Standard Specifications M2.01.7 and will be at the in place CUBIC YARD contract price. This price shall include full compensation for all testing, screening, labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

J. Payment for SILT SACK FOR SEDIMENT CONTROL will be at the per EACH contract price. This price shall include full compensation for all labor, materials, tools, and equipment, removal and disposal of all sediments collected, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

K. Payment for TOPSOIL REHANDLED AND SPREAD will be at the CUBIC YARD contract price. This price shall include full compensation for all testing, labor, materials, tools, screening, amendments, equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

L. Payment for URBAN FILL MATERIAL REHANDLED AND SPREAD will be at the CUBIC YARD contract price. This price shall include full compensation for all labor, materials, transportation, legal disposal of soils and other unsuitable materials, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

M. Payment for FILTER TUBE FOR EROSION CONTROL will be at the LINEAR FOOT contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work

necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

N. Payment for GEOGRID FOR SUBGRADE REINFORCEMENT NON PATHWAY AREAS will be at the SQUARE YARD contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

O. Payment for GEOGRID FOR SUBGRADE REINFORCEMENT UNDER PATHWAY AREAS will be at the SQUARE YARD contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

4.03 PAYMENT ITEM

Payment will be made under:

ITEM	DESCRIPTION	UNIT
02200.01	UNCLASSIFIED EXCAVATION	CUBIC YARD
02200.02	TEST PIT FOR EXPLORATION	CUBIC YARD
02200.03	CLASS B ROCK EXCAVATION	CUBIC YARD
02200.04	ORDINARY BORROW	CUBIC YARD
02200.05	GRAVEL BORROW	CUBIC YARD
02200.06	FINE GRADING AND COMPACTION	SQUARE YARD
02200.07	DENSE GRADED CRUSHED STONE	CUBIC YARD
02200.08	SILT SACK FOR SEDIMENT CONTROL	EACH
02200.09	TOPSOIL REHANDLED AND SPREAD	CUBIC YARD
02200.10	URBAN FILL MATERIAL REHANDLED AND SPREAD	CUBIC YARD

02200.11	FILTER TUBE FOR EROSION CONTROL	LINEAR FOOT
02200.12	GEOGRID FOR SUBGRADE REINFORCEMENT NON PATHWAY AREAS	SQUARE YARD
02200.13	GEOGRID FOR SUBGRADE REINFORCEMENT UNDER PATHWAY AREAS	SQUARE YARD

END OF SECTION

SECTION 02213

WATERFRONT BUILDING CONDITION SURVEY AND VIBRATION MONITORING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. The work to be done under this section shall consist of furnishing all materials, labor, supervision, tools, and equipment and performing all operations necessary to complete all work as shown on the Contract Drawings and as specified.

B. The work includes, but is not limited to, the following items:

1. Building Condition Surveys:
   This work shall consist of performing a building condition survey(s) and preparing permanent records as indicated in the Contract Documents prior to the commencement of work, after completion of work, and at locations and times during construction as directed by the Engineer.
2. Vibration Monitoring (Non-blasting):
   This work shall consist of performing vibration monitoring of background and construction activities and preparing daily and summary report(s) of vibration readings during vibration producing activities such as but not limited to pile driving, vibratory compaction, demolition of concrete seawall or operation of heavy construction equipment.

1.02 REFERENCES

A. Specification Section 02075: Waterfront Selective Demolition, Salvage for Reuse, and Utility Protection, Part 1.01-C.25 and Part 1.04-C for building mural protection requirements.

B. Specification Section 02375: Waterfront Steel Sheet Piles

C. Specification Section 02470: Waterfront Micro Piles

1.03 SUBMITTALS

A. The Contractor shall engage the services of a Consultant capable to perform a pre-construction survey of the existing buildings in order to document the pre-construction condition of all elements of such buildings. This survey shall serve as a baseline to monitor the structure for any potential movement that may occur because of the planned construction activities.

B. The Contractor shall engage the services of a Consultant experienced in vibration monitoring to measure and assess peak particle velocities during construction activities.

C. Data from both activities, pre-construction survey and vibration monitoring, shall be provided in a comprehensive report that must be sealed and stamped by a Professional Engineer, licensed in the Commonwealth of Massachusetts (MA).

1. Submit Consultants experience performing pre-construction survey and vibration monitoring, for the review and acceptance by the Engineer.
2. Submit two copies of the pre-construction survey and vibration monitoring to the Engineer/DCR.

D. Submittal of Written Vibration Monitoring Plan:
A Vibration Monitoring Plan must be prepared by the Seismologist/Vibration Consultant and submitted by the Contractor at least 30 calendar days prior to any commencement of sheet pile or micro pile installation. No pile installation work shall commence until the Vibration Monitoring Plan has been approved. The vibration monitoring plan may be returned to the Contractor for revision or clarification. Vibration monitoring plan shall include: The Vibration Monitoring Plan must include:

1. A description of the organizations and individuals that will be involved in the vibration monitoring activities, including planned duties, the name of vibration monitoring specialist(s), responsibilities and authorities of the organizations and individuals, and contact information for organizations and key individuals.
2. A description of the monitoring equipment with example data output
3. The scheduled start date and length of construction operations, which require vibration monitoring.
4. The limits of vibration monitoring work
5. The location of all structures to be monitored in proximity to the construction operation.
6. Seismograph locations
7. The location of any underground utilities in proximity to the construction operation.
8. Experience and Qualifications

    a. The Seismologist/Vibration Consultant must be a registered Professional Engineer in the Commonwealth of MA with a minimum of 5 years of

experience, including a minimum of four projects of similar magnitude and subsurface conditions. This individual shall have experience with assessing vibration monitoring and recording operations, interpreting ground vibration and sound data, determining parameter values for vibration attenuation through soil, analyzing ground motion spectra, and assessing the structural responses to vibrations. The Seismologist/Vibration Consultant qualifications shall also include experience with pre- and post-construction condition surveys of structures, familiarity with construction methods and materials, and knowledge of structural response to ground vibrations generated by construction activities.

b. The Professional Engineer shall sign and seal all reports, results, interpretations, and assessments obtained from vibration monitoring and structural condition surveys. The Professional Engineer must be on site and supervise the initial installation of each vibration monitoring instrument, the Vibration Test Program and the Preconstruction and Postconstruction Condition Surveys.

c. A minimum of one on-site technician, working under direct supervision of the Seismologist/Vibration Consultant, shall be on site full-time during installation of the steel sheet piles and installation of the micropiles. The on-site technician shall have a minimum of five years of experience in controlling and monitoring vibrations originating from construction activities and be experienced and trained to install and use vibration monitoring instrumentation and interpret the instrumentation data. Their experience and training shall also include analyzing ground and sound vibration parameters, implementing proper monitoring, and recording methods, knowledge of proper vibration control methods, capability to install and read supplemental instrumentation to monitor movement and settlement of structures.

d. Submit proof and details, as references, of two projects in the past (5) five years where the vibration monitoring consultant performing the work has satisfactorily monitored construction operations by recording maximum peak particle velocities (PPVs). Include contact information for each reference provided.

9. Equipment and Monitoring

a. Submit information on the required 3-component seismograph, capable of measuring particle velocity data in three mutually perpendicular directions, including: the manufacturer’s name, model number, and documentation of factory calibration performed within the last 12 months.

b. Submit the frequency and duration of vibration monitoring for any construction activity.

c. List established or estimated vibration limits (peak particle velocity at distance relative to sheet pile and micro pile installation for the particular

construction equipment and methods proposed. Provide evidence or justification that the proposed construction equipment and methods meets the specified vibration limits.

d. Provide an initial plan for typical setup and location of vibration monitoring equipment during various construction activities.
e. Provide description of any separate measures or methods required to reduce vibrations.
f. Provide procedure for addressing public complaints pertaining to construction vibrations and potential damages. Include an example of a Vibration Complaint Report. Include a vibration screening procedure that includes both defining the problem and actions required to be taken.

E. Submit Copies of all Vibration Monitoring Records

F. The Contractor shall maintain a complaint log and make this available to the Engineer on request. Occupants/owners of adjacent buildings shall be notified by the Contractor at least 2 weeks prior to commencement of any vibration producing activity that might affect the structure or inhabitants.

PART 2 - PRODUCTS

NONE

PART 3 – EXECUTION

3.01 Building Condition Survey

A. The building condition survey shall include documentation of exterior, interior, foundation, and any other pertinent structure elements including but not limited to:

1. The exterior of each residential building of the Condominium and the individual units and interior common elements thereof, including all structural elements, finish elements, and windows and doors.
2. Paved areas on common land that are located within any of the easement areas including, the paved entry area abutting Easement 1 and leading to and from Easement 2 (Entry Area).
3. The paved circle and pathway located between such Entry Area and Easement 3, and paved areas adjacent to landscaped, planted, or other improved areas.
4. Any utility, drainage or other installations serving the Condominium.

5. Any associated lines, pipes, or equipment and the marina fuel tanks .

B. The survey shall detail (by engineering sketches, video tape, photographs, and/or notes) any existing structural, cosmetic, or utility damage. The survey will be conducted by a Professional Engineer, registered in the State of Massachusetts.

C. Inspect and document conditions of all condominium units located within in both buildings of the Seaport Landing Condominiums. Coordinate with tenant office to establish entry periods to allow access to document existing condition of units.

D. The Engineer shall accompany the Contractor on each building condition survey for verification of the data recorded.

E. A report shall be issued that will summarize the pre-construction condition of the building(s) and will identify areas of concern, including potential personnel hazards (falling debris) and structural elements that may require temporary support or repair.

F. Crack displacement monitoring gages will be installed as appropriate across any significant existing cracks to help verify any additional building distress if it should develop. The appropriate location, number, and type of gages will be established by the Contractor and/or the Project Engineer. The gages will be read prior to vibration producing activities, as well as during these activities. Data shall be obtained on a weekly basis for as long as vibration-producing activities are being conducted.

G. A report shall be submitted which summarizes the data. The Engineer shall be alerted if any significant movement is detected by the monitoring gages. Provide general photography and video equipment, analog or digital, capable of superimposing the date and time on all images.

3.02 Vibration Monitoring (Non-blasting):

A. Construction activities requiring monitoring shall not begin until the approved Seismologist/Vibration Consultant's on-site technician is onsite.

1. The Contractor shall install a minimum of six (6) seismographs (equivalent to 2 seismographs per address).
2. Seismic range – 0.01 to 4.00 inches per second with accuracy of +/-5% of the measured peak particle velocity or better at frequencies between 10 and 100 Hertz, and with a resolution of 0.01 inches per second or less.
3. Display the date of the most recent calibration. Calibration must have been performed within the last 12 months to a standard traceable to the National Institute of Standards and Technology.
4. Possess a reliable power source or battery for required duration of recordings, equipment suitable for site and weather conditions.

5. Three channels for vibration monitoring.
6. Power sources – an internal rechargeable battery with charger and 115 volts alternating current. The battery must be of approximate size and type to supply continuous power to the monitor for a minimum of 24 hours.
7. Instruments must be capable of producing strip chart recordings and readings on site within one hour of readings. The Contractor shall provide the appropriate computer and software to perform the analysis and produce reports of the continuous monitoring.
8. Produce plots showing particle velocity and frequency relative to current OSM and USBM standards.
9. The continuous monitoring mode must be capable of recording single-component peak particle velocities and the frequency of peaks shall have an interval of one minute or less.
10. The location of adjacent structures to be monitored and maximum allowable PPVs as indicated in the Contract Documents. If not otherwise specified, a maximum allowable PPV, in accordance with the United States Bureau of Mines (USBM) Vibration Criteria (Figure 1), shall be observed at all structures.

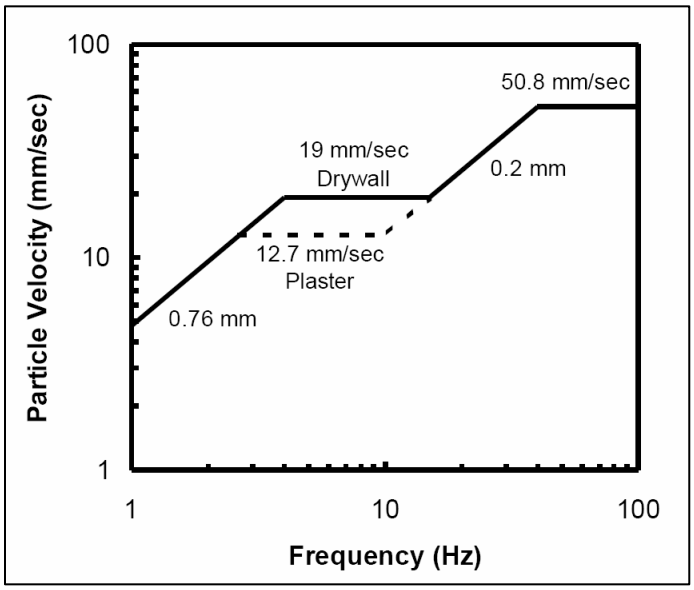


Figure 1 – USBM Vibration Criteria (after Siskind et al, 1980)
The figure provides a "threshold damage" limit, defined as cosmetic damage (e.g., cracking) within the structure, categorized by both frequency ranges and particle velocity.

11. The location of seismograph(s) placements, as directed by the Contractor's Professional Engineer. Recording seismographs may be installed on selected structures at as many locations required as determined by the Contractor's Professional Engineer.

12. Certifications shall be provided to the Engineer that all monitoring equipment is calibrated and maintained in accordance with manufacturer's requirements and that, were applicable, calibrations are traced to the National Institute of Standards and Technology.

13. The Contractor shall operate the monitoring equipment and record data for the duration of the construction activities. The Contractor shall document with photos, sketches, and notes, if appropriate, all events responsible for measured vibration levels and submit documentation along with the readings to the Engineer.

14. The procedure for tracking PPV throughout construction operations (e.g., Pile Driving Operations: pile tip vs. vibrations may be correlated through time of day. A record of the time of day at each depth interval, included on the pile driving records, would be required to correlate to a time-based readout of PPV.)

15. The Contractor shall inform the Engineer immediately each time measured particle velocities exceed 85% of the allowable peak particle velocity. The Contractor shall make equipment or procedural modifications as required to avoid exceeding the allowable vibration intensity.

16. If the measured velocities exceed the maximum allowable PPVs, the Contractor shall stop operations immediately and revise equipment and procedures to reduce vibrations to allowable levels. If the seismographs show any indication of damage or vandalism, the seismographs shall be immediately recalibrated or replaced.

17. The Contractor shall be in communication with his monitoring firm's personnel during vibration monitoring at all locations to verify the data recorded.

18. The Contractor shall provide the Engineer with the results of daily vibration monitoring, one workday after the readings are taken. Upon completion of the construction operations for those locations requiring vibration monitoring, the daily submittals shall be synthesized into a final report.

B. Vibration Monitoring Criteria:
The threshold criteria indicated below represents the minimum requirements at the onset of any work which may cause construction activity vibrations to occur at the project site or surrounding areas.

1. For frequencies of 40 Hz or lower, should the maximum peak velocity ever exceed 0.3 inches per second (ips), the Contractor shall:

    a. Double the frequency of the readings
    b. Notify the Engineer
    c. Verify with the Engineer that all work is being conducted according to the Contract Documents
    d. Schedule a meeting with the Engineer to be held within 48 hours of the reading to discuss further action.

2. For frequencies greater than 40 Hz, should the maximum peak velocity ever exceed 0.5 inches per second (ips), the Contractor shall:

    a. Double the frequency of the readings
    b. Notify the Engineer
    c. Verify with the Engineer that all work is being conducted according to the Contract Documents
    d. Schedule a meeting with the Engineer to be held within 48 hours of the reading to discuss further action.

3. For frequencies of 40 Hz or lower, should the maximum peak particle velocity ever exceed 0.75 inch per second (ips), the Contractor shall:

    a. Stop all construction activities immediately
    b. Verify the readings
    c. Schedule a meeting with the Engineer to be held immediately (no more than one calendar day) to discuss further action.

4. For frequencies greater than 40 Hz, should the maximum peak particle velocity ever exceed 1 inch per second (ips), the Contractor shall:

    a. Stop all construction activities immediately
    b. Verify the readings
    c. Schedule a meeting with the Engineer to be held immediately (no more than one calendar day) to discuss further action.

5. Threshold limits indicated for frequencies at or below 40 Hz may be increased to the 40 Hz or above limits if the lower thresholds trigger excessive warnings/alarms which prevent the Contractor from performing necessary work if the following occurs:

a. Steps have been taken which directly result in a reduction in vibrations such that the maximum peak velocity limits are met.
b. The Contractor has assessed all appurtenant structures following a warning or an alarm and submits a certified letter stating that no damage occurred when the maximum peak velocity limits were exceeded.
c. The Contractor submits a modified Vibration Monitoring plan stating the adjusted maximum peak velocity limits for review and approval.

3.03 Postconstruction Condition Survey

A. Conduct a Postconstruction Condition Survey within 30 calendar days upon the completion of all sheet pile and micro pile installation.

B. Postconstruction Condition Surveys shall be conducted on all structures and utilities that previously had a Preconstruction Condition Survey, and on any additional properties, structures, and conditions for which complaints of damage have been received or damage claims have been filed.

C. Distribute records of the final examination in the same manner as the original Preconstruction Condition Survey. The Postconstruction Condition Survey shall have the same requirements as the Preconstruction Condition Survey and shall consist of a description with any measurements, surveys, photographs, and other information needed to document the postconstruction condition of surveyed structures. Preconstruction and postconstruction comparisons must be made of surveyed areas, including photographs and other measurements. The Seismologist/Vibration Consultant shall include an evaluation of whether any noted differences between the Preconstruction and Postconstruction Condition Surveys are the result of construction vibrations or if they are due to other causes.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02213-1 BUILDING CONDITION SURVEY will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete as indicated by the Contract Drawings.

B. Measurement for Item 02213-2 VIBRATION MONITORING will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete as indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 02213-1 BUILDING CONDITION SURVEY will be at the LUMP SUM contract price. This price shall include full compensation for providing and the furnishing of all labor, materials, tools and equipment, for a pre-construction visual inspection and photographic documentation of existing conditions as identified on the contract documents, written condition reports with annotated photos and location references, coordination with property owners and stakeholders, post-construction re-inspection and comparison with baseline data, final report summarizing findings and any observed changes, and all other incidental work necessary to complete the BUILDING CONDITION SURVEY as shown on the Drawings and as herein specified.

1. The first payment shall constitute 50% of the pre-construction survey fee for the baseline report. The second and final payment shall constitute 50% of the post-construction survey fee for the report compiling all data gathered during construction.

B. Payment for Item 02213-2 VIBRATION MONITORING will be at the LUMP SUM contract price. This price shall include full compensation providing and the furnishing of all labor, materials, tools, and equipment for installation of vibration monitoring equipment, calibration and verification of sensors, continuous monitoring during construction, real-time alert system for threshold exceedance, inspections, daily logs and summary reports, documentation and reporting, coordination with project team and stakeholders, removal of equipment and restoration of monitoring locations, and all other incidental work necessary to complete the VIBRATION MONITORING as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	**DESCRIPTION**	**UNIT**
02213-1	BUILDING CONDITION SURVEYS	LUMP SUM
02213-2	VIBRATION MONITORING	LUMP SUM

END OF SECTION

SECTION 02225

WATERFRONT EXCAVATING, BACKFILLING, AND COMPACTING

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

Excavate, backfill, compact, and grade the site to the elevations and limits shown on the Contract Drawings, as specified herein, and as needed to meet the requirements of the construction shown on the Contract Documents.

1.02 QUALITY ASSURANCE

A. Use adequate numbers of skilled workers who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Use equipment adequate in size, capacity, and numbers to accomplish the work of this Section in a timely manner.

C. In addition to complying with requirements of governmental agencies having jurisdiction, comply with the directions of the Consulting Engineer.

1.03 SUBMITTALS

A. Submit the pre-qualified list of subcontractors and the proposed schedule of unit prices to the Engineer for review.

B. Submit material gradation, moisture density curve, and representative material sample for each material proposed for use.

C. Submit de-watering plan, if de-watering is to be performed. Include proposed intake and discharge location, containment measures for discharge, including details on size, type, and intended location of all components.

PART 2 – PRODUCTS

2.01 MATERIALS

A. Granular Backfill

Where the Drawings indicate “granular fill” material, it shall meet the requirements of granular backfill as described herein. Granular backfill shall consist of crushed quarry rock, processed gravel, and crushed stone or crushed gravel. A sample and grading curve is to be provided for Engineer's review prior to commencing work. Recycled man-made products such as asphalt and concrete are not acceptable.

1. Crushed quarry rock shall be coarse aggregate consisting of 100 percent crushed bedrock, produced by crushing bedrock extracted from a single-source quarry location. Crushed quarry rock aggregate shall be processed separately from overburden soil deposits, shall not contain crushed or uncrushed gravel, and shall be free of deleterious material or soft, friable particles.

2. Processed gravel shall be coarse aggregate produced by crushing and/or screening naturally occurring boulder, cobble, and gravel-sized materials extracted from a single source location. Processed gravel shall be free of deleterious material or soft, friable particles.

3. Aggregates shall conform MassDOT Standard specifications as follows:

   a. Fine Aggregates: MassDOT Section M4.02.02-A

Sieve Designation	Minimum	Maximum
3/8 in.	100	
No. 4	95	100
No. 16	55	80
No. 50	10	25
No. 100	2	8
No. 200	0	3

The fineness modulus of fine aggregate shall be not less than 2.5 and not greater than 3.0. For the purpose of determining the degree of uniformity, a fineness modulus determination will be made upon representative samples from any one source. Fine aggregate from any one source having a variation in fineness modulus greater than 0.20 either way from the representative sample will be rejected.

Samples for tests of fine aggregate will be taken under the direction of the Engineer from approved storage piles at the site of the batch plant or from approved storage piles at the producing pit.

The fineness modulus of fine aggregate shall be determined by adding the cumulative percentages, by weight, of materials retained on U.S. Standard Sieves numbered 4, 8, 16, 30, 50, 100 and dividing by 100.

Fine aggregate failing to pass the minimum requirements for material passing the No. 50 and/or No. 100 sieves may be used, provided an approved inorganic fine material is added to correct the deficiency in grading.

Table taken from Massachusetts Highway Department, Standard Specifications for Highways and Bridges

b. Coarse Aggregates: MassDOT Section M4.02.02-B

Percent by Weight Passing (AASHTO T-27)

Designation and Nominal Size	1½ in.		3/4 in.		3/8 in.	
Sieve Size	**Min.**	**Max.**	**Min.**	**Max.**	**Min.**	**Max.**
1½ in.	90	100				
3/4 in.	35	60	90	100		
1/2 in.					90	100
3/8 in.	10	25	20	50	30	70
No. 4	0	5	0	10	0	15
No. 8			0	5	0	5

Stone retained on the largest sieve shall be within an oversize tolerance of 1/4 in.

1½ in. aggregate shall be proportioned in two or more sizes, separately weighed in the mix. The combined grading as proportioned in the mix shall meet the grading requirements for 1½ in. coarse aggregate, as determined by actual test.

Three-quarter-inch aggregate may be proportioned in two sizes or processed to the specified gradation.

For use in mass concrete the Engineer may allow the use in 1½ in. aggregate of not more than 30% of coarse aggregate passing 2¼ in. and retained on 1½ in. sieve, provided such aggregate is separately proportioned as an additional size.

Table taken from Massachusetts Highway Department, Standard Specifications for Highways and Bridges

c. 12-Inch Minus Cobble

Description and Nominal Size	Percent by Weight Passing
12”	100
10”	
8”	70 max.
6”	
5”	40 max.
4”	
3”	
2”	
1½”	
¾”	10 max.
½”	
No. 4	
No. 200	

PART 3 – EXECUTION

3.01 INSTALLATION

A. Surface Conditions

1. Examine the areas and conditions under which the work of this Section will be performed. Correct conditions detrimental to timely and proper

completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

B. Finished Elevations and Lines

1. Locate and protect control points before starting work on the site.

2. Preserve permanent reference points during progress of the Work.

3. Do not change or relocate reference points or items of the Work without specific direction from the Engineer.

4. Promptly advise the Engineer when a reference point is lost or destroyed or requires relocation because of other changes in the Work.

5. Upon direction of the Engineer, require the field engineer to replace reference stakes or markers.

6. Locate such replacements according to the original survey control.

C. Procedures

1. Utilities:

a. Unless shown to be removed, protect active utility lines shown on the Drawings or otherwise made known to the Contractor prior to excavating. If damaged, repair or replace at no additional cost to DCR. The Contractor is responsible for notification of local utilities (Call Before You Dig or equivalent).
b. If active utility lines are encountered and are not shown on the Drawings or otherwise made known to the Contractor, promptly take necessary steps to assure that service is not interrupted.
c. If service is interrupted as a result of Work under this Section, immediately restore service by repairing the damaged utility at no additional cost to DCR.
d. If existing utilities are found to interfere with the permanent facilities being constructed under this Section, immediately notify the Engineer and secure instructions.
e. Do not proceed with permanent relocation of utilities until written instructions are received from the Engineer.

2. Protection of persons and property:

a. Barricade open holes and depressions occurring as part of the Work, and post warning lights on property adjacent to or with public access.

b. Operate warning lights during hours from dusk to dawn each day and as otherwise required.
c. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, washout, and other hazards created by operations under this Section.
d. Provide grounding of equipment.

3. Dewatering of Upland Excavations:

a. Remove all water, including rainwater, encountered during trench and substructure work to an approved location by pumps, drains, and other approved methods.
b. Keep excavations and site construction area free from water.
c. Should de-watering systems be employed, discharge effluent to an upland location contained by hay bales, silt fencing or other means of containment acceptable to DCR.

4. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

5. Maintain access to adjacent areas at all times.

6. Upland soil stockpiles shall be contained by hay bales or silt fencing to prevent erosion. Maintain containment measures during the Work.

D. Excavating

1. Perform excavating of every type of material encountered within the limits of the Work to the lines, grades, and elevations indicated and specified herein.

2. Satisfactory Excavated Materials

Transport to, and place in, fill or embankment areas within the limits of the Work.

3. Unsatisfactory Excavated Materials

a. Excavate to a distance below grade as directed by the Engineer and replace with satisfactory materials.
b. Include excavation of unsatisfactory materials, and replacement by satisfactory materials, as part of the work of this Section.

4. Surplus Materials

a. It is a requirement of this Contract that no excavated soils, including riprap and other stone products, are permitted to be

removed from the site. Surplus materials are to be stockpiled by the Contractor at a location on site per the direction of DCR. Stockpiles are to conform to the requirements of Paragraph 3.01-C above.

5. Excavating of Surfaces and Subsurfaces

   a. Where rocks, boulders, granite, or similar material is encountered, and where such material cannot be removed or excavated by conventional earth moving or ripping equipment, take required steps to proceed with the general grading operations of the Work, and remove or excavate such material by means which will neither cause additional cost to DCR nor endanger buildings or structures whether on or off the site.
   b. Where existing subsurface structures are encountered, notwithstanding items described in Paragraph 3.01-C, where these subsurface structures are classified as abandoned by the Engineer, and where these structures impede progress of the Work, shall be removed by means which will neither cause additional cost to DCR nor endanger buildings or structures on or off site.
   c. Do not use explosives without written permission from the Engineer.

6. Excavate and backfill in a manner and sequence that will provide proper drainage at all times.

7. Borrow

   Obtain material required for fill or embankment in excess of that produced within the grading limits of the Work from borrows areas selected and paid for by the Contractor and accepted by the Engineer.

8. Ditches and Gutters

   a. Cut accurately to the cross sections, grades, and elevations shown.
   b. Maintain excavations free from detrimental quantities of leaves, sticks, trash, and other debris until completion of the Work.

9. Unauthorized Excavations

   a. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimension without specific instruction from the Engineer.
   b. Under footings, foundations, or retaining walls:

i. Fill unauthorized excavations by extending the indicated bottom elevation of the footing or base to the excavation bottom, without altering the required top elevation.
ii. When acceptable to the Engineer, lean concrete fill may be used to bring the bottom elevation to proper position.
iii. Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations, unless otherwise directed by the Engineer.

10. Stability of Excavations

a. Slope excavations as necessary to make slopes safe in accordance with the appropriate regulations.
b. Shore and brace where sloping is not possible because of space restrictions or stability of the materials being excavated.
c. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

11. Shoring and Bracing

a. Provide materials for shoring and bracing as may be necessary for safety of personnel, protection of work and compliance with requirements of govern-mental agencies having jurisdiction.
b. Maintain shoring and bracing in excavations regardless of the time period excavations will be open.
c. Construct shoring and bracing as excavation progresses.

12. Excavating the Structure

a. Conform to elevations and dimensions shown within a tolerance of 0.10 ft and extending a sufficient distance from footings and foundations to permit placing and removing concrete formwork, installation of services, other construction required, and for inspection.
b. In excavating for footings, take care not to disturb bottom of excavation:

i. Excavate by hand tools to final grade just before concrete is placed.
ii. Trim bottoms to required lines and grades to leave solid base to receive concrete.
iii. Excavate for footings and foundations only after general site excavating, filling, and grading are complete.

13. Excavating the Pavement

Cut surface under pavements to comply with cross sections, elevations, and grades.

14. Cold Weather Protection

Protect excavation bottoms against freezing when ambient atmospheric temperature remains lower than 35 degrees F for more than four consecutive hours or is anticipated to be lower than 35 degrees F during non-working hours such as overnight, weekends, or holidays.

E. Material Excavated to Perform New Work

1. Throughout the work area, the Contractor is required to clear certain areas water ward of the bulkhead of sediment and riprap in order to perform the new work. The Contractor shall take measures to comply with the following requirements:

a. Do not discharge sediment or rip rap into the river. In-water material shall be contained.
b. Riprap shall be stockpiled and placed over the sediment layer described.
c. Filling and Backfilling
d. General:

i. For each area shown on the Drawings, place acceptable soil material in layers to required elevations.
ii. Perform all backfilling and compaction operations in a careful and controlled manner. Avoid damaging existing structures. Prevent loss of material through openings in the bulkhead and prevent materials from entering the waterway.

F. Backfill

1. Backfill excavations as promptly as progress of the Work permits, but not until completion of the following:

a. Acceptance of construction below finish grade including, where applicable, damp-proofing and waterproofing.
b. Inspecting, testing, approving, and recording locations of underground utilities.
c. Removing concrete formwork.
d. Removing shoring and bracing, and backfilling of voids with satisfactory materials.
e. Removing trash and debris.

f. Placement of horizontal bracing on horizontally supported walls.

2. Ground Surface Preparation

a. Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious matter from ground surface prior to placement of fills.
b. Plow, strip, or break up sloped surfaces steeper than one vertical to four horizontal so that fill material will bond with existing surface.
c. When existing ground surface has a density less than specified under "compacting" for the particular area, break up the ground surface, pulverize, moisture condition to the optimum moisture content, and compact to required depth and percentage of maximum density.

3. Placing and Compacting

a. De-water area scheduled to receive backfill.
b. Place backfill and fill materials in layers not more than 8” in loose depth.
c. Before compacting, moisten or aerate each layer as necessary to provide the optimum moisture content.
d. Compact each layer to required percentage of maximum density for area.
e. Do not place backfill or fill material on surfaces that are muddy, frozen, or containing frost or ice.
f. Place backfill and fill materials evenly along structures, to required elevations.
g. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around the structure to approximately the same elevation in each lift.

4. Grading

a. General:

i. Uniformly grade the areas within limits of grading under this Section, including adjacent transition areas.
ii. Smooth the finished surfaces within specified tolerance.
iii. Compact with uniform levels or slopes between points where elevations are shown on the Drawings, or between such points and existing grades.
iv. Where a change of slope is indicated on the Drawings, construct a rolled transition section having a minimum radius of approximately 8'-0" unless adjacent construction will not permit such a transition, or if such a transition defeats positive control of drainage.

b. Grading outside building lines:

i. Grade areas adjacent to buildings to achieve drainage away from the structures, and to prevent ponding.
ii. Finish the surfaces to be free from irregular surface changes, and:
a). Shape the surface of areas scheduled to be under walks to line, grade, and cross-section, with finished surface not more than 0.10 ft above or below the required subgrade elevation.
b). Shape the surface of areas scheduled to be under pavement to line, grade, and cross-section, with finished surface not more than 0.05 ft above or below the required subgrade elevation.

5. Compacting

a. Control backfill compaction during construction to provide the minimum percentage of density specified for each area as determined according to ASTM D1557.
b. Backfill material's density shall not be below 99% of its density at optimum moisture content as determined by the above test in all layers.
c. Moisture control:

i. Where subgrade or layer of soil material shall be moisture-conditioned before compacting, uniformly apply water to surface of subgrade or layer of soil material to prevent free water appearing on surface during or subsequent to compacting operations.
ii. Remove and replace, or scarify and air dry, soil material that is too wet to permit compacting to the specified density.
iii. Soil material that has been removed because it is too wet to permit compacting may be stockpiled or spread and allowed to dry. Assist drying by dicing, harrowing, or pulverizing until moisture content is reduced to a satisfactory value as determined by moisture density relation tests reviewed by the Engineer.

3.02 MAINTENANCE

A. Protection of newly graded areas:

1. Protect newly graded areas from traffic and erosion and keep free from trash and weeds.

2. Repair and re-establish grades in settled, eroded, and rutted areas to the specified tolerances.

B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, reshape, and compact to the required density prior to further construction.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02225-1 FURNISH AND INSTALL COMPACTED STRUCTURAL BACKFILL BEHIND SHEETS will be made on a per CUBIC YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Unless specified, there will be no separate measurement of quantities or payments for work covered by this Section. Measurement and Payment for all other items item shall be included within the work it is associated with.

4.02 PAYMENT

A. Payment for Item 02225-1 FURNISH AND INSTALL COMPACTED STRUCTURAL BACKFILL BEHIND SHEETS will be at the per CUBIC YARD contract price. This price shall include full compensation for excavation, providing and installing structural backfill material, backfilling and the furnishing of all labor including testing, transportation, hauling, survey, placement and compaction, disposal of surplus of any unsuitable material, supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL COMPACTED STRUCTURAL BACKFILL BEHIND SHEETS as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	**DESCRIPTION**	**UNIT**
02225-1	FURNISH AND INSTALL COMPACTED STRUCTURAL BACKFILL BEHIND SHEETS	CUBIC YARD

END OF SECTION

SECTION 02280
EXCAVATED SOIL MANAGEMENT

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

A. Include the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) *Standard Specifications for Highways and Bridges* and the *Supplemental Specifications*.

1.02 DESCRIPTION OF WORK

A. This Section specifies requirements for the following types of work and related items, but is not limited to:

1. Field screening for volatile organic compounds (VOC's) with a portable photoionization detector (PID) , excavating and handling, transport and off-site disposal of urban fill from the drilled shaft excavation and screened urban fill material not passing a 3" screen.

B. This Section is for characterization of sub-grade materials excavated from below surface materials (topsoil and/or bituminous paving). Material removed as topsoil for reuse is not to be characterized by the requirements of this Section. Topsoil shall be handled as specified in Section 02200 – SITE EARTHWORK and 02900 – PLANTING AND LAWNS. Bituminous Paving shall be handled as specified in Section 2100 – SITE PREPARATION, DEMOLITION AND REMOVALS.

C. The Contractor shall be responsible for adhering to regulations, specifications and recognized standard practices related to contaminated material handling during excavation and disposal activities. The DCR shall not be responsible at any time for the Contractor's violation of pertinent State or Federal regulations or endangerment of laborers and others. The Contractor shall comply with all rules,

regulations, laws, permits and ordinances of local, state and federal agencies.

D. All labor, materials, equipment, and services necessary to make the work comply with such regulations shall be provided by the Contractor without additional cost to the DCR. Whenever there is a conflict or overlap within the regulations, the most stringent provisions are applicable. The Contractor shall reimburse the DCR for all costs it incurs, including penalties and/or for fines, as a result of the Contractor's failure to adhere to the regulations, specifications, recognized standard practices, etc., that relate to contaminated material handling, transportation and disposal.

1.03 REFERENCES

A. Massachusetts Department of Environmental Protection (DEP) Policies and Regulations

1. DEP Policy COMM-97-001, Reuse and Disposal of Contaminated Soils at Massachusetts Landfills.

2. Massachusetts Department of Environmental Protection, 310 CMR 40.0000, Massachusetts Contingency Plan (MCP) .

3. Massachusetts Department of Environmental Protection – Similar Soils Provision Guidance WSC#-13-500

1.04 DEFINITIONS

A. "Unsuitable Materials" shall include the following:

1. Pavements, concrete, utility structures, building foundations and other manmade structures.

2. Peat, muck, organic silt and other organic materials subject to decomposition, consolidation or decay.

3. Solid waste including wood, old burnt wood, masonry, glass, and metal.

4. Boulders except as specified herein for fills.

5. Hazardous materials as defined by DEP pursuant to the MCP, 310 CMR 40.0000.

B. Contaminated Soil: Soil containing Oil or Hazardous Material (OHM) at concentrations equal to or greater than the MCP Reportable Concentrations or Limiting Soil Concentrations found in Table 2 of MassDEP Guidance WSC#-13-

500, Similar Soils Provision Guidance, or containing OHM not listed in the Similar Soils Provision Guidance.

C. Unregulated Soil: Soil, fill and dredged material with measured levels of oil and hazardous material (OHM) contamination at concentrations below the applicable Reportable Concentrations (RCs) presented in the MCP. Unregulated soil consists of material which may be reused (or otherwise disposed) as fill within the Commonwealth of Massachusetts subject to the non-degradation criteria of the MCP (310 CMR 40.0032(3), in a restricted manner, such that they are sent to a location with equal or higher concentrations of similar contaminants. Disposal areas include licensed disposal facilities, approved industrial settings in areas which will be capped or covered with pavement or compost topsoil and seeded, and for purposes of this project shall be reused as fill within the project site whenever possible. The material cannot be placed in residential and/or environmentally sensitive (e.g. wetlands) areas. Under no circumstances shall unregulated contaminated soils be placed in an uncontaminated or less contaminated area.

D. Regulated Soil: Materials containing measurable levels of OHM that are equal to or exceed the applicable Reportable Concentrations for the site as defined by the MCP, 310 CMR 40.0000. . Regulated Soil may be reused (as daily or intermediate cover or pre-cap contouring material) or disposed (as buried waste) at lined landfills within the Commonwealth of Massachusetts or at an unlined landfill that is approved by the Massachusetts Department of Environmental Protection (DEP) for accepting such material, in accordance with DEP Policy #COMM-97-001, or at a similar out-of-state facility. It shall be noted that soils which exceed the levels and criteria for disposal at in-state landfills, as outlined in COMM-97-001, may be shipped to an in-state landfill, but require approval from the DEP Division of Solid Waste Management and receiving facility. An additional management alternative for this material is recycling into asphalt. Regulated Soils may also be recycled at a DEP approved recycling facility possessing a Class A recycling permit subject to acceptance by the facility and compliance with DEP Policy #BWSC-94-400. **Regulated Soil removed from the site for disposal or treatment shall be removed via an LSP approved Bill of Lading, Manifest or applicable material tracking form.** This type of facility shall be approved/permitted by the State in which it operates to accept the class of contaminated soil in accordance with all applicable local, state, and federal regulations.

E. Hazardous Waste: Materials shall be disposed of at a facility permitted and operated in full compliance with Federal Regulation 40 CFR 260-265, Massachusetts Regulation 310 CMR 30.000, Toxic Substances Control Act (TSCA) regulations, or the equivalent regulations of other states, and all other applicable local, state, and federal regulations. All excavated materials classified as hazardous waste shall be disposed of at an out-of-state permitted facility. This

facility shall be a RCRA hazardous waste or TSCA facility, or RCRA hazardous waste incinerator. This type of facility shall be approved/permitted by the State in which it operates to accept hazardous waste in accordance with all applicable local, state and federal regulations and shall be permitted to accept all contamination which may be present in the soil excavate. The Contractor shall ensure that, when needed, the facility can accept TSCA waste materials i.e. polychlorinated biphenyls (PCBs). Hazardous waste shall be removed from the site for disposal or treatment via an LSP approved Manifest.

F. LSP: Licensed Site Professional, a hazardous waste site cleanup professional, as defined in M.G.L. c. 21A, § 19, holding a valid license issued by the Board of Registration of Hazardous Waste Site Cleanup Professionals pursuant to M.G.L. c. 21A, §§ 19 through 19J.

G. Reference to the "Standard Specifications" shall mean the Commonwealth of Massachusetts Department of Transportation (MassDOT) *2022 Standard Specifications for Highways and Bridges and the Supplemental Specifications.*

1.05 EXISTING CONDITIONS

A. Subsurface Conditions

1. The geotechnical report and soil boring logs have been provided as part of the contract documents. It is expressly understood that the DCR will not be responsible for interpretations or conclusions drawn there from by the Contractor.

2. Urban fill underlies the park. The fill is typically dark gray to black and granular. It is a mixture of soil, wood and ash with minor broken brick, glass, cinders, and trash.

3. There are several release sites in the vicinity of the project but they have previously been closed with MADEP. There are no open release sites in the vicinity of the project, and contaminated soils associated with a prior release are not anticipated.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION

3.01 ENVIRONMENTAL HEALTH AND SAFETY PROGRAM

A. The work shall consist of ensuring the health and safety of the Contractor's employees and subcontracting personnel, the DCR and their representatives, the

environment, and public welfare from any on-site chemical contamination present in air, soil, water and sediment.

B. The Contractor shall prepare and implement a site-specific Environmental Health and Safety Plan (EHASP) which has been approved and stamped by a Certified Industrial Hygienist (CIH) and includes the preparer's name and work experience. The EHASP shall include appropriate components required by OSHA Standard 29 CFR 1910.120(b) and the Massachusetts Contingency plan (MCP) 310 CMR 40.0018 and shall comply with all applicable state and federal laws, regulations, standards and guidelines, and provide a degree of protection and training appropriate for implementation on the project. The EHASP shall be a dynamic document with provision for change to reflect new information, new practices, or procedures, changing site environmental conditions or other situations which may affect site workers and the public. The EHASP shall be developed and implemented independently from the standard construction HASP.

C. Health and safety procedures provided by the Contractor shall comply with all the appropriate regulations that address employee working conditions, including but not limited to standards established by OSHA and National Institute for Occupational Safety and Health (NIOSH). Equipment used for the purpose of health and safety shall be approved by and meet pertinent standards and specifications of the appropriate regulatory agencies.

D. A copy of the most up-to-date version of the EHASP shall be maintained on-site at all times by the Contractor. The on-site copy shall contain the signature of the, Engineer and each on-site employee of the DCR, Contractor, and Subcontractors involved with on-site activities. The employee's signature on the EHASP shall be deemed prima facie evidence that the employee has read and understands the plan. Updated copies of signature sheets shall be submitted to the Engineer.

E. The EHASP shall specify a Contractor Site Safety and Health Officer responsible for implementation of the EHASP and to oversee all construction activities, including handling, storage, sampling, and transport, which require contact with or exposure to potentially hazardous materials.

F. The level of protection required to ensure the health and safety of on-site personnel will be stipulated in the EHASP. The Site Safety and Health Officer shall implement the EHASP based on changing site and weather conditions, type of operation or activity, chemical compounds identified on-site, concentration of the chemicals, air monitoring data, physical state of the hazardous materials, potential duration of exposure to hazardous materials, dexterity required to perform work, decontamination procedures, necessary personnel and type of equipment to be utilized.

G. During implementation of the EHASP, a daily log shall be kept by the Site Safety and Health Officer and a copy shall be provided weekly to the Engineer. This log shall be used to record a description of the weather conditions, levels of personal protection being employed, screening data and any other information relevant to on-site environmental safety conditions. The Site Safety and Health Officer shall sign and date the daily log.

3.02 PERSONAL PROTECTION LEVEL C UPGRADE

A. The work shall consist of providing appropriate personal protective equipment (PPE) for all personnel in an area either containing or suspected of containing a hazardous environment.

B. Contingencies for upgrading the level of protection for on-site workers will be identified in the EHASP and the Contractor shall have the capability to implement the personal protection upgrade in a timely manner. The protective equipment and its use shall be in compliance with the EHASP and all appropriate regulations and/or standards for employee working conditions.

3.03 LICENSED SITE PROFESSIONAL SERVICES

A. A Licensed Site Professional (LSP) shall be required to provide the services necessary to comply with the requirements of the MCP. These services may include sampling, analysis and characterization of potentially contaminated media, preparation of Immediate Response Action (IRA) Plans, Utility-Related Abatement Measure (URAM) and Release Abatement Measure (RAM) Plans, Imminent Hazard Evaluations, status reports, transmittal forms, release notification forms, risk assessments, completion statements, and related documents required pursuant to the Massachusetts Contingency Plan (MCP). LSP hours related to the characterization and disposal of contaminated soil and/or sediment are incidental to the disposal items. An estimate of LSP services to be provided shall be submitted to the Engineer for approval before any LSP activity begins.

B. The name and qualifications of the LSP and all environmental technicians to be assigned to the project shall be submitted to the Engineer for approval at least four weeks prior to initial site activities. The LSP shall have a current, valid license issued by the Massachusetts Board of Registration of Hazardous Waste Site Cleanup Professionals. The LSP shall have significant experience in the oversight of MCP activities at active construction sites. Qualification packages for the LSP and each technician shall include a resume, all recent work assignments with responsibilities identified (previous 5 years), and applicable training and certifications. A list of all Notices of Noncompliance, Notice of Audit Findings and Enforcement Orders issued by the DEP shall be submitted for all work assignments listed for the LSP and environmental technicians.

C. The LSP shall evaluate soil and/or sediment with discoloration, odor, and presence of petroleum liquid or sheening on the groundwater surface, or any abnormal gas or materials in the ground which are known or suspected to be oil or hazardous materials. Excavated soil and sediment which is suspected of petroleum contamination shall be field screened using the jar headspace procedures according to established DEP Guidance. All field screening equipment shall be pre-approved by the Engineer. The LSP shall ensure proper onsite calibration of all field screening instrumentation.

D. The Engineer shall be contacted immediately when observations or any field screening results verify contamination requiring further analysis, and/or enhanced management of suspect soil and/or sediment. Any enhanced management of contaminated soil to ensure proper stockpiling and storage is incidental to the LSP Services item. The LSP shall adequately characterize subsurface conditions prior to backfill in areas where contaminated material has been excavated. The Engineer shall approve the locations of the testing sites prior to the sampling.

E. Contaminated soil, sediment and/or groundwater shall be handled in accordance with all applicable state and federal statutes, regulations, and policies. The LSP shall adequately characterize contaminated media for comparison to the requirements of the MCP. The Contractor and the LSP shall be aware of the reporting requirements for releases of oil and/or OHM) as set forth in federal and state laws and regulations, and shall both be held responsible for performing the work in accordance with all applicable Federal and State laws and regulations. The LSP shall maintain written records in a clear and concise format which tracks the excavation, stockpiling, analysis and reuse/disposal of all suspect contaminated soils, sediments, and groundwater. These records shall be up-to-date and available to the Engineer on a bi-weekly basis. The LSP shall review and summarize the laboratory data from any analyses performed on contaminated media. A report shall be delivered to the Engineer outlining the material sampling methods, laboratory analysis results and proposed course of action. The laboratory report together with Chain of Custody forms for all analytical results shall be submitted to the Engineer within 14 days after completion of such analyses.

F. The LSP and Contractor shall be held responsible for the submission of all MCP-related documents to the Engineer at least 14 days in advance of any timeframe specified in the MCP and for the timely submission of data and tracking information as noted within this Item. All documents prepared under this Item shall be reviewed and signed by the approved LSP. The Contractor and LSP shall be responsible for all fines, penalties and enforcement requirements imposed by applicable regulatory agencies for failure to meet regulatory and contract timeframes. No compensation will be provided for such fines, penalties, and enforcement actions.

G. The Contractor and the LSP shall be aware of the reporting requirements for releases of oil and/or OHM as set forth in federal and state laws and regulations, and shall both be held responsible for performing the work in accordance with all applicable Federal and State laws and regulations.

H. If the Contractor causes a release of OHM, the Contractor shall be responsible for assessing and remediating the release in accordance with all pertinent State and Federal regulations, including securing the services of an LSP, at his own expense.

I. The LSP shall coordinate all activities involving both the DCR and the DEP through the Engineer. Any notification of release shall be approved by the Engineer before submittal to the DEP, except if an imminent hazard condition exists as defined in 309 CMR 4.03(4)(b).

J. Laboratory testing provides for analytical testing in support of LSP services related to maintaining MCP compliance, such as delineating the extent and type of contamination present. Sampling and testing for disposal purposes are not included.

K. In order to maintain compliance with the MCP or other regulatory requirements, the LSP shall request approval from the Engineer to obtain samples from various locations and depths within the project area and to perform laboratory analyses on those samples. The samples shall be delivered to a DEP-certified laboratory using proper chain-of-custody documentation for analyses which, depending upon site conditions and suspected and/or identified contaminants of concern, may include, but are not limited to, metals, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), pesticides, polycyclic aromatic hydrocarbons (PAHs), extractable petroleum hydrocarbons (EPHs) and volatile petroleum hydrocarbons (VPHs). Subsequent testing, depending upon initial results, may be required for Toxicity Characteristic Leaching Procedure (TCLP) analyses (EPA Method 1311) for metals.

3.04 SOIL CHARACTERIZATION/MANAGEMENT

A. Excavated Materials Management Plan

1. Prepare an Excavated Materials Management Plan with

a. Detailed plan for the handling of all surplus soils including:

i. Proposed disposal, reuse, or recycling destinations and written facility approvals from each facility for each class of soil for off-site disposal.

ii. List of required permits, permit applications and final permits.

iii. Procedures and protocols for sampling, handling, and testing of soil.

B. Field Screening

1. Following generation of soil planned for off site disposal, the Contractor's Environmental Consultant shall:

a. field screen soil for the presence of volatile organic compounds (VOC) and petroleum hydrocarbons on a representative composite sample of each 50 cubic yards of excavated soil.

2. If contaminated materials are found in areas not yet identified, stop work and immediately notify the Engineer.

C. Excavation and Handling of Soil

1. Segregate soils during generation of drilled shaft spoils and urban fill mechanical screening for soil characterization and identification of disposal facility.

D. Transport of Excess Soil

1. Transport soils in covered dump trailers.

2. If necessary, transport excess soils under a Material Shipping Record or Bill of Lading.

E. Disposal of Excess Soil

1. All excess soils generated by execution of the drilled shafts and mechanical screening of the urban fill shall be disposed, reused or recycled at facilities meeting the requirements of 310 CMR 40.0030 and in accordance with this section.

2. Provide complete Material Shipping Records or Bill of Ladings and submit to the DCR for review and signature as Generator at least 3 days prior to offsite transport of soil.

3.05 CONTAMINATED MATERIAL DISPOSAL

A. The work under this Section shall include the transportation and disposal of contaminated material that has been generated from the drilled shaft spoils and urban fill that has been excavated, mechanically screened, stockpiled and planned

for off site disposal. It shall also include any additional laboratory analyses required by a particular disposal facility beyond the standard disposal test set.

B. Contaminated soils shall be disposed of in a manner appropriate for the soil classification and in accordance with the applicable laws of local, state, and federal authorities.

C. The Contractor shall be responsible for identifying a disposal facility(s) licensed to accept the class of contaminated soils to be managed and assure that the facility can accept the anticipated volume of soil contemplated by the project.

D. The Contractor shall be responsible for hiring a Licensed Site Professional (LSP) and all ancillary professional services including laboratories as needed for this work. The Contractor will be responsible for obtaining all permits, approvals, manifests, waste profiles, Bills of Lading, etc. subject to the approval of the Engineer prior to the removal of the contaminated soil from the site. The Contractor and LSP shall prepare and submit to the Engineer for approval all documents required under the Massachusetts Contingency Plan (MCP) and related laws and environmental regulations to conduct characterization, transport, and disposal of contaminated materials.

E. The Contractor and its LSP shall determine if soil excavated or soil to be excavated and planned for off-site disposal is unregulated soil or contaminated soil as defined in this section. Such materials planned for off-site disposal shall be given a designation for purposes of reuse or disposal based on the criteria of the Massachusetts Contingency Plan (MCP).

F. The Contractor shall submit to the DCR the proposed disposal area for unregulated soils for approval. If such a disposal area is not a licensed disposal facility, the Contractor shall submit to the Engineer analytical data to characterize the disposal area sufficiently to verify that the unregulated material generated within the construction project limits is equal to or less than the contaminant levels at the disposal site and meets the non-degradation requirements of the MCP. In addition, the Contractor shall provide written confirmation from the owner of the proposed disposal area that s/he has been provided with the analytical data for both the materials to be disposed as well as the disposal site characterization and that s/he agrees to accept this material. **A Material Shipping Record or Bill of Lading, as appropriate, shall be used to track the off-site disposal of unregulated soil and a copy, signed by the disposal facility or property owner, shall be provided to the Engineer in order to document legal disposal of the unregulated material.**

G. Complying with the requirements for the Management of Remediation Waste in 310 CMR 40.0030. Prior to the transportation of surplus soil off site, submit analytical data, and approval from the receiving facility, and approval of the

Contractor's Environmental Consultant. The DCR reserves the right to reject the selected disposal facility.

H. All material transported off-site shall be loaded by the Contractor into properly licensed and permitted vehicles and transported directly to the selected disposal or recycling facility and be accompanied by the applicable shipping paper. At a minimum, truck bodies shall be structurally sound with sealed tail gates, and trucks shall be lined, and loads covered with a liner, which shall be placed to form a continuous waterproof tarpaulin to protect the load from wind and rain.

3.06 MONITORING/SAMPLING/TESTING REQUIREMENTS

A. The Contractor shall be responsible for monitoring, sampling, and testing during and following excavation of contaminated soils to determine the specific class of contaminated material. Additional sampling and analysis may be necessary to meet the requirements of the disposal facility license. The cost of such additional sampling and analysis shall be included in the bid cost for the applicable disposal items.

B. The Contractor shall obtain sufficient information to demonstrate that the contaminated soil meets the disposal criteria set by the receiving facility that will accept the material.

C. No excavated material will be removed for off-site disposal until the results of chemical analyses have been received and the materials have been properly classified. The Contractor shall submit to the Engineer results of field and laboratory chemical analyses tests within seven days after their completion, accompanied by the classification of the material determined by the Contractor, and the intended disposition of the material. The Contractor shall submit to the Engineer for review all plans and documents relevant to LSP services, including but not limited to, all documents that will be submitted to the DEP.

D. Copies of the fully executed Weight Slips/Bills of Lading/Manifests/Material Shipping Records or other material tracking form received by the Contractor from each disposal facility and for each load disposed of at that facility, shall be submitted to Engineer and the Contractor's LSP within three (3) days of receipt by the Contractor. The Contractor is responsible for preparing and submitting such documents for review and signature by the LSP or other appropriate person with signatory authority, three (3) days in advance of transporting soil off-site. The Contractor shall furnish a form attached to each manifest or other material tracking form for all material removed off-site, certifying that the material was delivered to the site approved for the class of material.

3.07 DECONTAMINATION OF EQUIPMENT

A. Tools and equipment which are to be taken from and reused off site shall be decontaminated in accordance with applicable local, state, and federal regulations. This requirement shall include, but not be limited to, all tools, heavy machinery and excavating and hauling equipment used during excavation, stockpiling and handling of contaminated material. Decontamination of equipment is considered incidental to the applicable excavation item, Item 180.4, and this Item.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for ENVIRONMENTAL HEALTH AND SAFETY PROGRAM will be made on a LUMP SUM basis for the implementation of the Environmental Health and Safety Program.

B. Measurement for PERSONAL PROTECTION LEVEL C UPGRADE will be made on a per HOUR basis. This measurement shall be per worker required in Level C personal protection.

C. Measurement for LICENSED SITE PROFESSIONAL SERVICES will be made on a per HOUR basis of service per person provided by LSP, Environmental Technicians and other approved personnel.

D. Measurement for DISPOSAL OF UNREGULATED SOIL will be made on a per TON basis for contaminated materials removed from the site and transported to and disposed of at an approved location or licensed facility. Disposal of contaminated soil shall be measured for payment by the TON of actual and verified weight of contaminated materials removed and disposed of. The quantities will be determined only by weight slips issued by and signed by the disposal facility.

E. Measurement for DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY will be made on a per TON basis for contaminated materials removed from the site and transported to and disposed of at an approved in-state facility. Disposal of contaminated soil shall be measured for payment by the TON of actual and verified weight of contaminated materials removed and disposed of. The quantities will be determined only by weight slips issued by and signed by the disposal facility.

F. Measurement for DISPOSAL OF REGULATED SOIL – OUT-OF-STATE FACILITY will be made on a per TON basis for contaminated materials removed from the site and transported to and disposed of at an approved out-of-state facility. Disposal of contaminated soil shall be measured for payment by the TON of actual and verified weight of contaminated materials removed and disposed of.

The quantities will be determined only by weight slips issued by and signed by the disposal facility.

G. Measurement for DISPOSAL OF HAZARDOUS WASTE will be made on a per TON basis for hazardous waste removed from the site and transported to and disposed of at the licensed hazardous waste facility. Disposal of hazardous waste shall be measured for payment by the TON of actual and verified weight of hazardous materials removed and disposed of. The quantities will be determined only by weight slips issued by and signed by the disposal facility.

4.02 PAYMENT

A. Excavations outside the established pay limits and as shown on the Plans will be considered as made either through error or the Contractor's convenience and will not be included for payment under any item, nor will refilling with the required backfill be included for payment under any item.

B. The quantity and type of laboratory tests recommended by the Contractor and not required for disposal facility requirements shall be approved by the Engineer beforehand. The contractor will be reimbursed upon satisfactory written evidence of payment. The contractor may be required to obtain cost estimates from three DEP certified laboratories for the Engineer to choose the service provider. Laboratory testing related to soil/sediment disposal (disposal characterization, landfill acceptance, disposal package preparation, etc.) shall be incidental to disposal items.

C. Payment for ENVIRONMENTAL HEALTH AND SAFETY PROGRAM will be at the LUMP SUM contract price. This price shall include full compensation for the preparation and implementation of the Environmental Health and Safety Program, including the monitoring, protection, and storage of all contaminated materials, as well as subsequent modifications to the EHASP. Payment of 50% of the Environmental Health and Safety Program contract price will be made upon the initial acceptance of the EHASP by the Engineer. Payment of the remaining 50% of the Environmental Health and Safety Program contract price will be made upon completion of the work. The bid price shall include preparation and implementation of the EHASP as well as the cost for its enforcement by the Site Safety and Health Officer along with any necessary revisions and updates.

D. Payment for PERSONAL PROTECTION LEVEL C UPGRADE will be made at the per HOUR contract price, per worker, upon upgrade to Level C. No payment will be made to the Contractor to provide Level D PPE.

E. Payment for LICENSED SITE PROFESSIONAL SERVICES will be made at the per HOUR contract price. This price shall include full compensation for hours of service provided by LSP, Environmental Technicians and other approved

personnel. Travel time shall not be included in the billable hours. LSP hours related to soil/sediment disposal (disposal characterization, landfill acceptance, disposal package preparation, etc.) shall be incidental to disposal items.

F. Payment for DISPOSAL OF UNREGULATED SOIL will be made at the per TON contract price. This price shall include full compensation for contaminated materials removed from the site and transported to and disposed of at an approved location or licensed facility, and includes all costs for approvals, permits, fees and taxes, additional testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal. The most cost-effective, legal disposal method shall be used.

G. Payment for DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY will be made at the per TON contract price. This price shall include full compensation for contaminated materials removed from the site and transported to and disposed of at an approved in-state facility, and includes all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal. The most cost-effective, legal disposal method shall be used.

H. Payment for DISPOSAL OF REGULATED SOIL – OUT-OF-STATE FACILITY will be made at the per TON contract price. This price shall include full compensation for contaminated materials removed from the site and transported to and disposed of at an approved out-of-state facility, and includes all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal. The most cost-effective, legal disposal method shall be used.

I. Payment for DISPOSAL OF HAZARDOUS WASTE will be made at the per TON contract price. This price shall include full compensation for hazardous waste removed from the site and transported to and disposed of at the licensed hazardous waste facility, and includes all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal. The most cost-effective, legal disposal method shall be used.

4.03 PAYMENT ITEM

Payment will be made under:

ITEM	DESCRIPTION	UNIT
02280.01	ENVIRONMENTAL HEALTH AND SAFETY PROGRAM	LUMP SUM

02280.02	PERSONAL PROTECTION LEVEL C UPGRADE	HOUR
02280.03	LICENSED SITE PROFESSIONAL SERVICES	HOUR
02280.04	DISPOSAL OF UNREGULATED SOIL	TON
02280.05	DISPOSAL OF REGULATED SOIL IN-STATE FACILITY	TON
02280.06	DISPOSAL OF REGULATED SOIL OUT-OF-STATE FACILITY	TON
02280.07	DISPOSAL OF HAZARDOUS WASTE	TON

END OF SECTION

SECTION 02360
DRILLED SHAFTS

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

A. Include the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) *Standard Specifications for Highways and Bridges* and the *Supplemental Specifications*.

1.02 DESCRIPTION OF WORK

A. This Section specifies requirements for the following types of work and related items, but is not limited to:

1. Drilling and installation of drilled shafts including locations, diameters of shafts, bottom elevations, and details of construction. This provision governs the construction of Drilled Shafts being a reinforced concrete section cast-in-place against permanent steel casing.

2. Design and construction of the drilled shaft support system for the proposed light towers within the park, excavation method and excavation support system; material disposal; control and disposal of ground, surface, and construction water; and site restoration. Work areas shall be fenced and barricaded from public access. Construction of the drilled shafts shall be in accordance with the details and dimensions shown on the plans and this specification.

3. Within the northern half of the park that includes the parking lot and splash pad area, 30-inch diameter drilled shafts for the light poles shall extend to a minimum depth of 10 feet. One 2-pole decorative light location (C-2 and C-3) will be supported by a single 42-inch diameter drilled shaft. If miscellaneous unsuitable fill material (i.e. decomposed wood) is encountered at 10 feet, then the drilled shaft will be extended beyond the depth of the fill material.

4. Within the lower 1.5 acres of the park the drilled shafts shall extend a minimum of 1 foot into the Boston Blue Clay Crust layer. At the decorative 3-pole light cluster location (C-8, C-9 and C-10) four 24-inch diameter reinforced concrete drilled shafts will provide lateral resistance tied together in a 2 feet thick reinforced concrete pier cap. Drilled shafts for each single light pole shall be supported by one 30-inch diameter drilled shaft.

B. Survey of Drilled Shafts Locations

1. The Contractor shall employ an approved Licensed Massachusetts Land Surveyor to field locate the positions of the Drilled Shafts as shown in the contract documents. A certified copy of the survey, lines, and levels shall be established. Drilled Shafts centerline locations shall be staked and maintained by the Licensed Massachusetts Land Surveyor provided by the Contractor.

2. The Contractor will be responsible for the accuracy of location and positioning of each Drilled Shaft. Any errors in setting out and any consequential loss to the Client will be made good by the Contractor to the satisfaction of the Engineer.

C. Tolerances

1. Construct Drilled Shafts at the light pole locations shown on the plans and within the tolerances specified herein. If tolerances are exceeded, the Engineer may require corrective measures to meet the tolerances specified. Construct the Drilled Shafts such that the axis at the top of the light structure is no more than 3 inches in any direction from the position shown in the plans. Build Drilled Shafts within 2% of the plumb deviation for the total length of the shaft. Verify the plumbness of the Drilled Shafts excavations by an accurate procedure, such as an inclinometer on the Kelly bar or other approved techniques. Construct the finished top of shaft elevation a minimum of 6-inches into the bottom of the pier cap as shown on the Contract Drawings.

2. Should Drilled Shafts be installed outside these tolerances affecting the design of the structure, the Contractor, at his own time and cost, shall propose and carry out immediate corrective measures subject to the approval of the Engineer.

1.03 PREQUALIFICATION AND EXPERIENCE REQUIREMENTS

A. Submit documentation that the Drilled Shafts Contractor has successfully completed at least five Drilled Shafts projects within the last 3 years with diameters, lengths, and subsurface conditions similar to those anticipated for this project. Documentation shall include the General Contractor and Owner’s name and current contact information with descriptions of each past project. Also, submit documentation of

experience with dry and wet placement of concrete and the use of temporary casing or slurry.

1.04 REFERENCES

A. Publications listed below form a part of this specification to extent referenced. Publications are referenced in text by basic designation only.

1. American Society for Testing and Materials (ASTM)

- A36/A36M-05 - Standard Specification for Carbon Structural Steel
- A283/A283M-03 - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
- A615/A615M-06a - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
- A996/A996M-06a - Standard Specification for Rail-Steel and Axle-Steel Deformed and Bars for Concrete Reinforcement
- C33-03 - Standard Specification for Concrete Aggregates
- C94/C94M-05 - Standard Specification for Ready-Mixed Concrete
- C150-05 - Standard Specification for Portland Cement
- C494/C494M-05a - Standard Specification for Chemical Admixtures for Concrete
- C618-05 - Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
- C989-05 - Standard Specification for Ground Granulated Blast-Furnace Slag for Use in Concrete and Mortars
- C1017/C1017M-03 - Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete

2. American Concrete Institute (ACI)

- 211.1-91 (2002) - Standard Practice for Selecting Proportions for Normal, Heavyweight and Mass Concrete
- 301-05 - Specifications for Structural Concrete
- 315-99 - Details and Detailing of Concrete Reinforcement Structures.

3. American Welding Society (AWS)

- D1.1 (2006) - Structural Welding Code – Steel

1.05 SUBMITTALS

A. Within 60 days after receiving Notice to Proceed, the Contractor/Subcontractor, pre-qualified for the design and construction of the Drilled Shafts foundation support system for the light poles, shall submit working drawings prepared, stamped, and signed by a Professional Engineer registered in Massachusetts. The working drawings shall show all details clearly to allow an expeditious review of the proposed construction procedure by the Engineer.

B. Submit Samples and Shop Drawings

1. Before beginning work, submit a detailed location plan and description of the proposed method of Drilled Shaft installation, all of which shall be subject to the review and approval of the Engineer.

2. Shop Drawings shall comply with ACI 315, “Details and Detailing of Concrete Reinforcement”. Furnish shop drawings prepared by a Professional Engineer licensed in Massachusetts for detailing, fabricating, bending, and placing concrete reinforcement.

3. Reinforcing steel shop drawings and details of reinforcement placement shall include bracing, centering, and lifting methods and the method for supporting the reinforcement on the bottom of the shaft excavation. Include details for ensuring the reinforcing cage position is maintained during construction.

C. Reports

1. Drilled Shafts Record: Data as specified.

2. Certified, “Drilled Shafts Field Record” for each Drilled Shaft record actual elevation of bottom, , final centerline, location of top, variation of shaft from plumb, result of all tests and observations performed, material type and actual allowable bearing capacity of bottom, levelness of bottom, seepage of water, still water level (if allowed to flood), variation of shaft diameter (from those shown); and evidence of seams, voids, or channels below bottom.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Steel Reinforcement: ASTM A 615/A 615M, or 996, Grade 60, deformed

B. Portland Cement: ASTM C 150, Type I or II

Select mineral or cementitious admixtures from two subparagraphs below if permitted. Ready-mix plant blends fly ash or slag with Portland cement.

C. Fly Ash/Slag

1. Fly Ash Admixture: ASTM C 618, Class C or F
2. Ground Granulated Blast Furnace Slag: ASTM C 989, Grade 100 or 120.

D. Normal Weight Aggregate: ASTM C 33, uniformly graded, 19 mm (3/4 in) maximum aggregate size.

E. Water; Portable, complying with ASTM C 94/C94 M requirements.

F. Admixtures: Certified by manufacturer to contain no more than 0.1 percent water soluble chloride ions by mass of cementitious material and to be compatible with other admixtures and cementitious materials. Do not use admixtures containing calcium chloride.

1. Water-Reducing Admixture: ASTM C 494, Type A.
2. Water Reducing and Retarding Admixture: ASTM C 494, Type D.
3. High-Range, Water-Reducing Admixture: ASTM C 494, Type G.
4. Plasticizing and Retarding Admixture: ASTM C 1017, Type II

G. Concrete Mix: Prepare design mixes according to ACI 211.1 and ACI 301 for each type and strength of concrete determined by either laboratory trial mix or field test data bases. Use a qualified testing agency for preparing and reporting proposed mix designs for laboratory trial mix basis. Proportion mixes according to ACI 211.1 and ACI 301 to provide normal-weight concrete with the following properties.

1. Compressive Strength (28 days): 4,000 psi
2. Minimum Slump: Capable of maintaining a slump of 5 in plus or minus 1 in.
3. Do not air-entrain concrete for drilled shafts.
4. Limit water soluble, chloride-ion content in hardened concrete to 0.15/0.3 percent by weight of cement.
5. Concrete-mix design adjustments may be considered if characteristics of materials, project conditions, weather, test results, or other circumstances warrant. Resubmission and approval of proposed changes to concrete mix proportions is the responsibility of the Contractor.

H. Concrete Mixing: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and furnish batch ticket information. Do not add water to concrete mix after mixing, unless a procedure following ACI 301 is submitted to, and approved by the Engineer. Maintain concrete temperature less than 32 degree Celsius (90-degree Fahrenheit).

I. Permanent Steel Casing: Steel Casing shall be ASTM A252, Grade 2 or ASTM A36 Pipe.

PART 3 - EXECUTION

3.01 GENERAL

A. The Drilled Shafts constructed in conformance with this Specification and as shown on the Contract Drawings shall have reinforced steel cages that are placed vertically in predrilled holes and backfilled with structural concrete. The Drilled Shafts will be installed at the locations shown on the Contract Drawings.

B. Size: Minimum sizes and types of Drilled Shafts are shown on the Contract Drawings. Proposal to use shafts of sizes and types different from those shown on the Contract Drawings may be accepted if submitted in writing to the Engineer for approval and provided the following conditions are met:

1. Least dimension of shaft is equal to or greater than least dimension shown.
2. Entire Drilled Shaft receives full lateral support from surrounding material.

C. Changes: Requests for change in size or type of the Drilled Shafts from those shown shall be accompanied by calculations and other documentation prepared and stamped by a licensed Massachusetts Professional Engineer necessary to show that proposed changes will meet load requirements. Do not proceed with changes before receiving written approval from Engineer.

D. Defective Casings: Do not install buckled, distorted or otherwise damaged casings. Replace casings damaged or disturbed during construction, casings that are not mud-tight or otherwise not in accordance with drawings or specifications, at no additional cost to the DCR.

E. Survey: Registered Massachusetts Professional Land Surveyor or Registered Civil Engineer, specified in Section, GENERAL REQUIREMENTS, shall establish lines and levels and stake Drilled Shafts locations.

3.02 EXCAVATION

A. Excavation and construction methods shall result in minimum disturbance of surrounding material and full lateral support of Drilled Shafts by surrounding material.

B. It is anticipated that the drilled shafts may encountered obstructions such as wood, concrete and other construction demolition debris landfilled on the site in advancing the drilled shaft to the required depth. A pilot hole shall be drilled at each drilled shaft

location to locate obstructions that would prevent the advance of the drilled shaft casing to the required depth.

C. Excavate Drilled Shafts to dimensions and required bearing strata or elevations shown on Contract Drawings. Maintain sidewall stability during drilling. Drilled Shaft drilling equipment shall have the minimum torque capacity and downward force capacity for the contract site conditions. Bottoms of Drilled Shafts shall be cleaned of loose or soft materials and leveled. All material removed from the Drilled Shaft holes shall be removed from the ground around the casing before concrete placement is started and shall be disposed of off-site in accordance with Section 02280 – EXCAVATED SOIL MANAGEMENT.

3.03 PLACING CONCRETE

A. Before placing concrete, the tip of the Drilled Shafts shall be observed and approved by a qualified testing agency registered and licensed in Massachusetts. The testing agency shall be retained by the Contractor and approved by the Engineer. The shaft shall be inspected, cleared of mud, water, loose material, and debris.

B. Place concrete using a down pipe to direct flow of concrete. Except in the presence of water, concrete may fall freely, up to a maximum height of 6.0 feet provided the concrete does not hit the sides of the Drilled Shafts. Use a tremie pipe or pump, if the distance is greater than 6.0 feet.

C. Concrete placement in each shaft shall be one continuous operation. If placing operations shall be stopped, leave surface approximately level. If concrete has hardened, clean surface and flush with a 1-to-1 cement sand grout before placing operation is resumed. Concrete pours shall not begin within one hour of darkness. In the event that this type of continuous sequential operation cannot be performed, the Contractor shall submit, for approval by the Engineer, a method of securing the open excavation. The Contractor shall not leave excavations open overnight without receiving prior written approval from the Engineer.

D. When water is present, control water level to within 2 inches of bottom of the Drilled Shafts by pumping. If impossible or impractical to control water, secure written permission from the Engineer to place concrete through water by means of a watertight tremie pipe.

1. When placing concrete under water, discharge end of tremie shall be submerged in fresh concrete and shaft of tremie maintained full of concrete to a point above water level.
2. Increase cement content of concrete required to be placed in water by one sack per cubic yard of concrete.

3.04 DRILLED SHAFTS RECORD

A. For each Drilled Shaft installed submit to Engineer for approval a certified report recording following information prepared by a Massachusetts Registered Professional Land Surveyor or Registered Professional Engineer.

1. Drilled Shaft number, length, and bearing material.
2. Location.
3. Concrete and steel reinforcement properties.
4. Plumbness.

B. Dates.

1. Excavation completed
2. Concrete placed

C. Diameters.

1. Top of shaft
2. Bottom of shaft

D. Elevations.

1. Top of ground
2. Top of concrete
3. Bottom of Drilled Shafts

3.05 CLEAN UP

A. All debris from excavation of objectionable material, obstructions, and any material not to remain as part of the construction are to be removed and disposed of by the Contractor in a legal manner at no additional cost to the DCR.

B. The site shall be cleaned at frequent intervals and no material shall be stored on the site in a manner that could obstruct the easy access of equipment and personnel.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for DRILLED SHAFT EXCAVATION will be made on a per LINEAR FOOT basis, determined by the diameter of shaft shown on the plans installed and accepted by the Engineer in compliance with the Contract Drawings and Specifications.

B. Measurement for DRILLED SHAFT will be made on a per LINEAR FOOT basis, determined by the diameter of shaft, cement concrete and steel reinforcing shown on the plans installed and accepted by the Engineer in compliance with the Contract Drawings and Specifications.

C. Measurement for PERMANENT CASING will be made on a per LINEAR FOOT basis and shall include the permanent casing of the diameter shown on the plans furnished, installed, and accepted by the Engineer in compliance with the Contract Drawings and Specifications.

4.02 PAYMENT

A. The Contractor shall anticipate encountering obstructions as noted herein and shall utilize equipment and methods necessary to advance through or remove the obstructions. The presence of obstructions, any lost production, replacement shafts, and the removal of obstructions, if necessary, shall not be measured or paid for separately. Any costs associated with the presence of obstructions shall be considered incidental to the Drilled Shaft Excavation Item.

B. Payment for DRILLED SHAFT EXCAVATION will be at the per LINEAR FOOT contract price. This price shall include full compensation for drilled shaft excavation, temporary casing, water control, removal from the site and disposal of excavated materials, using slurry as necessary, tools and drilling equipment to excavate the shaft, and furnishing all other labor, materials, and equipment necessary to complete the drilled shaft excavation. If larger diameter shaft excavation than that specified on the plans is performed at the Contractor's option, no additional compensation will be provided to perform this oversized drilled shaft excavation.

C. Payment for DRILLED SHAFT will be at the per LINEAR FOOT contract price. This price shall include full compensation for all materials, labor, tools, equipment, and all other incidental work necessary to complete the work of this item in accordance with the Contract Drawings and Specifications and as herein specified.

D. Payment for PERMANENT CASING will be at the per LINEAR FOOT contract price. This price shall include full compensation for permanent casings, labor, materials, tools, equipment, and all other incidental work necessary to complete the work of this item in accordance with the Contract Drawings and Specifications and as herein specified.

4.03 PAYMENT ITEM

Payment will be made under:

ITEM	DESCRIPTION	UNIT

02360.01	DRILLED SHAFT EXCAVATION	FOOT
02360.02	DRILLED SHAFTS	FOOT
02360.03	PERMANENT CASINGS	FOOT

END OF SECTION

SECTION 02375

WATERFRONT STEEL SHEET PILES

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. The Work covered by this Section of these Specifications consists of furnishing all plant, labor, supervision, equipment, appliances, and materials and in performing all operations in connection with the construction of the bulkhead, all in strict accordance with this Section of the Specifications and the applicable drawings, and subject to the terms and conditions of the Contract.

B. The work includes, but is not limited to, the following items:

1. Steel sheet Piling, Epoxy Coated
2. Steel Sheet Piling Cap and Cap Connections, Epoxy Coated
3. Steel Sheet Piling Connectors, Epoxy Coated
4. Steel Sheet Piling Custom Fabricated Sheets, Epoxy Coated
5. Steel Sheet Piling Closures (Beams and Angles), Epoxy Coated
6. Outfall Channel Framing, Epoxy Coated
7. Utility Penetrations
8. Other elements related to the steel sheet pile bulkhead installation not otherwise identified.

1.02 REFERENCE SECTIONS

1. Specification Section 05110: Waterfront Structural Steel
2. Specification Section 05510: Waterfront Miscellaneous Metals
3. Specification Section 09905: Waterfront Protective Coating

1.03 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.

B. DCR, through the Engineer, reserves the right of approval of the subcontractor pre-qualified and selected for this portion of the Work by the Contractor. Approval will be based, in part, on documented successful experience in performing work of a similar nature.

C. Driving of additional piles at the Contractor's own expense may be required by the Engineer in the event tolerances are exceeded. Drive individual piles plumb within 2%, and in a manner that the completed wall appears vertical when viewed from any point.

D. The Engineer may elect to observe the shop fabrication of the steel sheet piling. The Contractor shall provide the fabrication schedule and allow access for the Engineer to perform this task.

E. DCR reserves the right to take samples from steel sheet pile material at the site for testing in order to verify compliance with the Specifications.

1.04 SUBMITTALS

A. Submit the pre-qualified list of subcontractors to the Engineer for review.

B. Upon receipt of the Engineer's review of the pre-qualified subcontractor, promptly submit sufficient technical data on the equipment necessary to accurately measure and record pile penetration and capacity during the entire driving of each pile.

C. Submit a detailed Work Plan for review by the Engineer that includes the following:

1. Written description of the means and methods necessary to install the steel sheet piles plumb and straight and protect coating.
2. Falsework layout and temporary bracing plan.
3. Layout plan of steel sheet piles including shop drawings and bill of materials. Provide details of all corners and transitions.
4. Shop drawings of all temporary shoring and falsework components including calculations that demonstrate adequacy of such temporary work.

D. Steel sheet piles shall not be installed until the work plan is reviewed and no exceptions taken by the Engineer.

E. Submit steel certificates for review no later than the time of delivery of materials to the site.

F. Submit three (3) copies of pile driving records within 24 hours of installation.

1.05 PRODUCT DELIVERY AND STORAGE

The Contractor shall notify the Engineer 24 hours in advance of delivery of steel sheet piles. Contractor guarantees that steel sheet piles shall be handled in such a manner as to not induce stresses which will damage the materials and shall be stored in a safe manner within designated areas provided on the site.

PART 2 - PRODUCTS

2.01 STEEL SECTIONS

A. Steel Sheet Pile - AZ Sections

1. Steel sheet piling shall be as manufactured by Arbed or equivalent as accepted by the Engineer. Sections shall be as indicated on the Contract Drawings. Steel grade shall be ASTM A572, Grade 50 steel. Sheet pile length to be as shown on the Drawings.
2. Subject to review of the Engineer, the Contractor may substitute higher section modulus piles at its option to facilitate driving at no additional cost to DCR.
3. Steel sheet pile sections shall be shop fabricated by “hot-rolled” process. Steel sheet piles (referred to as “singles”) shall be shop fabricated from a single piece of stock, which is formed into the completed unit by the hot rolling process. “Singles” may be shop assembled (into units referred to as “doubles”) after coating and prior to shipping to the site.

B. Welding - Special Conditions

1. Welding will be permitted only where specially fabricated pieces are required as shown on the Drawings, where field welds are scheduled, or where acceptable to the Engineer.
2. Welding shall conform to AWS D1.1 – Steel. Electrodes shall be in accordance with AWS A5.1 or A5.5.

2.02PROTECTIVE COATING

A. Steel sheets and shall be coated for the top 10 feet on both sides in accordance with this specification.
B. Steel sheet pile closure beams shall be fully coated for the top 10 feet in accordance with this specification and Specification Section 09905, Waterfront Protective Coating.

C. Sheet pile connectors closure angles, outfall framing, steel caps, steel cap connection angles, and any other structural steel related to the steel bulkhead assembly shall be fully coated in accordance with this specification.
D. Material used for factory epoxy coating of all scheduled surfaces shall be Bar Rust 235 Multi-Purpose epoxy coating as manufactured by Devoe Coatings or equivalent accepted by the engineer of record.

2.03STEEL PILE PREPARATION

All holes are to be made in the piling prior to applying the epoxy coating detailed in Section 2.02, above, with the exception of holes to accommodate pipe sleeves for outlets and ground anchors. Field cut holes shall be carefully performed at the required locations in such a manner as to minimize damage to the coating. On completion of the welding of pipe sleeves, all damage to the coating is to be made good in accordance with these Specifications and to the satisfaction of the Engineer.

PART 3 - EXECUTION

3.01 EQUIPMENT

A. Drive the piles with air, diesel, or vibratory hammers with sufficient energy and energy transfer characteristics to drive the piles to the required toe levels without crippling pile heads.

B. Piles are to be located by temporary frames. The frames shall be rigidly located such as to keep the piles plumb and to line while being driven. Piles may be continuously or incrementally driven or driven singly or in pairs, as required to maintain the line and level of the completed bulkhead.

C. Take precautions to avoid contact of coated pile surfaces with components of leads and/or falsework. Install timber rub strips or similar items at contact areas as may be required to reduce the potential for damage of the coating during driving. All damage to the protective coating shall be repaired at the Contractor's expense.

D. Use suitable cushions or driving heads to avoid damage to the piles, developing proper total driving energy, and directing the energy along the longitudinal center of gravity of the pile.

1. Drive sheet piles to their full penetration without bending, rupturing or severely damaging the sheet piles.
2. If failure in any of the above respects is encountered, pull the sheet pile and drive a new pile at no additional cost to DCR.

3.02 PILE DRIVING

A. Drive the piles straight and true at indicated locations, with deviation from the longitudinal axis of not more than 1/4-inch per foot.

B. Provide the Engineer with a complete driving log with date of final installation and tip elevation. This log shall be submitted weekly and signed by a representative of the Contractor.

C. Plug all "lifting eye" holes in steel sheet piling per details on the Drawings.

D. Obstructions encountered in steel pile locations shall be dealt with as follows:

1. All rocks, timbers, pile stubs, or other obstructions at the ground surface (either above or under water) which interfere with driving of piles shall be removed at no additional cost of DCR.
2. In the case of an apparent obstruction below the ground surface but above anticipated full depth, which prevents appreciable penetration of a sheet pile, the abnormal condition will receive further consideration by the Project Engineer. Depending on the depth and resistance of the obstruction, the Project Engineer will decide whether to consider the sheet pile acceptable or order the obstruction removed. The decision may be deferred until the driving of adjacent sheets indicates the obstruction to be isolated or extending over the area of several sheets. If necessary, removal of obstructions 6 feet or less below the ground surface shall be performed by the Contractor at no additional cost to DCR.
   Care shall be taken in driving to avoid subjecting sheets to excessive or undue stress. Any sheet pile driven in the wrong position or damaged by reason of defects, or by driving, shall be withdrawn and replaced by a new sheet, or supplemented by a second sheet pile adjacent to the first. In either case, no payment shall be made for the unacceptable sheet pile.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02375-1 FURNISH AND INSTALL STEEL SHEET PILE BULKHEAD will be made on a per LINEAR FOOT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 02375-2 FURNISH AND INSTALL STEEL SHEET PILE CAP will be made on a per LINEAR FOOT installed basis for all work described

in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 02375-1 FURNISH AND INSTALL STEEL SHEET PILE BULKHEAD will be at the per LINEAR FOOT installed contract price. This price shall include full compensation for excavation, providing and installing steel sheet piling, terminations, closures, transitions, connectors, structural steel closure beams and angles, cutting to final elevation, weep drains, temporary bracing and templates shoring, structural backfill and drainage material, utility penetrations, utility penetration framing, support angles for adjacent structures, patching of lifting holes, protective coating, disposal of excess material, backfilling with structural backfill and the furnishing of all labor including testing, transportation, survey, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL STEEL SHEET PILE BULKHEAD as shown on the Drawings and as herein specified.

B. Payment for Item 02375-2 FURNISH AND INSTALL STEEL SHEET PILE CAP will be at the per LINEAR FOOT installed contract price. This price shall include full compensation for providing and installing the steel sheet pile bulkhead cap, including but not limited to cutting, connection angles, protective coating elements, disposal of excess material and the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL STEEL SHEET PILE CAP as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	**DESCRIPTION**	**UNIT**
02375-1	FURNISH AND INSTALL STEEL SHEET PILE BULKHEAD	LINEAR FOOT
02375-2	FURNISH AND INSTALL STEEL SHEET PILE CAP	LINEAR FOOT

END OF SECTION

SECTION 02470

WATERFRONT MICRO-PILES

PART 1 – GENERAL

1.01 DESCRIPTION OF WORK

A. The work to be done under this section shall consist of furnishing all labor and materials and performing all operations necessary to install micro-piles at the locations and to the required capacities and tip elevations indicated in the contract documents. The micro-pile specialty Contractor is responsible for furnishing of all design, materials, products, accessories, tools, equipment, services, transportation, labor and supervision, and manufacturing techniques required for design, installation, and testing of micropiles and pile top attachments for this project.

B. The work includes, but is not limited to, the following items:

1. Furnish and Install Micro-piles.
   a. The Contractor shall allow for all necessary operations including mats for drill rigs, scaffolding, platforms, handling equipment, tools machinery, etc. necessary for the expeditious handling of the work.

1.02 REFERENCE SECTIONS

A. Specification Section 09905: Waterfront Protective Coating

1.03 DEFINITIONS

A. Definitions that apply within this specification are:

1. Admixture: Substance added to the grout to control bleed and/or shrinkage, improve flowability, reduce water content, or retard setting time.
2. Bond Breaker: A device or special treatment incorporated into a length of a micro-pile that will allow no load to be transferred to the soil over that length. A bond breaker also provides full lateral support of the pile over the length of the bond breaker. Grout placed in contact with the soil using gravity pressure only will not be considered to constitute a bond breaker.
3. Bond Zone: The gravity-grouted, pressure-grouted, and/or post-grouted length of a micro-pile that provides the pile's capacity.
4. Casing: Steel tube introduced during the drilling process in overburden soil to temporarily stabilize the drill hole. This is usually withdrawn as the pile is grouted, although in certain types of micropiles, some casing is permanently left in place to provide added pile reinforcement.

5. Design Load: The load permitted on a pile.
6. Drill Casing: Steel pipe of flush joint type used in the drilling process to stabilize the drill hole.
7. Duplex Drilling: A method of progressing and cleaning out a hole for installing a micro-pile in which the outer drill casing is progressed simultaneously with an inner drill rod string. The drill casing is cleaned using reverse circulation. Intimate contact between the soil and an outer drill casing is maintained during drilling.
8. Extended Length: An additional pile length resulting from a requirement that the pile capacity be achieved below a given elevation. Typically, extended lengths are prompted by a conflict with subsurface elements (e.g., underground structure, utilities, etc.) or unreliable soil strata. Bond breakers may be required.
9. Free Length: The design length of the micro-pile that is not bonded to the surrounding ground or grout.
10. Micro-pile: A small-diameter (typically less than 12 inches) friction pile formed by removing material using non-vibratory and non-displacement methods to create a cased open, cylindrical hole in the ground, which is subsequently filled with grout and steel reinforcement.
11. Secondary casing: a.k.a. “Mill Rejects, will not be accepted.
12. Non-production Pile: Non-production piles are piles that are not incorporated into the substructure. For example, test piles, which are abandoned after testing has been completed.
13. Permanent Casing: A steel casing installed in the upper portion of a micro-pile to increase the pile's moment capacity and lateral capacity against horizontal loads.
14. Positive circulation or flush: A method of progressing and cleaning out a hole for a micro-pile wherein drilling fluid is injected into the hole and returns upward along the outside of the drill casing.
15. Post grouting: A method used to increase pile capacity after the grout column has reached initial set by pumping grout at very high pressure (up to 1000 psi) through a sleeved port pipe (post grout tube).
16. Pressure grouting.: A method used to develop pile capacity wherein pressure is applied continuously to the top of the fluid grout column through the drill head as the casing is removed from the bond zone.
17. Production pile: A pile, which will be incorporated into the structure's foundation.
18. Recirculation: A method of handling drilling fluid where the fluid coming back out of the hole is captured in a pan and reused.

19. Reverse Circulation: A method of cleaning the inside of the drill casing. Drilling fluid is circulated down through the drill rods and returns upwards through the inside of the drill casing to flush the drill casing clean.
20. Static Pile Load Test: A test to verify design assumptions and the adequacy of the contractor's installation methods.
21. Telltale: A simple mechanical device, a.k.a. "strain rod," that is used to measure deflection in concrete or steel. The device consists of a small-diameter steel rod that is fixed at a selected point along or within the pile. This rod is encased, and free to move, in a slightly larger pipe or tube which extends up to the pile top. Dial gages are used to measure the deflections at the top of the rod.
22. Tremie Grouting: A method used to place grout in a wet hole. A grout tube is placed to the bottom of the drill hole. While keeping the tube opening submerged in the grout, grout is pumped into the hole, causing the drilling fluid to be displaced.

1.03 SUBMITTALS

A. The Contractor shall submit construction details, structural details and load test results for at least three (3) previous successful micro-pile load tests from different projects of similar scope to this project.
B. At least 45 calendar days before the planned start of micro-pile construction, the Contractor shall submit five (5) copies of the completed project reference list and a personnel list. The project reference list shall include a brief project description with DCR's name and current phone number and load test reports. The personnel lest shall identify the micro-pile system design engineer (if applicable), supervising project Engineer, drill rig operators, and on-site supervisors to be assigned to the project. The personnel list shall contain a summary of each individual's experience and be complete enough for the Engineer to determine whether each individual satisfies the required qualifications.
C. Submit the method-of-installation information outlined below to the Engineer for approval by DCR's Engineer. Do not begin work prior to receiving approval by DCR's Engineer. Approval of the installation method by DCR's Engineer does not constitute a guarantee of acceptable pile installations. Acceptable installations are the responsibility of the Contractor. Include in the submittal:
D. At least 21 calendar days before the planned start of micro-pile construction, submit complete design calculations and working drawings to the Engineer for review and approval. Include all details, dimensions, quantities, ground profiles, and cross sections necessary to construct the micro-pile structure.
E. The micro-pile shop drawings and calculations shall be signed and sealed by the Contractor's Professional Engineer, previously approved by the owner's

Engineer. The Contractor's Engineer shall be a P.E. Registered in the State of Massachusetts.

F. Provide information on the proposed steel drill casing/pipe used as reinforcement.
G. Details of equipment for pile installation including equipment required for installation, including but not limited to: drill, pumps, casing, etc.
H. Details of drilling procedures.
I. Details of procedures for pile installation including, but not limited to, installation sequence and the approximate time required for each sequence step.
J. Procedures for advancing through boulders and other obstructions.
K. Procedures for containment of drilling fluid and spoil, and disposal of spoil.
L. Provide information on the length of the casing sections to be used, as dictated by the length of the drill mast and by the available overhead clearance, and the resulting location of joints.
M. Provide coating information & thickness.
N. Procedures and equipment for placing grout.
O. Prepare the mix design for the grout and obtain documentation from an independent laboratory showing the following:

1. The mix design conforms to the submitted mix and meets the strength requirements specified in the contract documents.
2. The compressive strength of the mix, tested at 7, 14, and 28 days.
3. The specific gravity of the mix.

P. Identify a method for monitoring quality control of the mix. At a minimum, the Contractor shall use a Baroid Mud Balance per American Petroleum Institute (API) Recommended Practice (RP) 13B-1: Standard Procedure for Testing Water-Based Drilling Fluids, to check the specific gravity of the mixed grout prior to placement of the grout into each micro-pile.
Q. Provide pressure gages capable of measuring the actual grout pressures used and such that actual pressure readings are within the middle third of the gage.
R. Details of post-grouting equipment and procedures, including the method, sequence of operations, and equipment required.
S. Layout drawings showing the proposed sequence of pile installation. Coordinate this sequence with the proposed phasing and scheduling.
T. If welding of casing is proposed, submit the proposed welding procedure, certified by a qualified welding specialist.
U. Plan describing how surface water, drill flush, and excess waste grout will be controlled and disposed of.

V. Certified mill test reports for the reinforcing steel or coupons test results for permanent casing without mill certification.

W. Proposed grouting plan. The grouting plan shall include complete descriptions, details, and supporting calculations for the following:

1. Grout mix design and type of materials to be used in the grout including certified test data and trial batch reports.
2. Methods and equipment for accurately monitoring and recording the grout depth, grout volume and grout pressure as the grout is being placed.
3. Grouting rate calculations, when requested by the Engineer. The calculations shall be based on the initial pump pressures or static head on the grout and losses throughout the placing system, including anticipated head of drilling fluid (if applicable) to be displaced.
4. Estimated curing time for grout to achieve specified strength.
5. Procedure and equipment for Contractor monitoring of grout quality.

X. Detailed plans for the proposed micro-pile load testing method.

1. This shall include all drawings, details, and structural design calculations necessary to clearly describe the proposed test method, reaction load system capacity and equipment setup, types, and accuracy of apparatus to be used for applying and measuring the test loads and pile top movements in accordance with Section 3.6, Pile Load Tests, of FHWA NHI-05-039 Micro-pile Design & Construction.
2. Calibration reports and data for each test jack, pressure gauge and master pressure gauge and electronic load cell to be used. The calibration tests shall have been performed by an independent testing laboratory, and tests shall have been performed within 90 calendar days of the date submitted. Testing shall not commence until the Engineer has reviewed and accepted the jack, pressure gauge, master pressure gauge and electronic load cell calibration data.
3. All compliance testing costs are borne by the Contractor

1.04 QUALITY ASSURANCE

A. The micro-pile Contractor shall be experienced in the construction and load testing of micropiles and have successfully constructed at least five (5) projects in the last 5 years involving construction totaling at least 100 micropiles of similar capacity to those required in these Contract Drawings and Specifications.

B. The Contractor shall have previous micro-pile drilling and grouting experience in soil/rock similar to project conditions.

C. The Contractor shall assign an Engineer to supervise the work with experience of at least three (3) projects of similar scope to this project completed over the past five (5) years. The on-site supervisors and drill rig operators shall also have experience on at least three (3) projects over the past five (5) years installing

micropiles of equal or greater capacity than required in these plans and specifications.

D. The micro-piles shall be designed by a Registered Professional Engineer in the state of Massachusetts with experience in the design of at least three (3) successfully completed micro-pile projects over the past five (5) years, with micro-piles of similar capacity to those required in these Contract Drawings and Specifications.

E. Work shall be performed in accordance with the project drawings, specifications and attachments.

F. The piling work is to be carried out by full-time operators and supervisory staff who shall be experienced in the installation of the proposed type of piles.

1.05 SITE CONDITIONS

A. Before bidding the Work, the Contractor shall review the available subsurface information and visit the site to assess the site geometry, equipment access conditions, and location of existing structures and above ground facilities.

B. The existing ground surface where the piles are to be driven is covered by broken rock and debris of varying sizes. The obstructions shall be removed in such a way that the removals do no damage or undermine the existing seawalls, footings or nearby buildings.

C. The Contractor shall take care to ensure the safety of underground utility services and adjacent properties during the installation of micro-piles. The contractor will be liable to any claims of damage to the piling operations.

D. Obstructions are defined as unforeseen objects, which impede progress. Objects that are made known to the Contractor will not be considered to be obstructions. Notify the Engineer immediately upon encountering unforeseen objects. No consideration will be given for additional compensation on this account without this timely notification.

1.06 SETTING OUT

A. The Contractor shall be required to employ an approved Licensed Surveyor who will set up the positions of the piles as shown in the pile layout plans of the design. The Contractor will be responsible for the accuracy of location and positioning of each pile. Any errors in setting out will be made good by the Contractor to the satisfaction of DCR’s Engineer.

B. The Contractor shall preserve the control marker set out by the Licensed Surveyor. Should any control marker be displaced or lost, it shall be replaced by a Licensed Surveyor with the approval of DCR’s Engineer.

PART 2 - PRODUCTS

2.01 MATERIALS

A. The diameter of piles shall not be less than the specified/designed diameter at any level throughout its length.

B. Drill Casing. Provide drill casing consisting of flush joint type steel pipe of appropriate thickness to withstand the stresses associated with advancing it into the ground, in addition to the stresses due to hydrostatic and earth pressures.

C. Drill Casing/Pipe used as Reinforcement. Provide steel drill casing/pipe used as reinforcement conforming to API Grade N80 (80 KSI) yield steel pipe, Type 1. Approval of the steel drill casing/pipe used as reinforcement shall be done in accordance with the following procedure:

D. Requirements for Micro-pile Structural Casing. Structural casing that is installed in coupled (spliced) sections shall meet the following requirements:

1. The casing shall be flush joint and the pipe joint shall be completely shouldered and with no stripped threads.
2. All welded connections shall be performed by a Certified Welder, the approved Welding Procedure Specification (WPS) and the Approved Welding Procedure Qualification Record (WPQR). Welds shall be full penetration welds for full structural load capacity. For piles with bending or tension stress, welds shall be Ultrasonic (UT) or Radiograph Tested (RT). These requirements do not apply to minor welding that does not carry structural load, such as cutting teeth and tacking on bearing plates.

E. The design shall limit the maximum yield stress of steel (Fy) to 80 ksi unless the Contractor offers and alternative design.

F. Concrete. Provide a pumpable grout/concrete consisting of, as a minimum, Portland Cement - Type I/II and Water meeting the following Specification requirements:

1. W/C Ratio = 0.55 by weight
2. 28-day Strength = 4,000 psi
3. Shall conform to ASTM C109, ASTM C150 and AASHTO M854

2.02 MATERIAL SUBSECTION

The use of Grout Sand and Fly Ash in the mix is optional. Field sampling and testing shall be done in accordance with the procedures listed in the contract documents.

2.03 PROTECTIVE COATING

A. The last, top two (2) sections of pile installed shall be shop coated with epoxy coating in accordance with Specification Section 09905, Waterfront Protective Coating.

B. Material used for factory epoxy coating of all scheduled surfaces shall be Bar Rust 235 Multi-Purpose epoxy coating as manufactured by Devoe Coatings or equivalent accepted by the engineer of record.

PART 3 - EXECUTION

3.01 GENERAL

A. Piles shall be oriented as shown on the plans.
B. All pile installation shall be performed under the supervision of the Contractor's and DCR's Engineer.
C. The Contractor shall protect existing equipment and structures during pile installation.
D. As part of the Micro-Pile installation, the Contractor shall remove all grout overflow, drill tailing and spoil materials within the casing to the designated dumpsters provided by others.

3.02 CONSTRUCTION DETAILS

A. Drilling and Excavation. Advance the hole using a duplex drilling method. Do not drill or flush ahead of the drill casing by more than 1 foot. Perform drilling and excavation in such a manner to prevent collapse of the hole. Use of bentonite slurry is not permitted. Use of polymer slurry to remove cuttings from the cased hole shall be approved by the Engineer. If obstructions are encountered during excavation for a pile, progress through them by means of coring or a tricone roller bit. Use of drop-type impact hammers and blasting are not permitted. Use of a down-the-hole hammer shall be approved by DCR's Engineer. Control the procedures and operations so as to prevent mining, damage, or settlement to adjacent structures, tunnels, utilities, or adjacent ground. If any mining, damage, or settlement occurs, halt operations. Provide a written plan to the Engineer for review with procedures to avoid reoccurrence. Resume work only after the Engineer has approved the plan in writing. Repair all damage and settlement at no additional cost to DCR. Control the procedures and operations so as to prevent the soil at the bottom of the hole from flowing into the hole at all times during installation and cleaning out. Monitor the rate of fluid flow used to progress the holes. Control drilling fluid and dispose of spoil in accordance with the approved procedure. Do not progress a hole, pressure-grout, or post-grout, within a radius of five (5) pile diameters or 5 feet, whichever is greater, of a micro-pile until the grout for that micro-pile has set for 24 hours or longer if a retarder is used.

B. Post Grout Tube Placement: Size to allow grout tremie pipe insertion to the bottom of the drill-hole; and sized to allow grout to freely flow up the drill hole and casing and between adjacent reinforcing bars.

C. Grout Placement and Casing Removal: Provide quality control of the mix by monitoring grout quality. Measure grout consistency by determining grout density per API Recommended Practice (RP) 13B-1 by the Baroid Mud Balance Test at a frequency, of at least one test per micro-pile, and provide the information to the inspector. The Engineer will perform quality assurance of the mix in accordance with the current procedural directives of the Materials Bureau. Place grout by means of a tremie pipe from the bottom of the pile upward. Record the initial volume of grout required to fill the hole. Record grouting pressure and volume of grout being pumped into the pile during pressure grouting. Upon completion, maintain the grout level at or above the pile cut off elevation until the grout has set. Locate the grout pressure and volume measuring gages at the pile installation site so that they are accessible and legible to the inspector.

D. Construction Tolerances. Install the piles so that the center of each micro-pile does not vary from the plan location by more than 3 inches. Pile shall be plumb within 2 percent of total-length plan alignment. Cut off the top of the pile at the elevation indicated in the contract documents.

E. Micro-piles will be monitored during installation to make a general determination as to whether they have reached theoretical design capacity at the full design length. Drill cuttings will be monitored by the Engineer for the final 10 feet to determine if the soils are consistent with the soil borings.

F. Perform proof testing of piles at the locations specified herein or designated by the Engineer. Perform compression load testing in accordance with ASTM D1143, tension load testing in accordance with ASTM D3689. Micro-piles shall be installed to bear on sound bedrock to develop a minimum ultimate compression capacity of 150 kips and a minimum ultimate tensile capacity of 30 kips.

1. Grout cubes shall be made from each mini-pile and tested at 7, 14 and 28 days. Grout shall have attained adequate strength for testing prior to performance of the load.

G. Piles shall be drilled to the elevation/depth specified in the Contract Drawings and shall be seated securely enough to assure minimum bearing loads shown on plans.

H. Micro-pile locations are to be verified in the field with the Engineer to be sure they align properly with plan locations. The Contractor shall take into account the additional weight of drilling equipment and drilling loads when planning drilling operations.

I. Pile Acceptance Criteria

1. Pile meets criteria for load bearing.
2. Pile meets Construction Tolerance criteria.
3. Pile was installed in accordance with the approved submittal.
4. Pile is not damaged.
5. Pile was installed using the same method, grout volumes, and pressures as the accepted test pile, if applicable.

J. Micro-piles that fail to meet the acceptance criteria will be rejected and no payment will be made for these piles.

K. Unacceptable Piles. Unacceptable piles are piles which do not meet the acceptance criteria identified in the above. Submit to the Engineer a written plan of remedial action, for approval by DCR's Engineer, showing how to correct the problem and prevent its reoccurrence. Repair, augment, or replace the unacceptable pile in accordance with the approved remedial plan at no additional cost to the Engineer or DCR.

3.03 INSPECTION

A. All pile excavations shall be inspected for their full length before grouting.

B. A copy of the pile records shall be submitted in duplicate to DCR's Engineer.

C. All piles shall be continuously inspected by DCR's Engineer. A record shall be kept by the Contractor of each pile and shall include as a minimum:

1. Date and time of installation.
2. Details of equipment.
3. Weather condition
4. Pile number or location description.
5. Length of pile as installed.
6. Pile type and dimension.
7. Nature of strata where each pile is bored.
8. Ground level and base of excavation level.
9. Total penetration.
10. Depth and penetration into rock, if required.
11. Time of drilling at intervals not exceeding 5 m.
12. Details of all splicing or jointing operations, locations of sleeves, etc.
13. Volume of grout intake.
14. Details of grouting operations and timetables.
15. Top level of pile immediately after completion.
16. Errors in position and inclination.
17. Remarks explaining unusual events or data and movement of piles.
18. Amount of grout and the pressure used.
19. Detailed drilling speed (m/min).

20. Description of drilled material.
21. Calibration certificates of dialed gauges and pressure gauges.
22. Load tests

3.04 DAMAGED OR DISPLACED PILES

A. Should the deviation exceed the tolerance allowed, the Contractor shall submit a remedial proposal for the approval by the DCR's Engineer. Failing this, the faulty pile shall be replaced by additional piles as necessary in positions as determined by the Engineer at no cost to DCR. The cost of modification to the pile cap, etc. if any, shall be borne by the Contractor. The same will apply to any piling work rejected by the DCR's Engineer for not truly constructed and installed in accordance with the specification.

B. Where a pile has been damaged during installation, testing or by other causes, the damaged pile shall be considered and treated as a faulty pile and shall be replaced by additional piles as approved by the DCR's Engineer at the Contractor's expense.

C. Where piles have not been positioned within the specified limits, no method of forcible correction will be permitted.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02470-1 FURNISH AND INSTALL MICRO-PILES will be made on a per EACH basis, based on a total length of 65-feet per micropile, for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 02470-2 (2) MICRO-PILE LOAD TESTS will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

C. Measurement for Item 02470-3 MICRO-PILE VARIATION IN LENGTH TO TOP OF ROCK will be made on a per EACH additional 5-foot-long section basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

D. Measurement for Item 02470-4 UNEXPECTED OBSTRUCTION DRILLING will be made on a per HOUR basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 02470-1 FURNISH AND INSTALL MICRO-PILES will be at the per EACH contract price, based on a total length of 65-feet per micropile. This price shall include full compensation for providing and installing all steel casing materials, micro-pile attachments, grout, reinforcement, and the furnishing of all labor including, survey, templates, drilling, grouting , supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL MICRO-PILES based on length of 65 linear feet total, per each micro-pile as shown on the Drawings and as herein specified.

B. Payment for Item 02470-2 (2) MICRO-PILE LOAD TESTS will be at the per EACH contract price. This price shall include full compensation for providing and installing all materials, and the furnishing of all labor, materials, tools, and equipment, reporting, and all other incidental work necessary to complete two (2) MICRO-PILE LOAD TESTS as shown on the Drawings and as herein specified.
   a. No separate or additional payment will be made for excess grout takes or proof tests micro-piles that fail acceptance criteria.

C. Payment for Item 02470-3 MICRO-PILE VARIATION IN LENGTH TO TOP OF ROCK will be at a per EACH additional 5-foot-long section contract price. This price shall include full compensation for providing and installing all steel casing materials, micro-pile attachments, grout, reinforcement, and the furnishing of all labor including, drilling grouting, supervision, materials, tools, and equipment, and all other incidental work necessary to complete the MICRO-PILE VARIATION IN LENGTH TO TOP OF ROCK as shown on the Drawings and as herein specified pile for additional 5-foot length required beyond the specified bid quantity.

D. Payment for Item 02470-4 UNEXPECTED OBSTRUCTION DRILLING will be at the per HOUR contract price. This price shall include full compensation for the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary as required to remove an unexpected obstruction to complete the UNEXPECTED OBSTRUCTION DRILLING as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02470-1	FURNISH AND INSTALL MICRO-PILES	EACH
02470-2	(2) MICRO-PILE LOAD TESTS	EACH
02470-3	MICRO-PILE VARIATION IN LENGTH TO TOP OF ROCK	EACH
02470-4	UNEXPECTED OBSTRUCTION DRILLING	HOUR

END OF SECTION

SECTION 02500
SITE PAVING

PART 1 - GENERAL

1.01 DESCRIPTION

A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the Commonwealth of Massachusetts Department of Transportation (MassDOT) 2021 Standard Specifications for Highways and Bridges and the Supplemental Specifications.

1.02 SUMMARY

A. This Section specifies requirements for the following types of Work and related items, but is not limited to:

1. Precast Concrete Pavers and Base Materials
2. Bedding and Joint Sand
3. Edge Restraints
4. Poured in Place Splash Pad Surfacing and Base Materials
    a. “Shell” standard color option

B. For Driveway and Parking Lot Paving, Patching and Base Materials see Section 02510 – VEHICULAR AREAS PAVING.

C. For Pedestrian Concrete Paving, refer to Section 03300 – CAST IN PLACE CONCRETE.

1.03 RELATED WORK UNDER OTHER SECTIONS

A. The following related work is to be performed under the designated SECTIONS:

1. Section 02100 – SITE PREPARATION, DEMOLITION, AND REMOVALS
2. Section 02150 – TREE PROTECTION AND PRUNING
3. Section 02200 – SITE EARTHWORK
4. Section 02280 – EXCAVATED SOIL MANAGEMENT
5. Section 02360 – DRILLED SHAFTS
6. Section 02375 – WATERFRONT STEEL SHEET PILES
7. Section 02470 – WATERFRONT MICRO-PILES
8. Section 02510 – VEHICULAR AREAS PAVING
9. Section 02630 – STORM DRAINAGE UTILITIES
10. Section 02665 – WATER PIPING, VALVES AND APPURTENANCES
11. Section 02730 – SANITARY SEWERS AND FORCE MAINS
12. Section 02760 – PAVEMENT MARKINGS
13. Section 02881 – WATER PLAY EQUIPMENT
14. Section 02890 – TRAFFIC SIGNS
15. Section 03300 – CAST IN PLACE CONCRETE.
16. Section 04010 – SITE GRANITE
17. Section 06130 – WATERFRONT STRUCTURAL TIMBER
18. Section 06150 – WATERFRONT HARDWOOD DECKING
19. Section 09905 – WATERFRONT PROTECTIVE COATING
20. Section 16100 – PARK AND BOARDWALK LIGHTING
21. Section 16421 – BOARDWALK ELECTRICAL UTILITES
22. Section 23100 – FUEL SYSTEMS

1.04 REFERENCES

A. Where references are made in these Specifications to standard specifications, codes, etc., of the U.S. Government, State or local authorities, or professional and industrial societies and associations, the applicable portions thereof shall govern as fully as if they were recited at length herein, and shall include all revisions thereto issued as of the date of the Notice to Contractors pertaining hereto.

1. ASTM International: American Society for Testing Materials International

2. AASHTO: American Association of State Highway and Transportation Officials

3. MASSDOT: "Standard Specifications for Highway and Bridges," Massachusetts Highway Department (formerly Massachusetts Department of Public Works), Commonwealth of Massachusetts, latest edition and all supplements.

4. The Americans with Disabilities Act (ADA) of 1990, and to the Final Rule for the Accessibility Guidelines for Recreational Facilities and Outdoor Developed Areas by the Recreational Access Advisory Committee, US Architectural And Transportation Barriers Compliance Board, most recent edition.

5. MAAB: Massachusetts Architectural Access Board.

6. ASTM C 33, Standard Specification for Concrete Aggregates.

7. ASTM C 67, Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile, Section 8, Freezing and Thawing.

8. ASTM C 136, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.

9. ASTM C 140, Standard Test Methods for Sampling and Testing Concrete Masonry Units and Related Units.

10. ASTM C 144 Standard Specifications for Aggregate for Masonry Mortar.

11. ASTM D 448, Standard Classification for Sizes of Aggregate for Road and Bridge Construction.

12. ASTM C 936, Standard Specification for Solid Concrete Interlocking Paving Units.

13. ASTM C 979, Standard Specification for Pigments for Integrally Colored Concrete.

14. ASTM D 698 Test Methods for Moisture Density Relations of Soil and Soil Aggregate Mixtures Using a 5.5 lb (24.4 N) Rammer and 12 in. (305 mm) drop.

15. ASTM D 1557 Test Methods for Moisture Density Relations of Soil and Soil Aggregate Mixtures Using a 10-lb (44.5 N) Rammer and 18 in. (457 mm) drop.

16. ASTM C 1645 Standard Test Method for Freeze-thaw and De-icing Salt Durability of Solid Concrete Interlocking Paving Units

17. ASTM D 2940 Graded Aggregate Material for Bases or Subbases for Highways or Airports.

18. ASTM D 4254, Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.

19. ASTM D 4254, Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculation of Relative Density.

20. Interlocking Concrete Pavement Institute (ICPI): ICPI Tech Spec Technical Bulletins

21. American Society of Civil Engineers (ASCE)
1. ASCE 58-16 Structural Design of Interlocking Concrete Pavement for Municipal Streets and Roadways

1.05 SUBMITTALS

A. The Contractor shall provide the following samples, shop drawings, and submittals in conformance with the General Requirements and Covenants and as stated herein. The Contractor shall not order materials until the Landscape Architect's review of samples, certification and/or test results. Delivered materials shall closely match the samples and conform to test results.

B. Design mix submittals: Submit materials description, proportions, and mechanical sieve sizes of aggregates for the following:

1. Precast Concrete Pavers' Setting Bed Sand

2. Precast Concrete Pavers' Polymeric Joint Sand

3. Precast Concrete Pavers' Base Aggregate

4. Splash Pad Surfacing and base materials

C. Contractor must provide the following submittals for the Splash Pad Surfacing:

1. Manufacturer's product literature and specification data.

2. ASTM C 1028-07 Skid Resistance Test.

3. Manufacturer's written instructions for recommended maintenance practices.

4. Verification Samples of Splash Pad Surfacing: Submit manufacturer's standard verification samples of 9" x 9" (229 x 229 mm) minimum; One (1) of each color specified.

5. Written statement on Manufacturer's letterhead certifying that the top surface will not discolor via fading for a period of three (3) years from date of installation.

6. Written manufacturer's warranty for water play.

7. Product liability insurance certificate with DCR as certificate holder.

8. MSDS and Product Data Sheets for items listed in this Section, Item 2.03 SPLASH PAD SURFACING.

D. Closeout Submittals: Submit the following:

1. Warranty documents specified herein.

E. Samples, shop drawings, manufacturers' product literature, and certified test reports:

1. Precast Paver Submittals:
   a. Two (2) representative full-size samples of each paver type, thickness, color and finish as specified in this section and as shown on Drawings that indicate the range of color variation and texture expected upon project completion. Accepted samples become the standard of acceptance for the product produced.

   b. Test results from an independent testing laboratory for compliance of concrete pavers with ASTM C 936.

   c. Manufacturer’s certification of concrete pavers by ICPI as having met applicable ASTM standards.

   d. Manufacturer’s catalog product data, installation instructions, and material safety data sheets for the safe handling of the specified materials and products.

2. Polymeric Joint Sand Submittal:
   a. Provide two (2) representative one-pound samples in containers of Polymeric Joint Sand materials.

   b. Provide manufacturer’s available color samples of Polymeric Joint Sand (actual material- not images) for selection by Landscape Architect

   c. Test results from an independent testing laboratory for sieve analysis of Polymeric Joint Sand per ASTM C 136 conforming to the grading requirements of ASTM C 144.

3. Setting Bed Sand Submittal:
   a. Provide two (2) representative one-pound samples in containers of Setting Bed Sand materials.
   b. Test results from an independent testing laboratory for sieve analysis per ASTM C 136 conforming to the grading requirements of ASTM C 144.

4. Base Aggregate:
   a. Test results from an independent testing laboratory for sieve analysis of Base Aggregate per ASTM C 136.

5. Product analysis for hot mix asphalt curb and base course.

6. Product analysis for any proposed joint sealer.

7. Splash Pad Surfacing: Two (2) total color samples for Splash Pad Surfacing.

8. Paving Installation Contractor:
   a. Job references from a minimum of three projects similar in size and complexity. Provide Owner/Client/General Contractor names, postal address, phone, fax, and email address.

G. Field samples.

1. General:

   a. Schedule field sample construction so that field samples can be reviewed by the Landscape Architect a minimum of 7 days prior to installation of paving surfaces represented by field samples.

   b. Locate field sample panels in areas as directed by the Landscape Architect.

   c. Continue to construct field samples until acceptable. Rejected samples shall be removed from the site.

   d. Final samples shall remain undisturbed and shall be maintained for the duration of construction, becoming the standard for acceptance of all proposed elements. Samples shall show all aspects of finish paving appearance including color, jointing, edge treatment, sealing, cleanliness and fastening.

   e. Remove panels from site at completion of project, unless otherwise directed by the Landscape Architect.

   f. Construct field sample panels or areas for each different type of paving system to demonstrate ability to achieve types of setting bed, joints, color, and surface texture required.

g. Provide field samples simulating actual design and execution conditions for paving materials, mixing of paving materials, installation sequence, curing, use of temporary protective coating system, and methods for correction of defective work.

h. Subject to acceptance by Landscape Architect and Engineer, mock-up may be retained as part of finished work.

i. Rejected mock-ups must be completely removed and disposed of legally after a final mock-up is approved.

j. No products shall be ordered until submittals have been reviewed by the Landscape Architect. The Landscape Architect shall retain the right to reject products not conforming to this specification and/or reviewed submittal drawings. Delivered materials shall match approved materials.

2. Provide the following paving mock-ups to be constructed on site for review by the Landscape Architect:

a. Provide a mock-up measuring at least 15’ x 15’ or of a sufficient size to demonstrate paver color transitions, demonstrating field layout and installation of the Precast Concrete Paving type, pattern, color distribution, and color as shown on Contract Drawings for review by Landscape Architect.

1. The mockups shall demonstrate the proposed transition of paver color as described on the contract drawings. In the central plaza and the seating areas adjacent to the promenade, the pavers transition from black to light grey, with a specified percentage of paver color for every two feet of paving area. The intention is that the pattern is random and creates a gradual transition in color from black to light grey. The drawings indicate the starting point. This color percentage distribution is described on the drawings.

2. Use these areas to determine extent of the Setting Bed Sand layer, joint sizes, lines, laying pattern(s) and levelness. This area will serve as the standard by which the workmanship will be judged.

b. Splash Pad Surfacing, one 5’ x 5’ panel.

1.06 DELIVERY, HANDLING, AND STORAGE

A. Deliver materials in original, unopened, undamaged and sealed containers marked with name of manufacturer and identification labels intact. Deliver Concrete Pavers to the site in steel banded, plastic banded or plastic wrapped packaging capable of transfer by forklift or clamp lift. After delivery, store materials under waterproof covers on planking clear of ground and protect from handling damage, dirt, stain, water and wind. Storage piles or stacks shall be located to avoid or be protected from heavy or unnecessary traffic. Materials shall be stored under an approved roof or covered with waterproof tarpaulins, at all times, except when materials are being installed.

B. Unload Concrete Pavers at job site in such a manner that no damage occurs to the products or adjacent surfaces.

C. Stored materials shall be adequately protected against moisture by (1) stacking in such a manner as to allow a complete circulation of air under each stack, and (2) covering each stack, top and sides with a waterproof paper or membrane. Coverings shall remain in place at all times, when not working from the particular stack.

D. Take all necessary precautions to protect all items from moisture, chipping, cracking, or other damage, including theft and vandalism, during the transportation of these materials to the project, unloading and storage on the site. After delivery take all necessary precautions to prevent all items from chipping, cracking, construction dust and debris, or damage of any kind. Damaged units will not be allowed to be installed and should any damage units be found in constructed work, such units shall be removed immediately and replaced with new units, and the Contractor shall assume all expenses incurred.

E. Store and protect materials free from mud, dirt and other foreign materials.

F. Prevent Joint and Setting Bed Sand from exposure to rainfall or removal by wind with secure, waterproof covering.

G. Store Polymeric Joint Sand on elevated platforms, under a cover and/or in a dry location.

H. Delivery: Deliver all Splash Pad Surfacing materials in manufacturer’s original, unopened, undamaged containers with identification labels intact.

I. Storage and Protection: Store all Splash Pad Surfacing materials protected from exposure to harmful environmental conditions and at a minimum temperature of 40 degrees F (4 degrees C) and a maximum temperature of 90 degrees F (32 degrees C).

1.07 QUALIFICATIONS

A. The paving work shall be performed by a firm having a minimum of five (5) years acceptable experience in the installation of materials specified on projects comparable to this project.

B. Precast Concrete Paver installer must hold a current certificate from the Interlocking Concrete Pavement Institute Concrete Paver Installer Certification program.

C. Splash Pad Surfacing Area Paving Qualifications: The installation of the new surface shall be completed by Surface America certified installers. Manufacturer's detailed installation procedures shall be submitted to the architect and made part of the bid specifications. Installers must have completed a minimum of five (5) installations comparable to this project showcasing their experience in the installation of the splash pad surfacing.

D. Splash Pad Surfacing Installers must be International Play Equipment Manufacturers Association (IPEMA) certified.

1.08 QUALITY ASSURANCE

A. Utilize a Manufacturer having at least ten years of experience manufacturing concrete pavers on projects of similar nature or project size. Utilize an installer having successfully completed concrete paver installation similar in design, material, and extent indicated on this project.

B. Utilize an installer having successfully completed rip rap stone installation similar in design, material, and extent indicated on this project.

C. Source Limitations:
   1. Obtain Concrete Pavers from one source location with the resources to provide products of consistent quality in appearance and physical properties.

   2. Obtain minimum 5% more than quantity shown on plans to account for breakage.

D. Obtain Joint and Setting Bed Sands from one source with the resources to provide materials and products of consistent quality in appearance and physical properties.

   1. Obtain Polymeric Joint Sand from one source with the resources to provide materials and products of consistent quality in appearance and physical properties.

1.09 PROJECT/SITE CONDITIONS

A. Environmental Requirements:

1. Install Concrete Pavers only on unfrozen and dry Setting Bed Sand.

2. Install Setting Bed Sand only on unfrozen and dry Base materials.

3. Install Base Aggregates for all paving types only over unfrozen subgrade.

4. Install Setting Bed Sand or Concrete Pavers when no heavy rain or snowfall are forecast within 24 hours.

5. For installation of Splash Pad Surfacing temperature must remain above 50-degrees Fahrenheit throughout the installation and curing process. Maximum ambient temperature is 90 degrees F (32 degrees C). Weather and surface must be dry, and there should be no rain in the forecast for at least 8 hours.

B. Weather Limitations for Polymeric Jointing Sand for Concrete Pavers:

1. Install Polymeric Joint Sand only when ambient temperature is above 40°F (5°C), under dry conditions with no rain forecast for 24 hours and when surface of pavement is completely dry.

1.10 WARRANTY

A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

B. Manufacturer's Warranty: Submit, for DCR's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights DCR may have under contract documents.

C. Precast Concrete Pavers manufacturer shall warranty its products for a period of five (5) years commencing on the date the products are delivered to the job site. The warranty shall cover the structural integrity of the products and any abnormal deterioration of its surfaces that may be caused by the use of rock salt (sodium chloride [NaCl]).

D. The standard warranty period for splashpad surfacing is to be 3 years from date of completion of work. Contractor to provide manufacturer's complete written maintenance instructions and warranty to DCR at time of final acceptance.

PART 2 – MATERIALS

2.01 PRECAST CONCRETE PAVERS

A. Precast Concrete Pavers as manufactured by:
Techo-Bloc Corp.
70 East Brookfield Rd., North Brookfield, MA 01535 USA
Rich Brown
Commercial Specifier Rep
New England & Upstate New York
Email: rich.brown@techo-bloc.com
Cell: 857-286-9828
Website: techo-bloc.com
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Product: Diamond Smooth Paver, **GAUGED**

C. Materials: Must meet and exceed the requirements of ASTM C 936

D. Finish: HD^2 Smooth, slip resistant surface texture

E. Color, as shown on drawings:
1. Onyx Black
2. Greyed Nickel
3. Refer to drawings and as described in item 3.05, this section, for percentage of color distribution and pattern.

F. Color Pigment Material Standard: Comply with ASTM C 979

G. Size and Shape: 3 15/16 inches x 7 1/8 inches x 12 5/16 inches DIAMOND shape with an approximate weight of 14 pounds.

H. Average Compressive Strength (C140): 8000 psi (55 MPa) with no individual unit under 7200 psi (50 MPa) per ASTM C 140.

I. Average Water Absorption (ASTM C 140): 5% with no unit greater than 7%.

J. Freeze/Thaw Resistance (ASTM C 1645): 28 freeze-thaw cycles with no greater loss than 225 g/m2 of paver surface area or no greater loss than 500 g/m2 of paver surface area after 49 freeze-thaw cycles.

K. Concrete Paver Overage and Attic Stock:

1. Provide a minimum of 5% additional material for overage to be used during construction.
2. Contractor to provide additional 100 square feet of each color used for DCR for maintenance and repair.

3. Furnish Pavers from the same production run as installed materials.
4. Manufacture to supply maintenance and reinstatement manuals for Concrete Paver units.

L. Polymeric Joint Sand for Precast Concrete Pavers

1. Provide Polymeric Joint Sand as manufactured by:

   Techniseal HP Nextgel OR Polybind Complete G2 OR Approved Equal

   a. Product Type: Dry mix, contains polymeric binding agent, activated with water.

   b. Polymeric Sand product shall be no dust, haze free, and rapid set.

   c. Color: To be selected by Landscape Architect from available offerings.

   d. Provide colored Polymeric Joint Sand meeting the minimum material and physical properties as follows:

   e. Compression Strength: proven resistance to compression of 550 PSI after drying for 7 days under controlled conditions (73°F (23°C) at 50% humidity). Test sand sample shape: cylinder (2" (5 cm) dia. X 4" (10 cm) high).

   f. Polymeric Joint Sand shall conform to the grading requirements of ASTM C 144 with modifications as shown in Table 1 below and submit range of colors to be selected by the Landscape Architect before construction.

Table 1: Grading Requirements for Polymeric Joint Sand

Sieve Size	ASTM C 144 Natural Sand Percent Passing	ASTM C 144 Manufactured Sand Percent Passing
No. 4 (4.75 mm)	100	100
No. 8 (2.36 mm)	95 to 100	95 to 100
No. 16 (1.18 mm)	70 to 100	70 to 100
No. 30 (0.600 mm)	40 to 75	40 to 75
No. 50 (0.300 mm)	10 to 35	20 to 40
No. 100 (0.150 mm)	2 to 15	10 to 25
No. 200 (0.075 mm)	0 to 5	0 to 10

M. Setting Bed Sand for Precast Concrete Pavers

1. Provide Setting Bed Sand as follows:
   a. Washed, clean, non-plastic, free from deleterious or foreign matter, symmetrically shaped, natural or manufactured from crushed rock.

   b. Do not use limestone screenings, stone dust, or sand for the bedding sand material that does not conform to conform to the grading requirements of ASTM C 33.

   c. Do not use mason sand or sand conforming to ASTM C 144 for the bedding sand.

   d. Where concrete pavers are subject to vehicular traffic, utilize sands that are as hard as practically available.

2. Setting Bed Sand shall conform to the grading requirements of ASTM C 33 with modifications as shown in Table 2.

Table 2: Grading Requirements for Setting Bedding Sand

ASTM C 33

Sieve Size	Percent Passing
3/8 in. (9.5 mm)	100
No. 4 (4.75 mm)	95 to 100
No. 8 (2.36 mm)	80 to 100
No. 16 (1.18 mm)	50 to 85
No. 30 (0.600 mm)	25 to 60
No. 50 (0.300 mm)	5 to 30
No. 100 (0.150 mm)	0 to 10
No. 200 (0.075 mm)	0 to 1

Note: Bedding sands should conform to ASTM C33 gradations for concrete sand. ICPI recommends the additional limitations on the No. 200 (0.075 mm) sieve as shown.

N. Bituminous Concrete Base for Precast Concrete Pavers

1. Bituminous concrete Base for Precast Concrete Paver shall be Class 1 conforming to the requirements of MASSDOT Sections 460.20 to and including 460.40 and MASSDOT Division III M3.11.00 for binder course and top course.

   a. Top Course: HMA 3/8” Top

   b. Binder Course: HMA Surface Dense Binder

c. Tack coat: Emulsified asphalt, SS-1

2. Base materials shall be Dense Graded Crushed Stone and Gravel Borrow 'Type B' as shown on Drawings and as specified in Section 02200 SITE EARTHWORK.

3. Provide 4" diameter schedule 40 PVC weeps, as shown on Contract Drawings. Weeps shall be placed on grid located at 6' feet on center and filled with drainage stone to provide sub drainage through bituminous base. Cover top of each PVC weep with filter fabric prior to placing setting bed sand.

4. Filter Fabric shall be a non-woven polypropylene fabric equal to Mirafi 140N, manufactured by Mirafi, Inc., Charlotte, NC 28224, or approved equal.

2.02 METAL EDGE RESTRAINT FOR PRECAST CONCRETE PAVERS

A. Provide Sure-loc A18158M 1/8" thick aluminum edge restraint manufactured from 6063 extruded aluminum alloy of T-5 hardness, or approved equal. Material to have 45 degree, "V" cutouts in base along with recessed stake pockets every 4 inches along the perimeter of paving at areas located on Drawings and supported on a minimum of 6 inches (150 mm) of compacted Granular Base (as specified this Section) under the restraint (deeper granular base shall be under paver – see Drawings) as manufactured by Sure-loc Corporation, or approved equal.

B. Sections to lock together without offset or overlap. Joining tabs and hardware to connect sections supplied with product.

C. Provide 12" long manufacturer-supplied spike to fasten heavy duty edge restraints at 10-12" inches on center and at each end.

2.03 SPLASH PAD SURFACING

A. Splash Pad Surfacing as manufactured by:
AquaFlex® Landscape Structures Inc.
601 7th Street South Delano, MN 55328 USA
Telephone: (888) 438-6574
Fax: 763) 972-3185
Email: info@aquaflexsurfaces.com
Website: http://www.aquaflexsurfaces.com
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Product: AquaFlex® Porous Surfacing Systems, or approved equal.

C. Materials: AquaFlex aliphatic, 100% solids, two-component, chlorine-resistant polyurethane Binder/Primer, AquaFlex aliphatic thermoplastic large pebbles.

1. The pebbles are a thermoplastic aliphatic polyurethane. The system is 100% color. The AquaFlex Binder/Primer is a two-part aliphatic chlorine resistant polyurethane. Any equal product granule or pebble must be aliphatic polyurethane based, not rubber based such as EPDM, TPV or polyolefin-based TPE; must include an aliphatic polyurethane binder proven to be chlorine resistant, and must be 100% color. Recycled black material is not acceptable.

D. Finish Texture: Pebble grain.

E. Color:
1. Shell (Standard Option)

F. Bituminous Concrete Base for Precast Concrete Pavers

1. Bituminous concrete Base for Precast Concrete Paver shall be Class 1 conforming to the requirements of MASSDOT Sections 460.20 to and including 460.40 and MASSDOT Division III M3.11.00 for binder course and top course.

a. Top Course: HMA 3/8” Top

b. Binder Course: HMA Surface Dense Binder

c. Tack coat: Emulsified asphalt, SS-1

2. Base materials shall be Dense Graded Crushed Stone and Gravel Borrow ‘Type B’ as shown on Drawings and as specified in Section 02200 Earthwork.

3. Provide 4” diameter schedule 40 PVC weeps, as shown on Contract Drawings. Weeps shall be placed on grid located at 6’ feet on center and filled with drainage stone to provide sub drainage through bituminous base. Cover top of each PCV weep with filter fabric prior to placing setting bed sand.

4. Filter Fabric shall be a non-woven polypropylene fabric equal to Mirafi 140N, manufactured by Mirafi, Inc., Charlotte, NC 28224, or approved equal.

PART 3 - EXECUTION

3.01 GENERAL

A. Comply with each of the applicable technical Sections. All items located on the Drawings shall be fabricated and installed by the Contractor as detailed on the Drawings, as per suppliers' and manufacturers' written installation procedures and as approved by the Landscape Architect. All fabrication and installation work shall be accomplished using the highest standards of workmanship and shall include all excavation, concrete for footings, labor, transportation and incidentals to make the work complete.

1. Project Conditions: Installation of items shall follow manufacturer's guidelines for project conditions during installation.

B. Contractor shall schedule delivery of items and all necessary equipment and hardware so as to arrive at the site in a timely manner to comply with construction schedule and minimize on-site storage time. Items delivered to the site prior to scheduled installation time shall be stored in a secured staging area with all small components retained separately by the Contractor. Protect all items from weather, careless handling, ongoing construction in the vicinity, vandals or pilferers.

C. Stake locations of all items in the field and construct mock-up for review and approval of the Landscape Architect and Engineer before commencing final construction.

D. Contractor shall install all items level and with plumb vertical alignment, or as indicated otherwise on the Drawings.

E. Any incidence of damage, vandalism, or theft of any item during installation shall be reported immediately to the Landscape Architect, remedial action shall be decided, and repairs made to the satisfaction of the Landscape Architect. The Contractor is required to secure all items of the Work from access by the Public until Final Acceptance, unless otherwise permitted by the Landscape Architect and Engineer.

3.02 EXAMINATION

A. Acceptance of Site Verification of Conditions:

1. General Contractor shall inspect, accept and certify in writing to the paver installation subcontractor that site conditions meet specifications for the following items prior to installation of interlocking concrete pavers.

a. Verify that subgrade preparation, compacted density and elevations conform to specified requirements.

b. Verify that geotextiles, if applicable, have been placed according to drawings and specifications.

c. Verify that base materials, thickness, compacted density, surface tolerances and elevations conform to specified requirements.

d. Provide written density test results for soil subgrade and base materials to the DCR, General Contractor and paver installation subcontractor.

e. Verify location, type, and elevations of edge restraints, concrete collars around utility structures, and drainage inlets.

2. Do not proceed with installation of bedding sand and interlocking concrete pavers until subgrade soil and base conditions are corrected by the General Contractor or designated subcontractor.

3.03 BASE COURSE CONSTRUCTION FOR BITUMINOUS CONCRETE BASE

A. The dense-graded crushed stone (See Section 02200 EARTHWORK) shall be spread and compacted in layers not exceeding 4" in depth compacted measurement and all layers shall be compacted to not less than 95 percent of the maximum dry density of the material as determined by the standard AASHO test designation T99 compaction test Method C at optimum moisture content as determined by the Landscape Architect and to the depth specified on Drawings for Bituminous Concrete Base. The specific density of base shall be maintained by determining the number of passes of a roller required to produce a constant and uniform density, after conducting a series of tests either using the sand/volume method or the nuclear device.

B. Compaction of the dense-graded crushed stone course shall continue until the surface is even and true to the proposed lines and grades within a tolerance of 3/8 inch above or below the required cross sectional elevations and to a maximum irregularity not exceeding 3/8 inch under a 10 foot line longitudinally. Any specific areas of dense-graded stone base which, after being rolled, does not form a satisfactory, solid, stable foundation shall be removed, replaced and re-compacted by the Contractor without extra compensation.

C. The processed gravel shall be spread and compacted in layers not exceeding 4" in depth compacted measurement and all layers shall be compacted to not less than 95 percent of the maximum dry density of the material as determined by the Standard AASHO Test Designation T99 compaction test Method C at optimum moisture content as determined

by the Landscape Architect and to the depth required on the Drawings for Bituminous Concrete Base. If the material retained on the #4 sieves is 50% or more of the total sample this test shall not apply and the material shall be compacted to the satisfaction of the Landscape Architect. The specific density of the gravel sub-base shall be maintained by determining the number of passes of a roller required to produce a constant and uniform density, after conducting a series of tests either using the sand/volume method or the nuclear device.

D. Compaction of the processed gravel course shall continue until the surface is even and true to the proposed lines and grades within a tolerance of 3/8 inch above or below the required cross sectional elevations and to a maximum irregularity not exceeding 3/8 inch under a 10 foot line longitudinally. Any specific area of gravel subbase which, after being rolled, does not form a satisfactory solid, stable foundation shall be removed, replaced and re-compacted by the Contractor without extra compensation.

3.04 BITUMINOUS CONCRETE BASE

A. Install bituminous concrete paving as shown on the Drawings and in accordance with the MASSDOT Section 460.60 to and including Section 460.68 except as herein modified.

B. The bottom course shall conform to MASSDOT for binder course bituminous concrete and the surface shall conform to MASSDOT for top course bituminous concrete in accordance with the job mix formula.

C. The surface of the binder course shall be parallel to the proposed grade of the finished surface. The finished surface of the surface course shall conform to the grades shown on the Drawings and to the tolerances specified in MASSDOT Section 460.67.

D. All joints at existing paving shall be sawed vertical butt joints which shall receive a light coating of asphalt emulsion a short time before new paving commences. Interface between new and existing pavement shall result in a smooth continuous surface.

E. Prior to installing overlays, remove loose and foreign material. Use power brooms, blowers and hand brooms as required.

F. Tack Coat: Dilute material with equal parts of water and apply to contact surfaces of previously constructed asphalt or portland cement concrete and similar surfaces. Apply at a rate of 0.05 to 0.15 gallons per square yard of surface. Apply tack coat by brush to contact surfaces of curbs, gutters, manholes and other structures projecting into or abutting asphalt pavement. Allow surfaces to dry until material is at condition of tackiness to receive pavement.

G. Properly protect new and existing paving, steps, curbs, walls, lights and planting against splashing and spattering from asphalt and bitumen during preparation and installation of pavement. Remove and replace or satisfactorily clean any materials so damaged at no additional cost. Cleaning method to be approved by the Landscape Architect.

3.05 PRECAST CONCRETE PAVER PREPARATION

A. Verify base is dry, certified by General Contractor as meeting material, installation and grade specifications.

B. Verify that base is ready to support sand, edge restraints and pavers and imposed loads.

C. Edge Restraint Preparation:

1. Provide and install metal edge restraints as indicated on the drawings and per manufacturer's recommendations.

2. Provide metal edge restraints along the perimeter of all paving as indicated and supported on a minimum of 6 inches (150 mm) of Base Aggregate.

3. Provide 10" spiral galvanized or stainless steel spike to fasten edge restraint at 20-24 inches on center for straight sections and 10-12 inches on center for curved sections.

4. Installed edging should remain completely hidden from view as a condition of acceptance.

3.06 PRECAST CONCRETE PAVERS INSTALLATION

A. Install bituminous concrete paving as shown on the Drawings and in accordance with the MASSDOT Section 460.60 to and including Section 460.68 except as herein modified and as specified in Section 3.03 and 3.04 of this Section. Bituminous Concrete Base and granular base materials shall be as per the depths and materials as described on Contract Drawings.

B. Spread bedding sand evenly over the base course and screed to a nominal 1 in. thickness, not exceeding 1 1/2 in. thickness. Spread bedding sand evenly over the base course and screed rails, using the rails and/or edge restraints to produce a nominal 1 in. thickness, allowing for specified variation in the base surface.

1. Do not disturb screeded sand.

2. Screeded area shall not substantially exceed that which is covered by pavers in one day.

3. Do not use bedding sand to fill depressions in the base surface.

C. Lay pavers in patterns shown on drawings. Place units hand tight without using hammers. Make horizontal adjustments to placement of laid pavers with rubber hammers and pry bars as required.

D. Install pavers according to the pattern and color distribution as described on the contract drawings and in notes on the contract drawing describing patterns and color distribution.

E. Provide 3/32 in wide joints between pavers.

F. Joint (bond) lines shall not deviate more than ±1/2 in. over 50 ft. from string lines.

G. Fill gaps at the edges of the paved area with cut pavers or edge units.

H. Adjust paving pattern at pavement edges such that cutting of edge pavers is minimized. All cut pavers exposed to vehicular tires shall be no smaller than one-third of a whole paver. Cut pavers at edges as indicated on the drawings.

I. Keep skid steer and forklift equipment off newly laid pavers that have not received initial compaction and joint sand.

J. Use a low-amplitude plate compactor capable of at least minimum of 4,000 lbf (18 kN) at a frequency of 75 to 100 Hz to vibrate the pavers into the sand. Remove any cracked or damaged pavers and replace with new units.

K. Simultaneously spread, sweep and compact dry joint sand into joints continuously until full. This will require at least 4 to 6 passes with a plate compactor. Do not compact within 6 ft. of unrestrained edges of paving units.

L. All work within 6 ft. of the laying face must be left fully compacted with sand-filled joints at the end of each day or compacted upon acceptance of the work. Cover the laying face or any incomplete areas with plastic sheets overnight if not closed with cut and compacted pavers with joint sand to prevent exposed bedding sand from becoming saturated from rainfall.

M. Remove excess sand from surface when installation is complete.

N. Surface shall be broom clean after removal of excess joint sand.

3.07 REPAIRING, CLEANING AND SEALING PRECAST CONCRETE PAVERS

A. Remove and replace unit pavers and rip rap stones that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units or stones. Provide new units or stones to match adjoining units and install in same manner as original units or stones, with specified joint treatment and with no evidence of replacement.

B. Cleaning: Remove dirt, debris, stains, grit, etc. from exposed paver surfaces; wash and scrub clean.

C. Clean Concrete Pavers in accordance with the manufacturer's written recommendations.

3.08 SPLASH PAD SURFACING

A. Existing Substrate Preparation:

1. Remove from substrate any loose or delaminated material that would be deleterious to application of the new paving system surface.

2. Install bituminous concrete paving as shown on the Drawings and in accordance with the MASSDOT Section 460.60 to and including Section 460.68 except as herein modified and as specified in Section 3.03 and 3.04 of this Section. Bituminous Concrete Base and granular base materials shall be as per the depths and materials as described on Contract Drawings.

B. Bituminous Concrete Base Preparation: Bituminous Concrete Base must be at least 21 days old before installing surface. Broom scrub using a degreaser to remove any surface oils. Power-wash any contaminants off the surface. Allow 24 hours for the surface to dry. **AQUAFLEX CAN NOT BE INSTALLED OVER BITUMINOUS CONCRETE CURED FOR LESS THAN 21 DAYS MIN.**

C. Installation:

1. Forming: Following the shape of the area to be surfaced, form out the area with 1" x 4" wood strips, or for radius/curved concrete, use plywood cut into 4" strips. Stabilize the wood with spikes or stakes and thoroughly wax the wood surfaces with carnauba wax.

2. Priming: Roll or brush AquaFlex aliphatic, two-component polyurethane Bonder/Primer on to the surface being sure to liberally cover the entire area. Mix an amount of primer that will be used in less than 30 minutes. Normally this would be approximately one gallon when the temperature is 85 degrees

Fahrenheit. If it is warmer, the primer will cure faster and less material should be mixed. Only prime 200 square feet at a time, and as the installers approach an unprimed area, prime 200 additional square feet.

3. AquaFlex Mixing and Finishing: Dry mix two 50-pound bags (100 pounds total) of AquaFlex pebbles in a mortar mixer. Pre-mix 9 pints of AquaFlex aliphatic, two-component chlorine-resistant polyurethane Binder/Primer in an appropriate plastic container with a paddle mixer. Add the premixed 9 pints of binder to the pebbles in the mortar mixer. Mix thoroughly so that each pebble is covered evenly. Dump the mix onto the primed area and spread it with a cam rake (1/2" setting) to an average thickness of 3/8", keeping the surface as level as possible. Hand or power-trowel using a solution of soapy water to spray the surface of the trowel. This will allow easier manipulation of the trowel as well as aid in the curing of the Polyurethane. **Let the surface set for 48 to 72 hours or until dry to the touch before opening paving to traffic.**

D. Cleaning:

1. The contractor should clean the job site of excess materials, and if necessary, backfill any excavation around the perimeter with earth or other appropriate material.

2. The contractor shall instruct DCR's personnel on proper maintenance and repair of the AquaFlex surface.

3.09 PEDESTRIAN PAVEMENT TOLERANCES AND ADA VERIFICATION IN THE FIELD (V.I.F)

A. Comply with tolerances of ACI 117 and as follows with exception that variations plus or minus must still meet ADA maximum requirements for walkways, CMR 22.0, latest editions.

1. Elevation: ¼"

1. Thickness: Plus ½", minus ½"
   a. Pedestrian and Bituminous Concrete Pavement: Plus ½", minus ½"
   b. Dense Graded Stone Pack Surfacing: Plus ½", minus ½"
   c. Water Play Area Paving: Plus ¼", minus ¼"

3. Surface: Gap below 10 foot long, unleveled straightedge not to exceed 3/8".

4. Comply with all ADA grading requirements for exterior walkway slopes some indicated below, verified in the field before construction:

a. Maximum longitudinal no steeper than 5% or 1 foot vertical: 20 feet Horizontal;
b. Maximum cross slope on walkways and accessible parking spaces no steeper than 2% or 1 foot Vertical: 50 feet Horizontal, for all walkways without handrails;
c. Longitudinal slope maximum no steeper than 8.33% or 1 foot Vertical: 12 feet Horizontal for pedestrian curb ramps;
d. Verify all grades in the field and installed sub grades and assure that these requirements can be met in the field ***before final pavement construction***. Notify DCR and Landscape Architect if these requirements cannot be met for any reason. Contractor shall adjust grades in the field to meet all ADA requirements with review of the Landscape Architect at no additional cost to DCR.

3.10 PROTECTION

A. Protect all installed paving surfaces from damage resulting from subsequent construction activity on the site.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02500-01 PRECAST CONCRETE PAVERS will be made on a per SQUARE FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 02500-02 SPLASHPAD SURFACING will be made on per SQUARE FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 02500-01 PRECAST CONCRETE PAVERS will be at the per SQUARE FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, bituminous concrete base with weeps, all subbase materials, metal edging, backfilling, and the furnishing of all labor, materials, tools and equipment, shipping costs, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

B. Payment for Item 02500-02 SPLASHPAD SURFACING will be at the per SQUARE FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, bituminous concrete base with weeps,

all subbase materials, backfilling, and the furnishing of all labor, materials, tools and equipment, pedestrian bituminous concrete base and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM NO.	ITEM	UNIT
02500-01	PRECAST CONCRETE PAVERS	SQUARE FOOT
02500-02	SPLASHPAD SURFACING	SQUARE FOOT

END OF SECTION

SECTION 02510
VEHICULAR AREAS PAVING

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

A. Include the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges and the Supplemental Specifications.

1.02 DESCRIPTION OF WORK

A. This Section specifies requirements for the following types of work and related items, but is not limited to:

1. Full depth construction of driveway and pavement reclamation of the existing parking lot subbases, pavements and patches at the locations shown on the plans and as required by the Engineer.

2. Constructing the bituminous concrete subbase for the Precast Concrete Paving and Splash Pad Paving is the work of Section 02500 SITE PAVING.

3. Sawcutting of pavements and sidewalks not associated with granite curbing at the locations shown on the plans and as required by the Engineer.

PART 2 – PRODUCTS

2.01 CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL

A. Products used shall meet the requirements of Section 440 of the Standard Specifications unless otherwise noted on the Plans.

2.02 WATER FOR DUST CONTROL

A. Products used shall meet the requirements of Section 440 of the Standard Specifications unless otherwise noted on the Plans.

2.03 RECLAIMED PAVEMENT FOR BASE AND/OR SUB-BASE

A. Products shall meet the requirements of Section 403 of the Standard Specifications unless otherwise noted on the Plans.

2.04 SUPERPAVE

A. Products used shall meet the requirements of Section 450 of the Standard Specifications unless otherwise noted on the Plans.

2.05 HOT MIX ASPHALT PAVEMENT FOR PATCHING

A. Products used shall meet the requirements of Section 450 of the Standard Specifications unless otherwise noted on the Plans.

2.06 ASPHALT EMULSION FOR TACK COAT

A. Products used shall meet the requirements of Section 450 of the Standard Specifications unless otherwise noted on the Plans.

2.07 HOT MIX ASPHALT JOINT SEALANT

A. Products used shall meet the requirements of Section 450 of the Standard Specifications unless otherwise noted on the Plans.

PART 3 – EXECUTION

3.01 CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL

A. Methods of execution used shall meet the requirements of Section 440 of the Standard Specifications.

3.02 WATER FOR DUST CONTROL

A. Methods of execution used shall meet the requirements of Section 440 of the Standard Specifications.

3.03 RECLAIMED PAVEMENT FOR BASE AND/OR SUB-BASE

A. Methods of execution used shall meet the requirements of Section 403 of the Standard Specifications.

3.04 SUPERPAVE

A. Methods of execution used shall meet the requirements of Section 450 of the Standard Specifications.

3.05 HOT MIX ASPHALT PAVEMENT FOR PATCHING

A. Methods of execution used shall meet the requirements of Section 450 of the Standard Specifications and as noted on the Plans.

3.06 ASPHALT EMULSION FOR TACK COAT

A. Methods of execution used shall meet the requirements of Section 450 of the Standard Specifications and as noted on the Plans.

3.07 HOT MIX ASPHALT JOINT SEALANT

A. Methods of execution used shall meet the requirements of Section 450 of the Standard Specifications.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement of items shall be in accordance with Sections 403, 440, 450, 501, 580, and 701 of the Standard Specifications unless otherwise stated below.

B. Measurement for RECLAIMED PAVEMENT FOR BASE COURSE AND/OR SUB-BASE will be made on a per SQUARE YARD (SY) basis in conformance with the applicable provisions of Section 403 of the Standard Specifications and as indicated by the Contract Drawings.

C. Measurement for CRUSHED STONE FOR BLENDING will be made on a per TON basis in conformance with the applicable provisions of Section 403 of the Standard Specifications and as indicated by the Contract Drawings.

D. Measurement for CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL will be made on a per POUND (LB) basis in conformance with the applicable provisions of Section 440 of the Standard Specifications and as indicated by the Contract Drawings.

E. Measurement for WATER FOR DUST CONTROL will be made on a per THOUSAND GALLONS (MGAL) basis in conformance with the applicable provisions of Section 440 of the Standard Specifications and as indicated by the Contract Drawings.

F. Measurement for SUPERPAVE for surface, intermediate, and base courses will be made separately on a per TON basis in conformance with the applicable provisions of Section 450 of the Standard Specifications and as indicated by the Contract Drawings.

G. Measurement for HOT MIX ASPHALT PAVEMENT FOR PATCHING will be made on a per TON basis in conformance with the applicable provisions of Section 450 of the Standard Specifications and as indicated by the Contract Drawings.

H. Measurement for ASPHALT EMULSION FOR TACK COAT will be made on a per GALLON basis in conformance with the applicable provisions of Section 450 of the Standard Specifications and as indicated by the Contract Drawings.

I. Measurement for HOT MIX ASPHALT JOINT SEALANT will be made on a per LINEAR FOOT basis in conformance with the applicable provisions of Section 450 of the Standard Specifications and as indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment of items shall be in accordance with Sections 403, 440, 450, 501, 580, and 701 of the Standard Specifications unless otherwise stated below.

B. Payment for RECLAIMED PAVEMENT FOR BASE COURSE AND/OR SUB-BASE will be made on a per SQUARE YARD (SY) basis in conformance with the applicable provisions of Section 403 of the Standard Specifications and as indicated by the Contract Drawings. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

C. Payment for CRUSHED STONE FOR BLENDING will be at the per TON contract price in conformance with the applicable provisions of Section 403 of the Standard Specifications. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

D. Payment for CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL will be at the per POUND (LB) contract price in conformance with the applicable provisions of Section 440 of the Standard Specifications. This price shall include full compensation for

all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

E. Payment for WATER FOR DUST CONTROL will be at the per THOUSAND GALLONS (MGAL) contract price in conformance with the applicable provisions of Section 440 of the Standard Specifications. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

F. Payment for SUPERPAVE for surface, intermediate, and base courses will be paid separately at the per TON contract price in conformance with the applicable provisions of Section 450 of the Standard Specifications. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

G. Payment for HOT MIX ASPHALT PAVEMENT FOR PATCHING will be at the per TON contract price in conformance with the applicable provisions of Section 450 of the Standard Specifications. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

H. Payment for ASPHALT EMULSION FOR TACK COAT will be at the per GALLON contract price in conformance with the applicable provisions of Section 450 of the Standard Specifications. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

I. Payment for HOT MIX ASPHALT JOINT SEALANT will be at the per LINEAR FOOT contract price in conformance with the applicable provisions of Section 450 of the Standard Specifications. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

J. Payment for SAWCUTTING ASPHALT PAVEMENT that is not associated with granite curbing will be at the per LINEAR FOOT contract price in conformance with the applicable provisions of Section 400 of the Standard Specifications. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02510.01	RECLAIMED PAVEMENT FOR BASE AND/OR SUB-BASE	SY
02510.02	CRUSHED STONE FOR BLENDING	TON
02510.03	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL	LB
02510.04	WATER FOR DUST CONTROL	MGAL
02510.05	SUPERPAVE SURFACE COURSE-9.5 (SSC - 9.5)	TON
02510.06	SUPERPAVE INTERMEDIATE COURSE-19.0 (SIC - 19.0)	TON
02510.07	HMA FOR PATCHING	TON
02510.08	ASPHALT EMULSION FOR TACK COAT	GALLON
02510.09	HMA JOINT SEALANT	LINEAR FOOT
02510.10	SAWCUTTING ASPHALT PAVEMENT	LINEAR FOOT

END OF SECTION

SECTION 02630
STORM DRAINAGE UTILITIES

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. Include the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges and the Supplemental Specifications.

1.02 DESCRIPTION OF WORK

A. This Section specifies requirements for the following types of work and related items, but is not limited to furnishing all labor, tools, equipment and materials and performing all operations necessary to install piping, valves and appurtenances as indicated by the Contract Drawings, as specified herein or as required by the Engineer:

1. Installing a new drainage system in the driveway and parking lot area and connecting the system to an existing underground vault.

2. Installing a new drain pipe from the splashpad area to an existing outfall.

3. Installing a new perforated underdrain from the landscaped stormwater feature to an existing outfall.

4. Removal and disposal of Drainage Structures, Drainage Castings, Drainage Pipe and Pipe Sediments.

5. Remove and replace storm drain lines that run through the south boardwalk seawall to accommodate the new steel bulkhead seawall construction. All

couplings, wall sleeves and pipe shall be furnished and installed by the Contractor.

6. The contractor is responsible for maintenance of storm flow service from the 24-inch storm drain outfall at the existing seawall. The contractor shall submit a flow diversion or bypass plan to maintain storm service flows around the work area and construction until the storm drain piping and scour protection is accepted in place.

7. De-watering in accordance with applicable standards and local requirements for completion of the work.

8. Note contractor may need to plan work around the sea level tides.

PART 2 - PRODUCTS

2.01 CATCH BASIN

A. Products used shall meet the requirements of Section 201 of the Standard Specifications unless otherwise noted on the Plans.

B. The precast reinforced concrete structure shall be structurally designed to withstand AASHTO H-25 traffic loading. Submit structural calculations stamped and signed by a Structural Professional Engineer registered in the Commonwealth of Massachusetts certifying the unit meets the AASHTO HS-25 traffic loading.

C. Based on available boring information, the groundwater table varies. The Contractor shall provide buoyancy calculations prepared by either a Civil or Structural Professional Engineer registered in the Commonwealth of Massachusetts for review and approval. Buoyancy calculations shall meet a minimum factor of safety of 1.2 for groundwater at proposed surface grade. Structure design shall be prepared by a Structural Professional Engineer registered in the Commonwealth of Massachusetts for review and approval.

D. Catch Basin to have 4 foot deep sump and hood.

2.02 MANHOLE

A. Products used shall meet the requirements of Section 201 of the Standard Specifications unless otherwise noted on the Plans.

B. The precast reinforced concrete structure shall be structurally designed to withstand AASHTO H-25 traffic loading. Submit structural calculations stamped and signed by a Structural Professional Engineer registered in the

Commonwealth of Massachusetts certifying the unit meets the AASHTO HS-25 traffic loading.

C. Based on available boring information, the groundwater table varies. The Contractor shall provide buoyancy calculations prepared by either a Civil or Structural Professional Engineer registered in the Commonwealth of Massachusetts for review and approval. Buoyancy calculations shall meet a minimum factor of safety of 1.2 for groundwater at proposed surface grade. Structure design shall be prepared by a Structural Professional Engineer registered in the Commonwealth of Massachusetts for review and approval.

2.03WATER QUALITY UNIT

A. The precast reinforced concrete structure shall be of size and capacity as indicated herein and as noted on the Plans.

B. The precast reinforced concrete structure shall be structurally designed to withstand AASHTO H-25 traffic loading. Submit structural calculations stamped and signed by a Structural Professional Engineer registered in the Commonwealth of Massachusetts certifying the unit meets the AASHTO HS-25 traffic loading.

C. Based on available boring information, the groundwater table varies. The Contractor shall provide buoyancy calculations prepared by either a Civil or Structural Professional Engineer registered in the Commonwealth of Massachusetts for review and approval. Buoyancy calculations shall meet a minimum factor of safety of 1.2 for groundwater at proposed surface grade. Structure design shall be prepared by a Structural Professional Engineer registered in the Commonwealth of Massachusetts for review and approval.

D. The cast iron frame and cover shall be in accordance with the requirements of Section 201 of the Standard Specifications. Cover shall be finished diamond pattern. The words "DRAIN- WQU' shall be cut on the manhole cover.

E. The precast reinforced concrete unit shall be of size and capacity in accordance with the performance criteria:

a. The water quality unit shall remove oil and sediment from stormwater during frequent wet weather events. It shall treat a minimum of 75 to 90 percent of the annual runoff volume and be capable of removing 80 percent of the total suspended sediment load as well as more than 90 percent of floatable free oil. The unit shall be capable of trapping silt and clay size particles, in addition to large particles.

b. The water quality unit system shall be capable of treating the first 1-inch runoff (first flush) generated by any rainfall storm (Boston, MA). The unit shall be equipped with an internal high flow bypass that regulates the flow rate into the treatment chamber and conveys high flows directly to the outlet, so the scour and/or re-suspension of material previously collected in the separator does not occur. External bypasses are not acceptable.

c. The water quality units shall be capable of treating a contributing drainage area as follows:

WQU-01:	0.30 Acres
WQU-02:	0.30 Acres

2.04 FRAME AND COVER

A. Products used shall meet the requirements of Section 201 of the Standard Specifications unless otherwise noted on the Plans. Cover shall be finished diamond pattern. The words "DRAIN' shall be cut on the manhole cover.

2.05 FRAME AND GRATE

A. Products used shall meet the requirements of Section 201 of the Standard Specifications unless otherwise noted on the Plans.

2.06 HIGH DENSITY POYETHLENE PIPE

A. Pipe shall be solid wall and made of high density molecular weight polyethylene pipe material meeting the requirements of ASTM D 3350 minimum cell classification 324420C or 335420C. HDPE shall be corrugated pipe with an integrally formed smooth interior and annular exterior pipe, Type S, as defined in AASHTO M 252 and M 294 Standard Specifications. The pipe shall contain a minimum of 2% black carbon as an ultraviolet inhibitor.

B. Gaskets shall be made of polyisoprene meeting the requirements of ASTM F477.

C. HDPE pipe and fittings shall be N-12, Series 35 as manufactured by ADS or Approved Equal.

2.07 SLOT-PERFORATED HIGH DENSITY POYETHLENE PIPE (SUBDRAIN)

A. Products used shall meet the requirements of Section 260 of the Standard Specifications unless otherwise noted on the Plans.

2.08 TRANSITION COUPLINGS

A. Transition couplings for joining existing pipe to new pipe with dissimilar outer diameter shall be made of chemical resistant elastomeric plastic with corrosion resistant stainless steel clamp bands and shall be sized to fit the outside diameters of the pipes being joined. Couplings shall conform to ASTM C 425 and/or ASTM C 1173, as applicable and shall be as manufactured by Fernco, Mission, Indiana Seal or equal.

2.09CRUSHED STONE

A. Crushed stone for bedding material under precast concrete manhole, catch basin, and backfill around HDPE Pipe shall meet the requirements of MassDOT Section M2.01.0 unless otherwise noted on the Plans.

2.10 GEOTEXTILE FABRIC FOR SEPARATION

A. Geotextile fabric used to envelop the crushed stone bedding and backfill shall meet the requirements specified in Subsection M9.50.0 Geotextile Fabrics of Division III, Materials, of the Standard Specifications unless otherwise noted on the Plans.

PART 3 - EXECUTION

3.01 INSTALLATION OF NEW WORK

A. Methods of execution used shall meet the requirements of Section 201 of the Standard Specifications unless otherwise noted below.

B. New pipe shall be laid upon a trench bottom as shown on the Plans, accurately to line and grade. The following requirements shall be met:

1. All pipes shall be laid in accordance with the recommendations or specifications of the manufacturer insofar as they do not conflict with these Specifications.

2. Pipe and appurtenances shall be examined carefully for cracks or other defects.

3. Pipe shall be laid to lines and depths shown or as approved by the DCR and the work done with suitable tools and appliances specifically designed for tamping and compacting under, around and above the pipe. An even alignment of the pipes shall be maintained.

4. Groundwater shall be maintained below subgrade level. Unless otherwise

noted, subgrade is 6 inches below the pipe invert.

5. The subgrade shall be compacted prior to placing the pipe bedding material.

6. Depressions in the trench bedding material shall be formed for bell-and-spigot pipe so that only the barrel of the pipe (and not the bell) bears on the prepared bed.

7. Blocking will not be permitted, except where pipe is installed and/or supported on piles.

8. Each length of pipe shall be laid to form a tight joint (using appropriate transition or repair couplings where necessary), as hereinafter specified, and to bring the inverts into a continuous line.

9. All pipes shall be clean and free of dirt before continuing laying new pipe and open ends shall be kept covered and free of dirt during construction.

10. Each pipe shall be held firmly in position by carefully and thoroughly tamping backfill material around the barrel of the pipe. Tamping irons shall be used.

11. The work shall be conducted in a manner such that no loose excavation or other foreign material can enter the pipes.

12. Whenever it is necessary to cut pipe to fit into existing pipelines power saws or other methods approved by the DCR shall be utilized.

13. Where new pipes are to join existing structures, extreme care shall be taken in modifying openings so that watertight connections can be made. The lengths of pipe used to connect to manholes shall meet the following requirements:

Pipe Material	Maximum Length	Minimum Length
HDPE	3’-3”	2’-0”

14. Ends of completed pipes shall be sealed with approved pipe caps or masonry, as specified.

15. Except as may be necessary in making joints, in placing cradles, and in tamping the backfill material, walking on or working over the pipes after they are laid shall not be permitted until the pipes are covered with crushed stone to a depth of 6 inches above the crown.

16. Where new pipes join existing pipes, all work necessary to make a watertight connection shall be done. Specified transition/repair couplings and gaskets are to be used where necessary to connect similar and dissimilar types of pipe. Pipes of the same material shall be removed at an existing joint to provide a new joint connection to minimize field cuts.

17. Pipe joints shall be made in accordance with the manufacturer's recommendations.

C. Connection to drain fixtures in the splash pad to the Water Play Area shall be coordinated with the Playsafe drain fixtures and terminated with temporary caps below the finished grade until Playsafe drain fixtures are ready to be installed. The temporary caps will be removed, and the drain riser pipes cut to the required elevation to be fitted with suitable PVC standard reducer fittings. Final grade adjustments to be made prior to mounting the splash pad drains as detailed on the Contract Drawings, and as recommended by the Playsafe drain and splash pad manufacturer.

D. Cleanouts: Cleanouts shall be constructed of the same material used for drain piping, and shall be enclosed in a cast iron frame and cover as shown on the Contract Drawings.

E. Concrete Cradle for Pipe: Concrete part-cradle or full cradle, as directed by the DCR, shall be built to support pipelines in designated locations and where depth of cover exceeds the manufacturer's recommended limits the size and type of pipe being installed. Concrete shall conform to the requirements of these Specifications.

F. Cleaning Lines: During removal of existing pipelines and/or installation of new work, all dirt and foreign material shall be prevented from entering pipelines and appurtenant construction. Upon completing work, any dirt and/or foreign material shall be removed from pipelines and appurtenances. No excess patching or grouting material shall be left at joints, in inverts, or at pipe connections so as to impede flow. All excess material and debris shall be legally disposed of at the Contractor's expense.

3.04 RECORD PLAN INFORMATION

A. The Contractor shall furnish as-built record plan to the DCR by securing ties, depths, distances and/or other reference dimensions for all pipelines and fittings installed under this project prior to obtaining final acceptance at no additional cost to the DCR.

3.05 TESTING AND VERIFICATION

A. To the extent possible, all work that can be visually inspected shall be so inspected after the work is completed. The Contractor and the DCR shall be present for the inspection.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement of items shall be in accordance with Sections 200 of the Standard Specifications unless otherwise stated below. De-watering as required for completion of the work is to be included in the respective items and no separate measurement will be made for de-watering.

B. Measurement for CATCH BASINS will be made on a per EACH unit basis regardless of depth and in conformance with the applicable provisions of Section 201 of the Standard Specifications and as indicated by the Contract Drawings.

C. Measurement for MANHOLES will be made on a per EACH unit basis regardless of depth and in conformance with the applicable provisions of Section 201 of the Standard Specifications and as indicated by the Contract Drawings.

D. Measurement for WATER QUALITY UNITS will be made on a per EACH basis for each unit actually constructed, complete and in place, and accepted by the Engineer in compliance with the Contract Drawings and Specifications.

E. Measurement for FRAME AND COVERS will be made on a per EACH basis in conformance with the applicable provisions of Section 201 of the Standard Specifications and as indicated by the Contract Drawings.

F. Measurement for FRAME AND GRATES will be made on a per EACH basis in conformance with the applicable provisions of Section 201 of the Standard Specifications and as indicated by the Contract Drawings.

G. Measurement for 8-INCH HIGH DENSITY POLYETHLENE PIPE will be made on a per LINEAR FOOT basis for pipe actually constructed, complete and in place, and accepted by the Engineer in compliance with the Contract Drawings and Specifications.

H. Measurement for 12-INCH HIGH DENSITY POLYETHLENE PIPE will be made on a per LINEAR FOOT basis for pipe actually constructed, complete and in place, and accepted by the Engineer in compliance with the Contract Drawings and Specifications.

I. Measurement for 8-INCH SLOT-PERFORATED HIGH DENSITY POLYETHLENE PIPE (SUBDRAIN) will be made on a per LINEAR FOOT

basis for pipe actually constructed, complete and in place, and accepted by the Engineer in compliance with the Contract Drawings and Specifications.

J. Measurement for REMOVE AND REPLACE 24-INCH STORM DRAIN and associated outfall will be made on a LUMP SUM basis as indicated by the Contract Drawings

K. Maintenance of storm flows including diversion and bypass shall be included in the respective items. No separate measurement will be made for maintaining storm service during construction.

L. Measurement for REMOVE AND DISPOSE OF EXISTING DRAINAGE STRUCTURE will be made on a per EACH basis for all work described in this section and as indicated by the Contract Drawings.

M. Measurement for REMOVE AND DISPOSE OF EXISTING DRAINAGE CASTING will be made on a per EACH basis for all work described in this section and as indicated by the Contract Drawings.

N. Measurement for REMOVE AND DISPOSE OF EXISTING DRAINAGE PIPE will be made on a per LINEAR FOOT basis for all work described in this section and as indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment of items shall be in accordance with Sections 200 of the Standard Specifications unless otherwise stated below. De-watering as required for completion of the work is to be included in the respective items and no separate payment will be made for de-watering.

B. Payment for CATCH BASINS will be at the per EACH contract price. This price shall include full compensation for all labor, tools, materials, equipment, and all other incidental work necessary to complete the item as indicated in the applicable provisions of Section 201 of the Standard Specifications and by the Contract Drawings.

C. Payment for MANHOLES will be at the per EACH contract price. This price shall include full compensation for all labor, tools, materials, equipment, and all other incidental work necessary to complete the item as indicated in the applicable provisions of Section 201 of the Standard Specifications and by the Contract Drawings.

D. Payment for WATER QUALITY UNITS will be at the per EACH contract price. This price shall include full compensation for each unit actually constructed, complete and in place, and accepted by the Engineer. The price shall also include

all labor, tools, materials, equipment, and all other incidental work necessary to complete the item in compliance with the Contract Drawings and Specifications.

E. Payment for FRAME AND COVERS will be at the per EACH contract price. This price shall include full compensation for all labor, tools, materials, equipment, and all other incidental work necessary to complete the item as indicated in the applicable provisions of Section 201 of the Standard Specifications and by the Contract Drawings.

F. Payment for FRAME AND GRATES will be at the per EACH contract price. This price shall include full compensation for all labor, tools, materials, equipment, and all other incidental work necessary to complete the item as indicated in the applicable provisions of Section 201 of the Standard Specifications and by the Contract Drawings.

G. Payment for 8-INCH HIGH DENSITY POLYETHLENE PIPE will be at the per LINEAR FOOT contract price. This price shall include full compensation for pipe actually constructed, complete and in place, and accepted by the Engineer. The price shall also include all labor, tools, materials, equipment, and all other incidental work necessary to complete the item in compliance with the Contract Drawings and Specifications.

H. Payment for 12-INCH HIGH DENSITY POLYETHLENE PIPE will be at the per LINEAR FOOT contract price. This price shall include full compensation for each unit actually constructed, complete and in place, and accepted by the Engineer. The price shall also include all labor, tools, materials, equipment, and all other incidental work necessary to complete the item in compliance with the Contract Drawings and Specifications.

I. Payment for 8-INCH SLOT-PERFORATED HIGH DENSITY POLYETHLENE PIPE (SUBDRAIN) will be at the per LINEAR FOOT contract price. This price shall include full compensation for each unit actually constructed, complete and in place, and accepted by the Engineer. The price shall also include all labor, tools, materials, equipment, and all other incidental work necessary to complete the item in compliance with the Contract Drawings and Specifications.

J. Payment for REMOVE AND REPLACE 24-INCH STORM DRAIN and associated outfall will be at the LUMP SUM contract price. This price shall include full compensation for all work necessary to complete removal and replacement of storm drain pipe along the south boardwalk seawall and boardwalk improvements as noted in the Contract Drawings. Work shall include support and extension of utilities across the underside of boardwalk extension where required and wall sleeves with watertight penetration through new steel bulkhead seawall and connections with adaptors as required on both

ends.

K. Maintenance of storm flows including diversion and bypass shall be included in the respective items. No separate payment will be made for maintaining storm service during construction.

L. Payment for REMOVE AND DISPOSE OF EXISTING DRAINAGE STRUCTURE will be at the per EACH contract price. This price shall include full compensation for all work necessary to completely remove and dispose of the structure, backfill with suitable material, all labor, materials, tools, and all other incidental work necessary to complete the item as indicated by the Contract Drawings.

M. Payment for REMOVE AND DISPOSE OF EXISTING DRAINAGE CASTING will be at the per EACH contract price. and includes all work necessary to completely remove and dispose of the casting and includes all incidentals necessary for completion of the work. This price shall include full compensation for all work necessary to completely remove and dispose of the casting, all labor, materials, tools, and all other incidental work necessary to complete the item as indicated by the Contract Drawings.

N. Payment for REMOVE AND DISPOSE OF EXISTING DRAINAGE PIPE will be at the per LINEAR FOOT contract price. This price shall include full compensation for all work necessary to completely remove and dispose of the structure, backfill with suitable material, all labor, materials, tools, and all other incidental work necessary to complete the item as indicated by the Contract Drawings. Disposal of sediments is considered incidental to this item.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02630.01	CATCH BASIN	EACH
02630.02	MANHOLE – 4FT DIAMETER	EACH
02630.03	MANHOLE – 5FT DIAMETER	EACH
02630.04	WATER QUALITY UNIT	EACH
02630.05	FRAME AND COVER	EACH
02630.06	FRAME AND GRATE	EACH

02630.07	8-INCH HIGH DENSITY POLYETHLENE PIPE	LINEAR FOOT
02630.08	12-INCH HIGH DENSITY POLYETHLENE PIPE	LINEAR FOOT
02630.09	8-INCH SLOT-PERFORATED HIGH DENSITY POLYETHLENE PIPE	LINEAR FOOT
02630.10	REMOVE AND REPLACE 24-INCH STORM DRAIN	LUMP SUM
02630.11	REMOVE AND DISPOSE OF EXISTING DRAINAGE STRUCTURE	EACH
02630.12	REMOVE AND DISPOSE OF EXISTING DRAINAGE CASTING	EACH
02630.13	REMOVE AND DISPOSE OF EXISTING DRAINAGE PIPE	LINEAR FOOT

END OF SECTION

SECTION 02665
WATER PIPING, VALVES AND APPURTENANT WORK

PART 1 GENERAL

1.01 GENERAL REQUIREMENTS

A. Include the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) *Standard Specifications for Highways and Bridges* and the *Supplemental Specifications*.

1.02 DESCRIPTION OF WORK

A. This Section specifies requirements for the following types of work and related items within the Park and at the South Boardwalk, but is not limited to:

1. Coordinate utility service outage with Utility Company and DCR as required.

2. Furnishing labor, tools, equipment and materials and performing all operations necessary for the installation of water main and service piping, valves and valve boxes, curb stops, fittings; meter with cabinet enclosure; and appurtenances as specified herein and as shown on the Drawings.

3. Disconnecting and draining the existing irrigation system so that if encountered or conflicting with the proposed work, the irrigation system can be removed or abandoned in place.

4. Furnishing all labor, tools, equipment and materials and performing all operations necessary to remove and reinstate water lines and air lines that run through the south boardwalk seawall to accommodate the new steel bulkhead seawall construction including the installation of air piping, water mains, services, piping, valves and appurtenances as indicated by the Contract Drawings, as specified herein or as required by the Engineer. Work shall be performed and completed during the period

while the Marina is shut down for other waterfront work such as construction of the new steel bulkhead seawall. Refer to Section 02010.

5. Furnishing and installing all fittings, couplings, valves, wall sleeves and pipe.

1.03 REFERENCES

A. The following Standards of the American Water Works Association (AWWA) /American National Standards Institute (ANSI) and American Society for Testing and Materials (ASTM) form a part of these Specifications:

1. ANSI / AWWA A21.4 / C104 - Cement-Mortar Lining for Ductile-Iron and Gray Iron Pipe and Fittings for Water.
2. ANSI / AWWA A21.10 / C110 - Gray-Iron and Ductile-Iron Fittings, 3-in. through 48-in., for Water and Other Liquids.
3. ANSI / AWWA A21.11 / C111 - Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings.
4. ANSI / AWWA A21.50 / C150 - Thickness Design of Ductile-Iron Pipe.
5. ANSI / AWWA A21.51 / C151 - Ductile-Iron Pipe, Centrifugally Cast-In Metal Molds or Sand-Lined Molds for Water or Other Liquids.
6. ANSI / AWWA A21.3 / C153 - Ductile-Iron Compact Fittings, 3-In. through 16-In., for Water and Other Liquids.
7. ANSI/ NSF 61 - Drinking Water System Components
8. AWWA C-207 - Steel Pipe Flanges for Waterworks Service.
9. AWWA C500 - Gate Valves for Water and Sewage Systems.
10. AWWA C-502 - Dry-Barrel Fire Hydrants
11. AWWA C-504 - Rubber Seated Butterfly Valves.
12. AWWA C-509 - Resilient-Seated Gate Valves for Water Supply Service.
13. AWWA C-550 - Protective Epoxy Interior Coatings for Valves and Hydrants.
14. AWWA C-600 - Installation of Ductile-Iron Water Mains and Their Appurtenances.
15. AWWA C651: Disinfecting Water Mains.
16. AWWA C800: Underground Service Line Valves and Fittings.
17. AWWA C901: Polyethylene (PE) Pressure Pipe and Tubing, ½-inch through 3-inch for Water Service.

18. ASTM A48: Gray Iron Castings.
19. ASTM B62: Composition Bronze or Ounce Metal Castings.
20. ASTM B88: Seamless Copper Water Tube
21. ASTM C150: Portland Cement
22. ASTM D1785: Polyvinyl Chloride Schedule 40 pipe

1.05 SUBMITTALS

A. Conform to Section 01300 – SUBMITTALS for all procedures and requirements.

1. Water Piping: Ductile Iron, Copper Tubing and Fittings
2. Gate Valves / Boxes
3. Curb Stop w/ Drain and Curb Boxes
4. Water Meter / Enclosure
5. Leakage Tests and Disinfection Tests

PART 2 - PRODUCTS

2.01 PIPE, FITTINGS AND COUPLINGS

A. All pipe and fittings furnished shall be accompanied by the manufacturer's Certificate of Compliance, in addition to meeting the performance tests hereinafter specified.

B. The kinds of pipe, fittings and couplings to be used for different parts of the work shall be ductile iron, unless otherwise specified or shown on the Contract Drawings.

C. Ductile Iron Pipe and Fittings: Water pipe 3-inch and larger shall be ductile-iron and shall conform to the latest ANSI/AWWA A21.51/C151 and A21.50/C150. Ductile-Iron pipe shall conform to the following requirements and exceptions to the aforementioned specifications insofar as they apply:

1. Ductile iron pipe shall conform to AWWA/ANSI Standard C150/A21.50 and C151/A21.51.

2. Ductile-Iron pipe shall be thickness Class 52.

3. Pipe shall have mechanical joint fittings.

4. Ductile iron pipe and fittings shall be <u>double thick</u> cement lined in accordance with AWWA/ANSI Standard C104/A21.4. The thickness of cement lining shall be not less than 1/8 inch for 3-inch to 12-inch pipe and 3/16 inch for 14-inch to 24-inch pipe.

5. All ductile iron pipe (interior and exterior) shall have a seal coat of asphaltic material in conformance with AWWA/ANSI Standard C104/A21.4.

6. Unless otherwise specified, all ductile iron pipe and fittings shall be coated with zinc-rich paint coating per AWWA C150 and C151, and ISO 8179-1 and 8179-2 "Ductile Iron Pipes – External Zinc Coating – Part 1: Metallic Zinc with finishing layer" and "Ductile Iron Pipes – External Zinc Coating – Part 2: Zinc rich paint with finishing layer."

7. Coating: The exterior of ductile iron pipe shall be coated with a layer of arc-sprayed zinc; a minimum of 200g of zinc shall be applied per m^2 of pipe surface area. A bituminous based topcoat or synthetic resin compatible with zinc shall be applied on top of the zinc coating. The mean dry thickness of zinc shall be greater than or equal to 3 mils. The mean dry thickness of the topcoat shall be a minimum of 2 mils. Pipe shall be clearly labeled as zinc coated.

D. Ductile Iron Fittings: Ductile iron fittings for pipes 3-inch and larger shall be furnished in accordance with latest ANSI/AWWA A21.53/ C153. Fittings shall conform to the following specific requirements and exceptions to the aforementioned specifications insofar as they apply:

1. Fittings shall have a Class 350 pressure rating.

2. Fittings for mechanical joints (MJ) shall be restrained with restraining devices. Restraining devices using standard MJ gaskets and retainer glands shall be Mega-Lugs, Series 1100, manufactured by EBBA Iron Inc., Roma-Grip by Romac Industries, or Series 1400 by Ford Meter Box, or approved equal. Restraining glands shall have a corrosion resistant coating.

3. Joints for Ductile Iron Pipe and Fittings: Joints for pipe and fittings, except as noted hereinafter, shall be in accordance with the latest ANSI/AWWA A21.11/ C111. Fittings shall be furnished with mechanical joints. All mechanical joints shall be provided with rubber gaskets, and stainless steel nuts and bolts.

4. The coating materials for mechanical joint fittings shall be a zinc-rich paint with inorganic binder and a zinc content of at least 85% by weight in the dry film and the mass of the zinc applied shall not be less than 150g per m^2. A bituminous based topcoat or synthetic resin compatible with zinc shall be applied on top of the zinc coating. The zinc rich paint coating shall be applied to a dry film thickness (DFT) of between 2.3 to 3.5 mils (.0020" to .0035").

6. Flexible couplings and solid sleeves shall be used to connect the various parts of the work as indicated on the Contract Drawings or approved by the Engineer.

Flexible couplings shall consist of a steel or ductile iron middle ring, follower rings and wedge-type gaskets at each end bolted together to give a tight joint suitable for water pressures at least equal to that of the pipeline in which they are to be installed. Flexible couplings shall be furnished with epoxy or other approved coating.

E. Gate Valves: Gate valves 3-inch and larger shall be resilient wedge type non-rising-stem, as manufactured by M&H Valve, Style 4067, Mueller A-2360, or Clow F-6100, or approved equal, and shall conform to the latest AWWA C509 insofar as applicable. Gate valves shall **OPEN RIGHT.**

F. Valve Boxes and Covers:

1. The valve box and extension shall be cast-iron, two piece, sliding type with a top flange and a minimum shaft diameter of 5 inches.

2. The bottom section shall be 36” long, unless otherwise specified on the plans, and provided with belled (buffalo) base. The base shall be integral to the bottom section.

3. The top section shall be 26” long and designed to slide over the base.

4. The cover shall be a heavy 2” drop type, non-tilting cast/ductile iron unit that is recessed in the box top to prevent plow breakage. The cover shall be provided with two pick holes for easy removal and have the word “WATER” clearly cast into the cover.

5. All valve box components shall be coated with a bituminous coating in accordance with AWWA C110.

G. Couplings: All required couplings shall be Red Hed, Mueller, Ford Quick Pak Cambridge Brass, and McDonald or approved equal by the Lynn Water and Sewer Department.

H. Pipe Saddles: All pipe saddles shall be double strap design.

I. Copper Tubing: New pipe used for water services for underground installation to the backflow preventer, splash pad command center, connection to ductile iron pipe and connection to curb stop assemblies shall be copper Type K water tube seamless, drawn temper, almost pure copper material manufactured to the requirements of ASTM B 88 Standards, and AWWA C800 Standards. Tube shall be manufactured from copper alloy C12200 having a chemical composition of a minimum of 99.9% Copper (Cu) and Silver (Ag) combined and a maximum allowable range of Phosphorous (P) of 0.015 % - 0.040 %. The Seamless copper water tube of drawn temper is required to be identified with a green color stripe and the manufacturer’s name or trademark.

2.02 APPURTENANCES

A. Meter Enclosure: Enclosure shall be a flip top, foam insulated, and locking- box with concrete pad. Enclosure shall be made of fiberglass laminate with a non-corrosive gel coat surface. Enclosure shall have drainage outlets and reinforced mounting flanges.

1. Color shall be as selected by the Engineer during Submittal review.

2. Enclosure shall be a "Lok Box" sized to suit installation of the Water Meter, Backflow Preventer and valves with layout as detailed. Enclosure shall be as manufactured by Hot Box or equal.

B. Meter: Meter shall conform to the City of Lynn Water Division's standards.

C. Ball Valve: Ball valve shall be full port, 2-piece bronze body, bottom loaded stem, stainless steel handle and nut, NPT x NPT end connection suitable for potable water (Lead Free).

2.03 LEAD FREE MARINE BRONZE BALL VALVES

A. Marine bronze ball valves shall be the ball valve and bronze o-ring type. Bronze valves shall be lead free. Ball shall be Teflon coated or stainless steel without drain. All parts shall be of bronze and shall be designed for a hydrostatic test pressure not less than 150 psi and shall open by turning clockwise (right).

2.04 PVC BALL VALVES

A. Ball valves along PVC pipe shall be PVC Schedule 80 Standard Ball Valves unless otherwise noted. All parts shall be of bronze and shall be designed for a hydrostatic test pressure not less than 150 psi and shall open by turning clockwise (right).

2.05 PVC SERVICE PIPE

A. PVC service pipe for potable water and air lines shall conform ASTM D1785 Standard Specification for Polyvinyl Chloride (PVC) Plastic Pipe, Schedule 40 with solvent weld joints or threaded for connections to fittings and valves.

B. Tubing for buried water services shall be polyethylene American made designed for 200 psi minimum service. Tubing shall conform to AWWA C-901 latest revisions. The tubing shall be copper O.D. size and be suitable for use with standard industry brass compression fittings without special adapters. Insert stiffeners shall be provided for use with all compression joint connections. Tubing shall be Drisco Pipe, Hydro-Flo or approved equal

2.06 RESTAINED INSULATING COUPLINGS

A. Couplings to be used in connecting two plain ends of cast, ductile iron pipe shall be of cast or ductile iron with bolts and nuts complying with AWWA C-111.

B. The coupling shall be equipped with insulating boot and or/ insulating spacers. The IC501's insulating boot stops electrolytic action by isolating one pipe from the other.

C. Bolts and rods will be protected with a wax tape corrosion protection applied after installation of coupling

2.07 WAX TAPE CORROSION PROTECTION

A. Wax tape wrap shall be a nonwoven, non-stitch bonded synthetic fabric, saturated with a blend of microcrystalline wax, solvents and corrosion inhibitors (no clay fillers), forming a tape wrapper that firms up and is suitable for painting.

B. Install per manufacturer’s recommendations. Wire brush and scrape the surface clean of loose mill scale, rust, paint and other foreign matter. Apply a thin film of wax tape primer. If the surface is wet, cold or rusty, then rub and press on primer firmly to displace the moisture and ensure adhesion. Then wrap wax tape using a 1” overlap. While wrapping, press and mold the wrap into conformity, ensuring that there are no air pockets or voids, so that the wrap is in intimate contact with the surface. Also, press and smooth out lap seams to ensure that they are sealed. If the wrap is going to be painted, allow a few days for it to firm up.

2.08 ZINC ANODE

A. Zinc alloyed anode that works well in seawater conditions. Chemical composition conforms to MIL-18001K.

B. Zinc anode shall be 2.1 kg body bolted style so that it may be bolded to water pipe flange. Provide custom bolts to attach anode.

PART 3 – EXECUTION

3.01 INSTALLATION OF PIPE AND APPURTENANCES

A. Ductile Iron Pipe and Fittings: Ductile iron pipe and fittings for potable water shall be laid and jointed in accordance with the requirements of AWWA C600 Standard Specifications and the manufacturer's recommendations.

1. Ductile-Iron pipe and fittings shall be encased in high density cross-laminated polyethylene film 4 mill (0.004 in.) minimum thickness in accordance with Section 4 requirements of AWWA C105 Standards.

A. Gate Valve: The gate valve shall be installed in accordance with the manufacturer's recommendations.

3.02 WATER SERVICE PIPE

A. All work on the water services (copper and polyethylene tubing) shall be properly coordinated with the City of Lynn Water Division personnel. Copper tubing shall be used for connection of water service to ductile pipe, curb stops and connection to above ground backflow preventer and meter fixtures. Connections will be made with compression and threaded brass fittings and as shown in the Contract Drawings.

B. All services shall be installed with a minimum cover of 5 feet in accordance with the Standard Construction details in these Contract Documents and the Lynn Water Division. The service pipe trench shall be backfilled in accordance with SECTION 02200 - EARTHWORK.

3.03 APPURTENANCES

A. Meter Enclosure: The fiberglass enclosure to be bolted from the mounting flanges onto the concrete slab in accordance with the manufacturer’s written instructions, and as shown on the Contract Drawings

B. Water Meter shall be installed inside the fiberglass enclosure fitted with brass unions for removal during winter in accordance with the Lynn Water Department, and as shown on the Contract Drawings.

C. Ball Valve: Ball valve shall be fitted with brass fittings into the 2” copper tubing upstream of the water meter inside the fiberglass enclosure and downstream of the backflow preventer in accordance with the Lynn Water Division, and as shown on the Contract Drawings.

3.04 TESTING

A. The ductile-iron pipe 3-inch and larger shall be given pressure and leakage tests in sections of appropriate length in the presence of the City of Lynn Water Division personnel.

B. The Contractor shall furnish a water meter and a pressure gage. The Contractor shall furnish and install suitable temporary testing plugs or caps for the pipe line; all necessary pressure pumps, pipe connections and other similar equipment; and all labor required; all without additional compensation for testing. The meter and gage shall be installed by the Contractor in such a manner that all water entering the section under test will be measured and the pressure in the section indicated, and they shall be kept in use during both tests.

1. The section of the pipe to be tested shall be filled with water of approved quality, and all air shall be expelled from the pipe. If hydrants or blowoffs are not available at high points for releasing air, the Contractor shall perform all the necessary excavation and backfilling operations and make the necessary taps at such point; and shall plug the holes after completion of the test with brass or bronze plugs.

2. For the pressure test, the Contractor shall, by pumping, raise the water pressure (based on the elevation at the lowest point of the section under test and corrected to the gage location) to a pressure of 150 psi for water piping 12 inches and less. If the Contractor cannot achieve the specified pressure and maintain it for a period of four hours, the section under test shall be considered as having failed to pass the pressure test.

3. Following a successful pressure test, the Contractor shall make a leakage test by metering the flow of water into the pipe while maintaining in the section being tested a pressure equal to the average pressure to which the pipe will be subjected under normal conditions of service. This shall be done by placing the section under system pressure, or by pumping. The rate of leakage shall not exceed zero.

4. If the section shall fail to pass the pressure test, the leakage test, or both, the Contractor shall do everything necessary to locate, uncover (even to the extent of uncovering the entire section), and repair or replace the defective pipe, fitting, or joint, all at his own expense and without extension of time for completion of the work.

3.05 DISINFECTION

A. Upon completion of new potable water mains and service connections and all the testing thereof, the interior of the pipes shall be flushed and then thoroughly disinfected in accordance with the latest AWWA C651 Standard Procedures.

B. Following acceptance of the disinfection process, the chlorinated water shall be flushed from the newly-laid main until such time as the replacement water throughout its entire length shall be equal in quality to that elsewhere in the system. All chlorinated water shall be dechlorinated while it is being flushed from the main. Method of dichlorination is to be approved by the Engineer. The Contractor shall monitor the chlorine residual to insure effective dichlorination to protect local water bodies.

C. Representative water samples shall be collected of the potable water in the new pipeline by the Contractor under the observation of the Engineer. These samples shall be taken to an independent third-party Massachusetts DEP certified laboratory for a bacteria analysis. The pipeline will be considered acceptable when two consecutive negative Coliform samples have been obtained 24 hour and 48 hours. The cost associated with the collection and analysis of the samples shall be paid for by the Contractor. Copies of results shall be sent to owner’s representative and City of Lynn Water Division.

D. In addition to coliform samples, the Contractor shall take a sample from each line and have it analyzed for volatile organic compounds (VOCs) at an approved lab. The Contractor shall pay for this testing. Copies of results shall be sent to owner's representative and City of Lynn Water Division.

E. Special disinfection procedures, such as soaking or swabbing, approved by the Engineer, shall be used in connections to existing mains and where the method outlined above is not practicable.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement for DUCTILE IRON PIPE under the appropriate size designated will be made on a per LINEAR FOOT basis along the finished grade over the pipe from end to end as laid as indicated by the Contract Drawings. The length of pipe for service connections 3 inches and greater shall be measured from the centerline of the water main to the point of connection to the existing service pipe.

B. No separate measure will be made for testing, disinfection, flushing dichlorination, sampling of Ductile Iron Pipe, or for connection to existing pipe.

B. Measurement for MECHANICAL JOINT (MJ) DUCTILE IRON FITTINGS will be made on a per POUND basis for all work complete in place as indicated by the Contract Drawings.

C. Measurement for COPPER TYPE K TUBING under the appropriate size designated will be made on a per LINEAR FOOT basis along the finished grade over the pipe from end to end as laid as indicated by the Contract Drawings.

D. Measurement for TAPPING SLEEVE AND VALVE under the appropriate size designated will be made on a per EACH basis as indicated by the Contract Drawings.

E. Measurement for WATER METER / FIBERGLASS HOT BOX ENCLOSURE will be made on a LUMP SUM basis for all work complete in place as indicated by the Contract Drawings.

F. Measurement for GATE VALVE will be made on a per EACH basis for all work with valve box and cover complete in place as indicated by the Contract Drawings.

G. Measurement for REMOVE AND REPLACE WATER at the South Boardwalk Utility Locations (MULTIPLE LOCATIONS SHOWN) will be made on a LUMP SUM basis for all work complete in place as indicated by the Contract Drawings.

H. Measurement for REMOVE AND REPLACE AIR LINE will be made on a LUMP SUM basis for all work complete in place as indicated by the Contract Drawings.

4.02 PAYMENT

A. There is no separate payment for coordination work with the Utility and DCR. All coordination is considered incidental to the individual payment Items.

B. Payment for DUCTILE IRON PIPE under the appropriate size designated will be at the per LINEAR FOOT contract price. No deduction for the length of valves or fittings in the pipe shall be made. This price shall include full compensation for trench excavation, furnishing, placing and compacting backfill materials, cutting, removal and disposal of existing water mains, furnishing and laying of new water pipe, and connection, testing, disinfection, flushing dichlorination and sampling, and connection to existing pipe as shown on the plans, all items and labor related to the approved installation of thrust restraints and polyethylene film encasements, and all other incidental work necessary to complete the item for which there is no separate pay item. Payment for disconnecting and draining the existing irrigation system is included in the work of the proposed connection to the existing pipe herein.

C. Payment for MECHANICAL JOINT (MJ) DUCTILE IRON FITTINGS will be at the per POUND contract price. This price shall include full compensation for all work complete in place, the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the item as indicated on the Contract Drawings and as herein specified.

D. Payment for COPPER TYPE K TUBING under the appropriate size designated will be at the per LINEAR FOOT contract price. This price shall include full compensation for the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the item as indicated on the Contract Drawings and as herein specified.

E. Payment for TAPPING SLEEVE AND VALVE under the appropriate size will be at the per EACH contract price. This price shall include full compensation for the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the item as indicated on the Contract Drawings and as herein specified.

F. Payment for WATER METER / FIBERGLASS HOT BOX ENCLOSURE will be at the LUMP SUM contract price. This price shall include full compensation for all trench excavation, placing and compacting backfill materials, furnishing brass fittings for connection to dissimilar materials, copper tubing, union, fittings and ball valves, concrete pad, stone bedding, the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the item as indicated on the Contract Drawings and as herein specified.

G. Payment for GATE VALVE will be at the per EACH contract price. This price shall include full compensation for valve box and cover complete in place, the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the item as indicated on the Contract Drawings and as herein specified.

H. Payment for REMOVE AND REPLACE WATER at the South Boardwalk Utility Locations (MULTIPLE LOCATIONS SHOWN) will be made at the LUMP SUM contract price. This price shall include full compensation for all trench excavation, placing and compacting backfill materials, pipe materials, testing and disinfection, connections with adaptors as required on both ends, the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the item as indicated on the Contract Drawings and as herein specified.

I. Payment for REMOVE AND REPLACE AIR LINE will be made at the LUMP SUM contract price. This price shall include full compensation for all trench excavation, placing and compacting backfill materials, pipe materials, testing, connections with adaptors as required on both ends, the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the item as indicated on the Contract Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02665.01	3” DUCTILE IRON PIPE	LINEAR FOOT
02665.02	MJ DUCTILE IRON FITTINGS	POUND
02665.03	2” COPPER TYPE K TUBING	LINEAR FOOT
02665.04	3” TAPPING SLEEVE & VALVE	EACH
02665.05	WATER METER / FIBERGLASS HOT BOX ENCLOSURE	LUMP SUM
02665.06	3” GATE VALVE	EACH
02665.07	REMOVE AND REPLACE WATER (MULTIPLE LOCATIONS)	LUMP SUM
02665.08	REMOVE AND REPLACE AIR LINE	LUMP SUM

END OF SECTION

SECTION 02730
SANITARY SEWERS AND FORCE MAINS

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

A. The work to be done under this section consists of furnishing all labor, tools, equipment and materials and performing all operations necessary to move or remove and replace sanitary sewer force main that run through the south boardwalk seawall to accommodate new steel bulkhead seawall construction including the excavation, disconnection of the force main, and moving the rubber hose force main and piping as indicated by the Contract Drawings, as specified herein or as required by the Engineer.

B. All wall sleeves and appurtenances shall be furnished and installed by the Contractor.

C. All rubber sanitary force main pipe shall be carefully handled, moved back from the excavation and steel bulkhead seawall construction area, temporarily capped and protected until replaced and placed back in service by the Contractor. The contractor is responsible for replacing 4-inch rubber force main damaged during project.

D. The force main services a dockside marine pump out system on the fuel dock. The Contractor shall coordinate with the marina to shut down and lock out pumps from service until work is completed.

E. Work shall be performed and completed during the period while the Marina is shut down for other waterfront work such as construction of the new steel bulkhead seawall. Refer to Section 02010.

F. Coordinate utility service outage with Utility Company and DCR as required.

PART 2 PRODUCTS

2.01 PIPE, FITTINGS AND COUPLINGS

A. A “Keco Dockside Marine Pump Out System” is located on Fuel Dock and a 4-inch rubber hose force main carries sewage from the docks, up the gangway to the south boardwalk and through the seawall for discharge to an existing sanitary manhole pump structure.

B. **Contact Keco Pump and Equipment for information on flexible force main piping and swivel connections.**

1. **Keco Pump & Equipment**
PO Box 80308
San Diego CA 92110

2. **Physical Address**
Keco Pump & Equipment
3475 Kurtz Street
San Diego CA 92110

3. **By Phone**
International 1 (619) 298-3800
Fax 1 (619) 298-3300
Toll Free 1 (800) 900-7867 (PUMP)

4. **By Email**
Sales sales@pumpahead.com
Technical support@pumpahead.com
Accounting accounting@pumpahead.com
General info@pumpahead.com

C. The kinds of pipe, fittings and couplings to be used for different parts of the work shall be same as existing facilities, unless otherwise specified or shown on the Contract Drawings.

D. Pipe and fittings shall conform to the following specific requirements insofar as they apply:

1. All pipe and fittings furnished shall be accompanied by the manufacturer's Certificate of Compliance, in addition to meeting the performance tests hereinafter specified.

PART 3 EXECUTION

3.01 INSTALLATION OF PIPE AND APPURTENANCES

A. Pipe hose and fittings shall be handled with care to ensure that the pipe and fittings are in sound, undamaged condition.

B. The CONTRACTOR shall furnish slings, straps and/or other approved devices to support the pipe when it is lifted. Pipe and fittings shall not be dropped from trucks onto the ground or into the trench.

D. All pipe shall be examined before relaying and no pipe or fittings shall be installed which are found to be defective. Damaged pipe hose (if any) shall be repaired or replaced in its entirety as required by the ENGINEER.

E. Hose shall be dewatered with air pressure to prevent unwanted sewage from entering work area and waterways.

F. Hose shall be temporarily capped and protected from dirt, debris and seawater from entering hose.

B. Pipe and appurtenances shall be examined carefully for cuts and cracks or other defects and cleaned of all dirt and debris before laying.

C. Pipe/ hose shall be laid to existing lines and depths as noted on the Contract Drawings or approved by the Engineer and the work shall be done with suitable tools and appliances. An even alignment of the pipes shall be maintained.

F. The work shall be conducted in such manner that no loose excavation or other foreign material can enter the pipes.

G. At all times when pipe laying is not actually in progress, the open ends of pipe shall be closed by temporary watertight plugs or by other approved means. If water is in the trench when work is resumed, the plug shall not be removed until all danger of water entering the pipe has passed.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement for MOVE AND REPLACE SEWER FORCEMAIN (MULTIPLE LOCATIONS) will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, completed as indicated by the Contract Drawings.

4.02 PAYMENT

Payment for MOVE AND REPLACE SEWER FORCEMAIN (MULTIPLE LOCATIONS) will be at the LUMP SUM contract price. This price shall include full compensation for all work necessary to complete moving or removal and replacement of

sanitary sewer force main along the south boardwalk seawall and boardwalk improvements as noted in the Contract Drawings. This price shall include support and extension of utilities across the underside of the boardwalk extension where required, wall sleeves for penetration through new steel bulkhead seawall, connections with adaptors as required on both ends, all labor, materials, tools, and equipment, and all other work incidental to installation of a complete operating system. There is no separate payment for coordination work with the Utility and DCR.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02730.01	MOVE AND REPLACE SEWER FORCEMAIN (MULTIPLE LOCATIONS)	LUMP SUM

END OF SECTION

SECTION 02760
PAVEMENT MARKINGS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. Include the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges and the Supplemental Specifications and the 2009 Manual of Uniform Traffic Control Devices (MUTCD), as amended.

1.02 DESCRIPTION OF WORK

A. This Section specifies requirements for the following types of work and related items, but is not limited to:

1. Removing existing pavement markings as required by the Engineer.

2. Furnishing materials and application of reflectorized thermoplastic pavement markings, at the locations shown on the plans and as required by the Engineer.

PART 2 - PRODUCTS

2.01 PAVEMENT MARKINGS

A. Products used shall meet the requirements of Section 860 of the Standard Specifications unless otherwise noted on the Plans.

B. All permanent 4-inch Reflectorized White Line (Thermoplastic) supplied under this section shall conform to the applicable MassDOT Standard Specifications for 6-inch Reflectorized White Line (Thermoplastic).

C. All permanent Pavement Arrows and Legends Reflectorized Blue (Thermoplastic) supplied under this section shall conform to the applicable MassDOT Standard Specifications for Pavement Arrows and Legends Reflectorized White (Thermoplastic).

PART 3 - EXECUTION

3.01 PAVEMENT MARKING REMOVAL

A. Methods of execution used shall meet the requirements of Section 850 of the Standard Specifications.

3.02 PAVEMENT MARKINGS

A. Methods of execution used shall meet the requirements of Section 860 of the Standard Specifications.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement of items shall be in accordance with Sections 850 and 860 of the Standard Specifications unless otherwise stated below.

B. Measurement for PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC) will be made on a per SQUARE FOOT basis in conformance with the applicable provisions of Section 860 of the Standard Specifications and as indicated by the Contract Drawings.

C. Measurement for PAVEMENT ARROWS AND LEGENDS REFLECTORIZED BLUE (THERMOPLASTIC) will be made on a per SQUARE FOOT basis in conformance with the applicable provisions of Section 860 of the Standard Specifications and as indicated by the Contract Drawings.

D. Measurement for 4-INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) will be made on a per LINEAR FOOT basis in conformance with the applicable provisions of Section 860 of the Standard Specifications and as indicated by the Contract Drawings.

E. Measurement for 12-INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) will be made on a per LINEAR FOOT basis in conformance with the applicable provisions of Section 860 of the Standard Specifications and as indicated by the Contract Drawings.

F. Measurement for 6-INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC) will be made on a per LINEAR FOOT basis in conformance with the applicable

provisions of Section 860 of the Standard Specifications and as indicated by the Contract Drawings.

G. There will be no separate measurement for removal of pavement markings. Removal of pavement markings is incidental to work of the Contract.

4.02 PAYMENT

A. Payment of items shall be in accordance with Sections 850 and 860 of the Standard Specifications unless otherwise stated below.

B. Payment for pavement marking removal as directed by the Engineer shall be considered incidental to the Contract and no separate payment shall be made.

C. Payment for PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC) will be at the per SQUARE FOOT contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

D. Payment for PAVEMENT ARROWS AND LEGENDS REFLECTORIZED BLUE (THERMOPLASTIC) will be at the per SQUARE FOOT contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

E. Payment for 4-INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) will be at the per LINEAR FOOT contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

F. Payment for 12-INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) will be at the per LINEAR FOOT contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

G. Payment for 6-INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC) will be at the per LINEAR FOOT contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02760.01	PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC)	SQUARE FOOT
02760.02	PAVEMENT ARROWS AND LEGENDS REFLECTORIZED BLUE (THERMOPLASTIC)	SQUARE FOOT
02760.03	4-INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)	LINEAR FOOT
02760.04	12-INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)	LINEAR FOOT
02760.05	6-INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC)	LINEAR FOOT

END OF SECTION

SECTION 02800
SITE IMPROVEMENTS

PART 1 - GENERAL

1.01 SCOPE AND RELATED WORK UNDER OTHER SECTIONS

A. Include GENERAL CONDITIONS and all parts of Division 1 as part of this Section.

B. The work of this Section consists of all site furniture, footings, bases, and other related items as indicated on the Drawings and /or as specified herein, and includes, but is not limited to, the following:

1. Trash Receptacle
2. Promenade Park Bench
3. Lounger (ALL TYPES)
4. Feature Bench (Single and Double)
5. Bike Rack
6. Picnic Table Group
7. Picnic Table Group (Wheelchair Accessible)
8. Landscape Boulder
9. Waterside Barrier with Leaning Rail
10. Waterside Barrier at Pavilion Stair
11. Landside Barrier
12. Landside Barrier at Boardwalk Ramp
13. Handrail at Plaza Granite Steps
14. Handrail at Boardwalk Stair
15. Handrail at Boardwalk Ramp
16. Park Sign
17. Interpretive Sign
18. Wayfinding Sign
19. Steel Marina Gates 1 and 2
20. Vehicular Parking Lot Gate
21. Fieldstone and Rockfill Groundcover
22. Cast in Place Footings and Bases are described in Section 03000 - CAST IN PLACE CONCRETE

C. The following related work is to be performed under the designated SECTIONS:

1. Section 02010 – WATERFRONT SITE PREPARATION
2. Section 02075 – WATERFRONT SELECTIVE DEMOLITION, SALVAGE FOR REUSE & UTILITY PROTECTION

3. Section 02100 – SITE PREPARATION, DEMOLITION, AND REMOVALS
4. Section 02150 – TREE PROTECTION AND PRUNING
5. Section 02200 – SITE EARTHWORK
6. Section 02280 – EXCAVATED SOIL MANAGEMENT
7. Section 02360 – DRILLED SHAFTS
8. Section 02500 – SITE PAVING
9. Section 02510 – VEHICULAR AREAS PAVING
10. Section 02630 – STORM DRAINAGE UTILITIES
11. Section 02881 – WATER PLAY EQUIPMENT
12. Section 02890 – TRAFFIC SIGNS
13. Section 02900 – PLANTING AND LAWNS
14. Section 03300 – CAST IN PLACE CONCRETE
15. Section 04010 – SITE GRANITE
16. Section 05110 – WATERFRONT STRUCTURAL STEEL
17. Section 05510 – WATERFRONT MISCELLANEOUS METALS
18. Section 06130 – WATERFRONT STRUCTURAL TIMBER
19. Section 06150 – WATERFRONT HARDWOOD DECKING
20. Section 09905 – WATERFRONT PROTECTIVE COATING
21. Section 16100 – PARK AND BOARDWALK LIGHTING
22. Section 16421 – BOARDWALK ELECTRICAL UTILITES
23. Section 23100 – FUEL SYSTEMS

1.02 SUBMITTALS

A. Shop Drawings and Product Literature: Prior to ordering the below listed materials, submit shop drawings and/or product literature to Landscape Architect for approval as follows. Do not order materials until Landscape Architect's approval has been obtained. Delivered materials shall closely match the approved shop drawings. Contractor shall submit complete shop drawings of each custom fabricated item and drawings indicating setting for all landscape signs in this Section. Include dimensioned drawings and schedules of all components with dimensions verified in the field where appropriate. Drawings shall show size and thickness of each member, type of material, method of connection and assembly, fabrication and erection tolerances for all connections, cuts, holes, bolts, galvanizing and painting, and relation to finished grade along bottom of item.

1. Product Manufacturer's Product Data and information on the following:

a. Trash Receptacle
b. Promenade Park Bench
c. Lounger (ALL TYPES)
d. Feature Bench (Single and Double)
e. Bike Rack

f. Picnic Table Group
g. Picnic Table Group (Wheelchair Accessible)
h. High pressure laminate signboards
i. Clay Waterproofing Layer

2. Warranty: Provide three-year Manufacturer's warranty for all furnishing items.

3. Landscape Boulder photographs of range of boulder sizes and materials available for selection by Landscape Architect. NOTE: Landscape Architect will select actual boulders to be used on site from within those submitted via photographs, samples, mock-ups or shown on site visit to quarry location.

4. Fieldstone and Rockfill Groundcover material sample;
   a. Fieldstone material sample and photographs of range of fieldstone sizes and materials available for selection by Landscape Architect. NOTE: Landscape Architect will select actual fieldstones to be used on site from within those submitted via photographs, samples, mock-ups or shown on site visit to quarry location.
   b. Rockfill photographs of range of rockfill sizes and materials available for selection by Landscape Architect.

5. Design mix submittals: Submit materials description, proportions, and mechanical sieve sizes of aggregates for the following:

   a. Rockfill Groundover: Rockfill Groundcover shall be similar to MassDOT M2.02.4 Modified Rockfill.
   b. Fieldstone Groundcover: Fieldstone Groundcover shall be similar to MassDOT M2.06.0 Slope Paving.

6. Isolating washer and sleeve for use at stainless steel and H.D. galvanized connections. Submit type or types as appropriate for each connection condition for Engineer and Landscape Architect approval.

B. SHOP DRAWINGS: Submit dimensioned shop drawings for material, design, and layout, and installation for review and approval of:

1. Trash Receptacle shop drawing and product literature.

2. Promenade Park Bench shop drawing and product literature.

3. Lounger **(ALL TYPES)** shop drawings showing all configurations, and product literature.

4. Feature Bench (Single and Double) shop drawings showing all configurations, and product literature.

5. Bike Rack shop drawing and product literature.

6. Picnic Table Group and Picnic Table Group (Wheelchair Accessible) shop drawings showing all configurations, and product literature.

7. Submit fully realized and dimensioned shop drawings for all types of barriers, railings, handrails, and gates. Shop drawings should include elevations of each barrier or railing, ramp and stair handrail and barrier rails, all corner conditions demonstrating each different corner condition, anchorage and anchor with finished grades verified in the field. Shop drawings for railings shall include a base plate placement plan drawing of boardwalk railing layout with dimensions that have been verified in the field. Shop drawings shall indicate length of all typical and custom segments and show relationships to adjacent panels or segments. Shop drawings shall identify each base plate type being used. Additionally, for structural steel base plates and railing post elements, submit certified mill test reports indicating structural strength, destructive and non-destructive test analysis, chemical and physical properties of each type of steel and conformance with ASTM A6.

8. Submit Shop Drawings for Park Signs, Interpretive Signs, and Wayfinding Signs showing frames, sign boards, foundations, and attachments including dimensioned drawings with hardware. Drawings shall show size and thickness of each member, type of material, method of connection and assembly, fabrication and erection tolerances for all connections, cuts, holes, bolts, welds, galvanizing and finishing, anchoring and footings.

   Graphic design files of all signs will be provided by Landscape Architect in digital form to contractor for sign manufacturer's use.

9. Submit fully realized shop drawings for Steel Marina Gate 1 and Steel Marina Gate 2. Basis of design is the existing gates. Contractor shall provide shop drawings stamped by a registered structural engineer in the State of Massachusetts with five (5) years minimum experience designing comparable gates for coastal marinas. Gates shall resemble existing gate configurations and function and be coordinated with the shop drawings for the Waterfront Barrier Railings. Drawings shall show size and thickness of each member, type of material, method of connection and assembly, fabrication and erection tolerances for all connections, cuts, holes, bolts, welds, galvanizing and finishing, anchoring and footings. Coordinate

drawings with Coastal Engineer's Gate Post Support Framing, sheet MS-11.

10. Submit fully realized shop drawing for the Vehicular Parking Lot Gate. Contractor shall provide shop drawings stamped by a registered structural engineer in the State of Massachusetts with five (5) years minimum experience designing comparable gates for parking lots. Drawings shall show size and thickness of each member, type of material, method of connection and assembly, fabrication and erection tolerances for all connections, cuts, holes, bolts, welds, galvanizing and finishing, anchoring and footings.

11. Fully realized layout shop drawings for all graphic artwork for each sign. Shop drawings shall be full size color representations of the graphic signage designs as provided by DCR and Landscape Architect for each sign to be manufactured.

12. Written Certification (for Final Acceptance) that all pipe handrails meet ADA and structural performance requirements, including anchorage testing on bridge, caps, and in surface concrete structures without deflection, deforming or in-stability.

13. Galvanizing and Color galvanizing Certificates and Warrantees for all metal work including railings, handrails, signs and site furnishings.

14. Product Literature for Factory-Applied Metal Coatings: Submit galvanizer's coatings data sheets for coatings specified in this Section including test data.

15. Certificate of Compliance for Items Coated by Galvanizer: If requested, submit notarized Certificate of Compliance with application for payment for galvanizing, signed by the galvanizer, indicating compliance with requirements of specifications. Include scope of services provided, and quantity and itemized description of items processed.

16. Certificate of Compliance for Shop Drawing Review by Galvanizer: If requested, submit galvanizer's certification that shop drawings for metal fabrications to receive metal coatings have been reviewed and that fabrications are acceptable to galvanizer for proper application of galvanizing and metal coatings. All drawings shall be signed by the galvanizer to indicate acceptance of design for galvanizing.

17. Certificate of Compliance of Item Identification by Galvanizer: The galvanizer shall mark all lots of material with a clearly visible tag indicating the name of the galvanizer, the type and weight of the coating,

and the applicable ASTM standards. If requested, submit certification of compliance that items have been tagged.

18. Certificate of Compliance for Shop Application: Galvanizer/applicator shall supply a certificate of compliance with SSPC-QP3 – Certification Standard for Shop Application of Complex Protective Coating Systems.

19. Substitutions: If substitutions or other products are proposed, submit this specification signed by the firm proposing the other products, indication line-by-line comparison of the proposed substitution or equal product with test results. Substitutions proposed with comparison test results will not be accepted.

20. Galvanizer shall have a written Quality Control/Quality Assurance manual for hot dip galvanizing and factory applied coatings. Submit Certification from the American Galvanizers Association that Galvanizer.

21. Certificate of Conformance: Provide certificate verifying that each item was prepared, coated, inspected, and repairs made in accordance with this specification.

22. Structural Certification: Provide written certification that structural requirements meet or exceed specifications included in Performance Requirements, herein.

23. Resubmit all shop drawings as many times as necessary for approval before fabrication.

C. SAMPLES:

1. Trash Receptacle - one (1) sample of manufacturer's color finish and one (1) sample of each type of anchor bolt).

2. Promenade Park Bench - one (1) sample of paint finish and one (1) sample of each type of anchor bolt).

3. Lounger (ALL TYPES) - one (1) sample of paint finish and one (1) sample of each type of anchor bolt).

4. Feature Bench (Single and Double) - one (1) sample of paint finish and one (1) sample of each type of anchor bolt).

5. Picnic Table Group and Picnic Table Group (Wheelchair Accessible) – (1) sample of paint finish and (1) sample of each different type of anchor bolt.

6. Submit representative samples (6 inch x 6 inch, min. size) sample steel and wood for bench, lounger, trash receptacle, bike loop, and pipe railings specified for review and approval by the Landscape Architect.

7. 6” long sample of Kebony or approved equal wood top rail for Leaning Rail.

8. 6” long section each of galvanized steel pipe rail for handrails.

9. 6” long section of stainless steel pipe rail for handrail.

10. 9” x 9” sample of galvanized steel square welded wire mesh with attachment flange for Landside Barrier.

11. Fieldstone and Rockfill Groundcover:
    a. Fieldstone Groundcover: Provide pictures of five or more stones representing typical size range of stone similar to MassDOT M2.06.0 Slope Paving.
    b. Rockfill Groundcover: Provide pictures Modified Rockfill representing typical size range of stone similar to MassDOT M2.02.4 Modified Rockfill.

12. Sign Samples:

    a. Park Sign sample measuring 12” x 18” with approved exterior coating.

    b. Interpretive Sign sample measuring 12” x 18” with approved exterior coating.

    c. Wayfinding Sign sample measuring 12” x 18” with approved exterior coating.

    d. High-pressure laminate signboards - (2) color samples of specified for approval before fabrication.

1.03 MOCK-UPS

A. General:

1. Schedule mock-up construction so that mock-ups can be reviewed by the Landscape Architect and Engineer a minimum of 7 days prior to installation of item represented by field mock-up.

2. Replace sample installation as many times as necessary for approval before fabrication. Construct all subsequent landscape site improvements to conform to approved sample mock-ups.

3. Subject to acceptance by Landscape Architect and Engineer, mock-up may be retained as part of finished work.

4. Rejected mock-ups must be completely removed and disposed of legally after a final mock-up is approved.

5. No products shall be ordered until submittals have been reviewed by the Landscape Architect and Engineer. The Landscape Architect and Engineer shall retain the right to reject products not conforming to this specification, reviewed submittal drawings, and/or mock-ups. Delivered materials shall match approved materials.

B. Approved mock-ups may become part of the completed work if located in final locations for that item and specific sign type as shown, located and oriented as on the Drawings.

C. Provide the following types of mock-ups. Mock-ups shall show the proposed complete fabrication of indicated Site Improvements, including but not limited to all hardware, fastenings, coatings, and finishes.

1. Landscape Boulder: Two complete stones indicating range of sizes and installation in adjacent cast-in-place concrete, located where boulders would occur in spray area, including base material and surrounding fill.

2. Erect one (1) continuous section of finished Waterside Barrier with Leaning Rail mounted on baseplate on timber decking in locations demonstrating inside and outside corner condition, in locations reviewed by the Coastal Engineer and Landscape Architect, either close to or in the final location of the railings, for review and approval. Revise panels, as required, to obtain approval. Approved mock-up may become part of the finished Work. Finished work shall match approved mock-up.

3. Erect one (1) continuous section of finished Waterside Barrier at Pavilion Stair mounted on baseplate on timber decking in locations reviewed by the Coastal Engineer and Landscape Architect, either close to or in the final location of the railings, for review and approval. Revise panels, as required, to obtain approval. Approved mock-up may become part of the finished Work. Finished work shall match approved mock-up.

4. Erect one (1) continuous section of finished Landside Barrier, mounted on baseplate in locations demonstrating inside and outside corner condition, with handrail, in locations reviewed by the Coastal Engineer and Landscape Architect, either close to or in the final location of the railings, for review and approval. Revise panels, as required, to obtain approval. Approved mock-up may become part of the finished Work. Finished work shall match approved mock-up.

5. Erect one (1) continuous section of finished Landside Barrier at Boardwalk Ramp mounted on baseplate in locations demonstrating transition from flat boardwalk to sloping, in locations reviewed by the Coastal Engineer and Landscape Architect, either close to or in the final location of the railings, for review and approval. Revise panels, as required, to obtain approval. Approved mock-up may become part of the finished Work. Finished work shall match approved mock-up.

6. Erect one (1) continuous section of finished Landside Barrier at Pavilion Stair mounted on baseplate in locations demonstrating inside and outside corner condition, in locations reviewed by the Coastal Engineer and Landscape Architect, either close to or in the final location of the railings, for review and approval. Revise panels, as required, to obtain approval. Approved mock-up may become part of the finished Work. Finished work shall match approved mock-up.

7. Erect one (1) continuous section of finished Handrail at Plaza Granite Steps in locations reviewed by the Landscape Architect, either close to or in the final location of the railings, for review and approval. Revise handrail, as required, to obtain approval. Approved mock-up may become part of the finished Work. Finished work shall match approved mock-up.

8. Erect one (1) continuous section of finished Handrail at Boardwalk Stair mounted on baseplate in locations reviewed by the Coastal Engineer and Landscape Architect, either close to or in the final location of the railings, for review and approval. Revise panels, as required, to obtain approval. Approved mock-up may become part of the finished Work. Finished work shall match approved mock-up.

9. Erect one (1) continuous section of finished Handrail at Boardwalk Ramp mounted on baseplate in locations reviewed by the Coastal Engineer and Landscape Architect, either close to or in the final location of the railings, for review and approval. Revise panels, as required, to obtain approval. Approved mock-up may become part of the finished Work. Finished work shall match approved mock-up.

10. Mock-up of one (1) complete Park Sign, one (1) complete Interpretive Sign, and one (1) complete Wayfinding Sign with base plate and attachments for review and approval by Landscape Architect and Owner prior to fabrication of remainder of railing segments. Mock-ups may be viewed in fabrication shop prior to delivery to site.

11. Full size mock-up of sign graphics: one of EACH sign type (in a temporary material).

12. Erect one (1), 5’ long minimum, complete section of finished Marina Gate mounted on baseplates in locations reviewed by the Coastal Engineer and Landscape Architect, either close to or in the final location of the gates, for review and approval. Revise panels, as required, to obtain approval. Approved mock-up may become part of the finished Work. Finished work shall match approved mock-up.

13. Erect one (1) 5’ long minimum, complete sections of finished Vehicular Parking Gate showing complete finished connection of minimum two segments of steel in locations reviewed by Landscape Architect and Engineer, either close to or in the final locations of the gate, for review and approval. Revise mock-up, as required, to obtain approval. Approved mock-up may become part of the finished Work. Finished work shall match approved mock-up.

14. Provide at least one 15’ x 5’ panel demonstrating field layout and installation of Fieldstone and Rockfill Groundcover treatment including as shown on Contract Drawings for review by Landscape Architect.

    a. Use this area to determine the joint sizes, lines, laying pattern and levelness. This area will serve as the standard by which the workmanship will be judged.

1.04 STANDARDS

A. Except as modified by governing codes and by the Contract Documents, comply with applicable provisions and recommendations of the following

1. MA MassDOT (Massachusetts Department of Transportation) formerly Massachusetts Highway Department (MHD) Standard Specifications (for Highways and Bridges), latest edition, including all addenda.

2. ASSHTO: American Association of State Highway and Transportation Officials, latest edition.

3. ADA – 2010 Standards for Accessible Design

4. ASTM International: American Society for Testing and Materials International, latest edition:
   A27 Steel Castings, Carbon, for General Application
   A36 Structural Steel
   A53 Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless
   A120 Standard Galvanized Steel Pipe
   A123 Zinc (Hot-Galvanized) Coatings on Products Fabricated from Rolled, Pressed, and Forged Steel Shapes, Plates, Bars, and Strips
   A153 Zinc Coating (Hot-Dip) on Iron and Steel Hardware
   A386 Zinc Coating (Hot-Dip) on Assembled Steel Products
   A 653/A 653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
   MUDCT Standard Sign Panels: HC Parking, Van Accessible, Crosswalk Warning Signs
   A 1011/A 1011M Standard Specification for Steel, Sheet, and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy an High-Strength Low-Alloy with Improved Formability
   A 924/A 924M Standard Specification for General Requirement for Steel Sheet, Metallic-Coated by the Hot-Dip Process
   D1761-06 Standard Test Methods for Mechanical Fasteners in Wood
   D245-06 Standards of Wood Structural Properties
   A 536 – Standard Specification for Ductile Iron Castings.
   B 117 – Standard Practice for Operating Salt Spray (Fog) Apparatus.
   D 522 – Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings.
   D 523 – Standard Test Method for Specular Gloss.
   D 2247 – Standard Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
   D 2794 – Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
   D 3359 – Standard Test Methods for Measuring Adhesion by Tape Test.
   D 3363 – Standard Test Method for Film Hardness by Pencil Test.
   F593-02(2008)e1Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs.
   G 155 – Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non-Metallic Materials.

5. ISO Testing Standards:
   a. ISO 1520 – Paints and Varnishes – Cupping Test.
   b. ISO 2815 – Paints and Varnishes – Buchholz Indentation Test.

6. LFI Testing Standards:
   a. LFI PT-019 – Standard Test for Strength and Durability

7. ANSI A117.1 (2009) – Accessible and Usable Buildings and Facilities

8. MAAB: Massachusetts Architectural Access Board – all relevant sections including steps, ramps, and access.

9. CMR 521 Section 41.00: Massachusetts State Board of Building Regulations and Standards - Signage.

10. CMR 780 Section 16100.0: Massachusetts State Board of Building Regulations and Standards - Wind Load.

1.05 QUALIFICATIONS OF MANUFACTURERS AND FABRICATORS

A. Contractor shall submit verification to the Landscape Architect and Engineer, which states that all proposed manufacturers of site furnishings have produced products of a similar nature and quality to that which is specified and that each manufacturer is capable of producing the quantity of site furnishings required by the contract within the time allocated in the project schedule.

B. Metal Fabricator shall have a minimum of five years experience in successfully producing metal fabrications similar to the specified items in comparable projects.

C. Welders shall be certified and shall have passed the AWS Qualification Test within the past 12 months.

D. All metal work and coatings shall be fabricated and applied in the shop under environmental and job conditions required by Specifications.

E. Provide labels to each piece or panel to facilitate field assembly. Assemble the metal sign and frame as much as possible in the Shop with minimum field assembly required.

F. Welding: Perform welding in conformance with AWS D1.1 - AWS D1.4, as applicable.

G. Fabricator Qualifications: Fabricator shall have a minimum of five years experience in successfully producing metal fabrications similar to the railing and signs specified in comparable projects. Welders shall be certified and shall have passed the AWS Qualification Test within the past 12 months.

1.06 QUALITY ASSURANCE FOR METAL WORK

A. Quality assurances for metal materials and construction methods:

1. Workmanship and finish shall be equal to the best practice of modern shops for each item of work. Exposed surfaces shall have smooth finish and sharp, well-defined lines and arises. Sections shall be well formed to shape and size with sharp lines and angles; curved work shall be sprung evenly to dimensioned radii curves. Castings shall have sharp corners and edges, and shall be clean, smooth, and true to pattern. Welding shall be in accordance with the Welding Code of the AWS. All welding, except as otherwise indicated, shall extend the entire length of joints. All welded face joints shall be ground flush and smooth. All welds shall be watertight. Ornamental metalwork shall be cut, drilled, countersunk, and tapped as required for the attachment of other work where shown on the drawings or when instructions for such work are given on the shop drawings. Ornamental metalwork to be built in with concrete or masonry shall be of the form required for anchorage, or shall be provided with suitable anchors or expansion shields.

2. All metal fabrication shall be accomplished using the highest standards of workmanship. Individual steel pieces shall be saw cut and carefully fit together. All welding, except as otherwise indicated, shall ex-tend the entire length of joints. All connections shall be full welded and ground flush and smooth. All fabricated steel items shall be fine sanded throughout to produce a high standard of surface smoothness. All surfaces and connections shall be without visible grinding marks, surface differentiation or variation. All welds shall be watertight. Ornamental metalwork shall be cut, drilled, countersunk, and tapped as required for the attachment of other work where shown on the drawings or when instructions for such work are given on the shop drawings.

B. Quality assurances for hot-dipped galvanizing and factory-applied metal coatings:

1. Galvanizer' Qualifications: Engage the services of a qualified galvanizer who has demonstrated a minimum of ten years experience in the successful application of galvanized coatings specified in this specification in the facility where the work is to be performed and who will apply the coatings within the same facility.

2. Coating Applicator's Qualifications: Galvanizing and factory-applied coatings shall be performed by a company with a minimum of ten years

experience in the successful application of hot-dip galvanizing utilizing the dry kettle process.

3. Pre-Construction Conference for Metal Fabrications to Receive Factory-Applied Metal Coatings: Contractor shall schedule a meeting to be attended by Contractor, Architect, fabricator, and galvanizer. Agenda shall include the following: Project schedule, scope of services, coordination between fabricator and galvanizer, finish of surfaces, application of coatings, color selections, submittals, and approvals.

4. Coordination between Fabricator and Galvanizer: Prior to fabrication and final submittal of shop drawings to Architect, direct fabricators to submit shop drawings to the galvanizer for all metal fabrications to receive factory-applied metal coatings. Direct galvanizer to review fabricator's shop drawings for suitability of materials for galvanizing and coatings and coordinate any required modifications to fabrications required to be performed by the fabricator.

5. Environmental Compliance: Coatings shall be certified OTC/VOC compliant and conform to EPA standards and local regulations.

6. All material that is specified to be galvanized shall be hot-dip galvanized after fabrication, in accordance with AASHTO specifications and as indicated herein.

7. Galvanized surfaces damaged by welding or other causes shall be wire brushed to remove all loose or cracked zinc coating and re-galvanized with a 95 percent zinc cold galvanizing coating prior to finishing.

8. Galvanizing shall be performed by a company with a minimum of five years' experience in the successful application of hot-dip galvanizing utilizing the dry kettle process.

9. Factory-applied metal coatings shall be performed in a facility acceptable to the coating manufacturer.

10. Submit samples of factory-applied coatings and colors proposed for use for approval prior to coating application as indicated in 1.02, Submittals.

11. Substitution requests shall be accompanied by samples and coating manufacturer's written certification that coatings proposed for use will have the same appearance and service life as the specified coatings.

12. Handle and install materials with factory-applied coatings as recommended by galvanizer and coating manufacturer to prevent damage to coatings prior to and after installation.

13. Touch-up factory-applied metal coatings as recommended by galvanizer and coating manufacturer.

14. Coatings not matching approved submittals shall be removed and replaced at no additional expense to the Engineer.

C. Structural Performance:

1. Provide completed assemblies which, when installed, comply with the following minimum requirements for structural performance without exceeding the allowable design working stress of the materials involved, including anchors and connections. Apply each load to produce the maximum stress in each respective component of each metal fabrication and record testing data.

2. Custom metal work furnishings and signs shall be capable of withstanding uniform side loads of 50 pounds per linear foot without compromising post anchorage. Signs and frame shall also be capable of withstanding concentrated side loads of 200 pounds applied at any point, non-concurrently.

3. Custom metal work furnishings and signs shall withstand wind load requirements per Massachusetts Building Code article CMR 780.1611.0 for Exposure B, Zone 3 (Lynn, MA), 1611.12.2.

4. Post Connection: Ensure that side rail/flange assembly provides maximum support (overlap) at post sleeves and still allow for line and grade adjustments at joint during field assembly.

5. The Contractor is encouraged to submit any proposed alterations to the structural design or operating durability of the metal elements for approval by the Landscape Architect.

1.07 QUALITY ASSURANCE FOR ALL NON-METAL WORK

A. Contractor shall have at least five (5) years of experience in Landscape Work similar in materials, design, and extent to that indicated for this project and with a record of successful landscape establishment. Installer shall maintain an experienced supervisor on the project site during all times that landscape construction is in progress. Provide written qualification data for firms and

persons to be responsible for Work, to demonstrate their capabilities and experience. Include lists of completed projects, with project names, addresses, phone numbers, and names and address of designers and clients.

B. Contractor shall conduct pre-landscape construction conference at Project site as directed by the Landscape Architect, to review landscape construction procedures, site conditions, and submittal requirements required in the Work of this Section, before any products are submitted for review and approval, or landscape construction commences.

C. Source Limitations:

1. Obtain Fieldstone Groundcover from one source location with the resources to provide products of consistent quality in appearance and physical properties.

2. Obtain Rockfill Groundcover from one source location with the resources to provide products of consistent quality in appearance and physical properties.

1.08 PRODUCT HANDLING AND STORAGE

A. Deliver site furniture in original sealed containers marked with name of manufacturer and identification of contents. After delivery store materials under waterproof covers on planking clear of ground and protect from handling damage dirt, stain, water and wind.

B. Take all necessary precautions to protect all items from moisture, chipping, cracking, or other damage, during the transportation of these materials to the project, unloading and storage on the site. After delivery take all necessary precautions to prevent all items from chipping, cracking, construction dust and debris, or damage of any kind. Damaged units will not be allowed to be installed and should any damage units be found in constructed work, such units shall be removed immediately and replaced with new units, and the Contractor shall assume all expenses incurred.

C. Stored materials shall be adequately protected against moisture by (1) stacking in such a manner as to allow a complete circulation of air under each stack, and (2) covering each stack, top and sides with a waterproof paper or membrane. Coverings shall remain in place at all times, when not working from the particular stack.

1.09 WARRANTY

A. The Contractor shall obtain, in DCR's name; the standard written manufacturer's guarantee and warrantees of all materials furnished under this Section where such warrantees and guarantees are offered in the manufacturer's published product literature. All these guarantees shall be in addition to, and not in lieu of, other liabilities, which the Contractor may have under law.

1. Products will be free from defects in material and/or workmanship for a period of three years from the date of invoice.

c. For the Vehicular Parking Lot Gate, Double Leaf, supplier shall guarantee, in writing, the satisfactory condition of the metal finish of his work in all parts for a period of twenty (20) years after date of final acceptance, and shall agree to promptly repair or replace any finish work that is found to be defective during this period.

2. The warranty does not apply to damage resulting from accident, alteration, misuse, tampering, negligence, or abuse.

3. The Contractor shall furnish labor and materials to fulfill the requirements of this warranty at no additional cost to DCR. All labor shall include premium time to correct any faulty material or workmanship and all materials required to complete the work.

4. The Manufacturer shall, at its option, repair, replace, or refund the purchase price of any items found defective upon inspection by an authorized Manufacturer service representative.

5. Provide galvanizer's standard warranty that materials will be free from 10 percent or more visible rust for 20 years.

6. Warranty for the finish gloss and color shall be 10 years in accordance with the following performance specifications.

a. Fade: Loss of gloss shall not exceed 35 units of gloss which shall be measured in accordance with ASTM D 523-89 with 60-degree geometry.

b. Color Shift: Shall not exceed 15 Delta E CIE LAB units for whites and light colors. Dark colors shall not exceed 25 Delta E CIE Lab units as measured by ASTM D 2244. (Yellows, Oranges and Reds are excluded.)

PART 2 - PRODUCTS

2.01 TRASH RECEPTACLE

A. All Trash Receptacles shall be as shown on the Drawings, and as manufactured by:
Landscape Forms, Inc.
431 Lawndale Avenue
Kalamazoo, Michigan 49048
toll free: 800-521-2546
phone: 269-381-0396
fax: 269-381-3455
website: www.landscapeforms.com
email: specify@landscapeforms.com
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Type: Chase Park Litter Receptacle; Style: Side Opening (Diameter: 24", Height: 39", Capacity: 40 gallons); Opening Size: 10" Diameter; Mounting: Surface Mounted;

C. Receptacle materials:

1. Base: Ductile cast iron, ASTM A 536, Grade 65-45-12.
2. Sides and Door:
   Cast 319 aluminum.
   Hinges: Two, stainless steel, connects sides and door.
3. Lid:
   0.100-inch thickness, spun 1100-0 aluminum.
   Lid Bracket: 1-inch by 1-inch by 1/4-inch aluminum angle.
4. Liners: Black, formed polyethylene.
5. Fasteners: Stainless steel.

D. Finish on Metal: Landscape Forms, Inc. "Pangard II".

1. Primer: Rust inhibitor.
2. Topcoat: Thermosetting polyester powdercoat. UV, chip, and flake resistant.
3. Test Results: "Pangard II".
   a. Gloss Consistency, Gardner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
   b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.

c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
e. Erichsen Cupping, ISO 1520: 8 mm.
f. Impression Hardness, Buchholz, ISO 2815: 95.
g. Impact Test, ASTM D 2794: 60 inch-pounds at 2.5 mils.
h. Pencil Hardness, ASTM D 3363: 2H minimum.
i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max undercutting 1 mm.
j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max blisters 1 mm.

4. Color: Mercury

2.02 PROMENADE PARK BENCH

A. All Promenade Park Benches shall be as shown on the Drawings, and as manufactured by:
Landscape Forms, Inc.
431 Lawndale Avenue
Kalamazoo, Michigan 49048
toll free: 800-521-2546
phone: 269-381-0396
fax: 269-381-3455
website: www.landscapeforms.com
email: specify@landscapeforms.com
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Type: Neoliviano; Style: Backed; With Arms; Surface Mount; Depth: 26.5”; Overall Height: 31”; Length: 69”

C. Promenade Park Bench materials:

1. Cast supports are to be made of A514 or A535 aluminum. Aluminum supports shall be anodized to provide corrosion protection.

2. Seat and Back Panels board thickness shall be 1-3/16 inches. Wood to be Jarrah, Solid stock, select Australian hardwood, unfinished.

3. Surface Mount: Surface mounted Park Bench shall have type 304 stainless steel anchor tabs installed.

4. Anchor Bolts to be corrosion resistant.

D. Recycled Content:

1. Park Bench shall have a Post-Consumer Material Content Minimum of three (3) percent.

2. Park Bench shall have a Pre-Consumer Material Content Minimum of three (3) percent.

3. Park Bench shall be 100 percent recyclable.

2.03 LOUNGER

A. Lounger shall meet the requirements shown on the Contract Drawings and of the quality, sustainable materials, and manufacturing processes of those produced by:
Vestre USA Inc.
175 Varick street New York, NY 10014
phone: +1 212.634.9658
website: www.vestre.com
email: info@vestre.com; Kristoffer Vestre: kristoffer@vestre.com
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Type: 1566 Bloc Sun Bench; Size: width:1356mm, length:1451mm, back height:868mm, front height:389mm

C. Lounger Materials:

1. All wood for loungers shall be linseed oil impregnated PEFC certified Nordic Pine from Scandinavia (Pinus sylvestris).

2. All metal shall be solid steel, hot dip galvanized and color powder coated with high-quality finish that complies with the strict requirements of Corrosion Class C5-M (EN ISO 12944); **color: RAL 6027 "Light Green"**

3. All attachment screws and fittings shall be type 316 stainless steel.

4. Anchor Bolts shall be AISI type 316 stainless steel of the type, size and number recommended by the manufacturer and to the length required for embedded installation into bituminous concrete base below precast concrete pavers or ipe decking, as indicated on drawings.

2.04 LOUNGER START MODULE

A. Lounger Start Module shall meet the requirements shown on the Contract Drawings and of the quality, sustainable materials, and manufacturing processes of those produced by:

Vestre USA Inc
175 Varick street New York, NY 10014
phone: +1 212.634.9658
website: www.vestre.com
email: info@vestre.com; Kristoffer Vestre: kristoffer@vestre.com
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Type: 1567 Bloc Sun Bench Start Module; Size: width: 1342mm, length: 1451mm, back height: 868mm, front height: 389mm

C. Lounger Start Module Materials:

1. All wood for loungers shall be linseed oil impregnated PEFC certified Nordic Pine from Scandinavia (Pinus sylvestris).

2. All metal shall be solid steel, hot dip galvanized and color powder coated with high-quality finish that complies with the strict requirements of Corrosion Class C5-M (EN ISO 12944); **color: RAL 6027 "Light Green"**

3. All attachment screws and fittings shall be type 316 stainless steel.

4. Anchor Bolts shall be AISI type 316 stainless steel of the type, size and number recommended by the manufacturer and to the length required for embedded installation into bituminous concrete base below precast concrete pavers or ipe decking, as indicated on drawings.

2.05 LOUNGER ADD-ON MODULE

A. Lounger Add-on Module shall meet the requirements shown on the Contract Drawings and of the quality, sustainable materials, and manufacturing processes of those produced by:

Vestre USA Inc
175 Varick street New York, NY 10014
phone: +1 212.634.9658
website: www.vestre.com
email: info@vestre.com; Kristoffer Vestre: kristoffer@vestre.com

Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Type: 1568 Bloc Sun Bench Add-on Module; Size: width: 1323mm, length: 1451mm, back height: 868mm, front height: 389mm

C. Lounger Add-on Module Materials:

1. All wood for loungers shall be linseed oil impregnated PEFC certified Nordic Pine from Scandinavia (Pinus sylvestris).

2. All metal shall be solid steel, hot dip galvanized and color powder coated with high-quality finish that complies with the strict requirements of Corrosion Class C5-M (EN ISO 12944); **color: RAL 6027 "Light Green"**

3. All attachment screws and fittings shall be type 316 stainless steel.

4. Anchor Bolts shall be AISI type 316 stainless steel of the type, size and number recommended by the manufacturer and to the length required for embedded installation into bituminous concrete base below precast concrete pavers or ipe decking, as indicated on drawings.

2.06 LOUNGER END MODULE

A. Lounger End Module shall meet the requirements shown on the Contract Drawings and of the quality, sustainable materials, and manufacturing processes of those produced by:
Vestre USA Inc
175 Varick street New York, NY 10014
phone: +1 212.634.9658
website: www.vestre.com
email: info@vestre.com; Kristoffer Vestre: kristoffer@vestre.com
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Type: 1569 Bloc Sun Bench End Module; Size: width: 1334mm, length: 1451mm, back height: 868mm, front height: 389mm

C. Lounger End Module Materials:

1. All wood for loungers shall be linseed oil impregnated PEFC certified Nordic Pine from Scandinavia (Pinus sylvestris).

2. All metal shall be solid steel, hot dip galvanized and color powder coated with high-quality finish that complies with the strict requirements of Corrosion Class C5-M (EN ISO 12944); **color: RAL 6027 "Light Green"**

3. All attachment screws and fittings shall be type 316 stainless steel.

4. Anchor Bolts shall be AISI type 316 stainless steel of the type, size and number recommended by the manufacturer and to the length required for embedded installation into bituminous concrete base below precast concrete pavers or ipe decking, as indicated on drawings.

2.07 LOUNGER SHORT ADD-ON MODULE

A. Lounger Short Add-on Module shall meet the requirements shown on the Contract Drawings and of the quality, sustainable materials, and manufacturing processes of those produced by:
Vestre USA Inc
175 Varick street New York, NY 10014
phone: +1 212.634.9658
website: www.vestre.com
email: info@vestre.com; Kristoffer Vestre: kristoffer@vestre.com
Or comparable, compatible, performance and color-matched equals approved by
the Landscape Architect.

B. Type: 1578 Bloc Short Sun Bench Add-on Module; Size: width: 1317mm, length: 915mm, back height: 868mm, front height: 389mm

C. Lounger Short Add-on Module Materials:

1. All wood for loungers shall be linseed oil impregnated PEFC certified Nordic Pine from Scandinavia (Pinus sylvestris).

2. All metal shall be solid steel, hot dip galvanized and color powder coated with high-quality finish that complies with the strict requirements of Corrosion Class C5-M (EN ISO 12944); **color: RAL 6027 "Light Green"**

3. All attachment screws and fittings shall be type 316 stainless steel.

4. Anchor Bolts shall be AISI type 316 stainless steel of the type, size and number recommended by the manufacturer and to the length required for embedded installation into bituminous concrete base below precast concrete pavers or ipe decking, as indicated on drawings.

2.08 FEATURE BENCH SINGLE

A. Feature Bench shall meet the requirements shown on the Contract Drawings and of the quality, sustainable materials, and manufacturing processes of those produced by:
Vestre USA Inc
175 Varick street New York, NY 10014
phone: +1 212.634.9658
website: www.vestre.com
email: info@vestre.com; Kristoffer Vestre: kristoffer@vestre.com
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Type: 1516 Bloc Bench, freestanding; Size: width: 670 mm, length: 1766mm, back height: 790mm, front height: 460mm

C. Feature Bench Materials:

1. All wood for Feature benches shall be linseed oil impregnated PEFC certified Nordic Pine from Scandinavia (Pinus sylvestris).

2. All metal shall be solid steel, hot dip galvanized and color powder coated with high-quality finish that complies with the strict requirements of Corrosion Class C5-M (EN ISO 12944); **color: RAL 6027 "Light Green"**

3. All attachment screws and fittings shall be type 316 stainless steel.

4. Anchor Bolts shall be AISI type 316 stainless steel of the type, size and number recommended by the manufacturer and to the length required for embedded installation into bituminous concrete base below precast concrete pavers or ipe decking, as indicated on drawings.

2.09 FEATURE BENCH DOUBLE

A. Feature Bench shall meet the requirements shown on the Contract Drawings and of the quality, sustainable materials, and manufacturing processes of those produced by:

Vestre USA Inc
175 Varick street New York, NY 10014
phone: +1 212.634.9658
website: www.vestre.com
email: info@vestre.com; Kristoffer Vestre: kristoffer@vestre.com
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Types: 1553 Bloc Seat Start Module; 1555 Bloc Seat End Module.

C. See Contract Drawings for each grouping.

D. Feature Bench Materials:

1. All wood for Feature benches shall be linseed oil impregnated PEFC certified Nordic Pine from Scandinavia (Pinus sylvestris).

2. All metal shall be solid steel, hot dip galvanized and color powder coated with high-quality finish that complies with the strict requirements of Corrosion Class C5-M (EN ISO 12944); **color: RAL 6027 "Light Green"**

3. All attachment screws and fittings shall be type 316 stainless steel.

4. Anchor Bolts shall be AISI type 316 stainless steel of the type, size and number recommended by the manufacturer and to the length required for embedded installation into bituminous concrete base below precast concrete pavers or ipe decking, as indicated on drawings.

2.10 BIKE RACK

A. All Bike Rack shall be as shown on the Drawings, and as manufactured by:
Landscape Forms, Inc.
431 Lawndale Avenue
Kalamazoo, Michigan 49048
toll free: 800-521-2546
phone: 269-381-0396
fax: 269-381-3455
website: www.landscapeforms.com
email: specify@landscapeforms.com
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Type: “Ride”; Size: Depth 3 ½” x Height 26” x length 28”; Mounting: Embedded.

C. Bike Rack materials:

1. Frame: Aluminum Casting – 319 ASTM B26 or 356 ASTM B108 & LFI 7.4.2-A1.
2. Adjustable Leveler: Stainless steel round bar 303 ASTM A581, A582.
3. Anchor Cover: Aluminum Casting – 319 ASTM B26 or 356 ASTM B108 & LFI 7.4.2-A1.
4. Anchor Set Screw: 1/4-20 x 1.50” set screw, cup point, hex drive, magni-coated.
5. Hardware Pack: Steel rod, 5/8-11 X 3 1/2” threaded rod with magni 565 – silver top coat, with thread patch.

D. Finish on Metal: Landscape Forms, Inc. “Pangard II”

1. Primer: Rust inhibitor.

2. Topcoat: Thermosetting polyester powdercoat. UV, chip, and flake resistant.

3. Test Results: “Pangard II”.
   a. Gloss Consistency, Gardner 60 Degrees, ASTM D 523: Plus or minus 5 percent from standard.
   b. UV Resistance, Color and Gloss, ASTM G 155, Cycle 7: Delta E less than 2 at 2.0 mils and less than 20 percent loss.
   c. Cross-Hatch Adhesion, ASTM D 3359, Method B: 100 percent pass.
   d. Flexibility Test, Mandrel, ASTM D 522: 3 mm at 2 mils.
   e. Erichsen Cupping, ISO 1520: 8 mm.
   f. Impression Hardness, Buchholz, ISO 2815: 95.
   g. Impact Test, ASTM D 2794: 60 inch-pounds at 2.5 mils.
   h. Pencil Hardness, ASTM D 3363: 2H minimum.
   i. Corrosion Resistance, 1,500-Hour Test, ASTM B 117: Max undercutting 1 mm.
   j. Humidity Resistance, 1,500-Hour Test, ASTM D 2247: Max blisters 1 mm.

4. Color: Mercury

E. All attachment screws and fittings shall be type 316 stainless steel.

F. Anchor Bolts shall be AISI type 316 stainless steel of the type, size and number recommended by the manufacturer and to the length required for embedded installation into bituminous concrete base below precast concrete pavers or ipe decking, as indicated on drawings.

G. All Bolts shall be tamper resistant. Installation of bolts shall be reviewed by DCR to ensure anti-theft measures are acceptable.

2.11 PICNIC TABLE GROUP AND PICNIC TABLE GROUP (WHEELCHAIR ACCESSIBLE)

A. Table and Benches for all Table Groupings shall meet the requirements shown on the Contract Drawings and of the quality, sustainable materials, and manufacturing processes of those produced by:
Vestre USA Inc
175 Varick street New York, NY 10014
phone: +1 212.634.9658
website: www.vestre.com
email: info@vestre.com; Kristoffer Vestre: kristoffer@vestre.com
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

B. Types: 1506 Bloc Bench Backless; 1516 Bloc Bench with Back; 1536 Bloc Table Freestanding; 1503 Bloc Chair with Back

C. See Contract Drawings for each table groupings: One (1) complete Picnic Table group (Wheelchair Accessible) consists of: 1 Table, 1 Backed Bench, and 1 Backed Chair. One (1) complete Picnic Table Group consists of: 1 Table, 1 Backed Bench, and 1 Backless Bench. For each grouping Contractor to provide *a complete set of furnishings as described in this section.*

D. Bench/Chair and Table Materials:

1. All wood for benches, chair and tables shall be linseed oil impregnated PEFC certified Nordic Pine from Scandinavia (Pinus sylvestris). All metal shall be solid steel, hot dip galvanized and color powder coated with high-quality finish that complies with the strict requirements of Corrosion Class C5-M (EN ISO 12944); **color: RAL 6027 "Light Green"**

2. Anchor Bolts shall be AISI type 316 stainless steel of the type, size and number recommended by the manufacturer and to the length required for embedded installation into bituminous concrete base below precast concrete unit pavers, or ipe decking as indicated on drawings.

3. All Bolts shall be tamper resistant. Installation of bolts shall be reviewed by DCR to ensure anti-theft measures are acceptable.

2.12 LANDSCAPE BOULDER

A. Boulders shall be large natural stone boulders with primarily smooth weathered surface as selected by the Landscape Architect from those submitted via photograph or from on-site quarry/ yard visit (if local to Massachusetts). All boulders shall average rough minimum dimensions of 36”W x 48”L x 36”H unless otherwise approved by Landscape Architect at time of boulder selection.

2.13 WATERSIDE BARRIER WITH LEANING RAIL

A. Waterside Barrier with Leaning Rail shall be manufactured from solid and tubular milled steel schedule 40 pipe and solid stock steel bars and plates with a hot dipped galvanized finish, fabricated to dimensions and with materials as shown on the Drawings and meeting all ADA requirements.

B. Top leaning rail is manufactured from Kebony™ Clear Radiata #2522, no. 2.6 with Net Finished Dimensions of 1-1/2 inches by 5-1/2 inches, or Thermally Modified and Furfuryl Impregnated Wood or approved equal. Wood leaning rail shall have eased leading edges and shall be sanded smooth. Apply end grain sealant per manufacturer requirements. Conform to material storing, handling, cut end treatment, strength and hardness requirements, as outlined in SECTION 06150 WATERFRONT WOOD DECKING.

C. Top leaning rail is fastened to continuous solid steel bar with Marine Grade Type 316L or 316A4 stainless steel vandal resistant screws. Solid steel bar welded to solid steel angle bracket, as indicated in drawings. Provide isolating washer and sleeve at all stainless steel to galvanized steel connections. At all wood and galvanized steel interfaces, provide solvent resistant Acrylic Flashing Tape, complying with SECTION 06150 WATERFRONT WOOD DECKING.

D. Horizontal steel rods shall be hot dipped galvanized. Rods shall be continuous with each continual railing unit (typ. 12’ length) and shall be fitted to post holes so as to remain fixed in place with no twisting or movement of bars after the hot dip galvanization process.

E. Vertical end posts, intermediate posts and base plates shall be fabricated from solid steel bar stock conforming to ASTM A572 Grade 50.

F. Carriage bolts and Lag bolts shall conform to Type 316L or 316A4 Stainless Steel.

G. High Strength Structural Bolts: Shall conform to ASTM F3125 Grade A325 with hexagonal heads.

H. Nuts: Shall be hexagonal and conform to ASTM A563.

I. Washers (except against timber): Shall conform to ASTM F436.

J. Isolating Washers and Sleeves: Provide isolating washers sleeves at all stainless steel and H.D. Galvanized connections.

K. Isolating Plate: Rigid Black HPDE isolating plate. Submit product information for Engineer approval.

L. Metal Materials:

1. All metal used in the fabrication and installation of the metal site fabrications of this Section shall conform to the following specifications:

2. Milled Steel Sheet and Flat Bar Stock: shall be in conformance to ASTM A36. Match to dimensions of existing, as shown on the Drawings, or as finalized in shop drawing structural calculations.

3. Stainless Steel anchor bolts, elements and hardware shall conform to Marine Grade Type 316L or 316A4.

4. Miscellaneous Bolts, Screws, and Fasteners: ASTM A307 (smaller than 5/8") and ASTM A325 (greater than 5/8").

5. Stainless Steel bolts, pins, plates and hardware shall conform to ASTM A666, be AISI Type 305 conforming to the requirements of ASTM A193 to sizes shown on the Drawings.

6. Bolts and Nuts: Regular hex. head extending 1/2" min. beyond nut when tight.

7. Plain Washers: Round.

8. All fasteners to be Stainless Steel and vandal resistant.

9. Provide labels to each piece or panel to facilitate field assembly. Assemble the metal panels and railings as much as possible in the Shop with minimum field assembly required.

M. Galvanizing:

Hot-dip galvanizing of all ferrous metal work shall conform to the quality standards and application processes performed by Duncan Galvanizing, Everett, MA or approved equal(s) as follows:

1. Hot-Dip Galvanizing: For steel exposed to the elements, weather or corrosive environments and other steel indicated to be galvanized, provide coating for iron and steel fabrications applied by the hot-dip process. Galvanizing bath shall contain special high-grade zinc.

    a. Basis of design: Duragalv® Or approved equal,
    b. Comply with ASTM A 123 for fabricated products and ASTM A 153 for hardware.
    c. If required, plug vent holes after galvanizing and grind smooth.
    d. Galvanized surface shall be prepared per SSPC SP2 or SP3 to provide a smooth surface removing all runs, drips or sags.
    e. Galvanizing shall exhibit a rugosity (smoothness) of 16-25 microns or less when measured by a profilometer. This pertains to those elements that are less than 24 pounds per running foot.
    f. Galvanized surfaces, that are to receive coatings, must be blasted per SSPC SP 16. The use of iron, steel shot, and aluminum oxide grit as a blast medium, and power wire brushes are not permitted.

Or comparable, compatible, color and performance matched equal as approved by Landscape Architect and Owner.

2.14 WATERSIDE BARRIER AT PAVILION STAIR

A. Waterside Barrier at Pavilion Stair shall meet all requirements of Waterside Barrier with Leaning Rail, including the Metal Material and Galvanizing requirements, as outlined in Article 2.13 this Section, but shall include the addition of a hot dip galvanized steel handrail and angled bars affixed to posts, as indicated in Drawings.

B. Handrail shall be manufactured from milled steel schedule 40 pipe and solid stock with hot dipped galvanized finish. It shall be fabricated to dimensions and materials shown on the Drawings and meeting all ADA requirements for allowable railing heights, clear dimensions between posts and vertical clearances to walls, hand-rail grip diameter and extensions at top and bottom of stairs and ramp.

2.15 LANDSIDE BARRIER

A. Landside Barrier shall meet the Metal Material and Galvanizing requirements as outlined in Article 2.13, this Section.

B. Landside Barrier shall be manufactured from solid and tubular milled steel schedule 40 pipe and solid stock steel bars and plates with a hot dipped galvanized finish, fabricated to dimensions and with materials as shown on the Drawings and meeting all ADA requirements.

C. Top rail is manufactured from schedule 40 hot dipped galvanized pipe fixed to solid hot dipped galvanized steel rod and bracket with tap screws, as indicated in Drawings.

D. Horizontal steel rods shall be hot dipped galvanized. Rods shall be continuous with each continual railing unit (typ. 12' length) and shall be fitted to post holes so as to remain fixed in place with no twisting or movement of bars after the hot dip galvanization process.

E. Hot Dipped galvanized finish mesh infill panels shall meet the requirements shown on the Contract Drawings and of the quality, materials, and manufacturing processes of those produced by:

McNICHOLS
33 High Street
North Billerica, MA 01862
https://www.mcnichols.com
877.664.0484
Or comparable, compatible, performance and color-matched equals approved by the Landscape Architect.

E. Types: McNICHOLS WIRE MESH, Square, Galvanized Steel, Hot Dipped, Welded – Trimmed, 2" x 2" Mesh (Square), 1.8800" x 1.800" Opening (Square), 0.120" Thick (11 Gauge) Wire Diameter, 88% Open Area

F. Vertical end posts, intermediate posts and base plates shall be fabricated from solid steel bar stock.

2.16 LANDSIDE BARRIER AT BOARDWALK RAMP

A. Landside Barrier at Ramp shall meet the Metal Material and Galvanizing requirements as outlined in Article 2.13, this Section.

B. Landside Barrier at Ramp shall meet all requirements of Landside Barrier, but shall include the addition of hot dip galvanized steel handrails affixed to posts, as indicated in Drawings.

C. Handrails shall be manufactured from milled steel schedule 40 pipe and solid stock with hot dipped galvanized finish. They shall be fabricated to dimensions and materials shown on the Drawings and meeting all ADA requirements for allowable railing heights, clear dimensions between posts and vertical clearances to walls, hand-rail grip diameter and extensions at top and bottom of stairs and ramp.

2.17 LANDSIDE BARRIER AT PAVILION STAIR

A. Landside Barrier at Pavilion stair shall meet the Metal Material and Galvanizing requirements as outlined in Article 2.13, this Section.

B. Landside Barrier at Ramp shall meet all requirements of Landside Barrier, but shall include the addition of hot dip galvanized steel handrails affixed to posts and angled bars and mesh infill panels, as indicated in Drawings.

C. Handrails shall be manufactured from milled steel schedule 40 pipe and solid stock with hot dipped galvanized finish. They shall be fabricated to dimensions and materials shown on the Drawings and meeting all ADA requirements for allowable railing heights, clear dimensions between posts and vertical clearances to walls, hand-rail grip diameter and extensions at top and bottom of stairs and ramp.

2.18 HANDRAIL AT PLAZA GRANITE STEPS

A. Handrail at Plaza Granite Steps shall be manufactured from Schedule 40 tubular Type 316 stainless steel with a satin finish, fabricated in the shop.

B. All welds shall be ground smooth.

C. Handrails shall meet all requirements of MAAB code and ADA requirements for allowable railing heights, clear dimensions between posts, clearances to adjacent walls, handrail grip diameter, and extensions at top and bottom of stairs and meet the dimensions and layouts as shown on the Drawings and in approved shop drawings to be approved by Landscape Architect prior to fabrication.

D. Handrails shall be securely fastened into sleeves set into concrete footings with pourable non shrink grout, with minimum 6” of embedment.

E. Provide Type 316 Stainless Steel cover plate over sleeve with silicone seal.

F. All concrete footings shall be 3500 PSI, ¾ inch to the dimensions indicated on the Drawings and shall meet the requirements as specified in Section 03300 Cast in Place Concrete.

G. Grout shall be high strength, 100% solids, solvent free, non-shrink, epoxy adhesive for anchoring. Submit product literature for approval.

H. Gravel Backfill for Footings: Provide Gravel Borrow Type B to dimensions shown in the Drawings.

2.19 HANDRAIL AT BOARDWALK STAIR

A. Handrail at stair shall meet the Metal Material and Galvanizing requirements as outlined in Article 2.13, this Section.

B. Handrail at stair shall be manufactured from solid and tubular milled steel schedule 40 pipe and solid stock steel bars and plates with a hot dipped galvanized finish, fabricated to dimensions and with materials as shown on the Drawings and meeting all ADA requirements for allowable railing heights, clear dimensions between posts and vertical clearances to walls, hand-rail grip diameter and extensions at top and bottom of stairs.

2.20 HANDRAIL AT BOARDWALK RAMP

A. Handrail at stair shall meet the Metal Material and Galvanizing requirements as outlined in Article 2.13, this Section.

B. Handrail at ramp shall be manufactured from solid and tubular milled steel schedule 40 pipe and solid stock steel bars and plates with a hot dipped galvanized, fabricated to dimensions and with materials as shown on the Drawings and meeting all ADA requirements for allowable railing heights, clear dimensions between posts and vertical clearances to walls, hand-rail grip diameter and extensions at top and bottom of ramps.

2.21 PARK SIGNS **(ALL TYPES)**

A. Custom High-Pressure Laminate Signs

1. Custom High-Pressure Laminate Signs for the Park Signs, Interpretive Signs, and Wayfinding Signs shall be as manufactured by:

Izone Imaging
2526 Charter Oak Drive, Suite 100

Temple, Texas 76502
Phone: 888.464.9663
Fax: 254.778.0938
www.izoneimaging.com
info@izoneimaging.com
Or comparable, compatible, color and performance matched equal as approved by Landscape Architect and DCR.

2. Park Signs, Interpretive Signs, and Wayfinding Signs dimensions, details, materials, message content, and design of signage shall be as shown on the Drawings.

3. Sign panels shall be fabricated from 0.5" (half inch) thick, structural high-pressure laminate. Panels shall be sturdy, weatherproof and vandal-proof and graffiti resistant. Signs are single-sided. Refer to Drawings and approved shop drawing matrix submitted before construction for dimensions, locations and types.

4. Sign graphics shall be inkjet printed with multicolor graphics sandwiched between multiple layers of melamine and phenolic sheets pressed at high pressure and heated to form a solid core. The plaque shall include a set of color matching proofs (17 colors).

5. Graphics/Text: The Contractor shall provide all final artwork in shop drawings and samples based on digital graphic files (artwork and text) for each of the plaques provided by DCR.

6. The Contractor shall provide full scale artwork for each plaque for review in the field by DCR and the Landscape Architect before construction. Constructed artwork layout, size, fonts, and text content shall reflect approved shop drawings and approved samples.

B. Metal Materials:

1. All metal used in the fabrication and installation of the metal site fabrications of this Section shall conform to the following specifications:

2. Milled Steel Sheet and Flat Bar Stock: shall be in conformance to ASTM A36. Match to dimensions of existing, as shown on the Drawings, or as finalized in shop drawing structural calculations.

3. Stainless Steel anchor bolts, elements and hardware shall conform to Marine Grade Type 316L or 316A4.

4. Miscellaneous Bolts, Screws, and Fasteners: ASTM A307 (smaller than 5/8") and ASTM A325 (greater than 5/8").

5. Stainless Steel bolts, pins, plates and hardware shall conform to ASTM A666, be Type 316L or 316A4, conforming to the requirements of ASTM A193 to sizes shown on the Drawings.

6. Bolts and Nuts: Regular hex. head extending 1/2" min. beyond nut when tight.

7. Plain Washers: Round.

8. All fasteners to be Stainless Steel and vandal resistant.

9. Provide labels to each piece or panel to facilitate field assembly. Assemble the metal panels and railings as much as possible in the Shop with minimum field assembly required.

C. Galvanizing and Finishing:

Hot-dip galvanizing of all ferrous metal work shall conform to the quality standards and application processes performed by Duncan Galvanizing, Everett, MA or approved equal(s) as follows:

1. Hot-Dip Galvanizing: For steel exposed to the elements, weather or corrosive environments and other steel indicated to be galvanized, provide coating for iron and steel fabrications applied by the hot-dip process. Galvanizing bath shall contain special high-grade zinc.

    a. Basis of design: Duragalv® Or approved equal,
    b. Comply with ASTM A 123 for fabricated products and ASTM A 153 for hardware.
    c. If required, plug vent holes after galvanizing and grind smooth.
    d. Galvanized surface shall be prepared per SSPC SP2 or SP3 to provide a smooth surface removing all runs, drips or sags.
    e. Galvanizing shall exhibit a rugosity (smoothness) of 16-25 microns or less when measured by a profilometer. This pertains to those elements that are less than 24 pounds per running foot.
    f. Galvanized surfaces, that are to receive coatings, must be blasted per SSPC SP 16. The use of iron, steel shot, and aluminum oxide grit as a blast medium, and power wire brushes are not permitted.

2. Primer: Provide factory-applied polyamide powder epoxy prime coat over metal that has been sandblasted per SSPC SP16.

a. Basis of design: Duncan® Thermoset, Or approved equal,
b. Primer shall be a polyamide epoxy powder primer with 0 VOC.
c. Apply primer within 12 hours after blasting at the same plant in a controlled environment meeting applicable environmental conditions and as recommended by the primer coating manufacturer. Cure schedule shall be as recommended by the manufacturer.
d. Primer shall be applied at 1.8-3 mils DFT and certified OTC/VOC compliant and conform to EPA and local requirements.
e. Primer shall meet or exceed the following performance criteria as stipulated by the coating manufacturer:
f. Cure Schedule: 10 min. at 400°F
g. Specific Gravity: 1.58 +/- .05 1.4-1.7 +/- .05
h. Coverage at 1.0 Mil 121.7 sq. ft./ lb.
i. 60° Gloss: 55-65 (ASTM D-523)
j. Adhesion: 5B (ASTM D-3359)
k. Flexibility: Pass 1/8 " Mandrel Bend (ASTM D-522)
l. Pencil Hardness: 2H-3H (ASTM D-3363)
m. Impact Resistance: 80 in-lbs direct (ASTM D-2794) 80 in-lb reverse
n. Typical Environmental Properties: On Bonderite 1000 Panels
o. Salt Fog 1000 hours (ASTM B-117)
p. Salt Fog (top-coated)* 5000+ hours (ASTM B-117)
q. Humidity 1000 hours PASSED

3. Topcoat: Provide fluoropolymer powder topcoat. Provide coating matching approved samples. Factory-applied metal coatings shall be applied in a facility acceptable to the coating manufacturer. Full cure of the coatings shall be verified by the coating manufacturer's recommended test methods.

a. Coatings must meet or exceed the criteria for the following categories as stipulated by the coating manufacturer. All testing must be on lab prepared panels.
b. Adhesion: ASTM D 3359, no loss.
c. Hardness: ASTM D 3363 (pencil), H min.
d. Falling Sand ASTM D 968 40L/mil.
e. Salt Fog Resistance: ASTM B 117, passes 4000 hrs.
f. Humidity: ASTM D 2247, 4000 hours, few #8 blisters.
g. Impact Resistance (3mm): ASTM D 2794, no loss.
h. Color Retention: ASTM D 2244, 10 year less than or equal to 5 delta E.
i. Chalk Resistance: ASTM D 4214, #8 rating.

j. Gloss Retention: ASTM D 523, greater than or equal to 50 percent retention.
k. Erosion Resistance: ASTM B 244, less than 10 percent film loss.
l. Compliance: AAMA 2605.

4. Clearcoat: Provide Super Durable powder urethane clearcoat in the gloss range specified.

   a. Clearcoat shall be applied over the color coat per the manufacturer's recoat schedule at the same galvanizer's plant in a controlled environment meeting applicable environmental conditions as recommended by the coating manufacturer. Cure schedule shall be as recommended by the manufacturer.
   b. Clearcoat shall be applied at 2-3 mils DFT and certified OTC/VOC compliant and conform to EPA and local requirements.
   c. Clearcoat shall meet or exceed the following performance criteria as stipulated by the coating manufacturer:
   d. Cure Schedule 10 min @400ºF
   e. Specific Gravity (g/ml): 1.17
   f. Coverage at 1.0 Mil (ft2/lb) 165.2
   g. 20º Gloss (ASTM D-523) 99
   h. 60º Gloss (ASTM D-523) 110
   i. Adhesion (ASTM D-3359) 5B
   j. Flexibility: Pass 1/8 " Mandrel Bend (ASTM D-522)
   k. Pencil Hardness: (ASTM D-3363) H-2H
   l. Impact resistance ASTM D-2794) Direct 100 in-lbs Reverse 100 in-lbs
   m. Humidity (ASTM D-4585) Slight gloss and color change
   n. Salt Spray (ASTM B-117) Max 1/8" Creepage.

5. Signs may have two color finishes, to be selected from approved samples.
6. Submit color samples of the following factory-applied coatings proposed for use for approval prior to application of color coating, as follows:

   a. Green Colors: RAL 6027, Light Green; RAL 6034 Pastel Turquoise, and RAL 1020 Olive Yellow
   b. Purple Colors: RAL 4001 Rotlila, RAL 4004 Claret Violet, and RAL 4007 Purple Violet

7. All color finish for all signage shall be Semi Gloss. Finish of fabricated signage shall match approved material and color sample provided as submittal.

D. Anti-Graffiti Coating: Anti-graffiti shall be a clear, touch, polyester overlaminate Graphic and Surface Protection Film that provides resistance to accidental and intentional stains, graffiti, abrasion, gouging and UV light. Film shall be Scotchguard Graphic and Surface Protection Film 8991R (Removable) as manufactured by 3M Commercial Graphics Division, 3M Center, Building 220-12E-04, St. Paul, MN 55144, 1-800-374-6772, www.3Mgraphics.com; meeting the following characteristics:

1. Film: Transparent polyester
2. Gloss: High gloss
3. Thickness: without adhesive: 4 mil (0.10 mm); with adhesive: 5.3 to 5.7 mils (0.13 mm to 0.14 mm)
4. Adhesive type and color: 8991R: Removable, pressure sensitive, clear
5. Liner: Polycoated paper
6. Recommended application surfaces: Flat, smooth, untextured; simple curves
7. Application temperature range: 50° to 90°F (10°to 32°C)
8. Removal: 8991: Permanent
9. Applied shrinkage: 5 mil (0.13 mm) In use temperature range-65° to +225°F (-54° to +107°C)
10. Chemical resistance: Resists most organic solvents and fluids; mild alkalis, mild acids and salt.

Or comparable, compatible, color and performance matched equal as approved by Landscape Architect and Owner.

E. Accessory Materials and Hardware

1. Reinforced Cement Concrete Footings for Park Sign, Interpretive Sign, and Wayfinding Sign shall be 4000 psi, ¾” 610 Cement Concrete and ACI 301, Standard Specifications for Structural Concrete for Buildings. Concrete shall be 4,000 PSI concrete. Exposed concrete surfaces shall be hand rubbed finish as defined in ACI 301. Reinforcing bars shall be ASTM A 615, Grade 60.

2. Grout shall be high strength, 100% solids, solvent free, non-shrink, epoxy adhesive for anchoring, manufacturer to be approved by DCR’s Representative.

3. Gravel Backfill for Footings: Provide Gravel Borrow Type B to dimensions shown in the Drawings.

4. Clay Waterproofing layer shall be Volclay Waterstop RX-101 as manufactured by Allco Waterproofing Solutions, Ltd. or approved equal as reviewed by Landscape Architect and Engineer.

2.22 STEEL MARINA GATES 1 AND 2

A. Steel Marina Gates 1 and 2 at existing small and large boat platform shall be restored, repaired and reinstalled.

B. Contractor shall prepare an existing conditions survey of the complete existing steel marina gate systems for Steel Marina Gate 1 and 2. The steel marina gate system includes the gate leafs, side fence panels, posts, anti-climbing devices, attachments to decking and adjacent barrier rail post, base plates and all other components necessary for the marina gate system. The existing conditions survey shall document the gate system's existing condition and suitability for refurbishment.

C. Contractor shall provide detailed shop drawings indicating refurbishment necessary provide a 20-year design life for the refurbished and reinstalled gate systems at the Steel Marina Gate 1 and Gate 2 locations. Restored barriers shall meet new adjacent guardrails or barriers in a manner consistent with existing conditions and will preserve existing function.

D. Contractor to provide all new hardware for refurbished gate systems.

E. All attachments to the boardwalk decking shall be as per the mounting details provided on the contract drawings and as per the approved, stamped shop drawings. Black HDPE Isolating Plate shall be used under galvanized base plates and wood decking.

F. Steel Marina Gates 1 and 2 shall be manufactured from solid and tubular milled steel schedule 40 pipe and solid stock steel bars and plates with a hot dipped galvanized, fabricated to dimensions and with materials as shown on the approved, stamped shop drawings, and meeting all ADA requirements.

G. Metal Material and Galvanizing shall meet the requirements as outlined in Article 2.13, this Section.

H. Carriage bolts and Lag screws shall conform to ASTM A307, Grade A.

I. High Strength Structural Bolts: Shall conform to ASTM F3125 Grade A325 with hexagonal heads.

J. Nuts: Shall be hexagonal and conform to ASTM A563.

K. Washers (except against timber): Shall conform to ASTM F436.

L. Isolating Washers and Sleeves: Provide isolating washers sleeves at all stainless steel and H.D. Galvanized connections. Submit product information for Engineer approval.

2.23 VEHICULAR PARKING LOT GATE

A. Vehicular Parking Lot Gate, Double Leaf (Shurcliff Closure Gate) shall be hot dipped galvanized and painted, and fabricated to dimensions and with materials as shown on the approved, stamped shop drawings.

1. Steel Tubing: Steel for fabrication shall be in conformance with ASTM International A500 Grade B requirements and steel sections for tubing shall have a ¼-inch minimum wall thickness, unless otherwise noted on the Drawings.

2. Steel Bar Stock: Steel flat bar stock shall be in conformance to ASTM International A36.

   a. Steel finishing requirements for all steel parts to be chemically suitable for galvanizing. Steel should contain carbon below 0.25%, phosphorous below 0.5% and manganese below 1.35%. Contact the galvanizer if the steel does not comply in order to determine the suitability for processing. Following fabrication, steel shall receive surface cleaning, galvanizing, surface smoothing after galvanizing, and surface color coating. Under the requirements of this Specification, all cleaning, galvanizing, and color finishing work required, shall be performed by the Galvanizing Contractor within his own plant.

3. Steel plate shall conform to ASTM International A-36, galvanized in accordance with Section 05035, GALVANIZING AND METAL COATINGS.

4. All pipe shall be galvanized cold formed steel conforming to ASTM International A 120, latest edition, Schedule 40 requirements with 36,000 psf minimum yield point, and galvanized in conformance with 05035, GALVANIZING AND METAL COATINGS, sizes as shown on the Drawings.

5. All hardware shall conform to ASTM International A325 and shall be galvanized in accordance with Section 05035 GALVANIZING AND METAL COATINGS, sizes as shown on the Drawings. Bolt for gate lock

shall conform to ASTM International A-307. One extra Bolt shall be supplied with each gate installation or replacement.

6. Reflector tape shall be commercial grade pressure sensitive tape 12 inch width with alternating bands of black and yellow as recommended in the "Manual on Uniform Traffic Control Devices," Section C. Object Markings, on pages 3C-l and 3C-3, continuously bonded with ends secured against peeling.

7. Weld connections shall be continuous ¼-inch or 3/16-inch fillet welds along all exposed joints of all steel. Electrodex E6OXX or E7OXX shield metal arc weld.

8. Double leaf closure gate installation shall include 3 lock posts for each closure gate installation (1 lock post in the open position and 1 in the closed position). Reflective bands shall be attached to all closure gate installation components, including all types of posts and at couplings.

9. Padlocks and keys shall be Masterlock of Milwaukee, plated, No. 2 or approved equal. The specified padlock is a standard brass plated lock with shackle dimensions matched to the lock pin and lock housing. Two (2) keys shall be supplied with each padlock. The Contractor shall check with the Engineer before ordering padlocks and keys.

10. All items to be hot dipped galvanized and powder coated finish as per the requirements described in Article 2.21, this Section. Powder coat color shall be "Fire Safety Yellow".

11. Contractor shall submit to the Owner a notarized Certificate of Compliance with all galvanizing requirements including ASTM international number and weight of zinc coating in ounces per square foot.

12. All closure gates shall have 3- 3 1/2 inch round red reflectors applied to both sides of the gate as shown on the Drawings and as directed by the Resident Engineer (refer to page 3C3 of the "Manual on Uniform Control Devices," secured to the pipe gate by 2 1/8-inch diameter bolt with nut and washer. Peen the bolt thread to secure the nut.

13. Furnished, installed, and included for payment within this Item are 18-inch diamond reflectorized red panels as shown on page 3C3 of the Manual on Uniform Control Devices (for Streets and Highways). Two 18" diamond reflectorized red panels shall be mounted on each closure gate leaf of each closure gate installation as shown on the contract plans and as directed by the Engineer.

14. The panels shall be fabricated of extruded aluminum ASTM International - B22 1, Alloy 6063-T6 and shall weigh 2.687 pounds per SQUARE FOOT.

15. Reflective sheeting shall conform with Federal Highway Administration Standard FP-79, Table V (High Intensity). The sheeting shall include a pre-coated pressure sensitive adhesive backing (Class).

16. Bolts, nuts, washers, and attachment clamps for anchoring the reflective panels to the gates shall conform to ASTM International -A572 with a minimum yield strength of 50,000 p.s.i. All bolts, nuts, and washers shall be galvanized in accordance with ASTM International -A 153.

17. Bolting the reflective panels directly to the gate framework with four bolts is an acceptable method of attachment.

18. All structural steel plates shall conform to the requirements of ASTM A709, Grade 50.

19. All welding shall comply with the provisions of the Structural Welding Code, AWS D1.1. All welds shall be E70 Electrode.

2.24 FIELDSTONE AND ROCKFILL GROUNDCOVER

A. Fieldstone for Fieldstone and Rockfill Groundcover shall be a locally sourced fieldstone similar to MassDOT M2.06.0: Slope Paving or comparable, compatible, dimensional and color-matched equals approved by the Landscape Architect.

   a. Submit two potential stone suppliers for Fieldstone and for Rockfill for approval by Engineer.

   b. As per M2.06.0 Slope Paving, stone shall be sound, angular in shape and free from structural defects. Each stone shall have one reasonably flat face and a thickness perpendicular to the face not less than 6 in., which shall be the least dimension of the stone. Approximately 60% of the stones shall vary from $2ft^3$ to $3ft^3$ each in volume and the remainder of the stones shall each be from $1ft^3$ to $2ft^3$ in volume.

   c. Color shall match existing revetment wall stones as closely as possible.

   d. Fieldstone color and grain shall be medium to fine grain, free from damage, visible blemishes not typical for approved samples (natural to the stone or caused during delivery, storage, or construction) errant color and iron stains, deposits or seams, and shall match samples approved by the

Landscape Architect, or will be rejected. Rust stains from natural cleft deposits or seams that appear after installation and before Final Acceptance may be cause for rejection and replacement of stone at Contractor's expense. Fieldstone appearance, as specified on the Drawings, specified herein, and exhibited in approved sample submittals shall be consistent throughout the Project.

B. Rockfill for Fieldstone and Rockfill Groundcover shall be locally sourced Rockfill similar to MassDOT M2.04.2 Modified Rockfill or comparable, compatible, dimensional and color-matched equals approved by the Landscape Architect.

a. As per M2.04.2 Modified Rockfill, shall consist of hard, durable angular shaped stones which are the product of the primary crushing of a stone crusher. Round stone, boulders, sandstone, and similar soft stone or relatively thin slabs will not be acceptable.

b. Stones shall be free from overburden, spoil, shale, organic material and meet the following gradation requirements:

Size of Stone (in.)	Passing Percentages
8	95-100
4	0-25
2 ½	0-5

2.25 BASE COURSE

A. Gravel Borrow 'Type B' shall meet the requirements as specified in Section 02200 SITE EARTHWORK.

2.26 CONCRETE FOOTINGS

A. All concrete footings shall be 3,500 PSI, ¾ inch to the dimensions indicated on the Drawings and shall meet the requirements as specified in Section 03300 CAST IN PLACE CONCRETE.

2.27 NON-SHRINK GROUT

A. Non-shrink grout for all field furnishing base plates, footing settings and anchor bolts shall conform to requirements of ASTM C11077, Grade B or C. Unless otherwise indicated, requirements for consistency, working time and temperature range shall be determined by the Contractor to suit working conditions.

PART 3- EXECUTION

3.01 INSPECTIONS

A. Contractor shall request that Landscape Architect inspect construction with 48 hours notice for the following items:
   1. Site samples and/or field mock-ups of site improvements
   2. All concrete footings and concrete reinforcing
   3. Prepared subgrade and base course limits and elevations
   4. Layout of all Site Improvements

3.02 GENERAL REQUIREMENTS

A. All site furnishings, signs, handrails, barrier rail, and railings shall be fabricated and fastened in accordance with existing fabrications and fastenings or as indicated on the drawings. All site work shall be installed in a level, plumb condition, true to the lines and grades shown on the Drawings.

B. All welding procedures shall conform to the current standards of the AWS. All welds shall be as designated on the Drawings and shall be ground smooth and flush to a neat finish. All welds shall be watertight and care shall be taken to minimize distortion due to heat. Metal shall not be galvanized or color finished prior to completing all welding and grinding of welds.

C. The Contractor shall be responsible for timing the delivery of all items so as to minimize on-site storage time prior to installation. All stored materials and items must be protected from weather, careless handling and vandalism.

D. Shim all bolt connections as necessary and secure bolts. Exposed bolts shall be fastened with an accepted semi-permanent adhesive to protect against vandalism.

E. Contractor shall handle, pack, and ship items in such a manner as to minimize damage to the finish. Upon arrival at job site it is the Contractor's responsibility to take equal precautions. Since some surface damage may occur, suitable touch-up material shall be readily available to repair any damage immediately.

F. Steel fabrication shall be accomplished using the highest standards of workmanship. Individual steel pieces to be welded shall be saw cut and carefully fitted together. All connections shall be full welded and ground flush and smooth. All fabricated steel items shall be fine sanded throughout prior to finishing to produce a high standard of surface smoothness. All surfaces and connections shall be without visible grinding marks, surface differentiation or variation.

G. Gravel borrow base and backfill for site furnishings shall be installed per drawings and in conformance with the construction methods of Section 02200 SITE EARTHWORK.

H. Cast-in-place concrete base and footings for site furnishings, signs, and railings shall be installed per drawings and approved field locations and under environmental conditions, and in conformance with Section 03300 CAST IN PLACE CONCRETE. Concrete shall not be poured in cold temperatures without blankets and warming measures to allow for proper curing. Base courses shall meet the requirements of 95% minimum compacted Gravel Borrow type b and in conformance with the requirements of MassDOT Standard Specifications.

I. Non-shrink grout for site furnishings base plates and anchor bolts shall be installed in conformance with the following requirements:

1. Preparation: Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles, and disintegrated materials. Use mechanical abrasion as necessary on structural steel and reinforcing steel to remove loose material and expose sound metal. Clean concrete surfaces as necessary, using a degreasing and etching chemical applied in accordance with the manufacturer's written instructions for the particular application. Construct appropriate forms to contain grout at the fluidity level at which is will be used. Saturate foundations and forms with water for a minimum of 24 hours prior to grouting. Take special care to eliminate water from bolt holes and other cavities.

2. Mixing: Mix with potable water according to manufacturer's printed instructions.

3. Placement: Follow manufacturer's placement instructions and recommendations for the particular application. Place grout only from one side to avoid entrapping air. Provide adequate air vent holes in large placements. Work or flow grout into place, filling all cavities. Place grout within time limit specified by manufacturer after addition of water to the batch.

J. Shop Welding: All welds shall be done in the shop according to welding requirements specified. All exposed welds shall be ground smooth so that no roughness is visible after galvanizing and finishing. Grinding shall maintain specified required thicknesses and structural integrity of welds.

K. Field Welding: Welding in the field shall be avoided and permitted only with approval of the Engineer. Comply with AWS D1.1 - AWS D1.4 as applicable for

procedures of manual metal-arc welding, appearance and quality of welds, and correction methods for defective welds.

L. Perform all cutting, drilling, and fitting required for installation of Work of this item within the shop prior to delivery. Avoid field cutting and drilling of sign frames to greatest extent possible and only with approval of the Landscape Architect. All field cuts and minor breaks in finish and galvanizing shall be prepared, primed, and re-finished per requirements for field touch-up of galvanized and/or color finished surfaces.

M. Coordinate and furnish anchorage devices, setting drawings, diagrams, templates, instructions, and directions for installation of sleeves, bolts, and other miscellaneous items to be embedded or attached to masonry work. Fabricator shall provide all coordination required with installers to insure proper assembly and erection in the field.

N. Erect signs and railings plumb. Erect to dimensions shown on the Drawings, plumb and free from rack.

O. Brace work rigid and secure to surrounding construction. Provide temporary bracing or anchors as required.

P. Application of Factory-Applied Metal Coatings

1. Galvanizing Application: Galvanize materials in accordance with specified standards and this specification. Galvanizing shall provide an acceptable substrate for applied coatings. The dry kettle process shall be used to eliminate any flux inclusions on the surface of the galvanized material.

   Prior to galvanizing, the steel shall be immersed in a pre-flux solution (zinc ammonium chloride). The pre-flux tank must be 12 to 14 Baumé density and contain less than 0.4 percent iron. Use of the wet kettle process is not acceptable. To provide the galvanized surface required, the following procedures shall be implemented:

   a. A monitoring recorder shall be utilized and inspected regularly to observe any variances in the galvanizing bath temperature.

   b. The pickling tanks shall contain hydrochloric acid with an iron content less than 8 percent and zinc content less than 3 percent. Titrations shall be taken weekly at a minimum.

   c. All chemicals and zinc shall be tested at least once a week to determine compliance with ASTM standards. All testing shall be done using

atomic absorption spectrometry or x-ray fluorescence (XRF) equipment at a lab in the galvanizing plant.

2. Finish coatings shall be applied under the following conditions:

   a. Minimum air temperature shall be 50 degrees F. Surface temperature of steel shall be 50 degrees to 120 degrees F and, in any event, be 5 degrees F higher than the dew point. Humidity shall be 85 percent maximum.

   b. The use of iron or steel shot and sand and aluminum oxide grit as a blast medium, and power wire brushes are not permitted.

   c. Surface of substrate shall be dry and free from dust, dirt, oil, grease or other contaminants. Coating and cure facility shall be maintained free of airborne dust and dirt until coatings are completely cured.

3. Application of Anti-Graffiti Coating

   a. Apply anti-graffiti coating as per manufacturer's recommendations.

Q. Adjust and Clean

1. Touch-Up and Repair: For damaged and field-welded metal coated surfaces, clean welds, bolted connections, and abraded areas.

2. For galvanized surfaces, apply organic zinc repair paint complying with requirements of ASTM A 780, modified to 95 percent zinc in dry film. Galvanizing repair paint shall have 95 percent zinc by weight, ZiRP by Duncan Galvanizing or approved equal. Thickness of applied galvanizing repair paint shall be not less than coating thickness required by ASTM A 123 or A 153 as applicable. Touch-up of galvanized surfaces with silver paint, brite paint, or aluminum paints is not acceptable.

3. For factory-applied finish coatings, field-touch-up shall be performed by factory approved personnel for warranties to apply. Touch-up shall be such that repair is not visible from a distance of 6 feet. If non factory-approved technicians are used for field touch-up, no warranties shall exist.

4. Five (5) touch-up repair kits and touchup instructions shall be provided to DCR for each type of factory-applied finish.

5. Clean all metal work of dirt and/or dust after installation for acceptance.

3.03 TRASH RECEPTACLE

A. Trash receptacle shall be mounted with a surface mounted assembly as shown on the Drawings and per manufacturer's instructions and in accordance with approved Shop Drawings.

1. Install trash receptacles in accordance with manufacturer's instructions at locations indicated on the Drawings
2. Install trash receptacles plumb and level

B. Trash receptacles shall be protected from damage during construction and shall be clean as a condition of acceptance. Finish shall be touched up according to manufacturer's instructions as a condition of acceptance.

3.04 PROMENADE PARK BENCH

A. Promenade Park Benches shall be mounted with an in-ground assembly as shown on the Drawings and per manufacturer's instructions and in accordance with approved Shop Drawings.

1. Install Promenade Park Benches in accordance with manufacturer's instructions at locations indicated on the Drawings
2. Install Promenade Park Benches plumb and level

B. Promenade Park Benches shall be protected from damage during construction and shall be clean as a condition of acceptance. Any damaged finish shall be touched up according to manufacturer's instructions as a condition of acceptance.

3.05 LOUNGER **(ALL TYPES)**

A. Lounger (all types) shall be mounted with a surface mounted assembly as shown on the Drawings and per manufacturer's instructions and in accordance with approved Shop Drawings.

1. Install lounger in accordance with manufacturer's instructions at locations indicated on the Drawings
2. Install lounger plumb and level
3. Anchor lounger securely in place

B. Lounger shall be protected from damage during construction and shall be clean as a condition of acceptance. Any damaged finish shall be touched up according to manufacturer's instructions as a condition of acceptance.

3.06 FEATURE BENCH (SINGLE AND DOUBLE)

A. Feature Bench shall be mounted with a surface mounted assembly as shown on the Drawings and per manufacturer's instructions and in accordance with approved Shop Drawings.

1. Install Feature bench in accordance with manufacturer's instructions at locations indicated on the Drawings
2. Install Feature bench plumb and level
3. Anchor Feature bench securely in place

B. Feature Bench shall be protected from damage during construction and shall be clean as a condition of acceptance. Any damaged finish shall be touched up according to manufacturer's instructions as a condition of acceptance.

3.07 BIKE RACK

A. Bike Rack shall be mounted with an in-ground assembly as shown on the Drawings and per manufacturer's instructions and in accordance with approved Shop Drawings.

1. Install bike rack in accordance with manufacturer's instructions at locations and spacing indicated on the Drawings

2. Anchor bike rack securely in place

3. Bike Rack shall be installed plumb, even, and to dimensions, locations, orientations, as shown in the Contract Drawings, and as coordinated with the Landscape Architect.

B. Bike Racks shall be protected from damage during construction and shall be clean as a condition of acceptance. Any damaged finish shall be touched up according to manufacturer's instructions as a condition of acceptance.

3.08 PICNIC TABLE GROUP AND PICNIC TABLE GROUP (WHEELCHAIR ACCESSIBLE)

A. Tables, chairs, and benches shall be installed plumb and level, and to dimensions, locations, orientations, pavement grades as shown in the Contract Drawings, and as coordinated with the Landscape Architect.

B. After locations are reviewed in the field by the Landscape Architect, Contractor shall prepare for in-ground mounting and attach tables using anchor bolts

assembly meeting the manufacturer's recommendations and as reviewed by Landscape Architect in submittal review. Any minor surface blemishes to metal surfaces shall be refinished according to manufacturer's recommendations, and exposed heads of bolts shall be primed and color finished according to the manufacturer's printed instructions.

C. All Tables shall be cleaned according to manufacturer's printed instructions in preparation for final review by Landscape Architect. The timber shall be cleaned with clear water and soft brush or cloth; do not use high pressure cleaner of similar. If sanding is required the timber can be gently sanded in the direction of the wood grain after discussion and approval of methods by Landscape Architect.

D. Installation anchor bolts are to be welded in place following final assembly and acceptance by DCR and Landscape Architect.

3.09 LANDSCAPE BOULDER

A. Install Landscape Boulders as shown on Drawings and verified in field by the Landscape Architect before final grading.

B. Boulders shall be protected from damage during construction and shall be clean and unblemished as a condition of acceptance.

3.10 BARRIERS AND RAILINGS **(ALL TYPES)**

A. Barriers and Railings (All Types) shall be securely installed plumb and level, securely fastened into timber subbase or steel flanges with stainless steel bolts or to dimensions and locations shown on the Drawings. Railing heights and layout shall meet ADA requirements.

B. Typical continuous railing units shall be fabricated as 12' long segments with posts located at 4'-0" on center. All typical and custom railing unit lengths to be verified in field by contractor and submitted as a base plate placement shop drawing for review by the Landscape Architect. Verify locations of each typical and custom length of railing in shop drawings and review in the field before final construction with the Landscape Architect.

C. All welds shall be ground smooth before galvanizing each fully assembled segment of typical or custom barrier/railing length or corner. All welding to be completed in the shop before galvanization and fixed in place on site.

D. Barriers and Railings (All Types) shall conform to the following minimum installed structural performance requirements:

1. 200 lbs lateral force applied at any point along face of rail post, or rails.
2. 200 lbs load per linear foot applied anywhere along top of rail or posts.

E. When barriers and railings contain handrails, they shall be installed to heights and in locations shown on the Drawings, plumb and following the gradient of the ramp and/or stair set as shown in the Drawings with extensions at landings meeting all ADA requirements. Posts shall be installed securely into timber base or steel flanges, as location dictates.

F. Vertical end posts, intermediate posts and base plates shall be fabricated from solid steel bar stock and welded together at base of post. Posts shall be installed in locations indicated on Drawings and with base plate type as shown at specific locations as indicated on the Drawings and verified in field.

G. Base plates shall be secured with stainless steel lag bolts embedded 8” minimum into deck or through bolted to steel sub-structure, as indicated in Drawings.

3.11 HANDRAILS **(ALL TYPES)**

A. Handrails at Boardwalk Ramp and Boardwalk Stair shall be securely installed plumb and level, securely fastened into timber subbase or steel flanges with stainless steel bolts or to dimensions and locations shown on the Drawings. Railing heights and layout shall meet ADA requirements.

B. Handrail at Plaza Granite Steps shall be securely installed plumb and level, securely fastened into stainless steel sleeve to dimensions and locations shown on the Drawings. Railing heights and layout shall meet ADA requirements.

C. All handrail placements to be verified in field by contractor and submitted as a base plate placement shop drawing for review by the Landscape Architect. Verify locations of each handrail in shop drawings and review in the field before final construction with the Landscape Architect.

D. All welds shall be ground smooth before galvanizing each fully assembled segment of typical or custom barrier/railing length or corner. All welding to be completed in the shop before galvanization and fixed in place on site.

E. All Handrails shall conform to the following minimum installed structural performance requirements:

1. 200 lbs lateral force applied at any point along face of rail post, or rails.
2. 200 lbs load per linear foot applied anywhere along top of rail or posts.

F. Handrails shall be installed to heights and in locations shown on the Drawings, plumb and following the gradient of the ramp and/or stair set as shown in the Drawings with extensions at landings meeting all ADA requirements. Posts shall be installed securely into timber base or steel flanges, as location dictates.

G. Vertical posts and base plates shall be fabricated from solid steel bar stock and welded together at base of post. Posts shall be installed in locations indicated on Drawings and with base plate type as shown at specific locations as indicated on the Drawings and verified in field.

H. Base plates shall be secured with stainless steel lag bolts embedded 8" minimum into deck or with through-bolts at steel sub-structure, as indicated in Drawings.

3.12 SIGNS **(ALL TYPES)**

A. All signs shall be fabricated and fastened in accordance with existing fabrications and fastenings or as indicated on the drawings. All site work shall be installed in a level, plumb condition, true to the lines and grades shown on the Drawings.

B. Installation

1. Field verify and adjust sections of the work prior to anchoring to ensure matching alignments and stability of members at abutting joints.

2. Contractor shall request that Landscape Architect inspect construction with 48 hours' notice for the following items:

   a. Site samples and/or field mock-ups of site improvements

   b. All concrete footings,

   c. Prepared sub-grade and base course limits, and elevations

   d. Layout of all Site Signs.

3. Signs shall be installed in location shown on the Drawings, verified in the field before construction and from field mock-up of graphics and approved submittals with review of the Landscape Architect and the City. Do not fabricate sign until all approvals have been obtained.

4. Signs shall be installed plumb and level, securely set and base extending a minimum of four feet below finished grade as shown on the Drawings.

5. Installed Signage shall be clean, plumb, secure and undamaged for acceptance.

6. Comply with fabricator's and galvanizer's requirements for installation of materials and fabrications, including use of nylon slings or padded cables for handling factory-coated materials.

7. Report to and submit field revision sketches to the Landscape Architect for approval before installation any assemblies and field fittings that do not match expected conditions that will require field cutting, drilling, and/or alignments that do not match the Drawings and design criteria specified.

8. Clean surrounding concrete and/or masonry surfaces and roughen if required to improve bonding. Take care installing signage to maintain pavement integrity without cracking or breaking. All paving and adjacent materials damaged during sign installation will be required to be repaired to acceptable condition.

3.13 STEEL MARINA GATES

A. Steel Marina Gates 1 and 2 shall be securely installed plumb and level, securely fastened into timber subbase or steel flanges with stainless steel bolts or to dimensions and locations shown on the Drawings. Gate heights and layout shall met ADA requirements.

B. Gate panel lengths to be verified in field by contractor and submitted as a base plate placement shop drawing for review by the Landscape Architect. Verify locations of each length of gates and panels in shop drawings and review in the field before final construction with the Landscape Architect and Coastal Engineer.

C. All welds shall be ground smooth before galvanizing and powder coating each fully assembled segment of typical or custom barrier/railing length or corner. All welding to be completed in the shop before galvanization and fixed in place on site.

D. Steel Marina Gates 1 and 2 shall conform to the following minimum installed structural performance requirements:

1. 200 lbs lateral force applied at any point along face of rail – post, or rails.
2. 200 lbs load per linear foot applied anywhere along top of rail or posts.

E. Vertical end posts, intermediate posts and base plates shall be fabricated from solid steel bar stock or tubular steel and welded together at base of post. Posts

shall be installed in locations indicated on Drawings and with base plate type as shown at specific locations as indicated on the Drawings and verified in field.

F. Base plates shall be secured with stainless steel bolts into deck or steel sub-structure, as indicated in Drawings.

3.14 VEHICULAR PARKING LOT GATE

A. Welding and qualifications of welders shall be in accordance with "Code for Welding in Building Construction" AWSD1.1 of the American Welding Society, latest edition. The steel vehicular gate's double arm shall be fabricated and installed in close conformity to the lines and grades in the Drawings and in accordance with approved Shop Drawings. Weld shall be continuous fillet welds along all exposed joints. Electrodes E6OXX or E7OXX and the shielded metal-arc process shall be used.

B. Excavation for post footings shall closely follow the line and grades in the Drawing(s), and the concrete shall be mixed and placed to conform to the Drawing(s).

C. Cement Concrete footing shall be constructed in accordance with DCR Standard Specifications in accordance with SECTION 03300, CAST-IN-PLACE CONCRETE and as detailed. All vertical hinge posts and lock posts shall be completely filled with concrete.

D. After fabrication is complete, all rough edges shall be buffed to rounded finish, all oil and grease film shall be removed, and all steel shall be galvanized as specified herein.

E. Install all members accurately in alignment and plumb to the height called for in the Drawing(s). Attention is drawn to the importance of the plumbness and proper height such that the bottom of the crossbar, in its maximum sag position, is tangent to the top of the rest plate. Proper positioning of the posts is crucial to the free movement of the gate, and the Contractor will be responsible for resetting the posts at no extra charge if the gate does not swing freely or if it binds in any way.

F. Thoroughly grease all contact moving surfaces with water-resisting automotive lithium-based grease.

G. All exposed nuts including the turn buckle assembly shall be made vandal-resistant by preening the ends of the bolt or punch prickling. All preened or pricked bolt ends shall be touched up with zinc-rich cold galvanized paint.

H. The color system specified is a factory finish coating. Upon arrival at the job site it is the Contractor's responsibility to handle the gate in such a manner as to minimize damage to the finish. Should any damage occur to the coating surface in shipping or handling at the job site, it is the responsibility of the Contractor to touch up said damage using suitable touch-up material, either liquid or aerosols, available from the galvanizer. Dry film thickness of applied repair paint to be not less than what was originally specified herein.

I. Install reflective tape bands in locations as indicated on drawings and/or as specified.

J. Restore area excavated and backfilled, and/or disturbed by construction of its original condition.

K. Hand dug post holes will not require footing forms; machine dug post holes will require footing forms. All excavations required for the installation of the gates shall be included under the unit price bid for these items of work including the removal of any type of material encountered. All surplus material shall be removed from the site and legally disposed of off DCR property.

L. All extra work and materials for extra size concrete bases shall be included for payment under this item.

M. The General Contractor shall be responsible for determining the actual field elevations and establishing same to ensure proper gate operation. Gates shall not be permanently installed on the hinge post until the entire projecting surface of the hinge post has been thoroughly greased, keys supplied to personnel as required, and each lock installed, closed, and left permanently attached.

N. All steel pipe used to fabricate closure gate components shall be composed of one continuous section of pipe including pipe components from welded joint to welded joint. Pieces of pipe used to make up a section within any part of the closure gate will not be permitted.

O. At all gate installations where the length of the leaf is greater than the standard 12-foot length, the Contractor shall increase the amount of concrete at any part of the gate installation to the satisfaction of the Engineer at no additional cost.

P. Any gate installation of any type that must have the deadman and the turn-buckle assembly to it deleted due to field construction conditions will have the concrete at its swivel post increased by at least 100% or to the satisfaction of the Engineer. The cost for all extra concrete and work shall be included in the bid price for those closure gate installation items.

Q. Padlock and Key

1. All keys, except limited quantity required during construction, shall be delivered to the Engineer a minimum of two (2) weeks before any padlock supplied is attached to gates constructed under this contract or as directed by the Engineer.

2. All padlocks supplied under this item of work shall have all numbers referring to the key completely removed.

   a. Each double gate installation will require three (3) padlocks: one for each lock post when gate is in the open position and one when gate is closed.

3.15 FIELDSTONE AND ROCKFILL GROUNDCOVER

A. Fieldstones shall be placed by hand or machine on planting soil (at Raingarden) or free draining backfill as specified by Coastal Engineer (at Boardwalk), as shown on drawings.

B. Fieldstone shall be placed in an irregular pattern, with smaller pieces distributed evenly across the field of stone. Groupings of similarly sized stones is not desired.

C. Fieldstone shall be compressed into bedding material to ensure stability and that no rocking of Fieldstones occurs. Rockfall can be used to stabilize Fieldstones if necessary.

D. Fieldstones should typically touch an adjacent fieldstone in one or two locations to interlock field of Fieldstones.

E. Joints between Fieldstones shall vary between 0” and 8” typical, with the typical joint spacing being between 4” and 8”. Rockfill shall be placed in between all Fieldstone joints such that all joints are completely filled by Rockfill and that no openings between adjacent Fieldstones are visible. Fieldstone shall cover approximately 70% of ground. Provide sufficient quantities of rockfill to fill all gaps between Fieldstones, plus an additional 20% surplus of total Rockfill area (to be placed in the field as directed by Landscape Architect).

F. Rockfill will be placed in a single layer in between Fieldstones such that the top of the rockfill matches closely with the top of the adjacent Fieldstone. Instances of more than one layer of Rockfill are acceptable when performed to achieve a flush condition between the top of a Fieldstone and the Rockfill.

G. Rockfill shall not protrude above an adjacent Fieldstone such that it could become unstable and roll down the surface of the Fieldstone.

H. Coordinate in the field with Landscape Architect on location of planting areas.

I. Fieldstone and Rockfill Groundcover slope shall not exceed 1V:3H.

3.16 GUARANTEE

A. All site furnishings contained within this section shall be guaranteed against defects for three years after final acceptance. The Contractor shall replace, repair, recoat or otherwise make satisfactory to DCR any unacceptable equipment defects at no additional cost to the DCR.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02800-01 TRASH RECEPTACLE will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 02800-02 PROMENADE PARK BENCH will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

C. Measurement for Item 02800-03 LOUNGER will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

D. Measurement for Item 02800-04 LOUNGER START MODULE will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

E. Measurement for Item 02800-05 LOUNGER ADD-ON MODULE will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

F. Measurement for Item 02800-06 LOUNGER END MODULE will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

G. Measurement for Item 02800-07 LOUNGER SHORT ADD-ON MODULE will be made on a per EACH basis for all work described in this section not

otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

H. Measurement for Item 02800-08 FEATURE BENCH SINGLE will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

I. Measurement for Item 02800-09 FEATURE BENCH DOUBLE will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

J. Measurement for Item 02800-10 BIKE RACK will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

K. Measurement for Item 02800-11 PICNIC TABLE GROUP will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

L. Measurement for Item 02800-12 PICNIC TABLE GROUP (WHEELCHAIR ACCESSIBLE) will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

M. Measurement for Item 02800-13 LANDSCAPE BOULDER will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

N. Measurement for Item 02800-14 WATERSIDE BARRIER WITH LEANING RAIL will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

O. Measurement for Item 02800-15 WATERSIDE BARRIER AT PAVILION STAIR will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

P. Measurement for Item 02800-16 LANDSIDE BARRIER will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

Q. Measurement for Item 02800-17 LANDSIDE BARRIER AT BOARDWALK RAMP will be made on a per LINEAR FOOT basis for all work described in

this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

R. Measurement for Item 02800-18 LANDSIDE BARRIER AT PAVILION STAIR will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

S. Measurement for Item 02800-19 HANDRAIL AT PLAZA GRANITE STEPS will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

T. Measurement for Item 02800-20 HANDRAIL AT BOARDWALK STAIR will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

U. Measurement for Item 02800-21 HANDRAIL AT BOARDWALK RAMP will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

V. Measurement for Item 02800-22 PARK SIGN will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

W. Measurement for Item 02800-23 INTERPRETIVE SIGN will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

X. Measurement for Item 02800-24 WAYFINDING SIGN will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

Y. Measurement for Item 02800-25 STEEL MARINA GATE 1 will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

Z. Measurement for Item 02800-26 STEEL MARINA GATE 2 will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings

AA. Measurement for Item 02800-27 VEHICULAR PARKING LOT GATE will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

AB. Measurement for Item 02800-28 FIELDSTONE AND ROCKFILL GROUNDCOVER will be made on a per SQUARE FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 02800-01 TRASH RECEPTACLE will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

B. Payment for Item 02800-02 PROMENADE PARK BENCH will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

C. Payment for Item 02800-03 LOUNGER will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

D. Payment for Item 02800-04 LOUNGER START MODULE will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

E. Payment for Item 02800-05 LOUNGER ADD-ON MODULE will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete

slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

F. Payment for Item 02800-06 LOUNGER END MODULE will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

G. Payment for Item 02800-07 LOUNGER SHORT ADD-ON MODULE will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

H. Payment for Item 02800-08 FEATURE BENCH SINGLE will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

I. Payment for Item 02800-09 FEATURE BENCH DOUBLE will be at the per EACH contract price This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

J. Payment for Item 02800-10 BIKE RACK will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

K. Payment for Item 02800-11 PICNIC TABLE GROUP will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete

slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

L. Payment for Item 02800-12 PICNIC TABLE GROUP (WHEELCHAIR ACCESSIBLE) will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete slabs, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

M. Payment for Item 02800-13 LANDSCAPE BOULDER will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, concrete, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

N. Payment for Item 02800-14 WATERSIDE BARRIER WITH LEANING RAIL will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, base plates, HDPE isolator plates, flashing tape, isolating washers and sleeves, corner conditions, including galvanizing and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

O. Payment for Item 02800-15 WATERSIDE BARRIER AT PAVILION STAIR will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, base plates, HDPE isolator plates, isolating washers and sleeves, corner conditions, including galvanizing and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

P. Payment for Item 02800-16 LANDSIDE BARRIER will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, base plates, HDPE isolator plates, isolating washers and sleeves, corner conditions, including galvanizing and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

Q. Payment for Item 02800-17 LANDSIDE BARRIER AT BOARDWALK RAMP will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, base plates, HDPE isolator plates, isolating washers and sleeves, corner conditions, including galvanizing and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

R. Payment for Item 02800-18 LANDSIDE BARRIER AT PAVILION STAIR will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, base plates, HDPE isolator plates, isolating washers and sleeves, corner conditions, including galvanizing and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

S. Payment for Item 02800-19 HANDRAIL AT PLAZA GRANITE STEPS will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, base plates with concrete footing, base courses, including finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

T. Payment for Item 02800-20 HANDRAIL AT BOARDWALK STAIR will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, base plates, HDPE isolator plates, isolating washers and sleeves, corner conditions, including galvanizing and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

U. Payment for Item 02800-21 HANDRAIL AT BOARDWALK RAMP will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, base plates, HDPE isolator plates, isolating washers and sleeves, corner conditions, including galvanizing and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

V. Payment for Item 02800-22 PARK SIGN will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete footing, base courses, including galvanizing, powdercoating, and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

W. Payment for Item 02800-23 INTERPRETIVE SIGN will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete footing, base courses, including galvanizing, powdercoating, and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

X. Payment for Item 02800-24 WAYFINDING SIGN will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete footing, base courses, including galvanizing, powdercoating, and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

Y. Payment for Item 02800-25 STEEL MARINA GATE 1 will be at the per EACH contract price. This price shall include full compensation for removal, refurbishment, and reinstallation of complete gate system, providing approved shop drawings, providing and installing all elements of the work, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, HDPE isolator plates, isolating washers and sleeves, including galvanizing and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

Z. Payment for Item 02800-26 STEEL MARINA GATE 2 will be at the per EACH contract price. This price shall include full compensation for removal, refurbishment, and reinstallation of complete gate system, providing approved shop drawings, providing and installing all elements of the work, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, HDPE isolator plates, isolating washers and sleeves, including galvanizing and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

AA. Payment for Item 02800-27 VEHICULAR PARKING LOT GATE will be at the per EACH contract price. This price shall include full compensation for

excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, concrete footing, base courses, including galvanizing and finishes, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

AB. Payment for Item 02800-28 FIELDSTONE AND ROCKFILL GROUNDCOVER will be at the per SQUARE FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, hardware, attachments, base courses, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM NO.	ITEM	UNIT
02800-01	TRASH RECEPTACLE	EACH
02800-02	PROMENADE PARK BENCH	EACH
02800-03	LOUNGER	EACH
02800-04	LOUNGER START MODULE	EACH
02800-05	LOUNGER ADD-ON MODULE	EACH
02800-06	LOUNGER END MODULE	EACH
02800-07	LOUNGER SHORT ADD-ON MODULE	EACH
02800-08	FEATURE BENCH SINGLE	EACH
02800-09	FEATURE BENCH DOUBLE	EACH
02800-10	BIKE RACK	EACH
02800-11	PICNIC TABLE GROUP	EACH
02800-12	PICNIC TABLE GROUP (WHEELCHAIR ACCESSIBLE)	EACH

02800-13	LANDSCAPE BOULDER	EACH
02800-14	WATERSIDE BARRIER WITH LEANING RAIL	LINEAR FOOT
02800-15	WATERSIDE BARRIER AT PAVILION STAIR	LINEAR FOOT
02800-16	LANDSIDE BARRIER	LINEAR FOOT
02800-17	LANDSIDE BARRIER AT BOARDWALK RAMP	LINEAR FOOT
02800-18	LANDSIDE BARRIER AT PAVILION STAIR	LINEAR FOOT
02800-19	HANDRAIL AT PLAZA GRANITE STEPS	LINEAR FOOT
02800-20	HANDRAIL AT BOARDWALK STAIR	LINEAR FOOT
02800-21	HANDRAIL AT BOARDWALK RAMP	LINEAR FOOT
02800-22	PARK SIGN	EACH
02800-23	INTERPRETIVE SIGN	EACH
02800-24	WAYFINDING SIGN	EACH
02800-25	STEEL MARINA GATE 1	EACH
02800-26	STEEL MARINA GATE 2	EACH
02800-27	VEHICULAR PARKING LOT GATE	EACH
02800-28	FIELDSTONE AND ROCKFILL GROUNDCOVER	SQUARE FOOT

END OF SECTION

SECTION 02881
WATER PLAY EQUIPMENT

PART 1 - GENERAL

1.01 DESCRIPTION

A. Include GENERAL CONDITIONS and all parts of Division 1 as part of this Section.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

1. See **APPENDIX A** for Piping and Electrical Diagrams and Splash Pad Layout Plan for all required water play equipment not expressly described in this section.

2. See **APPENDIX B** for the Water Play Control Cabinet and Command Center for all required equipment not expressly described in this section.

3. See Section 16100 PARK AND BOARDWALK LIGHTING for splash pad grounding grid.

C. Coordinate work with that of all other trades affecting, or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

1.02 SUMMARY

A. The work of this Section consists of all site work and related items as indicated on the Drawings and /or as specified herein, and includes, but is not limited to, the following:

1. Jet Stream No. 1
2. Magic Mist No. 2
3. Foot Activator
4. Deck Drain
5. Water Play Piping and Electrical
6. Command Center and Control Cabinet

1.03 RELATED WORK IN OTHER SECTIONS:

1. Section 02000 – SITE PREPARATION
2. Section 02100 – DEMOLITION AND REMOVALS
3. Section 02200 – EARTHWORK

4. Section 02280 – EXCAVATED SOIL MANAGEMENT
5. Section 02500 – SITE PAVING
6. Section 02510 – VEHICULAR AREAS PAVING
7. Section 02630 – STORM DRAINAGE UTILITIES
8. Section 02665 – WATER PIPING, VALVES AND APPURTENANCES
9. Section 02730 – SANITARY SEWERS AND FORCE MAINS
10. Section 02800 – SITE IMPROVEMENTS
11. Section 02900 – PLANTING AND LAWNS
12. Section 03300 – CAST IN PLACE CONCRETE
13. Section 04010 – SITE GRANITE
14. Section 16100 – PARK AND BOARDWALK LIGHTING
15. Section 16421 – BOARDWALK ELECTRICAL UTILITES
16. APPENDIX A – Piping and Electrical Diagrams, Splash Pad Layout Plan
17. APPENDIX B – Water Play Control Cabinet and Command Center

1.04 SUBMITTALS

A. SHOP DRAWINGS: Contractor shall provide shop drawings of all Water Play Equipment and Amenities for approval by Landscape Architect before any work is begun. Do not order materials until Landscape Architect's approval has been obtained. Contractor shall call attention, in writing, on the shop drawings, to any deviation from the specifications. Submit dimensioned shop drawings for material, design, and layout, and installation for review and approval for all Water Play Equipment and Amenities. Delivered materials shall closely match the approved samples. Shop Drawings shall provide full layout dimensions locating supply piping to the equipment from the command center and water play equipment locations and footings necessary for Contractor to accurately locate equipment in the Site.

B. PRODUCT LITERATURE: Submit Certificate of Compliance for all materials specified to comply with specific standards, and manufacturer's literature for material's source, design, finish, color, and recommended installation for review and approval of:

1. ALL WATER PLAY EQUIPMENT
2. Warranty Certificates as required by these specifications

C. SHOP DRAWINGS Submit dimensioned shop drawings of the following items including manufacturer's recommended installation methods for the following items:

1. ALL WATER PLAY EQUIPMENT SITE LAYOUT
2. PIPING LAYOUT FOR ALL WATER PLAY EQUIPMENT

1.05 REFERENCE STANDARDS

A. Except as modified by governing codes and by the Contract Documents, comply with applicable provisions and recommendations of the following

B. MA MassDOT (Massachusetts Department of Transportation) formerly Massachusetts Highway Department (MHD) Standard Specifications (for Highways and Bridges), latest edition, including all addenda.

C. ASSHTO: American Association of State Highway and Transportation Officials, latest edition.

D. Latest Edition of the Handbook for Public Playground Safety of the US Consumer Product Safety Commission and the ASTM F 1487.

E. The Americans with Disabilities Act (ADA) 1990, and to the Final Rule for the Accessibility Guidelines for Recreational Facilities and Outdoor Developed Areas by the Recreational Access Advisory Committee, US Architectural And Transportation Barriers Compliance Board, most recent edition.

F. ASTM: American Society of Testing Materials F 1487, Standard Consumer Safety Performance Specifications for Playground Equipment for Public Use.

G. ASTM: American Society of Testing Materials, latest edition, Standard A-120, VA 569, A-500.

H. Refer to Section 16100 PARK AND BOARDWALK LIGHTING, Section 02630 STORM DRAINAGE UTILITIES, and Section 02665 WATER PIPES, VALVES, AND APPURTENANT WORK.

1.06 QUALIFICATIONS OF MANUFACTURERS AND FABRICATORS

A. Water Play Equipment Manufacturer

B. The Water Play Equipment specified herein and indicated on the drawings shall be manufactured by a firm who can furnish supporting evidence of experience to perform this work and who has regularly been engaged in Water Play Equipment manufacture on a full-time basis for a period of not less than five (5) years.

C. Qualifications of the installer shall be subject to the review of the Landscape Architect.

D. The manufacturer of the Water Play Equipment shall maintain and have in effect at the time of completed installation an insurance policy covering completed operations (Product Liability) with a minimum limit of $1,000,000.00 (One Million Dollars) for each occurrence. A certificate of insurance shall be provided for the DCR.

E. A representative of the manufacturer shall be available for consultation during the installation of the equipment.

F. It is the responsibility of the manufacturer to indicate on the product literature and shop drawings in writing any and all variations from the following specifications, standards, and codes which shall hereby form a part of this specification.

G. Latest edition of the Handbook for Public Playground Safety of the US Consumer Product Safety Commission.

H. Standards for Welding: American Welding Society (AWS), latest edition.

I. American Society for Testing Materials, latest edition, Standards A-120, VA 569, and A-500 and F 1292 and F 1487.

1.07 PRODUCT WARRANTIES

A. Water Play Equipment Product Warranties:

1. A 25 Year Warranty on stainless steel Play Events/Products, stainless steel anchoring systems and aluminum spheres.

2. A 10 Year Warranty on the reinforced fiberglass skid, sand filter fiberglass tank and cartridge filter fiberglass tank.

3. A 5 Year Warranty on brass components including; spray nozzles, spray caps and spray heads. High-density polyethylene components, polyurethane components, and ultra high molecular weight polyethylene components. The command center vault (enclosure and access hatches), stainless steel automated water distribution manifold, drain boxes, strainers, electrical enclosures, and chemical controllers.

4. A 2 Year Warranty on color coatings, stainless steel hardware & moving parts, fiberglass products, Seeflow Polymers, Soft Touch Elastomers (Toe Guards), subterranean water containments system, circulation pumps, chemical injection pumps, chlorinator systems, acid feed systems, polyvinyl chloride (PVC); piping, fittings, ball valves, check valves, cartridge elements, pressure gauges, chemical sensing probes, motor starters, electrical relays, terminal blocks, actuated

valves, programmable logic controller (PLC controller), time switches, manual switches, transformers, breakers, electrical wiring and connection.

5. All warranties are to be managed by the equipment supplier.

1.08 CONTRACTOR QUALITY ASSURANCE

A. Contractor shall have at least five (5) years of experience in Landscape Work and Water Play Installations similar in materials, design, and extent to that indicated for this project and with a record of successful landscape establishment. Installer shall maintain an experienced supervisor on the project site during all times that landscape construction is in progress. Provide written qualification data for firms and persons to be responsible for Work, to demonstrate their capabilities and experience. Include lists of completed projects, with project names, addresses, phone numbers, and names and address of designers and clients.

B. Contractor shall conduct pre-landscape construction conference at Project site as directed by the Landscape Architect, to review landscape construction procedures, site conditions, and submittal requirements required in the Work of this Section, before any products are submitted for review and approval, or landscape construction commences.

1.09 PRODUCT HANDLING AND STORAGE

A. Deliver water play equipment in original sealed containers marked with name of manufacturer and identification of contents. After delivery store materials under waterproof covers on planking clear of ground and protect from handling damage dirt, stain, water and wind.

B. Take all necessary precautions to protect all items from moisture, chipping, cracking, or other damage, during the transportation of these materials to the project, unloading and storage on the site. After delivery take all necessary precautions to prevent all items from chipping, cracking, construction dust and debris, or damage of any kind. Damaged units will not be allowed to be installed and should any damaged units be found in constructed work, such units shall be removed immediately and replaced with new units, and the Contractor shall assume all expenses incurred.

C. Stored materials shall be adequately protected against moisture by (1) stacking in such a manner as to allow a complete circulation of air under each stack, and (2) covering each stack, top and sides with a waterproof paper or membrane. Coverings shall remain in place at all times, when not working from the particular stack.

D. All aquatic play products and associated equipment must be properly wrapped and secured in place while in transport to the project site. Care shall be observed during offloading and handling to prevent excessive stress and abrasions.

E. At the site, the play products and associated equipment are to be stored in safe areas, out of the way of traffic and other construction activities, until the actual time of installation. If required, safety barricades or other like precautions must be taken for the protection of public and adjacent property.

F. Protective wrapping on the aquatic play features must be left in place until construction work for the Splashpad is complete.

PART 2 – PRODUCTS

2.01 GENERAL PRODUCT CONSTRUCTION

A. Play Products: All aquatic play products installed above and below grade shall be manufactured from 304/304L stainless steel. The anchoring system shall be manufactured from 304/304L stainless steel. Rigid centricast fiber reinforced (FRP) and/or molded fiberglass, PVC, filament wound tubing, Galvanized Steel, or Aluminum shall not be utilized for any above or below grade play product structures.

B. Mounting and Assembly Hardware: All hardware and anchoring systems shall be 304/304L or 316 stainless steel. All Play Products and Ground Spay systems shall include an integrated anchoring and leveling system facilitating installation and a flush surface finish. Exposed and accessible hardware shall be tamper resistant, requiring a special tool for removal to deter vandalism and theft.

C. Spray nozzles, caps and heads: Shall be manufactured from lead free brass, UHMWPE or Polyurethane and shall use tamper resistant tools for installation and removal. PVC, Nylon, and Delrin™, shall not be utilized. All grade level play products are to be furnished with appropriate winterization caps.

Painted Finish: Shall be a polyester smooth glossy heat-cured powder coat that is UV and chemical resistant and suitable for public spaces.

D. Material for Paneling, Signage, Water Deflection, and Toe Guards: All Polyethylene, Polyurethane, Elastomers and Seeflow Polymers used for paneling, signage or water deflection shall be resistant to chlorinated water and be ultraviolet stabilized to inhibit sunlight fading.

E. Safety & Craftsmanship: All accessible edges shall be machined to a rounded finish. All welds shall be watertight, buffed smooth or polished to a non-visible finish and factory pressure tested. Accessible nozzles and spray heads shall be recessed to ensure a completely safe play environment with no pinch points, head entrapments or protrusion hazards. All products shall be designed in accordance with ASTM F1487, ASTM F-2461 and CSA Z614-98 regulations for public playgrounds.

F. Lexan Polymer: The Lexan Polymer shall be specially selected for aquatic play products and shall have the following characteristics: translucent, highly resistant to shock and impact vandalism and must be non-flammable. The polymer shall present dimensional stability a high resistance towards chemical products, ultra violets rays and be transparent presenting crystal clear surface throughout.

G. Seeflow Polymer: The Seeflow Polymer shall be specially selected for aquatic play products and shall have the following characteristics: translucent, highly resistant to shock and impact vandalism and must be non-flammable. The polymer shall present dimensional stability a high resistance towards chemical products, ultra violets rays and be transparent presenting crystal clear surface throughout.

2.02 JET STREAM NO 1

A. Jet Stream No 1 shall be as manufactured by:

Vortex Aquatic Structures International
328 Avro St.
Pointe Claire (Montreal)
Quebec, CANADA H9R 5W5
Phone: 514.694.3868
Toll-free: 1.877.5.VORTEX
Fax: 514.335.5413
www.vortex-intl.com
info@partac.com
Or comparable, compatible, color and performance matched equal as approved by Landscape Architect and DCR.

B. Play Product Structure: The Jet Stream VOR-7512.0000 shall be constructed of 304/304L stainless steel structural tubing with an outside diameter of 3” (7.6cm). The lead-free brass spray cap and winter cap shall be threaded into the stainless steel spray head housing using a tamper-resistant tool. The Embedded anchoring and leveling system shall be used.

C. Overall play product dimensions: The overall height of the Play Product shall be 5” (13cm).

D. Play Product Interactivity: Creates visual interest as a concentrated jet of water sprays up in a sleek Jet Stream.

E. Hydraulic Activity/Components: The lead-free brass spray cap shall have a single ¼" (6mm) spray hole projecting a vertical stream.

F. Hydraulic Requirements: The hydraulic requirements shall be 2-3 gpm (7.6 – 11.3 lpm) @ 5-10 psi (0.4 – 0.7 bar).

2.03 MAGIC MIST NO. 2

A. Magic Mist No. 2 shall be as manufactured by:

Vortex Aquatic Structures International
328 Avro St.
Pointe Claire (Montreal)
Quebec, CANADA H9R 5W5
Phone: 514.694.3868
Toll-free: 1.877.5.VORTEX
Fax: 514.335.5413
www.vortex-intl.com
info@partac.com
Or comparable, compatible, color and performance matched equal as approved by Landscape Architect and DCR.

B. Play Product Structure: The Magic Mist N°2 VOR-8099.4000 shall be constructed of 304/304L stainless steel with an outside diameter of 4½" (11.4cm). The lead free brass spray cap shall be fastened to the body using tamper-resistant fasteners. The anchoring system shall have an integrated levelling system facilitating installation and a plumb finished to the activity deck surface. The Magic Mist N°2 shall have three (3) nozzles inserts spaced equidistant across the diameter. All nozzles are to be flush with the surface to eliminate finger entrapment and protrusion hazards. Tamper resistant brass winter cap shall be included. Ground Sprays can be fitted with several interchangeable compatible spray head styles However, the spray zone layouts between the different products must be similar or must be planned to accommodate the various spray effects. When multiple ground sprays are plumbed together on a single water line, the connected ground sprays must have similar hydraulic requirements.

C. Overall play product dimensions: The overall height of the structure shall be 0".

D. Play Product Interactivity: Users can enjoy the refreshing, breezy sensation from the soft, fine sprays of the Magic Mist.

E. Hydraulic Activity/Components: Each nozzle shall produce a particularized mist effect.

F. Hydraulic Requirements: The combined hydraulic requirements of all three (3) spray nozzles shall be 3-6 gpm (11-23 lpm) @ 10-25 psi (0.7 – 1.7 bar).

2.04 FOOT ACTIVATOR

A. Foot Activator shall be as manufactured by:
Vortex Aquatic Structures International
328 Avro St.
Pointe Claire (Montreal)
Quebec, CANADA H9R 5W5
Phone: 514.694.3868
Toll-free: 1.877.5.VORTEX
Fax: 514.335.5413
www.vortex-intl.com
info@partac.com
Or comparable, compatible, color and performance matched equal as approved by Landscape Architect and DCR.

B. Play Product Structure: The Foot Activator VOR-606.0000 shall be constructed of 304/304L stainless steel structural tubing with an outside diameter of 4.50” (11.4cm) and a wall thickness of 0.120” (3mm). The activator shall have no moving parts and run on a low voltage electrical supply. A capacitive sensor switch to be used as an interface for processing user input activation. The activation cap shall consist of a high impact-resistant protective cap. The protective cap shall be constructed of 316 Stainless steel and powder coated, the s Steel Button integrated and shall be secured in place using tamper-resistant fasteners.

C. Overall play product dimensions: The above ground height shall be 11" (28 cm).

D. Play Product Interactivity: The Foot Activator shall be the direct interface between the users of the aquatic play area and the aquatic Play Products. The pre-programmed sequences of the aquatic Play Products shall be activated only when the touch-activated button on the Foot Activator is pressed by the user.

E. Hydraulic Activity/Components: N.A.

F. Hydraulic Requirements: N.A.

G. Finish/ Color: Standard

2.05 DECK DRAIN

A. Deck Drain shall be 12” x 12” Square Grate as manufactured by:
NDS
851 N. Harvard Ave
Lindsay, CA 93247
www.ndspro.com
Or comparable, compatible, color and performance matched equal as approved by Landscape Architect and DCR.

B. Material and Dimensions: UV Protected High Density Polyethylene (HDPE) with 3/8” Grate Openings

C. Weight: 2.33 lbs

D. Color: Gray (1210)

E. Fits: Use with 12” catch basin series

F. Grate Openings: 50.76 in2 open space

G. Will accomidate: 155.28 gallons per minute with ½” of head.

H. ADA Compliant.

2.06 WATER PLAY COMMAND CENTER AND CONTROL CABINET

A. Appropriately sized command center, with cast in place concrete footing, as specified by water play equipment provider. See Appendix B for all requirements.

2.07 WATER PLAY FIXTURE PIPING AND ELECTRICAL

A. See Appendix A for all requirements.

2.08 CAST-IN-PLACE CONCRETE FOR FOOTINGS

A. All concrete footings shall be 3500 PSI, and to the dimensions indicated on the Drawings, as specified by the equipment provider, and conforming to all requirements as specified in Section 03300 - CAST IN PLACE CONCRETE.

2.09 SEALANTS

A. Sealants for application on water play equipment as specified shall be polyurethane- based, one component, elastomeric sealants complying with Fed. Spec. TT-S-00230C, Class A Type 1 for horizontal use and Type 2 for vertical use. Color to be selected by the Landscape Architect. Sealants shall be self-leveling, pourable type for horizontal use and non-sag, gun-grade type for vertical use.

PART 3- EXECUTION

3.01 INSPECTIONS

A. Contractor shall request that Engineer inspect construction with 48 hours' notice for the following items:

1. All concrete footings and concrete reinforcing
2. Prepared sub-grade and base course limits and elevations
3. Layout of all Water Play elements

B. All items located on the Drawings shall be fabricated and installed by the Contractor as detailed on the Drawings, as per manufacturers' written installation procedures and as directed by the Engineer. All fabrication and installation work shall be accomplished using the highest standards of workmanship and shall include all excavation, concrete for footings, labor, transportation and incidentals to make the work complete.

1. Project Conditions: Installation of items shall follow Manufacturer's guidelines for project conditions during installation.

3.02 GENERAL REQUIREMENTS

A. All water play equipment shall be fabricated and fastened in accordance with existing fabrications and fastenings or as indicated on the drawings. All site furnishings shall be installed in a level, plumb condition, true to the lines and grades shown on the Drawings.

B. All welding procedures shall conform to the current standards of the AWS. All welds shall be as designated on the Drawings and shall be ground smooth and flush to a neat finish. All welds shall be watertight, and care shall be taken to minimize distortion due to heat. Metal shall not be galvanized or color finished prior to completing all welding and grinding of welds.

C. The Contractor shall be responsible for timing the delivery of all items so as to minimize on-site storage time prior to installation. All stored materials and items must be protected from weather, careless handling and vandalism.

D. Shim all bolt connections as necessary and secure bolts. Exposed bolts shall be fastened with an accepted semi-permanent adhesive to protect against vandalism.

E. Contractor shall handle, pack, and ship items in such a manner as to minimize damage to the finish. Upon arrival at job site, it is the Contractor's responsibility to take equal precautions. Since some surface damage may occur, suitable touch-up material shall be readily available to repair any damage immediately.

F. Steel fabrication shall be accomplished using the highest standards of workmanship. Individual steel pieces to be welded shall be saw cut and carefully fitted together. All connections shall be fully welded and ground flush and smooth. All fabricated steel items shall be fine sanded throughout prior to finishing to produce a high standard of surface smoothness. All surfaces and connections shall be without visible grinding marks, surface differentiation or variation.

G. Gravel borrow base and backfill for site furnishings shall be installed per drawings and in conformance with the construction materials and methods of Section 02200 EARTHWORK.

H. Cast-in-place concrete base and footings for field furnishings shall be installed per drawings and in conformance with the requirements of MassDOT Standard Specifications and as required in Section 03300 CAST IN PLACE CONCRETE.

I. Paving around water play equipment shall be installed per drawings and in conformance with the construction materials and methods of Section 02500 SITE PAVING.

J. Non-shrink grout for field furnishings base plates and anchor bolts shall be installed in conformance with the following requirements:

1. Preparation: Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles, and disintegrated materials. Use mechanical abrasion as necessary on structural steel and reinforcing steel to remove loose material and expose sound metal. Clean concrete surfaces as necessary, using a degreasing and etching chemical applied in accordance with the manufacturer's written instructions for the particular application. Construct appropriate forms to contain grout at the fluidity level at which will be used. Saturate foundations and forms with water for a minimum of 24 hours prior to grouting. Take special care to eliminate water from bolt holes and other cavities.

2. Mixing: Mix with potable water according to manufacturer's printed instructions.

3. Placement: Follow manufacturer's placement instructions and recommendations for the particular application. Place grout only from one side to avoid entrapping air. Provide adequate air vent holes in large placements. Work or flow grout into place, filling all cavities. Place grout within time limit specified by manufacturer after addition of water to the batch.

K. Sealant for water play equipment furniture shall be placed following the manufacturer's instruction and recommendations for the particular application. Place sealant from one side only to avoid trapping air. Work or flow sealant into place, filling all cavities. Shut down nearby equipment which may cause vibration. Finished sealant surface shall not be recessed and shall not allow for ponding of water.

3.03 WATER PLAY EQUIPMENT, PIPING, ELECTICAL, AND COMMAND CENTER CONTROL CABINET

A. Installation of all Water Play Equipment and Command Center shall be as per manufacturer's recommendations and as shown on Drawings and approved shop drawings from submittals process.

B. Installation of base materials and concrete footings for Water Play Equipment and Command Center shall be as shown on Drawings and manufacturer and as specified in Sections 02200 EARTHWORK and Section 03300 CAST IN PLACE CONCRETE.

C. Water and Electrical connections to Water Play Equipment Command Center shall be as shown on Drawings and as specified in Sections 02630 STORM DRAINAGE UTILITIES, 02665 WATER PIPING, VALVES AND APPURTENANCES, and the electric work of Section 16100.

D. When applicable, templates shall be supplied to facilitate the installation of embedded anchoring equipment.

E. All play products shall have electrical grounding studs incorporated into their associated anchoring equipment. All play products shall be grounded by the installer per local codes.

F. All installation conduit wiring including electrical supply panel, PVC connections, piping, elbows, tees, play product assembly if required and other items relating to the installation shall be supplied by the general contractor.

G. Drawings and Instructions: Product drawings and installation manuals shall be supplied by the manufacturer for ease of installation.

3.04 CLEAN UP

A. Perform cleaning during installation of the work and upon completion of the work. Remove from site all excess materials, debris, and equipment. Repair damage resulting from paving operations.

B. Upon completion of work, remove tools and equipment. Provide site clear, clean, and free of debris and scrap material resulting from work and legally dispose of.

C. Sweep pavement and wash free of stains, discolorations, dirt, and other foreign material immediately prior to final acceptance.

3.05 GUARANTEE

A. All water play equipment contained within this section shall be guaranteed against defects in workmanship or quality for the lengths of time as specified in this Section, Article 1.07 A after final acceptance. The Contractor shall replace, repair, recoat or otherwise make satisfactory to the DCR any unacceptable equipment at no additional cost to the DCR.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02881-01 WATER PLAY EQUIPMENT (See Appendix B, including Command Center, Cabinet, and concrete pad and foundations) will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 02881-02 WATER PLAY FIXTURE PIPING AND ELECTRICAL (See Appendix A) will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 02881-01 WATER PLAY EQUIPMENT (See Appendix B) will be at the LUMP SUM contract price. This price shall include full compensation for excavation providing and installing all elements of the work including all aquatic spray products, command center, cabinet, concrete pad and foundations, activator, and deck drain, backfilling and the furnishing of all labor, materials, tools and equipment, storage,

attachments, base materials and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

B. Payment for Item 02881-02 WATER PLAY FIXTURE PIPING AND ELECTRICAL (See Appendix A) will be at the LUMP SUM contract price. This price shall include full compensation for excavation providing and installing all elements of the work, including piping and electrical wiring from control cabinet to each individual fixture, backfilling, and the furnishing of all labor, materials, tools and equipment, piping, conduit, fittings, concrete, base materials, attachments and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM NO.	ITEM	UNIT
02881-01	WATER PLAY EQUIPMENT	LUMP SUM
02881-02	WATER PLAY FIXTURE PIPING AND ELECTRICAL	LUMP SUM

END OF SECTION

SECTION 02890
TRAFFIC SIGNS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. Include the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges and the Supplemental Specifications and the 2009 Manual of Uniform Traffic Control Devices (MUTCD), as amended.

1.02 DESCRIPTION OF WORK

A. This Section specifies requirements for the following types of work and related items, but is not limited to:

1. Furnishing and installing warning and regulatory signs at the locations shown on the plans or as required by the Engineer.

PART 2 - PRODUCTS

2.01 WARNING-REGULATORY AND ROUTE MARKER – ALUMINUM PANEL (TYPE A)

A. Products used shall meet the requirements of Section 828 of the Standard Specifications unless otherwise noted on the Plans.

2.02 SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY – STEEL

A. Products used shall meet the requirements of Section 840 of the Standard Specifications.

PART 3 - EXECUTION

3.01 WARNING-REGULATORY AND ROUTE MARKER – ALUMINUM PANEL (TYPE

A)

A. Methods of execution used shall meet the requirements of Section 828 of the Standard Specifications.

3.02 SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY – STEEL

A. Methods of execution used shall meet the requirements of Section 840 of the Standard Specifications.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement of items shall be in accordance with Section 828 and 840 of the Standard Specifications unless otherwise stated below.

B. Measurement for WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A) will be made on a per SQUARE FOOT basis for all work described in this section not otherwise listed below, completed as indicated by the Contract Drawings.

C. Measurement for SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY – STEEL will be made on a per EACH basis for all work described in this section not otherwise listed below, completed as indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment of items shall be in accordance with Section 828 and 840 of the Standard Specifications unless otherwise stated below.

B. Payment for WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A) will be at the per SQUARE FOOT contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

C. Payment for SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY – STEEL will be at the per EACH contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02890.01	WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A)	SQUARE FOOT
02890.02	SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY – STEEL	EACH

END OF SECTION

SECTION 02900
PLANTING AND LAWNS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. Attention is directed to the CONTRACT and all Sections within DIVISION 1 – GENERAL CONDITIONS, which are hereby made a part of this Section of the Specifications.

1.02 DESCRIPTION OF WORK

A. The Work of this Section includes but is not limited to:

1. Fine grading of all planted and seeded areas,

2. Installing trees, shrubs, and perennials as shown on contract drawings,

3. Amending stockpiled existing or imported loam with soil additives to be spread as planting soil, is the work Topsoil Rehandled and Spread as described in Section 02200 – EARTHWORK. Requirements for materials, testing, amendments, mixing and use as acceptable Planting Soil is described in This Section 02900 – PLANTING AND LAWNS.

4. Providing supplemental specified planting soil in landscape areas in quantities sufficient to meet the requirements of the drawings, including materials, testing, amendments, mixing and use as Planting Soil, is the work of this Section 02900 – PLANTING AND LAWNS.

5. Drainage test pits for all tree plantings,

6. Test pits for drainage for all trees,

7. Fertilizing and pruning trees and shrubs,

8. Guying trees,

9. Mulching planting beds and tree saucers,

10. Maintaining all plantings through 1-year guarantee period,

11. Fine grading and installing tested and approved planting soil in seeded and planted areas to required depths,

12. Seeded lawn including seeding of all disturbed areas at Landscape Architects direction,

13. Sodded lawns at no additional cost to the Client, if seeding is out of season and Contractor chooses to install Sod instead,

14. Maintenance, reseeding, guarantee, and protection of seeded and/or sodded lawns,

15. Locating and pre-tagging plant materials specified at nurseries at least two months before construction. Contractor shall also provide full compensation (including time and expenses) for Landscape Architect to tag trees at nurseries outside of Massachusetts and for tagging visits to Massachusetts's nurseries where plant material does not meet specifications as determined by the Landscape Architect.

B. Related Work: The following item is not included in this Section and will be performed under the designated Sections:

1. Section 02100 – SITE PREPARATION, DEMOLITION AND REMOVALS
2. Section 02150 – TREE PROTECTION AND PRUNING
3. Section 02200 – SITE EARTHWORK
4. Section 02280 – EXCAVATED SOIL MANAGEMENT
5. Section 02360 – DRILLED PIERS
6. Section 02500 – SITE PAVING
7. Section 02510 – VEHICULAR AREAS PAVING
8. Section 02630 – STORM DRAINAGE UTILITIES
9. Section 02665 – WATER PIPING, VALVES AND APPURTENANT WORK
10. Section 02800 – SITE IMPROVEMENTS
11. Section 02881 – WATER PLAY EQUIPMENT
12. Section 03300 – CAST IN PLACE CONCRETE
13. Section 04010 – SITE GRANITE
14. Section 16100 – PARK AND BOARDWALK LIGHTING
15. Section 16421 – BOARDWALK ELECTRICAL UTILITES

1.03 REFERENCES AND STANDARDS

A. The following references are used herein and shall mean:

1. AAN: American Association of Nurserymen "American Standard for Nursery Stock," ANSI Z60.1, latest edition.

2. AJCHN: American Joint Committee on Horticultural Nomenclature. "Standardized Plant Names," latest edition.

3. AOAC: Association of Official Agricultural Chemists.

4. TCIA: Tree Care Industry Association, Pruning Standards: "Standards for Pruning Shade Trees," and " Standards for Pesticide Application Operations" latest editions, NAA, P.O. Box 1094, Meeting Place Mall, Route 101, Amherst, NH 03031.

5. USDA: United States Department of Agriculture, Agricultural Research Service, "USDA Plant Hardiness Zone Map," Miscellaneous Publication No. 1475, latest edition.

6. MA Mass DOT (Massachusetts Department of Transportation) formerly Massachusetts Highway Department (MHD) Standard Specifications (for Highways and Bridges), 1988 edition, including all addenda.

7. ASTM International: American Society of Testing Materials International.

8. AASHTO: American Association of State Highway and Transportation Officials.

9. ANSI/NFPA: American National Standards Institute, National Fire Protection Act.

10. UMTC: University of Massachusetts Transportation Center, "Manufactured Loam using Compost Material - Phase 1: Feasibility", October 1966 or latest update.

11. MassDEP: Department of Environmental Protection, Commonwealth of Massachusetts.

12. USEPA: United States Environmental Protection Agency

1.04 QUALITY ASSURANCE

A. Contractor shall have at least five (5) years of experience in Landscape Work similar in materials, design, and extent to that indicated for this project and with a record of successful landscape establishment. Installer shall maintain an experienced supervisor on the project site during all times that landscape construction is in progress. Provide written qualification data for firms and persons to be responsible for Work, to demonstrate their capabilities and experience. Include lists of completed projects, with project names, addresses, phone numbers, and names and address of designers and clients.

B. Contractor shall conduct pre-landscape construction conference at Project site as directed by the Landscape Architect, to review landscape construction procedures, site conditions, and submittal requirements required in the Work of this Section, especially the requirements for Planting Soil, before any products are submitted for review and approval, or landscape construction commences.

C. To extent possible, provide each plant material species or variety from single source.

D. If required, only herbicides, pre-emergents, fertilizers, fungicides, and pesticides reviewed and approved by the Landscape Architect and permitted for use shall be used, and applied by appropriately licensed personnel according to manufacturer's recommendations.

E. Select compatible products where options are provided, provide each material from a single source and only with review and approval of college and Landscape Architect.

1.05 SUBMITTALS

A. Do not order or deliver materials until required samples, certifications, manufacturers' literature and test results have been reviewed by the Landscape Architect. Delivered materials shall closely match the samples, as judged by the Landscape Architect. If any deviations from specified materials are proposed, submit written request explaining differences and reasons for request.

B. Soil Additives and amendments: Product or testing certificates signed by manufacturers certifying that their products comply with specified requirements:

1. Manufacturers' certified analysis for all products specified.

2. Analysis for other amendments, such as organic compost, by the University of Massachusetts Agricultural Extension Service or other approved testing laboratory, made according to methods established by the AOAC, where applicable, and as required in this Specification.

3. Sieve and salt analysis of sand proposed as a planting soil amendment or component.

C. Chemicals and Pesticides: Manufacturers' literature.

D. Plant Materials: Labels and nursery certificates substantiating that plants, trees and shrubs materials comply with specified requirements set by AAN and others

and were grown within USDA hardiness zones specified. Lynn Heritage State Park is in USDA Plant Zone 7A (2023 Rev.).

E. Tagging and planting schedule: Proposed dates for tagging plants at nurseries, and for planting each type of planting, with consideration for fall-hazard species, work coordination, etc. At least 30 days prior to planting, the Contractor shall submit a schedule for tagging material to the Landscape Architect. If, due to schedule delays, the planting will be delayed and the plant material needs to be released, the Contractor shall submit the request to release material in writing, for approval of the Landscape Architect. No plant material shall be released without approval in writing from the Landscape Architect.

F. Seed Mix: Manufacturer's Certificate of Compliance with the specifications for each type of seed required. These certificates shall include the guaranteed percentage of purity, weed content and germination of the seed, and the net weight and date of shipment and pounds per acre sowing rate. No seed may be sown until the Contractor has submitted the certificates.

G. Sod seed mix, if used: Sod producer's statement of composition, percentages of purity and germination of each variety and production location.

H. Soil tests: Reports indicating and interpreting test results for complete planting soil and soil components. Final planting soil for testing may be composed of tested, stockpiled topsoil for reuse, approved organic compost and/or sand amendments, and/or off-site loam borrow mixed in order to meet Specifications for planting soil. Submit reports at least one (1) month before any delivery of materials. All tests shall be performed by the University of Massachusetts Cooperative Extension Service in accordance with current standards of Association of Official Agricultural Chemists or other testing laboratory as approved by the Landscape Architect. Contractor shall deliver test samples to laboratory, and have test results sent directly to the Landscape Architect. All costs shall be paid by Contractor. Testing reports shall include the following for the stockpiled topsoil and finished planting soil that may or may not be amended in order to meet the specifications:

1. Mechanical gradation (sieve analysis) and USDA soil classification

2. Percent organic matter, determined by loss on ignition of samples oven-dried to constant weight at 230 degrees F, plus or minus nine (9) degrees

3. Chemical analysis for elements specified herein.

4. Chemical analysis for soluble salts

5. Chemical analysis for carbon: nitrogen ratio

6. Chemical analysis for acidity (pH)

7. Recommendations for soil additives to correct soils deficiencies as necessary to accomplish particular planting operations of Project

8. Chemical analysis for toxic elements in planting soil as specified herein.

9. Testing for heavy metals as required by the USEPA

10. Refer to Article 2.1 Planting Soil and Article 2.2 Planting Soil Testing Program, for additional requirements.

I. Organic Material: If organic matter is proposed as a soil amendment, material manufactured from biosolids will **NOT** be accepted. All organic material amendments must be submitted with a letter certifying source and composition of organic material proposed for use as a soil amendment indicating compliance with UMTC "Article 5.4 Standard Compost Specifications for Massachusetts" and that the compost is mature, and if manufactured from wood bulking agents, has been aged a minimum of one (1) year, is required for review by Landscape Architect. Refer also to requirements included in Article 2.3 Soil Additives for Planting Soil. Letter shall also give description of product and recommendations for use as a planting soil component or amendment.

J. Samples:

1. Planting Soil, complete with any necessary amendments and additives: Following initial testing and certification by the Contractor of loam borrow, stockpiled topsoil, and/or soil amendments proposed for use to meet specifications, provide two (2) ten-pound representative samples of amended planting soil for testing. Provide a two-pound sample for the Landscape Architect's inspection, to be retained by the Landscape Architect for comparison with delivered soil. The Landscape Architect may examine each planting soil delivery to the site, and may request further testing be performed at the Contractor's expense. No planting soil shall be delivered until the review of samples and test results by the Landscape Architect, but such review shall not constitute final acceptance. The Landscape Architect reserves the right to reject on or after delivery any material that does not meet specifications or match approved samples. Use of unapproved planting soil will result in rejection by the Landscape Architect and removal by the Contractor at no additional cost to DCR.

2. Fertilizer: one (1) sample packet of planting fertilizer; one-pound sample of slow-release pelletized fertilizer; certificate showing composition and

analysis; purchasing receipt showing the total quantity purchased for the Project.

3. Organic Material: Two-pound sample and source for review.

4. Bark Mulch: Two-pound sample and source for review.

5. Fertilizer: Submit certificates of analysis for lawn fertilizer.

6. Mycorrhizae: Submit 1-pound sample and source for review. After approval, submit receipt showing the total quantity purchased for the project.

7. Chemicals (lawn and tree herbicides, fungicides, and pesticides): Manufacturer's literature and analysis.

8. Maintenance: Provide watering and fertilizing schedule to DCR for approval.

9. Maintenance Instructions: Submit recommended procedures for routine year-round maintenance of plantings. Instructions shall be submitted as a condition of Substantial Completion of the Project.

1.06 EXAMINATION OF EXISTING CONDITIONS

A. Inspect all areas to be planted before starting Work and report any defect, such as incorrect grading, incorrect subgrade elevations, or drainage problems, etc., to the Landscape Architect and Engineer prior to beginning Work. Commencement of Work shall indicate acceptance of filled subgrade areas to be planted, and Contractor shall assume responsibility for Work. Inspect areas to be fine graded and seeded before starting work.

B. The Contractor shall be solely responsible for judging the full extent of Work requirements involved, including but not limited to the potential need for storing and maintaining plants temporarily and re-handling plants prior to final installation.

C. Determine location of above-grade and underground utilities and perform Work in a manner, which will avoid damage. Review the locations of utilities with the Landscape Architect before proceeding. Contact all relevant utility companies, public or private, prior to beginning work; contact DIG SAFE 1-888-344-7233 (serves five N. E. states). Report any conflicts to the Landscape Architect and DCR in writing before excavating. Hand-excavate as required. Maintain grade stakes until removal is approved by the Landscape Architect.

D. Coordinate installation of planting materials to assure installation during normal planting seasons for each type of plant material required and as specified in planting schedule. Species designated as "Fall Hazard" by Nursery shall be planted in the Spring, indeterminate of other site and project schedules.

E. Coordinate planting Work with other Work of this contract being performed on site, or work being performed by others.

F. Coordinate maintenance of landscape areas installed at different times. Protect completed Work as sequence of planting proceeds.

PART 2 - PRODUCTS

2.01 PLANTING SOIL

A. Planting Soil Source

1. Contractor shall be responsible for providing, screening, and mixing planting soil and loam amendments to create suitable planting soil that meets specifications in quantities and locations shown in the Drawings. Existing topsoil may be used if test results show that it meets and/or can be amended to meet specifications. Additional loam borrow may be required to meet the quantities as shown in the details and plans. Contractor shall provide additional and alternative sources of planting soil components and amendments as required and requested by the Landscape Architect, based on soil tests performed on an on-going basis throughout the construction period in order to meet specifications. Final planting soil approved for use shall be screened with a ½-inch screen prior to spreading.

2. Planting soil mix, delivered, and/or installed shall be consistent throughout the project, and shall be obtained from approved sources, matching approved samples and mixture proportions reviewed before construction. If source or component changes at any time during construction, Contractor shall obtain new mechanical sieve, heavy metals, chemical, and nutrient tests of new source samples, remix components and resubmit test results of new planting soil mixture to the Landscape Architect for review and approval.

B. Planting Soil

1. Planting soil shall be a natural, amended natural, or manufactured soil, produced by a commercial processing facility specializing in production of loam, sands, gravels, and stone. Planting soil may have its topsoil component stripped from sites scheduled for construction, but not from USDA-classified prime farmland. Stripped topsoil shall be free from

subsoil. Natural topsoil shall be from well-drained sites where topsoil occurs at least 6" deep. Topsoil or organic matter obtained from bogs or marshes shall not be used. It shall conform to the following:

2. Planting soil shall be a "sandy loam" as determined by mechanical analysis (ASTM D-422) and based on the USDA Classification system, conforming to the following grain size distribution:

U.S. Sieve No.	Percent Passing By Weight	
	Maximum	Minimum
4	100	97
1	95	90
40	85	60
100	60	38
200	35	22
0.002 mm	5	0

3. Maximum grain size of any soil material shall be 1/2" in the largest dimension and shall be screened to meet that criteria. Test shall be by combined hydrometer and wet sieving in compliance with ASTM D422 after destruction of organic matter by ignition.

4. Planting soil as amended and proposed for use shall contain between 5% and 8% organic matter by weight as determined by the loss on ignition of samples that have been oven-dried to a constant weight at a temperature of 105 degrees C.

5. The acidity range of planting soil shall be 5.5 to 6.5 pH .

6. Planting soil shall be screened and free of plants and roots, clay lumps, stones or debris one half (1/2) inch or larger in any dimension.

7. Soluble salt content shall be less than 75 PPM, if a naturally stripped topsoil. Loam borrow manufactured from organic composted sludge may have a higher soluble salt content, but shall not exceed levels recommended for the specific plantings (750 PPM). Salt content will lower the longer the soil is spread on site, with rain and aging of the organic component. If salt content of the planting soil is too high, as determined by the Landscape Architect, the salt content must be within approved ranges by the time the soil is spread on site and plants installed, or planting will be delayed or soil rejected and will require replacement with an approved planting soil.

8. Carbon: nitrogen ratio shall be between ten (10) and fourteen (14) to one (1) if applicable.

9. Nutrient content of prepared planting soil and levels of toxic elements and compounds in complete planting soil shall be within the following ranges, measured in PPM:

Substance	Acceptable Range PPM (=mg/kg)	Unacceptable Level PPM (=mg/kg)
Aluminum	40 - 400	>400
Ammonium	6 - 24	>24
Arsenic	<1	30+
Boron	<0.3	1.0+
Cadmium	<0.2	5.0+
Calcium	300 - 1600	>1600
Chromium		250+
Cobalt		50+
Copper	0.3	6.0+
Iron	3 - 20	>20
Lead	33-110	>110
Magnesium	20 - 150	>150
Manganese	3 - 15	>15
Mercury		2+
Molybdenum	0 - 15	40+
Nickel		100+
Nitrate	30 - 235	235+
Phosphorus	3 - 18	18+
Potassium	25 - 110	110+
Selenium		36+
Zinc	3 - 70	500+
PCBs	0	1+

2.02 PLANTING SOIL TESTING PROGRAM

A. Contractor shall be responsible for mixing and obtaining planting soil samples and submitting samples for testing to ensure that proposed and installed planting soil materials conform to the specifications as stated herein and as required in Article 1.5. All costs for testing will be paid for by the Contractor. Submit prototype planting soil mixes to Laboratory at least 60 days before intended use on site, to allow for reformulation and retesting if test results are rejected. Testing shall be conducted no more than 6-months in advance of use on site.

B. All planting soil and planting soil products brought to or bulk mixed on site, even if previously approved by test results, shall be submitted for testing conformance and as required in the on-site planting soil sampling program. Tests shall be combined hydrometer and wet sieving in compliance with ASTM C422 after destruction of organic matter by ignition and according to additional requirements of this Section. Samples for tests shall be taken from stockpiles

and source within one (1) day of delivery to the site in the presence of the Landscape Architect.

C. Prior to delivery or spreading, Contractor shall submit a minimum of two (2) approved sample test results of planting soil from each proposed location or source.

D. Contractor shall deliver samples to Landscape Architect and testing laboratory, shall have testing report sent directly to the Landscape Architect, and shall pay all costs. Contractor shall furnish additional amendments of fertilizer, lime and organic matter at his/her own expense that may be required by test results and required by specifications.

E. Sieve, heavy metals, and chemical analysis shall be performed by the University of Massachusetts Agricultural Station in Amherst, MA or approved testing laboratory, in accordance with the current standards of the Association of Official Agricultural Chemists and as required to meet requirements for chemical compositions as specified. Incomplete testing or test results will result in rejection and require re-testing by the Contractor at his/her expense.

F. Soil samples of mixed and fully amended planting soil shall be tested for Nitrate, Nitrogen, Ammonium Nitrogen, Phosphorus, Potassium, Calcium Aluminum, Soluble Salts and show the acidity of the soil and other values for compounds as indicated in Article 2.01 paragraph B. All sands and organic matter proposed for use as soil amendments shall also be tested for the requirements specified for those items and submitted for review and approval.

G. Based on the initial and delivered and/or on-site mixed planting soil test results, the planting soil shall be identified as acceptable, acceptable with certain fertilizer, limestone, and other amendments, or unacceptable and requiring resubmission and retesting. If sand, gypsum, or other major planting soil components are required to be added to meet specifications, additional samples with new formulations shall be required to be submitted for testing, review, and approval. If the planting soil is found unacceptable, the Contractor shall be responsible for identifying another source of planting soil and soil ingredients, and/or remix and re-blend as many planting soil component mixtures required to produce a planting soil approved by the Landscape Architect that meets specifications. Contractor shall incur all expenses associated with testing and mixing additional samples required for approval.

H. All planting soil and sand-based planting medium installed shall match the samples approved by the Landscape Architect. The Landscape Architect may require Contractor to furnish additional testing of planting soil or planting medium delivered to the site if it does not appear to be consistent with previously tested samples.

2.03 SOIL ADDITIVES FOR PLANTING SOIL

A. Aluminum sulphate for adjustment of planting soil pH shall be commercial sulfur, unadulterated, delivered in containers with the name of the manufacturer, material analysis and net weight appearing on each container.

B. Ground limestone for adjustment of planting soil pH shall be agricultural grade ground dolomite limestone containing at least 85% calcium carbonate equivalent, with 50% passing the 100 mesh and 95% passing the 20 mesh sieve.

C. Organic Compost:

1. Organic compost shall be natural or manufactured mature, composted organic material, and, if biosolid based, aged a minimum of one (1) year. Organic material shall be as specified by UMTC 'Article 5.4 - Standard Compost Specifications for Massachusetts'. Only compost meeting Class A (E.P.A.Federal) or Type I (Massachusetts) compost products shall be acceptable.

2. Organic compost shall be produced by a DEP-approved composting vendor of material originating from mature leaf compost, mature composted animal manure, other aged, composted vegetable materials such as brewer’s waste, or composted with wood products, safe for plants, humans and soil organisms (Class A or Type I). Raw (uncomposted or unprocessed) or incompletely composted organic matter shall be rejected. Organic matter manufactured from sludge and other biosolid materials will NOT be accepted. If organic matter is manufactured from manure, it shall be aged for at least one (1) year without exception, and shall have no objectionable biowaste odor.

3. Organic compost shall contain no uncomposted bulking agents, such as uncomposted wood chips, and shall be free from hard lumps and free water when handled (at least 60% dry solids). It may be shredded or granular in form. No plastic shall be present. It shall be free from excessive amounts of zinc or unpleasant odor. 100% of material shall pass a 1/2" sieve.

4. Each and every source of organic material proposed for use as a soil amendment or component of planting soil must be tested on the criteria specified in this Article and results submitted for review and approval by the Landscape Architect before construction. Each delivery of organic material must match samples tested by Contractor and approved by the Landscape Architect or delivered material will be rejected. Each delivery of compost shall require testing and approval, per specifications, to insure compliance with previously approved test submittals. Contractor shall

provide sufficient quantities of composted organic material to meet requirements of the planting soil specified and detailed in the Drawings after mixing, spreading, and compaction, and may obtain this material from various sources, if material and test results have been reviewed and approved by the Landscape Architect.

5. Other requirements and test results for specific characteristics of the organic matter and results issued for the following criteria shall be:

   a. According to the methods of testing of AOAC, latest edition, the acidity range shall be approximately 5.5 pH minimum to 8.0 pH maximum.

   b. The organic matter shall not be less than 40% as determined by loss on ignition for biosolid compost and may be higher for other compost types. The density shall be 1150 kilos/cubic meter (850 lbs/cy).

   c. The water absorbing ability shall be 200% minimum by weight on an oven dry basis for organic compost other than peat moss.

   d. The Carbon/nitrogen ratio shall be between 10/1 to maximum 25/1 without the addition of nitrogen.

   e. The degree of maturity should be between Grades IV and V, 'curing compost' and 'very stable compost' as measured in a colorimetric-based maturity test. The stability shall be, on the 02 evolution test, < 7 mg C02 - C/g BVS day or deWar self-heating test < 15 degrees C above room temperature.

   f. There should be no unpleasant or detectable odor of ammonia or hydrogen sulfide, which would indicate immature compost. Color of biosolid compost shall be dark brown.

   g. Total salinity should be less than 4.0 mm hos/cm (Ds/m) or less than 2560 PPM salt (NACL)

   h. The material shall contain some nitrogen, phosphorus, copper, boron, manganese, and molybdenum in horticulturally and agriculturally appropriate proportions to prevent ion antagonisms.

   i. Concentrations of arsenic, cadmium, chromium, copper, lead, mercury, molybdenum, nickel, and selenium must be below EPA (EPA CFR Part 503 Regulations, Table 3, p. 93392, Vol. 58 No.32, 1993) and Commonwealth standards for application to soils with

human activity. No pesticide residues or chlorinated hydrocarbons of any kind should be present.

j. Maturity and age of composted organic material intended for use on this project shall be verified in writing by supplier as part of test results.

D. Sand for use as PLANTING SOIL additive or component:

1. Sand for use as ingredient or amendment in planting soil shall be medium sand with angular (not round) sand particles (beach sand not acceptable). Sand that meets MassDOT Standard Specifications M4.101.0: Sand Borrow Type a, may be used if material is not self-compacting or overly gravelly, according to the Landscape Architect.

2. Sand sources and requirements of sand as a planting soil component or amendment may require adjustment at the request of the Landscape Architect, depending on the characteristics and proportions of the other planting soil components (stripped topsoil, borrow, organic component) used to mix the approved planting soil. The intent of the installed planting soil is to provide a consistent, stable, well draining, aerated, nutrient rich, and friable planting soil that will support mature trees and lawns in an irrigated environment.

2.04 SEED MIXES

A. Contractor shall furnish the Landscape Architect with the dealer's certificate of the mixture composition for review and approval before seeding operations begin. Seed mixture shall be fresh, clean, new crop seed of the previous year's crop, mixed off site by the seed dealer. Weed seed content shall not exceed 1% by weight. The seed shall be furnished and delivered in the proportion specified below in new, clean, sealed and properly labeled containers. All seed shall comply with State and Federal seed laws; seed that has become wet, moldy or otherwise damaged will be rejected.

B. SEEDED LAWN MIX: Sow at six (6) lbs per 1,000 square feet of Pennington/ Lofts Seed's "New England Sun and Shade Mix," or approved equal, as adapted to contain the following Pennington/ Loft's seed varieties thoroughly mixed:

Botanical Name/Proportion Common Name	By Weight Minimum	Germination Minimum	Purity Minimum
Festuca rubra ssp. commutata	(40%)	95%	90%

Chewings Fescue (2) Named Variety:			
'Survivor'	20%	95%	90%
'Fairmont'	20%	95%	90%
Festuca rubra ssp. arenaria Creeping Red Fescue (1) Named Variety:	(30%)	95%	90%
'Navigator II'	30%	95%	90%
Lolium perenne Perennial Ryegrass (2) Named Varieties:	(15%)	90%	90%
'Thrive'	7.5%	90%	90%
'Stamina'	7.5%	90%	90%
Poa pratensis Kentucky Bluegrass (2) Named Varieties:	(15%)	85%	90%
'Oasis'	7.5%	85%	90%
'Endurance'	7.5%	85%	90%

C. Note: If these specific named varieties and/or cultivars of lawn grass species listed above are not available at the time of construction, the Contractor may substitute cultivars that display similar proven growth, color, habit, drought tolerance, and disease and insect resistance as patented and named cultivars specified, but only with review and approval of the Landscape Architect and only if Contractor demonstrates that these cultivars are equal in performance and appearance. Grass species and proportions of species in mix may not be changed.

D. Seed shall be fresh, clean, new crop seed. Grass shall be of the previous year's crop and the weed seed content shall not exceed 1% by weight. Where possible, seed stock shall come from a local source. The seed shall be furnished and delivered, in the proportion specified, in new, clean, sealed, and properly labeled containers. All seed shall comply with State and Federal seed laws. Submit manufacturer's Certificates of Compliance. Seed which has become wet, moldy or otherwise damaged shall not be acceptable. The Contractor shall take care to handle and store the wildflower seed according to grower's recommendations and shall not subject the seed to extremes of heat, cold or moist conditions.

E. Refer to the Drawings for limits and types of seeding required and as directed by the Landscape architect.

2.05 HYDROMULCH

A. Hydromulch used in hydroseed mixture for lawn to cover specific seeded areas, shall be fiber processed from whole wood chips manufactured specifically for standard hydraulic mulching equipment. Fiber shall not be produced from recycled material such as sawdust, paper, or cardboard.

B. Moisture content of hydromulch shall not exceed 10%, plus or minus 3% as defined by the pulp and paper industry standards. Fiber shall have a water holding capacity of not less than 900 grams water per 100 grams fiber.

C. The hydromulch shall be of such character that the fiber will be dispersed into a uniform slurry when mixed with water. It shall be nontoxic to plant life or animal life.

D. The hydromulch shall contain a non-petroleum based organic tackifier and a green dye to allow for easy visual metering during application but shall be noninjurious to plant growth.

2.06 CHEMICALS AND INSECTICIDES

A. Provide chemicals and insecticides only as needed for fungus or pest control for plants and as the MassDEP for the intended uses and application rates and applied only when and where permitted by the Landscape Architect and DCR.

2.07 WATER

A. Contractor shall provide all labor and materials required to furnish water to plantings and seeded or sodded lawns, until Final Acceptance at his/her expense. Contractor shall supply temporary soaker hoses, hose connections, and any other appurtenances necessary to connect and draw from existing water lines or water trucks. Contractor shall not cause damage to any vegetation during the watering operation. Water shall potable, free of salt and other impurities injurious to vegetation.

2.08 PLANT MATERIALS

A. Provide quality, size, genus, species, and variety of trees indicated, complying with applicable requirements of AJCHN and AAN. No substitutions will be permitted without prior written approval by the Landscape Architect. All plants shall be nursery grown, not collected from natural vegetated areas.

B. The Landscape Architect, accompanied by the Contractor, will tag plants at their place of growth, after pre-tagging by Contractor. At least one (1) month prior to the expected planting date, request in writing that the Landscape Architect schedule tagging trip(s). The Landscape Architect representative's time and

expenses spent to locate plant material shall be paid for by Contractor only if the Landscape Architect is sent to a site where satisfactory plant materials are not located and to nurseries not located in Massachusetts. No plant material tagged by the Landscape Architect shall be delivered to the site of Work without these tags.

C. The Landscape Architect's selection shall not impair the right of inspection and rejection upon delivery at the site or during the progress of the Work. Contractor shall pay cost of replacement of materials rejected by the Landscape Architect at the site.

D. Each tree shall be labeled with securely attached, waterproof tag bearing legible designation of botanical and common name according to AJCHN.

E. Only plant stock obtained from and grown between USDA hardiness Zones 1 through 7A (2023 Rev.), will be accepted.

F. Plants shall be in accordance with AAN as a minimum requirement for acceptance. Plants shall be typical of their species or variety, have a normal habit of growth, and meet the size and form requirements indicated by the Landscape Architect. The trunk of each tree shall be a single trunk growing from a single intact crown of roots. Trees indicated as "multi-stemmed" in the Plant List shall have three (3) stems, typical.

G. Measure trees according to AAN with branches and trunks or canes in their normal position. Take caliper measurements six (6) inches above ground for trees up to 4-inch caliper size, and 12 inches above ground for larger sizes.

H. The height of trees (measured from the crown of the roots to the tip of the top branch) shall be not less than the minimum size directed by the Landscape Architect or as required by AAN based upon caliper size designated. Lateral branching of deciduous trees is to begin at no less than seven (7) feet height.

I. Trees of a larger size may be used if acceptable to the Landscape Architect with a proportionate increase in size of roots or balls. Do not cut root balls to size of smaller plants to fit limited planting area. Do not prune to obtain required sizes.

J. Trunks shall be free from sunscald, frost cracks, or wounds resulting from abrasions, fire, or other causes. No tree shall have evidence of ever having had basal suckers. The plants must be in a moist vigorous condition, free from dead wood, bruises or other root, bark or branch injuries.

K. Trees shall not be pruned in preparation for transplanting. No wounds from previous pruning shall be present having a diameter exceeding two (2) inches; such wounds shall show vigorous scar tissue on all edges.

L. All plant parts shall be moist and show active cambium when cut. Plants shall be sound, healthy, and vigorous, well-branched and densely foliated when in leaf. They shall be certified by the grower as free of disease, insect pests, eggs or larvae.

M. Balled and burlapped plants shall be moved with root systems as solid units with balls of earth firmly wrapped with untreated natural eight-ounce burlap, firmly held in place by a stout cord or wire. Plants prepared with plastic or other non-biodegradable wrappings will not be accepted except when directed by the Landscape Architect to be container grown. All plastic products must be removed before planting is accepted. Diameter and depth of the balls of earth on balled and burlapped plants must be sufficient to encompass the fibrous root feeding system necessary for healthy development of plant, according to AAN standards. Top of root ball shall be actual finish grade of tree as grown in nursery; excess soil shall be removed from top of ball prior to delivery. No plant will be accepted when ball of earth surrounding its roots has been cracked or broken prior to or during process of planting or after burlap, staves, ropes, container, or platform required in connection with its transplanting have been removed.

N. Trees delivered by truck and plants requiring storage on site shall be properly wrapped and covered during delivery to prevent drying of branches, leaves, or buds. Plant root balls shall be firmly bound, unbroken, and reasonably moist to indicate watering prior to delivery and during storage, and tree trunks shall be free from fresh scars and damage in handling.

O. Tree species designated as “Fall Hazard”, such as Birch and Maples, shall not be substituted with species that are appropriate for fall planting, but shall be planted in the spring, regardless of other project schedules.

2.09 FERTILIZERS

A. FERTILIZER FOR TREES AND SHRUBS installed by the Contractor shall be provided with through the use of slow release fertilizer packets, which are designed and certified by the manufacturer to provide controlled release of nutrients over a minimum three-year period. Packets shall remain sealed at delivery to site and until installation. Each packet shall consist of four (4) ounces of water-soluble fertilizer with a minimum guaranteed analysis of available elements by weight as follows:

Nitrogen	Phosphorus	Potash
16%	8%	16%

Note: Fertilizer packets shall not be used for trees located within the 100 foot wetland buffer zone.

B. FERTILIZER FOR SEEDED AREAS shall be a commercial product complying with the State and United States fertilizer laws. Deliver to the site in the original unopened containers that shall bear the manufacturer's certificate of compliance covering analysis. At least 50% by weight of the nitrogen content shall be derived from organic materials. Fertilizer shall contain not less than the percentages of weight of ingredients as follows or as recommended by the soil analysis:

Nitrogen	Phosphorus	Potash
10%	6%	4%

Note: Fertilizer shall not be used within the 100 foot wetland buffer zone.

C. FERTILIZER FOR PERENNIALS shall be a commercial product complying with the State and United States fertilizer laws. Deliver to the site in the original unopened containers that shall bear the manufacturer's certificate of compliance covering analysis. At least 50% by weight of the nitrogen content shall be derived from organic materials. Fertilizer shall contain not less than the percentages of weight of ingredients as follows or as recommended by the soil analysis:

Nitrogen	Phosphorus	Potash
10%	10%	10%

Note: Fertilizer shall not be used within the 100 foot wetland buffer zone.

2.10 MYCORRHIZAE

Mycorrhizae Granules shall be used for inoculating lawns and plants with beneficial mycorrhizal fungi. Mycorrhizae granules shall include at least three species of endomycorrhizal fungi and at least three species of ectomycorrhizal fungi. Mycorrhizae granules shall include a minimum of 40,000 propagules per lb. Inoculate seeded lawn areas with endo-ecto mycorrhizae pror to spreading seed or hydroseeding at a minimum rate of 1lb inoculant per 50 lbs seed. Each plant and tree shall be planted with mycorrhizae at manufacturer’s recommended rates.

2.11 BARK MULCH BEDS

A. Bark mulch shall be shredded pine bark aged at least six (6) months and not longer than two (2) years. The mulch shall be dark brown in color, free of chunks and pieces of wood thicker than one-quarter inch. Mulch shall be free of

stringy material over four (4) inches in length, and free of chunks over three (3) inches in width. It shall not contain, in the judgment of the Landscape Architect, an excess of fine particles, overly composted or soggy compost material. Bark mulch shall not have an unpleasant odor nor have any evidence of fungus growth. Hemlock bark shall not be used or brought to the site.

2.12 CHEMICALS AND INSECTICIDES

A. Provide chemicals and insecticides as needed for fungus or pest control for plants. All chemicals and insecticides shall be approved by the MassDEP for the intended uses and application rates and be acceptable to the Landscape Architect and DCR. No chemicals or insecticides shall be applied within the 100 foot wetland buffer zone.

2.13 TREE WRAP

A. Tree wrap may be used to protect tree trunks from damage during digging at the nursery, transport to the site or during planting operations, but the use of tree wrap of any type shall not be allowed on tree trunks and branches after trees are planted.

2.14 GUYING AND ANCHORING MATERIALS

A. Use brown or black, heavy duty woven poly-corded guying tape manufactured specifically for tree guying, such as ‘Arbortape’, or approved equal, in samples as approved by the Landscape Architect, to tie trees to stakes, using expanding knots as indicated in manufacturer's instructions. Do not use cable encased in hose. Use tapered hardwood stakes driven at an angle below grade as deadmen to anchor guys below grade as shown in the Drawings.

2.15 TREE PAINT/TREE WOUND DRESSING

A. Tree paint or tree wound dressing of any type shall not be used on tree wounds. Allow wound to heal and weather naturally, after trace cutting ragged or loose damaged bark back to live cambium.

PART 3 – EXECUTION

3.01 SITE PREPARATION PRIOR TO COMMENCING PLANTING AND INSTALLATION OF LAWNS

A. Refer to Section 02200: SITE EARTHWORK for rough grading which shall be performed before planting commences.

B. Before starting work, locate existing underground utilities in areas of Work; call DIG SAFE and other sources of information as necessary. Should uncharted, or incorrectly charted, piping or other utilities be encountered during excavation, notify the Landscape architect. Cooperate with the Engineer and utility companies in keeping respective services and facilities in operation. Repair damaged utilities to satisfaction of the utility companies and DCR. Do not interrupt existing utilities serving facilities occupied or used by others, during occupied hours, except when permitted in writing by DCR and then only after acceptable temporary utility services have been provided. Provide minimum of 48-hour notice to DCR, and obtain written notice to proceed before interrupting any utility.

C. Protect all existing structures, existing subgrades to remain, utilities, pavements, lawns, planting and other site improvements from damage due to grading Work.

1. Protection of Existing Plants to Remain:

a. Operations: Do not store materials, equipment, or operate or park equipment under the branches of existing trees to remain.

b. Barriers: Provide temporary fences at the drip line to protect existing plants to remain from damage during construction.

c. Notification: Give immediate written notification if other construction activities threaten to damage existing trees or plants to remain.

2. Replacement of Damaged Plants:

a. Replace existing plants to remain which Contractor damages during construction with accepted plants of the same species; replacement size to be determined by Landscape Architect; cost of replacement shall be at no additional cost to Owner.

b. Landscape Architect will determine extent of damage and value of damage plants.

D. Submit to Landscape Architect any requests for adjustments in grades and alignments found necessary to avoid interference with special conditions encountered.

E. Render the site erosion-free as necessary. Submit proposed methods for erosion control if necessary. Approval by the Engineer or Landscape Architect of any method to accomplish this does not relieve the Contractor of full responsibility for controlling erosion and/or sedimentation throughout the construction process.

F. Stockpile usable excavated materials in locations permitted by and/or where directed by the Landscape Architect or DCR. Place, grade and shape stockpiles for proper drainage. Locate and retain soil materials away from edge of excavations. Dispose of waste materials legally.

G. Backfill excavations as promptly as Work permits, but not until completion of inspection, testing, approval and recording locations of underdrainage and irrigation.

H. Uniformly grade subgrade to pitch a minimum of 1-2% including adjacent transition areas, providing minimum gradients for temporary drainage to catch basins and swales, streets, curbs, and away from plantings and structures.

I. Protect subgrade areas scheduled for planting from traffic and erosion. Keep free of trash and debris. Repair and re-establish grades in settled, eroded and rutted areas to specified tolerances. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape and compact to required density prior to further construction.

J. The top four (4) inches of subgrade of all areas to be planted and seeded shall be raked of all rubbish, sticks, roots, existing vegetative material and roots, and debris and stones larger than 1/2-inch and shall be removed off site. Subgrade surfaces shall be harrowed, raked or otherwise loosened to a depth of 4-inches. Subgrade shall be inspected and approved by the Landscape architect before planting soil is placed. The use of herbicides for vegetation removal shall be proposed only with the permission of DCR.

Herbicides shall not be used within the 100 foot wetland buffer zone.

3.02 PLANTING SOIL PREPARATION, PLACEMENT, AND FINE GRADING

A. Planting Soil Placement and Finished Grading:

1. Subgrade, Proposed Grades, and Finished Grade Inspections: Contractor shall request inspections by the Landscape Architect of the finished subgrade, proposed finished grades as indicated by grade stakes, and finished grade planting soil for approval. Subgrade shall be roughly scarified with a claw before installing planting soil for plantings and seeded areas.

2. Tolerances: Compacted, finished grades in planting and seeded areas shall deviate no more than 1 inch from indicated finish grade. Slopes shall be evenly graded with smooth lines and grades.

3. Placement:

a. Planting soil shall be screened with ½”-inch screen before spreading. After planting soil has been spread in 8-inch lifts maximum, it shall be carefully prepared by scarifying or harrowing to mix interface of subsoil and planting soil, soil shall be hand raked, and lightly rolled. The whole surface shall then be raked to a smooth, uniform surface to lines and grade as shown on the Plans.

b. Finished grading work shall not be done during wet, inclement, or freezing weather.

c. All depressions caused by settlement shall be filled with additional planting soil that matches approved planting soil and the surface shall be regraded and raked until a smooth and even finished grade is created.

d. Unless otherwise approved by the Landscape Architect, approved planting soil shall be placed to minimum depths after compaction and to rates as specified herein and as shown in the Drawings. Contractor shall be responsible to locate and protect irrigation system, utilities during all operations.

e. Planting soil structure shall not be destroyed through excessive and unnecessary handling or compaction or deterioration of soil structure will result in rejection of planting soil for use. Compaction of planting soil shall be between 80 - 85% maximum dry densities as verified by soil compaction tests as required by the Landscape Architect. Compaction shall be obtained by light rolling, dragging or other method approved by the Landscape Architect to maximum 85% dry density. Do not over compact, or loosening and re-rolling of the soils will be required. The compaction of the soil shall be adjusted by soil type within the required maximums, with less compaction preferred in finer soils.

B. SOIL ADDITIVE INCORPORATION FOR PLANTED AREAS:

1. Soil additives shall be spread and thoroughly incorporated into the planting soil by harrowing or other methods approved by the Landscape Architect. The following soil additives shall be incorporated:

a. Ground limestone is required by soil analysis to achieve a pH of 6.0 to 6.5, but the maximum amount applied shall be 1 pound per square yard. Limestone may not be mixed with fertilizer for application and shall be applied a minimum of two (2) weeks prior to fertilizer application.

b. Fertilizer (10-10-10) at the rate of five (5) pounds per 1,000 square feet, or more, as recommended by the soil analysis. Fertilizer may be applied hydraulically in one operation with hydroseeding and fiber mulching.

2. Lime and fertilizer shall be spread mechanically rather than in one operation with hydroseeding:

a. After the planting soil is placed and before it is raked to true lines and rolled, limestone shall be spread evenly over planting soil surface and thoroughly incorporated with planting soil by heavy raking to a least on-half depth of planting soil.

b. Fertilizer shall be uniformly spread and immediately mixed with the upper 2-in of topsoil.

3. Organic material and other bulk amendments (such as sand) required to be added to topsoil or mixed to make manufactured planting soil shall be thoroughly mixed in soil stockpile locations as specified in Article 3.1 or in a commercial facility, according to proportions determined by soil testing and approved mixing and test results, and not on grade after spreading.

3.03 PREPARATION OF SEEDED AREAS AND INCORPORATION OF ADDITIVES

A. Fine Grading of Seeded Areas and Preparation of the Seed Bed:

1. The whole surface shall then be fine graded by hand raking. Remove large stiff clods, lumps, brush, roots, stumps, litter and other foreign matter. Remove all stones over one half inch (1/2") in diameter from the top three inches (3") of the loam bed. Loam shall also be free of smaller stones in excessive quantities as determined by the Landscape architect.

2. If seed bed is proposed to be seeded by hand broadcasting, smooth surface to meet finished grades with raking and broadcast seed according to requirements specified. Compact with rolling after seeding. If bed is proposed to be drill seeded or hydroseeded, roll and compact bed before seeding. The surface shall be compacted with a roller or other suitable means to achieve a maximum dry density of 88 to 90% for the placed loam in accordance with compaction standards of ASTM D1557, Method D. During the compaction process, all depressions caused by settlement or rolling shall be filled with additional loam and the surface shall be

regraded and rolled until presenting a smooth and even finish corresponding to the required grades.

B. Incorporation of Soil Additives in the Seed Bed:

1. Soil additives shall be spread and thoroughly incorporated into the top four (4) inches of the loam layer by harrowing or as part of hydroseed slurry as approved by the Landscape architect. The following soil additives shall be incorporated in areas to receive Lawn seeding only:

2. Ground limestone as required by soil analysis to achieve a pH of 6.0 to 6.5, but the maximum amount applied shall be one (1) pound per square yard. Soil as measured in a six inch profile in proposed seeded areas that has a pH greater than 7.5 at the time of seeding shall require application of acidifier to reduce the pH to acceptable levels upon retesting by the Contractor as reviewed by the Landscape architect.

3. Fertilizer shall be applied for areas prepared (Top Dressed and seeded) for Seeded Lawn at rates recommended by soil tests, but not in excess of 20 pounds per 1000 square feet and NOT within the Wetland Buffer Zone.

3.04 GENERAL INSTALLATION METHODS FOR SEEDED LAWN

A. Seed shall be fresh, clean, new crop seed. Grass shall be of the previous year's crop and the weed seed content shall not exceed 1% by weight. Where possible, seed stock shall come from a local source. The seed shall be furnished and delivered, in the proportion specified, in new, clean, sealed, and properly labeled containers. All seed shall comply with State and Federal seed laws. Submit manufacturer's Certificates of Compliance. Seed which has become wet, moldy or otherwise damaged shall not be acceptable. The Contractor shall take care to handle and store the wildflower seed according to grower's recommendations and shall not subject the seed to extremes of heat, cold or moist conditions.

B. Limits of seeding shall be as designated on plans and as directed by DCR and the Landscape Architect. All areas disturbed outside the limit of seeding shall also be seeded. Stake limits of Seeded Lawn before seeding, for review by the Landscape Architect, before seeding to insure that proper seed mix is being installed to appropriate limits. Different methods for seeding are required, depending upon mix being installed.

1. Application rates for Seeded Lawn shall be: 6 lbs per 1,000 sq. ft.

C. The planting of seed shall be done only during periods within the season, which is normal for such work as determined by weather conditions without additional

compensation, but subject to the Landscape Architect's approval of time and methods.

1. Seeding dates for lawns shall be approximately April 1 - June 1 or August 15 - September 30.

2. Seeding Lawns outside of season shall occur only with permission of the Landscape Architect and Engineer, and may result in the requirement for re-preparing of seed bed and reseeding the following season until specifications requirements are met. Acceptance will not be given to seed outside of season until all the requirements of the specifications have been fulfilled and the lawns have met all grow-in requirements. Out-of-season seeding during hot weather will require shade mulching with netted hay-type erosion control fabric.

D. Seed only when the bed is in friable condition, not muddy, dried, or frozen, and not in windy or weather or in weather where temperatures are expected to be less than 45 or higher than 75 degrees Fahrenheit during and for two (2) weeks after seeding. After seeding, the seed bed shall be thoroughly and evenly watered with a fine spray to penetrate the soil to a depth of at least six (6) inches, and the seed bed kept evenly moist until germination and acceptance.

E. Prepared planting soil must be allowed to remain fallow for a minimum of three (3) weeks before seeding to encourage weedy growth from existing seed. Refer to the Notice of Intent for approved herbicide application practices. If necessary and in compliance with the Notice of Intent, employ a turf specialist certified to apply herbicide to prepare the seed bed. Apply herbicide specifically formulated for this application to grassy weeds and common herbaceous weeds, according to manufacturer’s instructions, to reduce competition by weeds during germination and grow-in. Dead weeds shall be harvested and removed, and seed bed raked and lightly rolled before seeding. Live weed crop may also be removed by hand, but only if weed roots are completely removed. NOTE: no herbicide use allowed within 100’ coastal bank buffer zone.

F. Protect all trees to remain with tree protection fencing during construction set to edge of canopy. All loaming and seed work within the fence limit must be done by hand with care not to disturb tree roots (no excavation) or fill more than 2” inches above existing grade. Fencing must remain until seeded lawn areas have been sown and fenced off with protective barriers.

G. Seed shall be carefully sown and thoroughly raked in twice at right angles at each pass, overlapping by at least 25%, and lightly rolling after raking to insure good soil to seed contact and even sowing. Specified rates for seeding shall meet or exceed requirements for any method used.

3.05 HYDROSEEDING SEEDED LAWNS

A. Hydroseeding with hydromulch and tackifier shall be the preferred method for seeding all seeded areas. Utilize a mobile tank to hydroseed with a capacity of at least 500 gallons, filled with water and seed in quantities so it may be sprayed on prepared loamed bed prepared in the specified proportions per unit of area to be hydroseeded.

B. The slurry shall be thoroughly mixed by means of positive agitation in the tank. The slurry shall be applied by means of a centrifugal pump using the turret or hose application technique from the mobile tank. The hose or turret shall be equipped with a nozzle of a proper design to insure even distribution of the hydroseeding slurry over the area to be hydroseeded. The hose or turret shall be operated by a person thoroughly familiar with this type of seeding operation.

C. Differing quantities of hydromulch, fertilizer, superphosphate, and limestone shall be included in slurry mix depending on seed type, application requirements, and recommendations for amendments based on results soil testing.

D. For Hydroseeding seeded lawn, or top dressing and seeding follow all requirements above but include 40 lbs./ 1,000 sq. ft. hydromulch with tackifier in seed/water slurry mixture.

3.06 SOD INSTALLATION

A. If areas are to be sodded, sod only during the planting season for sod, which shall be from April 1 to October 15. The actual planting of sod shall be done, however, only during periods within this season which are normal for such Work as determined by weather conditions and by accepted practice in this locality and approved by the Landscape Architect. Contractor may take responsibility for planting sod under unseasonable conditions, without additional compensation, and subject to DCR’s approval of time and methods.

B. Schedule delivery of sod to arrive in time for immediate installation. If not planted immediately upon delivery, place in a shaded, ventilated area. Do not place plastic or tarps directly over pallets of sod when in direct sun. Sprinkle to keep sod moist until installation. Do not allow root zone to be come dry and brittle. Temporary sod storage will not be permitted for longer than three (3) days. Store so that there is no compression of thickness of sod below minimum required. Store flat sods in pairs of layers such that grass surfaces face each other. Keep piles sprinkled with water and covered with burlap or straw to keep moist but not wet. Sods that become dried out or broken shall be rejected by the Landscape Architect.

C. Sod only when the bed is in a friable condition, not muddy, dry, hard or frozen. Immediately prior to laying sod, lightly roughen planting soil bed with fine-toothed harrow or hand rake to accept sod mat.

D. Handle sod pieces carefully to prevent loosening and separation of planting soil from roots. Sod shall be laid in one direction with staggered joints. Seams of sod shall be tightly butted to each other or to edges of existing lawn with no overlap. All sod prices trimmed to fit irregular areas shall be done by evenly cutting or shearing vertically to fit the edge. After initial laying of sod, the sod shall be rolled to flatten all seams. Finished grade at all lawn areas shall be smooth. Seams determined by the Landscape Architect to be inadequately joined shall be rectified at no additional cost.

E. In all swales and on slopes at or steeper than 3:1, hold sod in place by fastening alternate lines of sod with wooden pegs at least six (6) inches long, three (3) feet apart and driven flush with sod surface; other methods of fastening may be used at the Landscape Architect's approval. Pegging shall be done immediately after tamping. At least two (2) stakes shall be driven through each sod strip to be pegged and stakes shall be not more that two (2) feet apart. Stakes shall have their wider sides parallel to slope.

F. All sod planted areas shall be watered immediately after installation, except if installed within three (3) hours of dusk, in which case, water immediately the following morning, adhering to the procedures below.

3.07 PREPARING AND TOP DRESSING OF AREAS TO BE OVERSEEDED

A. All areas of existing or damaged grass areas shall be top dressed and over seeded as directed by the Landscape architect. Mow existing grass to a height of four (3") inches before topdressing and over seeding. Remove and discard all grass clippings and debris from the site.

B. Contractor shall spread approved, mechanically screened loam in areas of top dressing in accordance with planting soils requirements listed in this Section.

3.08 OVERSEEDING (ALL MIXES)

A. Contractor shall obtain Landscape architect's written approval of top dressing of screened loam before doing any seeding.

B. Seed only when the top dressed bed is in a friable condition, not muddy or hard.

C. Seed type and application rates for over seeding shall be the same as those listed in application rates for the particular seed mix specified for that area in locations as shown on the Drawings.

D. To maximize seed to soil contact, drill or slice seeding is recommended for all areas to be over seeded. Mechanical seeding shall be undertaken in two separate passes at ninety degrees to each other. Rake soil lightly and roll to ensure seed is in firm contact with soil.

E. Following rolling, thoroughly and evenly water seeded areas with a fine spray to penetrate the top dressed screened loam to a depth of at least 4 inches.

3.09 SEEDED LAWN PROTECTION AND MAINTENANCE

A. Protection: Seeded and/or sodded areas shall be protected by a three (3) foot high barrier constructed of two (2) inch x two (2) inch wood stakes set 18 inches in the ground at eight (8) foot spacing supporting plastic snow fencing. Barriers must be raised immediately after seeding and shall be maintained until acceptance. Barriers must be removed at the request of the Landscape Architect and not later than two (2) weeks after acceptance. If grass within fencing is damaged for any reason and fencing has not been kept taut and secure by the Contractor, Contractor shall replace grass within two (2) weeks, if during the growing season for that grass, within first two (2) weeks of next growing season.

B. Maintenance of Mown Lawns

1. Lawn maintenance, reseeding, and repair to lawn shall be required during the one-year guarantee period for mown lawns.

2. Watering: Watering shall be no less than two (2) inches of water per week within a given area, reduced by amount of natural rainfall at installation and between the months of April through October. Provide for daily watering of all grass areas to maintain moist soil to depth of at least six (6) inches. Apply one complete coverage of water in an 8-hour period. Sod shall be maintained in a continuous moist condition until establishment and rooting, satisfactory for good germination and growth. Water shall not be applied within three (3) hours of dusk unless specifically approved by the Landscape Architect. Prevent erosion due to excessive watering. Prevent damage to seeded areas by watering equipment. All Work injured or damaged due over- or under-watering shall be Contractor's responsibility to correct and at Contractor's expense.

3. Fertilizing: Lawn fertilizing shall be required during the first and second growing seasons. Fertilizing is permissible only in April, May, August, or September, and not before two (2) months of growing time after seeding unless fertilizer is manufactured specifically for newly seeded lawns. Use 10-10-10 fertilizer applied at rate according to manufacturer's instructions for new lawns after germination. A second application of

fertilizer, as specified herein, shall be applied to all seeded and sodded areas after one (1) season of growth of two (2) months duration. Fertilizer shall be applied only during the months of April, May, August or September at rate according to manufacturer's instructions. Adjust nitrogen type and analysis for season of application (slow release in fall).

4. Re-sodding: The Contractor shall be responsible for maintenance to establish a uniform stand of the specified sod until Final Acceptance. Bare spots, discolored sections or portions that fail to knit properly to planting soil bed shall not be accepted. Sod seams shall not be visible at time of acceptance. After the grass has started, all failing areas shall be re-sodded repeatedly, utilizing sod of the same grass types and mixtures from the same supplier, until all areas are covered with a satisfactory growth of grass.

5. Disease and insect control: Application of all preventative and reactive insecticides or fungicides shall be performed by a turf specialist certified by the Commonwealth of Massachusetts and only after submittal and approval by the Landscape Architect of materials, methods, application rates and schedule and permission of the User Agency. The use of granular materials is typically preferred over spray applications.

6. Mowing: At the time of the first cutting, mow lawn not less than 3 inches high. Grass shall be maintained between 3 inches and three and a half (3 ½") inches high between April and October 30. Do not remove more than 1/3 of the grass blade at any one time. The last mowing of the season, typically in late October, shall be shorter, typically 1½ inches high, with all lawn areas raked and completely vacuumed of thatch, leaves, and debris. Mowing shall include the mulching of clippings on lawns as well as removal of clippings from pavement surfaces immediately after mowing.

7. Instructions: Furnish complete written instructions for maintenance of lawn to the User Agency at least ten (10) days prior to the end of the contractual maintenance period, to familiarize the Landscape Architect with the maintenance requirements for proper care and development of the lawn.

3.10 ACCEPTANCE AND GUARANTEE PERIOD OF MOWN LAWNS

A. Seeded and/or Sodded Lawns:

1. Following the one-year minimum initial establishment period after germination for lawn areas which includes a minimum of three (3) mowing to 3" height, when lawn reaches 3.5" height; Contractor shall

request an inspection by the Landscape Architect for acceptance of the Work and the beginning of the one-year guarantee and maintenance period for mown lawns. All seeded and/or sodded lawns shall display a uniform, dense and tightly knitted stand of grass with no weeds present and no bare spots greater than three (3) inches in diameter over greater than 5% of the overall area. At least 90% of the grass established shall be permanent grass species. These grow-in requirements shall be met at initial acceptance and at the end of the one year guarantee and maintenance period.

B. Contractor shall request that the Landscape Architect inspect the seeded or sodded areas at the end of the one-year guarantee period after initial acceptance. Contractor shall weed, re- seed, lime, apply disease or insect controls, water, fertilize, or re-sod as required to meet the requirements indicated above, and maintain repaired or refurbished lawns and seeded areas in the manner required and methods indicated above until establishment and acceptance of the corrected work.

3.11 SCHEDULING OF PLANTING

A. Locate plant material sources and ensure that plants are shipped in timely fashion for installation. All trees shall be planted during the same planting season they are dug. Balled and burlapped and potted plant materials from cold storage shall be rejected.

B. Seasons for Planting:

Spring: Deciduous and Evergreen materials – April 1 through June 15
Perennials and Groundcovers – April 15 though June 1

Fall: Deciduous materials – October 1 through November 15
Evergreen materials – April 1 – Nov. 1

1. Summer digging of trees shall not be permitted for any reason. Contractor shall schedule his work and coordinate his schedule for planting, so that summer digging and substitutions of species that are fall hazards (fall digging/planting) does not occur.

2. Contractor shall secure plant material as soon as possible and with recent Massachusetts's regulations in mind, regarding importing clean out of state nursery stock inspected for the Oak bark beetle.

3. Refer to the Drawings for Fall Hazard Species, such as certain Oaks, Maples, Birch, etc: These species must be planted in the spring and substitutions shall not be permitted without approval of the Landscape Architect.

4. Evergreens planted in April or July-August, or out of season shall be sprayed with anti-desiccant twice during the guarantee period, once at planting and once in mid-winter.

3.12 PLANT MATERIAL DELIVERY, STORAGE AND HANDLING

A. Deliver and plant only freshly dug trees. Do not use plants "heeled-in" from previous season. Balled and burlapped plant materials from cold storage shall be rejected. Do not prune before delivery, except as approved by the Landscape Architect. Protect bark, branches, and root systems from sunscald, drying, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy natural shape. Provide protective covering during delivery.

B. Contractor shall be present at time of delivery of all plants to the site. Remove all tree wrapping at delivery and inspect tree trunks for damage. Report damaged plants immediately to the Landscape Architect. Wrap shall not be replaced except as specified herein.

C. Handle balled and burlapped stock by root ball, not by trunk or branches.

D. Deliver trees after preparations for planting have been completed and install immediately. If planting is delayed more than six (6) hours after delivery, set plants vertically in their natural growing orientation in shade, protect from weather, dust and mechanical damage, and keep roots moist. Set balled stock on ground or heeled into ground, and cover ball with soil, mulch, or as approved by the Landscape Architect. Storage for more than two (2) weeks shall not be allowed without permission from the Landscape Architect. Plant damage due to Contractor's planting delay shall be the responsibility of the Contractor.

E. Water root systems of trees stored on site with a fine-mist spray. Water as often as necessary to keep root systems moist during storage and planting.

F. Deliver packaged materials in containers showing weight, analysis, and name of manufacturer. Protect materials from damage during delivery and while stored at site.

3.13 UNDERDRAINAGE

A. Testing Pits for drainage:

1. Notify the Landscape Architect of five representative tree pits to be tested at least ten days in advance of the testing day. A representative of the Landscape Architect shall be present during all percolation testing. Locate

areas where tree planting will occur as shown on the Drawings. Test existing drainage capacity, percolation, of subsoil that shall exist at time of planting in a minimum of five sample tree pits. Tree pits shall be representative of the different tree planting areas of project site. The test shall be conducted by filling representative pits with a minimum of fifty gallons of water within a ten-minute period.

2. Prepare a report indicating pits tested, numbered pit locations on a site plan, time it took for pits to drain after filling, and submit the result to the Landscape Architect with analysis. If water has not completely drained from pit within two hours, an underdrainage system shall be designed by the Contractor, submitted to the Landscape Architect for approval, and installed by the Contractor for trees in areas where drainage failed. Plant elevations may have to be adjusted, locations changed, or underdrainage lines installed to compensate for drainage problems at no additional cost.

3.14 TREE AND SHRUB PLANTING

A. Fill entire shrub bed or planting area to depths indicated on Drawings with approved planting soil, according to requirements in Article 2.1.

B. Take care not to disturb any adjacent site improvements. If, in the opinion of the Landscape Architect, any damage to adjacent materials occurs as a result of planting operations, repair the damaged materials at no cost to DCR and/or the Landscape Architect.

C. Stake location for all trees for review by the Landscape Architect before any plant pits or beds are dug, and before plant delivery to site. Stake locations with stakes or flagging, outline planting areas for massed planting, and obtain the Landscape Architect’s review and acceptance before the start of planting work. The Landscape Architect reserves the right to determine the exact location of every tree and to change the location of any tree to an area of similar conditions.

D. Keep plant roots and earth balls moist and protect from sun and wind during entire planting operation.

E. Set balled and burlapped stock plumb in staked location. If top of rootball needs to be raised to conform to proposed finished grade, use leveling bed of compacted planting soil or existing subgrade to set ball. Set top of root ball for trees slightly higher (½ inches) than surrounding grade, judging planting height to allow for settling, to meet grade after settling as plant grew in nursery; refer to detail drawing. Scarify soils on sides of pit to facilitate integration of backfill with existing soil for better root penetration as plants grow. Roll back top 12 inches of burlap and remove wire baskets completely. Planting stock with root balls cracked or broken before or during planting operation will be cause for

rejection. Remove all non-biodegradable wrapping or binding material or containers from shrubs.

F. Place planting soil around ball in six-inch layers, tamping to settle backfill and eliminate air pockets. When pit is approximately half backfilled, water thoroughly until no more is absorbed. Water again after placing and tamping final layer of backfill. Compact planting soil and planting soil mix to approximately 85% maximum dry density. Do not overcompact planting areas; the Landscape Architect reserves the right to reject overcompacted soil installation and request removal and replacement of soil and plants.

G. All plant roots and earth balls shall be damp and thoroughly protected from sun and wind from the beginning of the digging operation, during transportation and at the site until the final planting. Remove container plants from containers prior to planting. All plants shall be planted in the center of the holes and at the same depth as they previously grew. After completion of planting installations, remove rope, wires, etc. from the top of the root balls. Remove burlap only from top third of root ball. Planting soil mix shall be backfilled in layers of not more than 6 inches and each layer watered sufficiently to settle before the next layer is put in place. Enough planting soil mix shall be used to bring the surface to finished grade when settled. A saucer shall be formed around each plant at a depth of 6 inches for trees and 4 inches for shrubs. All trees shall be planted 3 inches higher than the surrounding grade beyond the saucer.

H. Plant Fertilizing

1. Fertilizer packets for plants: Install one-half of the fertilizer packets at a depth of six (6) to eight (8) inches equally spaced around the plant 12 inches from the root ball, as planting soil is placed. Packets shall not be cut, ripped or damaged. If it becomes necessary to remove and replace dead or unhealthy plants, used packets shall be replaced with new packets. The application rates for fertilizer packets shall be as follows:

Type of Plant	Rate
Deciduous Shade Tree	One packet for each inch of caliper or four (4) packets, minimum for 3 ½-4 inch cal. tree.
Evergreen Tree	One packet for every 18 inches of height
Shrub	One packet for every 12 inches of height.

I. Within one (1) day of planting, place mulch to 3" depth as indicated on detail drawings, over saucer areas of individual trees and over area of planting beds to a depth of three (3) inches after settlement. No mulch shall be spread within 4-inch diameter from tree or shrub trunk. Mounding of mulch will not be permitted.

J. All plants shall be watered immediately following planting as necessary to thoroughly moisten rootball and planting soil and thereafter shall be inspected frequently for watering needs and watered, as required, to provide adequate moisture in the planting pit. Inspect tree pits 24 hours after initial watering to confirm that they are draining properly. If surface water or excessively saturated plant pit soils exist, immediately notify the Landscape Architect.

3.15 PLANTING OF CONTAINERIZED MATERIALS

A. Planting of containerized materials shall follow guidelines specified above, except that all containers shall be removed before planting. Plants that are pot bound may be rejected by Landscape Architect. Rough-up and open up the sides of the balls of species which have tough, fibrous roots, to insure that roots will spread out into the planting soil after establishment. Hand spread mycorrhizae and granular, pelletized superphosphate in the bottom of each plant pit, in amounts according to manufacturer's instructions and fertilize as required herein.

B. Fertilizer for Perennials: Plant beds of groundcover and perennials shall be fertilized with mycorrhizae and granular fertilizer with analysis of 10-10-10 NPK, at rates recommended by the manufacturer, with consideration of the nutrient and salt analysis of the planting. Wash down plants with potable water after hand spreading fertilizer

3.16 TREE PRUNING

A. Pruning shall be done only to ameliorate minor damage to branches incurred during shipping and planting; any plants with major damage shall be replaced as directed by the Landscape Architect. Remove only dead wood, damaged branches, crossed branches, and suckering shoots, in accordance with TCIA standards, minimizing amount of live growth removed. Shape trees only if additional direction is given by the Landscape Architect, maintaining natural form. Tree pruning shall be consistent to full height of tree to avoid uneven appearance and structural imbalance. Do not apply tree wound dressing. Prune in accordance with TCIA Standards for Class I, "Fine Pruning," to preserve natural character of the plant.

B. Never cut tree leader, unless permitted by the Landscape Architect.

3.17 TREE WRAPPING

A. Trees and trunks shall be wrapped with protective fabric during transport and delivery to storage. Trees shall not be wrapped after planting, to avoid accumulation of moisture on bark, which increases susceptibility to hidden insect infestation, and mold.

3.18 GUYING AND STAKING

A. Contractor shall use caution in installing wood deadmen anchors for trees, insuring that deadmen do not penetrate utility lines or structures. Deadmen should be installed according to the Drawings, securely anchored in undisturbed or compacted subgrade.

B. Install woven tape tree guys according to manufacturer's instructions, with ties that allow for tree growth (specified, expandable knots) and to allow for some movement and to avoid girdling. Guys shall be securely fastened to notched, wood deadmen with appropriate knots, at an angle to keep guys tight. Install three (3) guys per tree, typical, and affix safety flags at four (4) feet typical above finished grade, if guys are above ground.

C. Tree guying and anchoring systems shall be secure, installed so that tree ball does not rock and tree trunk and canopy remain plumb or nearly plumb in the wind, without holding tree so tight or at such an angle and height that there could be rubbing or structural damage to trunk in strong winds. Guys shall be installed to allow for tightening after installation and during the one-year maintenance period.

3.19 CLEANUP AND PROTECTION

A. Protect work from damage due to landscape operations, operations by other contractors and trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged Work as directed by the Landscape Architect.

B. Remove excess planting soil, waste material, and excess subsoil, unsuitable soil, trash, and debris, and legally dispose of material off site.

C. Repair damage to site or structures to restore them to their original condition at no cost to the Client.

3.20 MAINTENANCE REQUIREMENTS FOR PLANTINGS

A. Begin maintenance immediately after each area is planted and continue until the end of the one-year guarantee period after Final Acceptance.

B. Maintenance shall consist of keeping plants in healthy growing condition and shall include but not be limited to watering, weeding saucers, grass areas, and planting beds, mowing, cultivating, re-mulching, tightening and repairing of guys, removal of trash, injured and dead material, resetting plants to proper grades or upright position, and maintaining mulched planting saucer.

C. Inspect plants for watering needs at least twice each week and water as required to promote plant growth and vitality.

D. Keep planting and grass areas free of weeds, and maintain mulched saucers at required depths and size.

E. Remove and replace immediately plants that die during the maintenance period and repair, re-seed, or re-sod all lawn areas and erosion control devices, from installation through the one (1) year guarantee period.

F. Tighten guy tapes as required.

G. Chemicals, pesticides, fungicides, insecticides or herbicides within planted areas shall be applied by personnel licensed to do so in the Commonwealth of Massachusetts and only after obtaining written permission from the Landscape Architect, indicating the materials and dispensing methods allowed, the dates, time and weather conditions under which procedures will occur, and traffic control, resident and pedestrian protection plan proposed. Spraying for insects, pests and diseases shall conform to the TCIA Standards under the section entitled “Standards for Pesticide Application Operations”, as currently adopted.

H. Remove trash from all planted areas weekly or as directed by DCR.

I. During the maintenance period, any decline in the condition of plantings shall require the Contractor to take immediate action to identify potential problems and undertake corrective measures. If required, the Contractor shall engage professional arborists and horticulturists to inspect plant materials and to identify problems and recommend corrective procedures. The Landscape Architect shall be immediately advised of such actions. Inspection and recommendation reports shall be submitted to DCR.

3.21 ACCEPTANCE INSPECTION PROCEDURES

A. Requirements of Division I shall apply to this Section.

B. The Landscape Architect shall inspect work upon written request of Contractor, which shall be received by the Landscape Architect at least ten (10) days before the anticipated dates of inspection. Request inspection for acceptance of the

plantings only after all aspects of planting operations are completed and maintained according to Specifications, all pertaining test results are acceptable, irrigation system is operating properly, and all extraneous equipment, materials and debris are removed from the project site. Do not request inspections for partially completed work. There will be no acceptance 'in parts' for planting work. All items on the punch list shall be completed to the satisfaction of the Landscape Architect and DCR before the initiation of the one-year plant establishment period (guarantee period) can commence.

C. The Landscape Architect shall inspect work with Contractor present. At time of inspection if, in the Landscape Architect's opinion, a substantial amount of planting, materials or workmanship is deficient, Contractor's responsibility for maintenance of all work shall be extended until plant replacements are made or other deficiencies are corrected.

D. A written report, or "punch list," issued by the Landscape Architect shall indicate to Contractor remedial items to be corrected before Final Acceptance is given.

E. Acceptance: Acceptable plants are those that are to size and species as shown on the Drawings or accepted by the Landscape Architect, which show at least 85% live growth, actively growing or possessing live buds, with no indication of injury, disease, insect infestation, or decline due to environmental or other factors, which are plumb, mulched, guyed (if just planted) and balls moist.

F. All unsatisfactory plants shall be removed promptly. Replacement plants shall conform in all respects to Specifications for the originals and shall be planted and maintained in same manner until initial acceptance is made.

G. Inspection request and procedure shall be repeated when remedial items are completed. Date of final acceptance of completed remedial work shall establish end of installation and initial maintenance period and commencement of guarantee period.

H. Submit typed maintenance instructions for all plantings for the Landscape Architect's use.

3.22 PLANT ESTABLISHMENT PERIOD, GUARANTEE, AND FINAL INSPECTION

A. Guarantee specified herein shall not deprive DCR of other rights it may have under other provisions of Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of Contract Documents.

B. The Contractor shall guarantee the plantings for one (1) year after acceptance. During guarantee period, make monthly inspections of plant material during April through November to document condition of plants and to provide remedial measures. Continue maintenance as specified. Submit inspection reports to the Landscape Architect. Dead plants and plants with less than 85% live wood noted in inspections shall be replaced with new plants of same size and species within one (1) month or in first month of next growing season, whichever comes first, as permitted by specifications. Replacement plants shall be installed according to the Drawings and Specifications.

C. Notify the Landscape Architect at least ten (10) days in advance of requested date of inspection at end of one-year guarantee period. Submit to the Landscape Architect, before inspection, a list of plants replaced during guarantee period with species, location, and replacement dates.

D. All plants will be inspected by the Landscape Architect one (1) year after final acceptance and shall be alive and in satisfactory growth at the end of that time. Trees, which have settled out of plumb shall be reset, plumb or be replaced.

E. Delays: Delays caused by the Contractor in completing planting into more than one planting season shall extend the Warranty Period correspondingly.

F. At end of guarantee period, all guying material shall be removed from plants, all saucers flattened, mulch areas re-mulched and weeded, dead wood pruned and removed and all replacements completed. All dead or unsatisfactory grass areas shall be weeded, top-dressed, repaired, fertilized, and/or bed prepared and re-seeded until satisfactory growth with intended species has occurred, as a condition of completion of all Work at final inspection.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 02900-01 SEEDED LAWN (NEW OR REFURBISHED) will be made on a SQUARE YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 02900-02 DECIDUOUS TREE PLANTING (3.5-4” cal.) will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

C. Measurement for Item 02900-03 DECIDUOUS TREE PLANTING (3.-3.5” cal.) will be made on a per EACH basis for all work described in this section not

otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

D. Measurement for Item 02900-04 DECIDUOUS TREE PLANTING (2.5-3" cal.) will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

E. Measurement for Item 02900-05 DECIDUOUS TREE PLANTING (2-2.5" cal.) will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

F. Measurement for Item 02900-06 ORNAMENTAL DECIDUOUS TREE PLANTING (10'-12' HEIGHT) will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

G. Measurement for Item 02900-07 EVERGREEN TREE PLANTING (10'-12' HEIGHT) will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

H. Measurement for Item 02900-08 EVERGREEN SHRUB PLANTING (30"-36" HEIGHT) will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

I. Measurement for Item 02900-09 DECIDUOUS SHRUB PLANTING (30-36" HEIGHT) will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

J. Measurement for Item 02900-10 DECIDUOUS SHRUB PLANTING (18-24" HEIGHT) will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

K. Measurement for Item 02900-11 PERENNIAL OR ORNAMENTAL GRASS PLANTING will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

L. Measurement for Item 02900-12 GROUNDCOVER PLANTING will be made on a per EACH FLAT basis for all work described in this section not otherwise

listed below, complete to the lines and grades indicated by the Contract Drawings.

M. Measurement for Item 02900-13 PLANTING SOIL will be made on a per CUBIC YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 02900-01 SEEDED LAWN (NEW OR REFURBISHED) will be at the SQUARE YARD contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling and the furnishing of all labor, materials, tools and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

B. Payment for Item 02900-02 DECIDUOUS TREE PLANTING (3.5-4” cal.) will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, including bark mulch, backfilling and the furnishing of all labor, materials, tools and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

C. Payment for Item 02900-03 DECIDUOUS TREE PLANTING (3-3.5” cal.) will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, including bark mulch, backfilling and the furnishing of all labor, materials, tools and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

D. Payment for Item 02900-04 DECIDUOUS TREE PLANTING (2.5-3” cal.) will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, including bark mulch, backfilling and the furnishing of all labor, materials, tools, and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

E. Payment for Item 02900-05 DECIDUOUS TREE PLANTING (2-2.5” cal.) will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, including bark mulch, backfilling and the furnishing of all labor, materials, tools, and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

F. Payment for Item 02900-06 ORNAMENTAL DECIDUOUS TREE PLANTING (10'-12' HEIGHT) will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, including bark mulch, backfilling and the furnishing of all labor, materials, tools and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

G. Payment for Item 02900-07 EVERGREEN TREE PLANTING (10'-12' HEIGHT) will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, including bark mulch, backfilling and the furnishing of all labor, materials, tools and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

H. Payment for Item 02900-08 EVERGREEN SHRUB PLANTING (30"-36" HEIGHT) will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, including bark mulch, backfilling and the furnishing of all labor, materials, tools and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

I. Payment for Item 02900-09 DECIDUOUS SHRUB PLANTING (30-36" HEIGHT) will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, including bark mulch, backfilling and the furnishing of all labor, materials, tools and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

J. Payment for Item 02900-10 DECIDUOUS SHRUB PLANTING (18-24" HEIGHT) will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, including bark mulch, backfilling and the furnishing of all labor, materials, tools and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

K. Payment for Item 02900-11 PERENNIAL OR ORNAMENTAL GRASS PLANTING will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, including bark mulch, backfilling and the furnishing of all labor, materials, tools and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

L. Payment for Item 02900-12 GROUNDCOVER PLANTING will be at the per EACH FLAT contract price. This price assumes 18 plants per flat and shall

include full compensation for excavation, providing and installing all elements of the work, including bark mulch, backfilling and the furnishing of all labor, materials, tools and equipment, 12-month guarantee, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

M. Payment for Item 02900-13 PLANTING SOIL will be at the per CUBIC YARD contract price. This price shall include full compensation for any imported loam borrow, (i.e. PLANTING SOIL), if required, in addition to TOPSOIL REHANDLED AND SPREAD (see Section 02200 – SITE EARTHWORK), installed, complete-in-place including fine grading, labor, materials, excavation, watering and equipment required or incidental for the satisfactory completion of the work as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM NO.	ITEM	UNIT
02900-01	SEEDED LAWN (NEW OR REFURBISHED)	SQUARE YARD
02900-02	DECIDUOUS TREE PLANTING (3.5”-4” Cal.)	EACH
02900-03	DECIDUOUS TREE PLANTING (3”-3.5”Cal.)	EACH
02900-04	DECIDUOUS TREE PLANTING (2.5”-3” Cal.)	EACH
02900-05	DECIDUOUS TREE PLANTING (2”-2.5” Cal.)	EACH
02900-06	ORNAMENTAL DECIDUOUS TREE PLANTING (10’-12’ HEIGHT)	EACH
02900-07	EVERGREEN TREE PLANTING (10’-12’ HEIGHT)	EACH
02900-08	EVERGREEN SHRUB PLANTING (30”-36” HEIGHT)	EACH
02900-09	DECIDUOUS SHRUB PLANTING (30”-36” HEIGHT)	EACH
02900-10	DECIDUOUS SHRUB PLANTING (18”-24” HEIGHT)	EACH

02900-11	PERENNIAL OR ORNAMENTAL GRASS PLANTING (1 Gal.)	EACH
02900-12	GROUNDCOVER PLANTING	EACH FLAT
02900-13	PLANTING SOIL	CUBIC YARD

END OF SECTION

SECTION 03300
CAST IN PLACE CONCRETE

PART 1 - GENERAL

1.01 DESCRIPTION

A. Include GENERAL CONDITIONS and applicable parts of Division 1 as part of this Section.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

1.02 DESCRIPTION OF WORK

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:

1. Pedestrian Concrete Paving
   a. Refer to Section 02500 SITE PAVING for Precast Concrete Pavers.

2. Cement Concrete Wheelchair Ramps at the locations shown on the plans, including detectable warning panels, and as required by the Civil Engineer.

3. Cast-in-Place concrete base slabs, footings, and foundations including bases for benches, furniture, signage, vehicular parking lot gate, and other site improvements, as described in this Section but paid for in Section 02800 SITE IMPROVEMENTS.

4. Cast-in-Place concrete base slabs, footings, and foundations including bases for Water Play Command Center Control Cabinet and all water play equipment and drain, as described in this section but paid for in Section 02881 WATER PLAY EQUIPMENT.

5. Cast-in-Place concrete base slabs, footings, and foundations including bases for the Water Meter Enclosure, as described in this section but paid for in Section 02665 WATER PIPING, VALVES AND APPURTENANT WORK.

6. Refer to Section 16100 PARK AND BOARDWALK LIGHTING for all Cast-in-Place concrete base slabs, footings, and foundations for the Lighting Load Center and Receptacle Post foundations.

7. Refer to Section 03310 CAST IN PLACE WATERFRONT CONCRETE for all concrete called out and specified on Coastal Engineer's drawings.

8. Sawcutting of pavements and sidewalks at the locations shown on the plans and as required by the Civil Engineer and Landscape Architect.

9. Pedestrian Concrete Paving at Boardwalk Interface as shown on the plans and as required by the Landscape Architect.

1.03 RELATED SECTIONS

A. The following related work is to be performed under the designated SECTIONS:

1. Section 02100 – SITE PREPRATION, DEMOLITION AND REMOVALS
2. Section 02150 – TREE PROTECTION AND PRUNING
3. Section 02200 – SITE EARTHWORK
4. Section 02360 – DRILLED SHAFTS
5. Section 02500 – SITE PAVING
6. Section 02510 – VEHICULAR AREAS PAVING
7. Section 02630 – STORM DRAINAGE UTILITIES
8. Section 02665 – WATER PIPING, VALVES AND APPURTENANCES
9. Section 02760 – PAVEMENT MARKINGS
10. Section 02800 – SITE IMPROVEMENTS
11. Section 02881 – WATER PLAY EQUIPMENT
12. Section 02900 – PLANTING AND LAWNS
13. Section 03310 – WATERFRONT CAST IN PLACE CONCRETE
14. Section 04410 – SITE GRANITE
15. Section 16100 – PARK AND BOARDWALK LIGHTING

1.04 REFERENCE STANDARDS

A. References herein are made in accordance with the following abbreviations and all work under this Section shall conform to the latest editions as applicable.

1. American Concrete Institute (ACI)
2. ACI 301 - Specifications for Structural Concrete for Building
3. ACI 305R - Hot Weather Concreting
4. ACI 306R - Cold Weather Concreting

5. ACI 316R - Recommendations for Construction of Concrete Pavements and Concrete Bases
6. American Society for Testing and Materials (ASTM)
7. ASTM 185 - Welded Wire Steel Fabric for Concrete Reinforcement
8. ASTM 615 - Deformed and Plain Billot Steel Bars for Concrete Reinforcement
9. ASTM C33 - Concrete Aggregates
10. ASTM C94 - Ready-Mixed Concrete
11. ASTM C143 - Slump of Portland Cement Concrete
12. ASTM C150 - Portland Cement
13. ASTM C171 - Sheet Materials for Curing Concrete
14. ASTM C231 - Air Content of Freshly Mixed Concrete by the Pressure Method
15. ASTM C260 - Air Entraining Admixtures for Concrete
16. ASTM C309 - Liquid Membrane-Forming Compounds for Curing Concrete
17. ASTM C494 - Chemical Admixtures for Concrete
18. Concrete Reinforcing Steel Institute (CRSI)
19. CRSI - Manual of Standard Practice.
20. ASTM C979 – Pigments for Integrally Colored Concrete

B. Where references are made in these Specifications to standard specifications, codes, etc., of the U.S. Government, State or local authorities, or professional and industrial societies and associations, the applicable portions thereof shall govern as fully as if they were recited at length herein, and shall include all revisions thereto issued as of the date of the Notice to Contractors pertaining hereto.

1. AASHTO: American Association of State Highway and Transportation Officials

2. MHD: "Standard Specifications for Highway and Bridges," Massachusetts Highway Department (formerly Massachusetts Department of Public Works), Commonwealth of Massachusetts, latest edition and all supplements.

3. The Americans with Disabilities Act (ADA) of 1990, and to the Final Rule for the Accessibility Guidelines for Recreational Facilities and Outdoor Developed Areas by the Recreational Access Advisory Committee, US Architectural And Transportation Barriers Compliance Board, most recent edition.

4. MAAB: Massachusetts Architectural Access Board.

1.05 SUBMITTALS

A. Submittals shall be made in groupings where installations are complimentary. Failure to comply with this requirement will be cause for rejection of any or all submittals.

B. Submit documentation of recycled content from manufacturer for products with specified recycled content.

C. Submit environmental data in accordance with Table 1 of ASTM E 2129 for products provided under work of this Section.

D. As set forth in the General Conditions, prepare and submit a fully developed submittal schedule; note review times set forth in the General Conditions are deemed “average”, for large submissions allow longer review times.

E. Submit documentation of manufacturing locations and origins of materials for products either “manufactured” and/or “manufactured and sourced” within 500 miles of the project site.

F. Attention is directed to the General Conditions for coordination drawing requirements for this project. These drawings are critical to the proper execution of the Work and failure to honor these requirements may become the basis for denial of any and all claims for either or both “time” and “money”.

G. The Contractor is encouraged to submit for approval products made from recycled and/or environmentally responsible material. Every effort will be made by the Design Professional Team to approve these materials; the substitution request procedure shall still be enforced.

H. Product Data: For each type of product indicated. Include technical data and tested physical and performance properties.

I. Design Mixtures: For each concrete pavement mixture. Include alternate mixture designs when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

J. Submit concrete batch tickets for each truck delivered to site. Each ticket shall note at least the following data: design mix strength; batch proportions including actual water and aggregate moisture contents; date and batch time; arrival time at site; discharge time; concrete volume; and any change to concrete made at the site.

K. Shop Drawings: Contractor shall provide a to-scale shop drawing demonstrating locations and spacing of all Pedestrian Concrete score lines and expansion joints for review by the Landscape Architect.

L. Qualification Data: For manufacturer and testing agency.

M. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated, based on comprehensive testing of current materials:

1. Aggregates.

2. Include service record data indicating absence of deleterious expansion of concrete due to alkali-aggregate reactivity.

N. Material Certificates: Signed by manufacturers certifying that each of the following materials complies with requirements:

1. Cementitious materials;

2. Steel reinforcement and reinforcement accessories;

3. Admixtures;

4. Curing compounds

5. Applied finish materials;

6. Joint fillers

O. Field samples.

1. General:

a. Schedule field sample construction so that field samples can be reviewed by the Landscape Architect a minimum of 7 days prior to installation of paving surfaces represented by field samples.

b. Locate field sample panels in areas as directed by the Landscape Architect.

c. Continue to construct field samples until acceptable. Rejected samples shall be removed from the site.

d. Final samples shall remain undisturbed and shall be maintained for the duration of construction, becoming the standard for acceptance of all proposed elements. Samples shall show all aspects of finish paving appearance including color, jointing, edge treatment, sealing, cleanliness and fastening.

e. Remove panels from site at completion of project, unless otherwise directed by the Landscape Architect.

f. Construct field sample panels or areas for each different type of paving system to demonstrate ability to achieve types of setting bed, joints, color, and surface texture required.

g. Provide field samples simulating actual design and execution conditions for paving materials, mixing of paving materials, installation sequence, curing, use of temporary protective coating system, and methods for correction of defective work.

2. Provide the following mock-ups to be constructed on site for review by the Landscape Architect:

a. Pedestrian Concrete Paving – Saw Cut: at least a 12’x12’ panel.

1.07 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer of ready-mixed concrete products who complies with ASTM C 94/C 94M requirements for production facilities and equipment.

1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

B. Testing Agency Qualifications: An independent agency qualified according to ASTM C 1077 and ASTM E 329 for testing indicated, as documented according to ASTM E 548.

1. Personnel conducting field tests shall be qualified as ACI Concrete Field Testing Technician, Grade 1, according to ACI CP-01 or an equivalent certification program.

C. Regulatory Requirements: Comply with materials, workmanship, and other applicable requirements of the local authorities having jurisdiction for concrete asphalt paving work.

1. Comply with requirements of the Americans with Disabilities Act (ADA) and the Massachusetts Architectural Access Board (MAAB). If these requirements cannot be met with the grades and slopes indicated on the plans, notify the Designer immediately.

2. Comply with requirements of the local authorities having jurisdiction concerning the location and construction of accessible curb cuts.

D. ACI Publications: Comply with ACI 301, "Specification for Structural Concrete," unless modified by requirements in the Contract Documents.

E. Concrete Testing Service: Engage a qualified independent testing agency to perform material evaluation tests and to design concrete mixtures.

F. Mockups: Cast mockups of full-size sections of concrete pavement to demonstrate typical joints, surface finish, texture, and standard of workmanship.

1. Build mockups in the location and of the size indicated or, if not indicated, as directed by the Landscape Architect.

2. Notify the Landscape Architect seven days in advance of dates and times when mockups will be constructed.

3. Obtain the Landscape Architect's approval of mockups before starting construction.

4. Maintain approved mockups during construction in an undisturbed condition as a standard for judging the completed pavement.

5. Demolish and remove approved mockups from the site when directed by the Landscape Architect.

6. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

G. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 01.

H. Before submitting design mixtures, review concrete pavement mixture design and examine procedures for ensuring quality of concrete materials and concrete pavement construction practices. Require representatives, including the following, of each entity directly concerned with concrete pavement, to attend conference:

1. Contractor's superintendent.

2. Independent testing agency responsible for concrete design mixtures.

3. Ready-mix concrete producer.

4. Concrete pavement subcontractor.

1.08 PROJECT CONDITIONS

A. Traffic Control: Maintain access for vehicular and pedestrian traffic as required for other construction activities.

B. Environmental Limitations: Do not apply concrete materials if subgrade is wet or excessively damp, if rain is imminent or expected before time required for adequate cure.

PART 2 - PRODUCTS

2.01 REINFORCEMENT

A. Steel reinforcing bars shall conform to ASTM A615, Grade 60, deformed.

1. Bars employed as dowels shall be hot-rolled plain rounds.

B. Steel wire: ASTM A82, plain cold drawn steel.

C. Welded wire fabric reinforcement shall conform to the applicable requirements of ASTM A185. Fabric reinforcement shall be furnished in flat sheets. Fabric reinforcement in rolls will not be permitted. Welded wire fabric as shown on the Drawings.

D. Supports for Reinforcement: Bolsters, chairs, and other devices for spacing, supporting, and fastening reinforcing bars, and welded wire fabric in place shall be wire bar-type supports complying with CRSI specifications.

1. For slabs-on-grade, use supports with sand plates or horizontal runners where base material will not support chair legs.

2. For exposed-to-view concrete surfaces where legs of supports are in contact with forms, provide supports with legs that are protected by plastic (CRSI, Class 1).

2.02 PORTLAND CEMENT CONCRETE

A. Portland cement concrete shall:

1. Have a maximum water cement ratio of 0.45 conforming to ACI 316R.

2. Compressive strength shall be minimum 4,000 psi for walks, 4,000 psi for vehicular gate footing, 3,500 psi for all other footings, or as specified in drawings after 28 days for all concrete work.

3. Be Air-entrained type conforming to ASTM C94. Air content by volume shall be 6 percent +/- 1 percent, and shall be tested in accordance with ASTM C260.

4. Placed with a slump not less than 3 inches nor greater than 4 inches, determined in accordance with ASTM C143.

5. Use cement conforming to ASTM C150, Type I or II. Only one color of cement, all of the same manufacturer, shall be used for the work. Color shall be light-medium grey when cured. Dark grey concrete shall not be permitted.

6. Use fine and coarse aggregates conforming to ASTM C33.

7. Contain a water reducing agent to minimize cement and water content of the concrete mix at the specified slump. Water reducing agent shall conform to ASTM C494, Type A.

8. Contain no calcium chloride or admixtures containing calcium chloride shall be added to the concrete. No admixtures other than those specified shall be used in the concrete without the specific written permission of the Engineer in each case.

B. Surface sealer shall be non-yellowing type which breathes water vapor, as manufactured by ProSoCo, Sika Chemical Corporation, Dural-International Corporation, or approved equivalent. Color shall match cured concrete as closely as possible or be slightly darker.

2.03 CEMENT CONCRETE WHEELCHAIR RAMP

A. Products used shall meet the requirements of Section 2.02 Portland Cement Concrete.

B. Detectable Warning Panels to be installed at bottom of Accessible Pedestrian Curb Ramps shall meet the requirements shown in the MassDOT Construction Standard Drawing No. E 107.6.5R dated March 2012, or latest edition.

1. Detectable warning panels shall be “yellow” color and shall be approved by the Civil Engineer prior to installation.

2. Products used shall meet the requirements of Section 701 of the Standard Specifications unless otherwise noted on the Plans.

2.04 CURING MATERIALS FOR CONCRETE

A. Curing shall be accomplished by the following methods:

1. Moist curing with burlap covering.

2. Curing paper, non-staining, fiber reinforced laminated Kraft bituminous product conforming to ASTM C171. Four mil polyethylene sheeting may be substituted for curing paper.

3. Curing compound, a resin-base, non-pigmented, non-staining compound conforming to ASTM C309, Type 1.

2.05 EXPANSION JOINTS

A. Expansion joint filler shall be pre-formed non-bituminous type conforming to ASTM D1752, Type II, similar to Sealtight Cork Expansion Joint Filler, manufactured by W.R. Meadows, Inc., Elgin, IL 60120, or approved equivalent, or asphaltic impregnated high strength fiberboard, or approved equivalent.

Foam, tear off strip pre-molded joint filler for concrete joint filler will be rejected by the Landscape Architect.

1. Premolded filler shall be one piece for the full depth and width of the 3/8” joint, cleanly and evenly cut down ½ inch from top of concrete surface to receive colored sealant.

2. Colored sealant shall match color of concrete as closely as possible or be slightly darker.

B. Smooth dowel between slabs, if approved, shall be hot rolled plain steel dowel bonded at one end and operating in smooth close fitting sleeve (of same material) at the other.

2.06 FORMS

A. Cylindrical Forms: Sonotube Fibre Forms, wax-impregnated strippable forms manufactured by Sonoco Products Company, General Products Division, ABS or PVC plastic reusable forms, or approved equivalent.

B. Forms for Exposed Finish: Plywood, metal, metal-framed plywood faced, or other acceptable panel materials. Plywood shall be APA Ref. 1 B-B (Concrete Form), Class I Exterior Grade plywood or B-B or A-C Class I high density overlay concrete form plywood. Form work materials shall produce smooth, continuous, straight and level surfaces.

C. Forms for Unexposed Finish: Plywood, lumber or metal, with lumber dressed on at least two edges and one side.

D. Form Ties: prefabricated, adjustable length galvanized steel snap-off ties, with brackets, cones, cornerlocks and other accessories as necessary.

E. Form Release Agent: Commercial formulation compounds that will not bond with, stain or adversely affect concrete.

PART 3 - EXECUTION

3.01 PREPARATION OF SUBGRADE

A. The subgrade of areas to be paved shall be graded and compacted as specified in Section 02200 EARTHWORK and base.

B. Excavation required in pavement subgrade shall be completed before fine grading and final compaction of subgrade are performed. Where excavation must be performed in completed subgrade, subbase, base, or pavement, subsequent backfill and compaction shall be performed as required by the Engineer and as specified in Section 02200 EARTHWORK.

C. Materials shall not be stored or stockpiled on subgrade.

D. Prepared subgrade will be inspected by the Engineer. Subgrade shall be approved for installation of the gravel base course. Disturbance to subgrade caused by inspection procedures shall be repaired.

3.02 BASE COURSE

A. Gravel Borrow ‘Type B’ shall meet the requirements as specified in Section 02200 EARTHWORK.

B. Width of base course shall extend beyond edge of the proposed pavement as shown on the drawings.

C. Material shall be placed in lifts no more than 6 inches thick, compacted measure. Each lift shall be separately compacted to specified density.

1. Material shall be placed adjacent to wall, manhole, catch basin, and other structures only after they have been set to required grade.

2. Rolling shall begin at sides and progress to center of crowned areas, and shall begin on low side and progress toward high side of sloped areas. Rolling shall continue until material does not creep or wave ahead of roller wheels.

3. Surface irregularities which exceed 1/2 inch as measured by means of a 10 foot long straight edge, shall be re-graded and re-compacted.

D. Base course shall be compacted at optimum moisture content to not less than 95 percent of maximum density as determined by ASTM D1557.

E. The base course shall be kept clean and uncontaminated. Less select materials shall not be permitted to become mixed with the base course material.

3.03 STEEL REINFORCEMENT

A. Before being placed in position, reinforcing steel shall be thoroughly cleaned of loose mill and rust scale, dirt, ice, and other foreign material which may reduce the bond between the concrete and reinforcing. Where there is delay in placing concrete after reinforcement is in place, bars shall be re-inspected and cleaned when required.

B. Any bar showing cracks after bending shall be discarded.

C. Unless otherwise shown on the Drawings, reinforcing shall extend within 2 inches of form work and expansion joints. Reinforcing shall continue through control joints. Adjacent sheets of fabric reinforcing shall lap 6 inches.

D. After forms have been coated with form release agent, but before concrete is placed, reinforcing steel shall be securely wired in the required position and shall be maintained in that position until concrete is placed and compacted. Chair bars and supports shall be installed in a number and arrangement approved by the Engineer.

3.04 FORMS

A. General: Design, erect, support, brace, and maintain formwork to support vertical, lateral, static, and dynamic loads that might be applied until concrete structure can support such loads. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation, and position. Maintain

formwork construction tolerances and surface irregularities complying with the following ACI 347 limits.

1. Provide Class A tolerances for concrete surfaces exposed to view.

2. Provide Class C tolerances for other concrete surfaces.

B. Construct forms to provide for openings, offsets, sinkages, keyways, recesses, moldings, chamfers, blocking, screeds, bulkheads, anchorages, and inserts, and other features required for the work. Use selected materials to obtain required finishes. Solidly butt joints and provide back-up at joints to prevent cement paste from leaking.

C. Fabricate forms for easy removal without hammering or prying against concrete surfaces. Kerf wood inserts for forming keyways, reglets, recesses, and other features for easy removal.

D. Chamfer exposed corners and edges, using wood, metal, PVC, or rubber chamfer strips fabricated to produce uniform smooth lines and tight edge joints.

E. Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt or other debris just before placing concrete. Re-tighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.

3.05 INSTALLING EMBEDDED ITEMS

A. General: Set and build into formwork the anchorage devices and other embedded items required for work that is attached to, or supported by, cast-in-place concrete. Use setting drawings, diagrams, instructions, and directions provided by suppliers of items to be attached.

B. Forms for Slabs: Set edge forms, bulkheads, and intermediate screen strips for slabs to achieve required elevations and contours in finished surfaces. Provide and secure units to support screed strips using strike-off templates or compacting-type screeds.

3.06 PREPARING FORM SURFACES

A. Coat contact surfaces of forms with an approved, nonresidual, low-VOC form-coating compound before placing reinforcement.

3.07 CONCRETE PLACING FOR PEDESTRIAN CONCRETE PAVING AND CEMENT CONCRETE WHEELCHAIR RAMP

A. Equipment, methods of mixing and placing, and precautions to be observed as to weather, and condition of base shall meet the requirements of ACI 316R.

B. The Engineer shall be notified of scheduled concrete placement sufficiently in advance of start of operation to allow preliminary inspection of the work, including subgrade, forms, and reinforcing steel.

C. Work shall not be performed during rainy weather or if rain is expected in 24 hours of paving. Work shall not be performed when temperature is less than 40°F (4.4°C) or higher than 95°F (35°C), or in windy weather (greater than 25mph) without special treatment. Refer to articles 3.14 and 3.15.

D. Adjacent work shall be protected from stain and damage. Damaged and stained areas shall be replaced or repaired to equal their original conditions.

E. Existing concrete, earth, and other water-permeable material against which new concrete is to be placed shall be thoroughly damp when concrete is placed. There shall be no free water on surface.

F. Concrete which has set or partially set, before placing shall not be used. Retempering of concrete will not be permitted.

G. Concrete shall be thoroughly vibrated, or otherwise consolidated to secure a solid and homogeneous mass, thoroughly worked around reinforcement and into corners of forms.

H. When joining fresh concrete to concrete which has attained full set, latter shall be cleaned of foreign matter, and mortar laitance shall be removed by chipping and washing. Clean, roughened base surface shall be saturated with water, but shall have no free water on surface. A coat of 1:1 cement-sand grout, approximately 1/8 inch thick, shall be well scrubbed into the thoroughly dampened concrete base. New concrete shall be placed immediately, before grout has dried or set.

3.08 FINISHING

A. Finishes of concrete elements shall match samples reviewed in the field by the Landscape Architect before final construction. Concrete surfaces shall be screeded and finished true to line and grade, and free of hollows and bumps. Surface shall be dense and smooth.

B. Finished concrete surface for concrete subbases shall be woodfloated to a slightly rough surface. Surface shall not deviate more than 1/4 inch in 10 feet.

C. Finished concrete surfaces on pedestrian pavement, shall not deviate more than 1/8 inch in 10 feet.

D. Horizontal walkway or exposed slab concrete shall have a medium broom finish, with direction of grooves in concrete surface perpendicular to length of concrete band, slab, or pad, with score and expansion joints cleanly formed. After concrete has set sufficiently to prevent coarse aggregate from being torn from surface, but before it has completely set, brooms shall be drawn across the surface to produce a pattern of small parallel grooves. Broomed surface shall be uniform, with no smooth, unduly rough or porous spots, or other irregularities. Coarse aggregate shall not be dislodged by brooming operation.

E. Sawcut joints shall be spaced as shown in the Drawings, and expansion joints not more than 25’ on center and at all vertical surfaces such as facades, walls, curbs, and utility covers and posts. No tooled score joints; all joints saw cut.

F. Full depth slab 3/8” wide expansion joints with pre-molded joint filler and approved colored sealant shall be spaced not more than 25 feet on center. Expansion joints shall also be installed at interfaces with vertical elements such as facades, walls, curbs, and utility covers and posts. Immediately following finishing operations, arises at edges and both sides of expansion joints shall be rounded to a maximum 1/8-inch radius.

G. Sawcut control joints shall be spaced 5 feet on center but not more than 6 feet apart or less than 4 feet apart, and as shown in the Drawings. Joints to be sawcut in paving surface 1/8” wide x 25% concrete pavement depth and as shown in the Drawings. Lines shall be clean and true, with clean intersections (not over sawn cross), lines and dimensions. Review layout and sample field panel for review and approval before final construction with the Landscape Architect in the field.

H. Sidewalk wheelchair ramps and flares shall have a coarse broom finish perpendicular to the direction of travel with smooth, even, straight sawcut control joints as shown on the Drawings.

I. Where finishing is performed before end of curing period, concrete shall not be permitted to dry out, and shall be kept continuously moist from time of placing until end of curing period, or until curing membrane is applied.

3.09 CURING

A. Concrete shall be kept continuously damp from time of placement until end of specified curing period or cured by other methods. Water shall not be added to

surface during floating and troweling operations, and not earlier than 24 hours after concrete placement. Between finishing operations, surface shall be protected from rapid drying by a covering of waterproofing paper. Surface shall be damp when the covering is placed over it, and shall be kept damp by means of a fog spray of water, applied as often as necessary to prevent drying, but not sooner than 24 hours after placing concrete. None of the water so applied shall be troweled or floated into surface.

B. Concrete surfaces shall be cured by completely covering with curing paper or application of a curing compound. Concrete shall be fast curing coordinated with project completion date.

C. Concrete cured using waterproof paper shall be completely covered with paper with seams lapped and sealed with tape. Concrete surface shall not be allowed to become moistened between 24 and 36 hours after placing concrete. During curing period surface shall be checked frequently, and sprayed with water as often as necessary to prevent drying, but not earlier than 24 hours after placing concrete.

D. Concrete cured with a curing compound shall have the compound applied at a rate of 200 square feet per gallon, in two applications perpendicular to each other.

E. Curing period shall be seven (7) days minimum or longer and according to manufacturer's instructions.

F. Only if additional protection is absolutely required, the surface should remain uncovered after the seven-day period for at least 4 days, after which time new and unwrinkled non-staining reinforced waterproof Kraft curing paper may be used.

3.10 DETECTABLE WARNING PANELS

A. Detectable Warning Panels to be installed at bottom of Accessible Pedestrian Curb Ramps shall meet the requirements shown in the MassDOT Construction Standard Drawing No. E 107.6.5R dated March 2012, or latest edition.

3.11 EXPANSION JOINTS

A. Expansion joints shall be 3/8 inch wide as shown on drawings and located where shown on the drawings or not more than 25 feet on center and at all vertical surfaces such as facades, walls, curbs, utility covers, and posts. Expansion joints shall be installed with premolded joint filler and colored sealant in the concrete slabs. Joint filler shall extend the full depth of the slab and full length of the expansion joint.

1. For concrete walks, pavements, and pads, depth of joint filler shall be placed to form a 1-1/4 inch deep recess for sealant and backer rod below finished concrete surface.

2. Use of multiple pieces to make up required depth and width of joint will not be permitted.

3.12 CONSTRUCTION JOINTS

A. Construction joints shall be placed whenever placing of concrete is suspended for more than 30 minutes.

1. Butt joint with dowels or thickened edge joint shall be used if construction joints occur at control joint locations.

2. Keyed joints with tiebars shall be used if the joint occurs at any other location.

3.13 SAWCUT CONTROL JOINTS

A. Control joints shall be sawcut into the concrete slab in pattern shown on the Drawings, adjusted in the field with review of the Landscape Architect.

B. Scoring shall cut into slab surface at least 1 inch, but in no case not less than 25 percent of slab depth.

C. Joints shall not cross each other unless otherwise indicated on the drawings and mock-ups.

3.14 COLD WEATHER CONCRETING

A. Materials for concrete shall be heated when concrete is mixed, placed, or cured when the mean daily temperature is below 40°F or is expected to fall to below 40°F within 72 hours. The concrete, after placing, shall be protected by covering, heat, or both.

B. Details of handling and protecting of concrete during freezing weather shall be subject to the approval and direction of the Engineer. Procedures shall be in accordance with provisions of ACI 306R.

3.15 HOT WEATHER CONCRETING

A. Concrete just placed shall be protected from the direct rays of the sun and the forms and reinforcement just prior to placing shall be sprinkled with cold water.

Every effort shall be made to minimize delays which will result in excessive mixing of the concrete after arrival on the site.

B. During periods of excessively hot weather (95°F., or above), ingredients in the concrete shall be cooled with cold mixing water to maintain the temperature of the concrete at permissible levels in accordance with the provisions of ACI 305. Any concrete with a temperature above 95°F., when ready for placement, will be rejected.

C. Temperature records shall be maintained throughout the period of hot weather giving air temperature, general weather conditions (calm, windy, clear, cloudy, etc.) and relative humidity. Records shall include checks on temperature of concrete as delivered and after placing in forms. Data should be correlated with the progress of the work so that conditions surrounding the construction of any part of the structure can be ascertained.

3.16 PROTECTION OF CONCRETE SURFACES

A. Concrete surfaces shall be protected from traffic or damage until surfaces have hardened sufficiently.

3.17 REPAIRS AND PROTECTION

A. Remove and replace concrete pavement that is broken, damaged, or defective or that does not comply with requirements in this Section.

1. Should cracking, spauling, staining or damage of any kind that cannot be removed and repaired invisibly without damaging the surface, form, or color of the unit these unacceptable units shall be replaced with new units and installed per the requirements of the contract documents, at no additional cost to the Engineer, and as a condition for Final Acceptance.

B. Drill test cores, where directed by the Landscape Architect, when necessary to determine magnitude of cracks or defective areas. Fill drilled core holes in satisfactory pavement areas with Portland cement concrete bonded to pavement with epoxy adhesive.

C. Protect concrete from damage. Exclude traffic from pavement for at least 14 days after placement or unless permitted by the Landscape Architect. When construction traffic is permitted, maintain pavement as clean as possible by removing surface stains and spillage of materials as they occur. Time installation for memorial date mid-may event.

D. Maintain concrete pavement free of stains, discoloration, dirt, and other foreign material. Sweep concrete pavement not more than two days before date

scheduled for Substantial Completion inspections. All concrete shall be clean and undamaged as one condition of acceptance.

PART 4-COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 03300-01 PEDESTRIAN CONCRETE PAVING will be made on a per SQUARE YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract.

B. Measurement for Item 03300-02 CEMENT CONCRETE WHEELCHAIR RAMP will be made on a per SQUARE YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract.

C. CONCRETE BASE SLABS will NOT be measured as separate items but will be included within the measurement of their respective sections.

D. CONCRETE FOOTINGS FOR ALL SITE IMPROVEMENTS, WATER PLAY EQUIPMENT, and WATER PIPING, VALVES AND APPURTENANT WORK will NOT be measured as separate items but will be included within the measurement of their respective sections.

4.02 PAYMENT

A. Payment for Item 03300-01 PEDESTRIAN CONCRETE PAVING will be at the per SQUARE YARD contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, and the furnishing of all labor, materials, tools and equipment, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified. Sawcutting for the installation of Pedestrian Concrete Paving shall be included in the cost of the paving and no separate payment shall be made. Pedestrian Concrete Paving at Boardwalk Interface shall be included in the cost of paving and no separate payment shall be made.

B. Payment for Item 03300-02 CEMENT CONCRETE WHEELCHAIR RAMP will be at the per SQUARE YARD contract price. This price shall include full compensation for excavation, providing and installing all elements of the work including the detectable warning panels, backfilling, and the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified. Sawcutting for the installation of Cement Concrete Wheelchair Ramp shall be included in the cost of the ramp and no separate payment shall be made.

4.03 PAYMENT ITEMS

ITEM NO.	ITEM	UNIT
03300-01	PEDESTRIAN CONCRETE PAVING	SQUARE YARD
03300-02	CEMENT CONCRETE WHEELCHAIR RAMP	SQUARE YARD

END OF SECTION

SECTION 03310

WATERFRONT CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.01 WORK SPECIFIED

The Work covered under this Section of these Specifications consist of furnishing all plant, labor, supervision, equipment, appliances, and materials and in performing all operations in connection with the installation of reinforced concrete for all waterfront related aspects of the project, all in strict accordance with the Contract Documents.

1.02 REFERENCES

A. Specification Section 03300 – Cast In Place Concrete

1.03 SUBMITTALS

A. Shop Drawings and Product Data.
Shop drawings and product data showing all fabricated dimensions and locations for placing of the reinforcing steel and accessories shall be submitted for review. Shop Drawings shall provide sufficient technical data to demonstrate compliance with the specified requirements. Products, materials, or information submitted for review shall not be used or fabricated until after receipt of the Engineer's review comments. Distribute only reviewed shop drawings to the job site.

1.04 Mix Design.

A. Submit concrete mix design, with known test results, to the Engineer for review. The concrete mix design submittal shall consist of at least the following:
   1. Type of cement.
   2. Dry weight of cement.
   3. Saturated surface-dry weights of fine and coarse aggregates.
   4. Specific gravity of fine and coarse aggregates.
   5. Quantities, type, name, and producer of admixtures including polypropylene fibers.
   6. Total weight of water, including the water that is absorbed by and on the surface of the aggregates.
   7. Water to cement ratio.
   8. Slump: Maximum slump, taken at the truck, will be determined based on the pump hose length. The mix designs shall include the anticipated loss of slump per 100-foot length of specified hose size.

9. Strength test data of the proposed mix design as specified herein.
10. Distribute reviewed mix design to testing laboratory, batch plant, and job site.

B. Submit concrete batch tickets for each truck delivered to site. Each ticket shall note at least the following data: design mix strength; batch proportions including actual water and aggregate moisture contents; date and batch time; arrival time at site; discharge time; concrete volume; and any change to concrete made at the site.

C. Construction Joints: Submit proposed construction and control joint details and locations for Engineer's review.

D. Curing and protection procedures: including product data on materials proposed for use.

E. Quality Control Plan: Develop and submit for approval a concrete quality control program in accordance with the guidelines of ACI 121R and as specified herein. The plan shall include approved laboratories.
1. The Contractor shall select a qualified testing laboratory subject to Engineer and DCR approval. The concrete testing laboratory shall have the necessary equipment and experience to accomplish required testing. The laboratory shall meet the requirements of ASTM C1077 and be Cement and Concrete Reference Laboratory (CCRL) inspected. Submit
2. Laboratory and testing facilities shall be provided by and at the expense of the Contractor. The laboratories performing the tests shall be accredited in accordance with ASTM C1077, including ASTM C78/C78M and ASTM C1260. The accreditation shall be current and shall include the required test methods.
3. All compliance testing costs are borne by the Contractor.

F. Field Testing Technician and Testing Agency:
1. The Contractor shall submit qualifications of proposed testing agency and technicians subject to Engineer and DCR approval prior to performing testing on concrete.
2. Work on concrete shall be performed by an ACI Concrete Field-Testing Technician Grade 1 qualified in accordance with ACI SP-2 or equivalent.
3. Testing agencies that perform testing services on concrete materials shall meet the requirements of ASTM C1077.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Quality Assurance:
1. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the

specified requirements and the methods needed for proper performance of the Work of this Section.

2. DCR, through the Engineer, reserves the right of approval of any Subcontractor pre-qualified and selected for this portion of the Work by the Contractor. Approval will be based, in part, on a documented successful experience in performing Work of a similar nature.
3. Cast-in-Place Concrete work shall conform to all requirements of ACI 301, "Specifications for Structural Concrete for Buildings."
4. Detailing, fabrication, and erection of reinforcing steel shall conform to ACI 318, "Building Code Requirements for Structural Concrete and Commentary" and ACI 315, "Details and Detailing of Concrete Reinforcement."
5. Ready mix plant equipment and facilities shall conform to the "Check List for Certification of Ready Mixed Concrete Production Facilities" of the NRMCA.

B. Concrete:
1. Portland cement: Type I or II - low alkali conforming to ASTM C 150, "Standard Specification for Portland Cement."
2. Aggregate, general:
   a. Shall be normal weight and uniformly graded and clean conforming to ASTM C33, "Standard Specification for Concrete Aggregates."
   b. Do not use aggregate known to cause excessive shrinkage.
3. Aggregate, coarse: Crushed rock or washed gravel with a maximum size of 3/4".
4. Aggregate, fine: Natural washed sand of hard and durable particles varying from fine to particles passing a 3/8" screen, of which at least 12% shall pass a 50-mesh screen.
5. Water: Clean and potable.
6. Air entraining admixture shall conform to ASTM C260, "Standard Specification for Air Entraining Admixture for Concrete." The air-entraining agent shall be a nontoxic concentrated solution of neutralized Vinsol resin, such as "Daravair" as manufactured by W.R. Grace Company or equivalent accepted by the Engineer.
7. Water reducing admixture shall conform to ASTM C494 "Standard Specification for Chemical Admixtures for Concrete." Water reducing agent shall be of Type A, B, C, D, E, F, or G (as noted in concrete mix design) such as "Daracem-100" or "WRDA-19" as manufactured by W.R. Grace Company or equivalent accepted by the Engineer.
8. Polypropylene Fibers shall conform to ASTM C1116, Type III and shall have a length of 12 mm (1/2 in) with a ratio of 0.6 kg of fibers per m3 of concrete (1.0 LB of fibers per CY of concrete).
9. Calcium Nitrite Corrosion Inhibitors: Not Required

C. Reinforcing Materials:
   1. Reinforcing Bars: All reinforcing steel shall be new, deformed billet steel bars, conforming conform to ASTM 615 Grade 60, “Specification for Deformed and Plain Billet Steel Bars for Concrete Reinforcement”
      a. Concrete reinforcement shall be hot dipped galvanized in accordance with ASTM A767/A767M.
   2. Welded wire mesh (WWM) shall confirm to the requirements of ASTM A185 or ASTM A497, with a minimum yield strength of 65,000 pounds per square inch (psi). WWM shall be galvanized in accordance with ASTM A767/A767M.
   3. Any damage to the coating or galvanizing of the metal shall be repaired by the application of two heavy coats of Amerlock 400 or equal high solids epoxy. Touch up shall be applied as per manufacturer's instructions to provide a coating equal to the original finish.
   4. Accessories: All spacers, chairs, bolsters, and other devices necessary for proper reinforcing steel placement shall be galvanized with nylon tipped legs. All reinforcing steel shall be adequately tied with nylon, epoxy, or plastic-coated tie wire and supported with galvanized that hold the bars to the specified clearance. One chair sample shall be submitted to the Engineer for review. No clay or concrete bricks or any other material other than reviewed chairs shall be permitted to support reinforcing steel.
   5. Do not use reinforcement having any of the following defects:
      a. Bar lengths, depths, or bends exceeding the specified fabricating tolerances.
      b. Bends or kinks not indicated on the Drawings or required for this Work.
      c. Bars with cross section reduced due to excessive rust or other causes.

D. Moisture Protection:
   Curing materials for concrete cast above the tidal zone shall conform to ASTM C309, “Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete,” wet burlap, or plastic membrane.

E. Bonding Agent:
   Bonding agent shall be Sika Armatec 110 Epocem, as manufactured by Sika Corporation or an equivalent accepted by the Engineer.

F. Product Delivery, Storage, and Handling:
   Conform to the recommendations of ACI 304, “Guide for Measuring, Mixing, Transporting, and Placing Concrete.”

PART 3 - EXECUTION

3.01 INSTALLATION

A. Concrete Mix Proportioning
   1. Concrete shall be proportioned by the Contractor in accordance with ACI 301. The proposed design mix, together with all the Test Records, or Trial Mix Data, as required by ACI 301, shall be submitted to the Engineer for review at least two weeks prior to the first intended placement. Submit a separate pump mix if different from concrete mix placed by conventional methods.
   2. Concrete shall be normal weight with a minimum compressive strength of 4,500 pounds per square inch (psi) at 28 days.
   3. Concrete shall have a maximum water to cement ratio of 0.45.
   4. Concrete shall be proportioned to have a slump of 6 inches, $\pm$ 1 inch, at the discharge end of the pump hose. Use a water reducing agent as required to achieve the desired slump range. Addition of water at site will not be permitted.
   5. Concrete shall contain 7.5% entrained air for 3/8" aggregate size.

B. Form Construction
   1. Design, erect, support, brace, and maintain formwork so it will safely support vertical and lateral loads which might be applied until such loads can be supported safely by the concrete structure in accordance with ACI 347.
   2. Construct forms to the exact sizes, shapes, lines, and dimensions shown, and as required to obtain accurate alignment, location, grades, and level and plumb work in the finished structure.
   3. Form coating or water shall be applied to all forms. If coating is used, it shall be applied prior to placement of reinforcing steel.
   4. Form ties and spreaders shall be of such type as to leave no metal closer than 3 inches from any exposed concrete surface.

C. Reinforcement Placement
   1. All galvanized reinforcing steel shall be protected from damage to the galvanizing during handling and placement. Any galvanized reinforcing steel, where the galvanizing has been damaged shall be either removed from the site or touched up with a cold galvanizing coating, at the Engineer's discretion with strict conformance to the manufacturer's instructions at the Contractors expense.
   2. Place reinforcement to obtain the required coverage for concrete protection. The minimum concrete cover for all reinforcing shall be 3 inches except where specifically noted otherwise.

3. Clean reinforcement and remove loose dust, earth, and other materials, which reduce bond or destroy bond with concrete other than epoxy coating.
4. Position, support, and secure reinforcement against displacement by forms, construction, and the concrete placement operations.
5. All reinforcing steel shall be continuous unless specifically detailed otherwise on the Contract Drawings. Provide dowels or lap splices of the appropriate class to maintain continuity. Unless otherwise shown on the Contract Drawings lap bars in compliance with ACI 318. Dowels or splices shall be shown on the shop drawings and shall be subject to the field review of the Engineer. No more than 60% of the total number of bars shall be spliced at one location.

D. Embedded Items
1. Install embedded items furnished under this Section and other Sections. All sleeves, inserts, anchors, and embedded items required for adjoining work or for its support shall be placed prior to casting concrete. All embedded items shall be positioned accurately and supported against displacement.
2. Where existing timber pile tops are to be embedded in the concrete, thoroughly clean the embedded portion of the piles of all debris and foreign matter prior to concrete placement. Do not damage the existing piles by cleaning.

E. Concrete Mixing
1. Transit-mix the concrete in accordance with provisions of ASTM C94.
2. Do not use concrete after 90 minutes from the time of introduction of water to the mix.

F. Concrete Placement
1. All concrete work shall conform to the requirements of ACI 318, “Building Code Requirements for Structural Concrete.”
2. Preparation:
   a. Sawcut the seawall stem to the desired elevation and remove demolished sections.
   b. Install formwork if required.
   c. Remove foreign matter accumulated in the forms.
   d. Rigidly close openings left in the formwork.
   e. Wet wood forms immediately prior to concrete placement. Wet wood forms sufficiently to tighten up cracks. Wet other material sufficiently to maintain workability of the concrete.
   f. Use only clean tools.

3. Conveying:
    a. Perform concrete placing at such a rate that concrete which is being integrated with fresh concrete is still plastic.
    b. Deposit concrete as nearly as practicable in its final location so as to avoid separation due to re-handling and flowing.
    c. Do not use concrete which becomes non-plastic and unworkable, or does not meet required quality control limits, or has been contaminated by foreign materials.
    d. Remove rejected and excess concrete from the job site.
4. Placing concrete in forms:
    a. Concrete shall be cast to full dimensions in one operation.
    b. Free-fall of concrete during placement greater than 8 feet is prohibited. The Contractor shall place concrete with a tremie tube for drops greater than 8 feet.
    c. Deposit concrete in horizontal layers not deeper than 24 inches and avoid inclined construction joints.
    d. Remove temporary spreaders in forms when concrete has reached the elevation of the spreaders.
5. Consolidation:
    a. Consolidate each layer of concrete immediately after placing, by use of internal concrete vibrators supplemented by hand spading, rodding, or tamping.
    b. Do not use vibrators to transport concrete inside the forms.
6. Construction Joints:
    a. Do not use horizontal construction joints.

G. Curing and Protection
1. Beginning immediately after placement, concrete shall be protected from premature drying, excessively hot or cold temperatures, and mechanical damage and shall be maintained with minimal moisture loss at a relative constant temperature for the period necessary for hydration of the cement and hardening of the concrete.
2. Concrete surfaces not covered by forms or within the inter-tidal elevations shall be protected from loss of surface moisture for not less than seven days using moisture protection as specified herein.
3. If cold-weather concreting is anticipated, a preconstruction meeting shall be held to define how cold weather concreting methods will be used. When the mean daily ambient temperature is at or below 40 degrees F or 45 degrees F and falling, the Contractor shall follow the requirements of ACI 306.1, “Standard Specification for Cold Weather Concreting.”

a. Set up proper enclosure and heat to 50 degrees F for at least 2 hours before starting any pour. Set up individual thermometers within enclosure to monitor ambient temperatures near the face of fresh concrete. Thermometers shall be placed at a maximum of 50-foot centers, at major corners or returns, and at ends of concrete sections. Monitor and record temperatures in a log in the early morning, noon, and early evening.
b. Use a water-reducing admixture with an accelerated set, but do not use or rely upon any material as an anti-freeze. Use of calcium chloride is forbidden.
c. Use vented heaters with blowers so placed that they do not produce localized hot spots which may dry out the concrete. Exposure to exhaust gases from combustion heaters is prohibited for the first 24 hours of the curing period.
d. Maintain the temperature of the formwork at not less than 50 degrees F but not greater than 70 degrees F for 48 hours after completion of pour, formwork may be stripped after 72 hours after completion of pour. After 48 hours of maintaining at least 50 degrees F, the temperature may be allowed to drop gradually and shall be kept above 32 degrees F for a period of 7 days after completion of pour. Protection during this period may be provided by existing enclosure or by means indicated in note e below.
e. Protection may be provided by use of insulation methods. Adequate insulation shall consist of at least one of the following:
    i. 12" of dry earth; provide moisture cover if over slab concrete.
    ii. 4" of hay under adequate moisture cover.
    iii. 1" of insulation blankets with vapor barrier seal.
    iv. Other insulating material acceptable to the Engineer.
    NOTE: Extreme conditions of temperature or wind may require more protection.

f. Concrete may not be placed on frozen ground.
g. All frozen concrete shall be removed from the job and replaced at a cost to the Contractor.

4. When the mean daily ambient and substrate temperature is above 80 degrees F, the Contractor shall follow the requirements of ACI 305.1, “Standard Specification for Hot Weather Concreting.” Concrete shall be protected from thermal damage. Provisions for windbreaks, shading, fog spraying, sprinkling, ponding, or wet covering with a light colored material shall be made in advance of placement and such protective measures shall be taken as quickly as concrete hardening and finishing operations will allow.
    a. No concrete shall be placed when the air temperature is above 90 degrees F unless the air is still, and relative humidity is above 80%.

b. Set up proper windbreakers for concrete surfaces whenever the relative humidity is less than 70% for slight air motion or 80% for light breezes.
c. Provide shade for pours otherwise exposed to the sun.
d. Concrete is to be at a temperature of 80 degrees F or less when placed. If necessary, the batching plant shall cool aggregates by spraying or by using chilled water or ice. All such water shall be accounted for as part of the mixing water.
e. Use an admixture with a retarded set.
f. All forms shall be thoroughly wetted at least daily and more often when the relative humidity is low.
g. For slabs, maintain the required materials for curing on hand, so they may be placed immediately upon finishing. All concrete placed in ambient temperatures over 80 degrees F shall be kept wet for a minimum of 24 hours. Intermittent spraying will not be permitted. No water shall be applied before concrete has acquired its initial set. When the concrete temperature of any slab goes above 100 degrees F, place a layer of sand on it and keep it continuously wet until the temperature is below 80 degrees F.

H. Finishing
1. Exposed walking surfaces shall receive a light broom finish as follows:
a. Perform a floated finish, then draw a broom or burlap belt across the surface to produce a coarse scored texture.
b. Permit surface to harden sufficiently to retain the scoring or ridges.
c. Broom transverse to traffic or at right angles to the slope of the slab.
d. Tolerance for concrete floors/walking surfaces shall be conventional straight-edged tolerance in accordance with ACI 117 unless otherwise specified.
2. All other exposed surfaces of concrete shall receive a wood float finish.

3.02 QUALITY CONTROL TESTING DURING CONSTRUCTION

A. The Contractor will employ a testing laboratory to perform tests and to submit test reports.

B. Sampling and testing for quality control during placement of concrete shall include the following:

1. Sampling Fresh Concrete: ASTM C172, except modified for slump to comply with ASTM C94.

2. Slump: ASTM C143; one test at point of discharge for each day's pour of each type of concrete; additional tests when concrete consistency seems to have changed.

3. Air Content: ASTM C173, volumetric method for lightweight or normal weight concrete; ASTM C231 pressure method for normal weight concrete; one for each day's pour of each type of air- entrained concrete.

4. Concrete Temperature: Test hourly when air temperature is 40°F (4°C) and below, and when 80° F (27° C) and above; and each time a set of compression test specimens is made.

5. Compression Test Specimen: ASTM C31: One (1) set of four (4) standard cylinders for each compressive strength test, unless otherwise directed. Mold and store cylinders for laboratory cured test specimens except when field-cure test specimens are required.

6. Compressive Strength Tests: ASTM C39: One set for each day's pour exceeding 5 cu. yds. plus additional sets for each 50 cu. yds. over and above the first 25 cu. yds. of each concrete class placed in any one day.
   a. One (1) specimen tested at 7 days
   b. Two (2) specimens tested at 28 days
   c. And one (1) specimen retained in reserve for later testing, if required.
   d. When frequency of testing will provide less than five (5) strength tests for a given class of concrete, conduct testing from at least five (5) randomly selected batches or from each batch if fewer than five (5) are used.

7. Additional Tests: The testing service will make additional tests of in-place concrete when test results indicate specified concrete strengths and other characteristics that have not been attained in the structure, as directed by Owner. Testing service may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42, or by other methods as directed. The Contractor shall pay for such tests when unacceptable concrete is verified.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 03310-1 FURNISH AND INSTALL FIBER REINFORCED CONCRETE SLAB will be made on a per CUBIC YARD basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated on the Contract Drawings.

B. Measurement for Item 03310-2 FURNISH AND INSTALL CONCRETE LIGHT POLE FOUNDATIONS will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated on the Contract Drawings.

C. Measurement for Item 03310-3 FURNISH AND INSTALL SONOTUBE FOUNDATIONS AT CONDO PASS THROUGH will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated on the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 03310-1 FURNISH AND INSTALL FIBER REINFORCED CONCRETE SLAB will be at the per linear per CUBIC YARD contract price. This price shall include full compensation for excavation, providing and installing all concrete and fiber reinforcement, grouts, epoxy adhesives, and the furnishing of all labor for transportation, forming, finishing, curing, testing and supervision, materials, backfilling, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL FIBER REINFORCED CONCRETE SLAB as shown on the Drawings and as herein specified.

B. Payment for 03310-2 FURNISH AND INSTALL CONCRETE LIGHT POLE FOUNDATIONS will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing concrete, reinforcement, accessories, grouts, epoxy adhesives, backfilling, and the furnishing of all labor for installation, transportation, forming, finishing, curing, testing and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL CONCRETE LIGHT POLE FOUNDATIONS of five (5) cast in place concrete filled sonotube foundations shown on the Drawings and as herein specified.

C. Payment for Item 03310-3 FURNISH AND INSTALL SONOTUBE FOUNDATIONS AT CONDO PASS THROUGH will be at the LUMP SUM contract price. This price shall include full compensation for excavation, providing and installing, concrete, reinforcement, accessories, grouts, epoxy adhesives, backfilling, and the furnishing of all labor for installation, curing, testing and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL SONOTUBE FOUNDATIONS AT CONDO PASS THROUGH as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
03310-1	FURNISH AND INSTALL FIBER REINFORCED CONCRETE SLAB	CUBIC YARD
03310-2	FURNISH AND INSTALL CONCRETE LIGHT POLE FOUNDATIONS	EACH
03310-3	FURNISH AND INSTALL SONOTUBE FOUNDATIONS AT CONDO PASS THROUGH	LUMP SUM

END OF SECTION

SECTION 03400

WATERFRONT PRECAST CONCRETE

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. The Work covered under this Section of these Specifications consist of furnishing all plant, labor, supervision, equipment, appliances and materials and in performing all operations in connection with the installation of reinforced concrete for all aspects of the project, all in strict accordance with the Contract Documents.

B. The work includes, but is not limited to, the following items:

1. Construction of precast concrete sheet pile cap at the interface of the park path and all work incidental thereto.

1.02 SUBMITTALS

A. Shop Drawings of precast members

B. Anchorage and lifting inserts and devices

C. Contractor-furnished mix design

1. Submit copies of laboratory test reports showing that the mix has been successfully tested to produce concrete with the properties specified and that mix will be suitable for the job conditions. Laboratory test reports shall include mill test and all other test for cement, aggregates, and admixtures. Provide maximum nominal aggregate size, gradation analysis, percentage retained and passing sieve, and a graph of percentage retained versus sieve size. Test reports shall be submitted along with the concrete mix design. Obtain approval before concrete placement.

D. Quality control procedures: Submit quality control procedures established in accordance with PCI MNL-116 by the precast manufacturer.

E. Construction records of the manufacturing, handling, and erection of the precast concrete members shall be submitted.

F. Galvanized steel bars: Written certification for galvanized bars shall be submitted with the delivery of the bars.

G. Concrete batch ticket information.

1.03 QUALITY ASSURANCE

A. Codes and Standards: Comply with provisions of the latest edition of the following codes, specifications, and standards, except where more stringent requirements are shown or specified:

1. ACI 301 "Specifications for Structural Concrete for Buildings."
2. ACI 318 "Building Code Requirements for Reinforced Concrete."
3. Concrete Reinforcing Steel Institute (CRSI), "Manual of Standard Practice."
4. Precast/Prestressed Concrete Institute (PCI).
5. PCI MNL-116 (1999) Manual for Quality Control for Plants and Production of Structural Precast Concrete Products.
6. PCI MNL-120 (2010) PCI Design Handbook - Precast and Prestressed Concrete.

B. Qualifications: Plants used for fabrication of precast elements shall be certified by the PCI Plant Certification Program for Category C1 work. At DCR's option, PCI Plant quality control program records shall be available for review. Where elements are manufactured by specialists in plants not currently enrolled in the PCI "Quality Control Program," provide a product quality control system in accordance with PCI MNL-116 and perform concrete and aggregate quality control testing using an approved, independent commercial testing laboratory. Submit test results to the Engineer.

C. Erector Qualifications: The erector shall be regularly engaged for at least three years in the erection of precast structural concrete similar to the requirements of this project.

D. Welding Qualifications: Provide AWS D1.1/D1.1M qualified welders who are currently certified at contract award date and have maintained their certificates over the past year.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Transporting Members: In transporting members by truck, railroad car, or barge, provision shall be made for supporting the members as described above, except battens can be continuous over more than one stack of units, with adequate bracing to ensure their maintaining the vertical position and damping of dangerous vibrations. Trucks with double bolsters are satisfactory provided the members are fully seated on the outer bolsters at not more than 3 feet or the depth of the member from the end and the inner bolster is not more than 8 feet from the end of the member or the designated pickup point. Adequate padding material shall be provided between tie chains or cables to preclude chipping of concrete.

B. Lateral Deflection or Vibration: Any noticeable indication of lateral deflection or vibration during transportation shall be corrected by rigid bracing between members or by means of lateral trussing.

C. Storage

1. Storage Areas: Storage areas for precast members shall be stabilized, and suitable foundations shall be provided, so differential settlement or twisting of members will not occur.
2. Stacked members: Stacked members shall be separated and supported by battens placed across the full width of each bearing point. Battens shall be arranged in vertical planes at a distance not greater than the depth of the member from designated pickup points. Battens shall not be continuous over more than one stack of precast units. Stacking of members shall be such that lifting devices will be accessible and undamaged. The upper members of a stacked tier shall not be used as storage areas for shorter members or equipment.

D. Handling of Members: The location of pickup points for handling of the members and details of the pickup devices shall be shown in Shop Drawings. Members shall be handled only by means of approved devices at designated locations. Members shall be maintained in an upright position at all times and picked up and supported as shown in approved Shop Drawings.

PART 2 - PRODUCTS

2.01 CONCRETE MATERIALS

A. Portland Cement: ASTM C150, Type I or Type II, air entrained.
B. Use one brand of cement throughout project, unless otherwise acceptable to DCR.
C. Normal Weight Aggregates: ASTM C33 and as herein specified. Provide aggregates from a single source for exposed concrete.
D. For exterior exposed surfaces, do not use fine or coarse aggregates containing spalling-causing deleterious substances.
E. Water: Drinkable
F. Calcium Nitrite Corrosion Inhibitors: AASHTO M-194.
G. Silica Fume: Shall not be permitted.
H. Fly Ash: AASHTO M-295.

I. GGBF Slag: AASHTO M 302.

2.02 REINFORCING MATERIALS

A. Reinforcing Bars: New, deformed billet steel bars, conforming to ASTM A615, Grade 60, Galvanized in accordance with ASTM A767/A767M.

B. Welded wire mesh (WWM) shall confirm to the requirements of ASTM A185 or ASTM A497, with a minimum yield strength of 65,000 pounds per square inch (psi). WWM shall be galvanized in accordance with ASTM A767/A767M. Any damage to the coating or galvanizing of the metal shall be repaired by the application of two heavy coats of Amerlock 400 or equal high solids epoxy. Touch up shall be applied as per manufacturer's instructions to provide a coating equal to the original finish.

C. Accessories: All spacers, chairs, bolsters, and other devices necessary for proper reinforcing steel placement shall be galvanized with nylon tipped legs. All reinforcing steel shall be adequately tied with nylon, epoxy, or plastic-coated tie wire and supported with galvanized that hold the bars to the specified clearance. One chair sample shall be submitted to the Engineer for review. No clay or concrete bricks or any other material other than reviewed chairs shall be permitted to support reinforcing steel.

D. Do not use reinforcement having any of the following defects:
   1. Bar lengths, depths, or bends exceeding the specified fabricating tolerances.
   2. Bends or kinks not indicated on the Drawings or required for this Work.
   3. Bars with cross section reduced due to excessive rust or other causes.

2.03 EMBEDDED ITEMS

A. Embedded items, bolts, nuts, plates and reinforcing bar splicers shall be galvanized in accordance with the requirements of ASTM A153, Zinc Coating (Hot Dip) on Iron and Steel Hardware, prior to installation.

2.04 PROPORTIONING AND DESIGN OF MIXES:

A. The Contractor shall prepare design mixes for each type and strength of concrete by either laboratory trial batch or field experience methods as specified in ACI 301. If trial batch method used, use an independent testing facility acceptable to DCR for preparing and reporting proposed mix designs. The testing facility shall not be the same as used for field quality control testing.

B. The Contractor shall submit written reports to DCR of each proposed mix for each class of concrete at least 15 days prior to start of Work. Do not begin concrete production until DCR has reviewed mixes.

C. The Contractor shall design mixes to provide normal weight concrete with the following properties, as indicated on drawings and schedules: 5,000 psi 28-day compressive strength; ¾-inch aggregate, W/C ratio, 0.40 maximum (air-entrained) with Silica Fume at the rate of 6% +/- 1.5% of the total cementitious content and Calcium Nitrite Corrosion Inhibitor at 3 gallons per cubic yard.

D. Aggregate, coarse: Crushed rock or washed gravel with a maximum size of 3/4".

E. Concrete shall contain an admixture of either fly ash or ground granulated blast-furnace slag or a combination of fly ash and ground granulated blast-furnace (GGBF) slag. Fly ash, if used instead of GGBF slag, shall constitute 20% (dry weight) of the cementitious content. GGBF slag, if used instead of fly ash, shall constitute 25% (minimum dry weight) to 40% (maximum dry rate) of the cementitious content. Combinations of fly ash and GGBF slag may be used provided that the permeability and strength provisions contained herein are satisfied.

F. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant; at no additional cost to DCR and as accepted by DCR. Laboratory test data for revised mix design and strength results shall be submitted to and accepted by DCR before using in work.

G. Admixtures: Use water-reducing admixture or high range water-reducing admixture (super plasticizer) in concrete as required for placement and workability.

1. Use air-entraining admixture in exterior exposed concrete, unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content of 6.0 percent with a tolerance of plus-or- minus 1-1/2 percent.
2. Use admixtures for water reducing and set-control in strict compliance with manufacturer's directions.

H. Water-Cement Ratio: Provide concrete for following conditions with maximum water-cement (W/C) ratios as follows:

1. Subjected to brackish water, salt spray, or deicers; W/C 0.40.
2. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement of not less than 1" and no more than 4".

2.05 FORMS

A. Brace forms to prevent deformation. Forms shall produce a smooth, dense surface.

2.06 CONCRETE CURING

A. Commence curing immediately following the initial set and completion of surface finishing. Provide curing procedures to keep the temperature of the concrete between 50 and 190 degrees F. When accelerated curing is used, apply heat at controlled rate and uniformly along the casting beds. Monitor temperatures at various points in a product line in different casts.

2.07 SURFACE FINISH

A. Repairs located in a bearing area shall be approved by the Engineer of Record prior to repairs. Precast members containing hairline cracks which are visible and are less than 0.01 inches in width, may be accepted, except that cracks larger than 0.005 inches in width for surfaces exposed to the weather shall be repaired. Defects that involve more than 36 square inches of concrete shall be grounds for rejection. Any precast member that is structurally impaired or contains honeycombed section deep enough to expose reinforcing shall be rejected. Defects shall be repaired or rejected as specified in paragraph "Defects."

1. Exposed walking surfaces shall receive a light broom finish as follows:
   a. Perform a floated finish, then draw a broom or burlap belt across the surface to produce a coarse scored texture.
   b. Permit surface to harden sufficiently to retain the scoring or ridges.
   c. Broom transverse to traffic or at right angles to the slope of the slab.
   d. Tolerance for concrete floors/walking surfaces shall be conventional straight-edged tolerance in accordance with ACI 117 unless otherwise specified.
2. Unformed Surfaces
   a. Provide a steel troweled finish.
3. Formed Surfaces
   a. Refer to PCI MNL-116 (Appendix A - Commentary), Chapter 3, for grades of surface finishes.
   b. Unexposed Surfaces: Provide a commercial grade surface finish.
   c. Exposed Surfaces: Provide a standard grade surface finish. The combined area of acceptable defective areas shall not exceed 0.2 percent of the exposed to view surface area, and the patches shall be indistinguishable from the surrounding surfaces when dry.

2.08 ACCEPTANCE/REJECTION OF DEFECTS

A. Minor Defects: All honeycombed areas, chipped corners, air pockets over 6 mm 1/4 inch in diameter, and other minor defects involve less than 36 square inches of concrete shall be repaired. Form offsets of fins over 1/8 inch shall be ground smooth. All unsound concrete shall be removed from defective areas prior to repairing. All surfaces permanently exposed to view shall be repaired by a blend of Portland cement and white cement properly proportioned so that the final color when cured will be the same as adjacent concrete.

B. Major Defects: Major defects are those which involve more than 36 square inches of concrete or expose stressing tendons or reinforcing steel. If one or more major defects appear in a member, it shall be rejected. Cracks of a width of more than 0.01 inch shall be cause for rejection of the member.

2.09 TESTS, INSPECTIONS, AND VERIFICATIONS

A. Test Chloride Ion Penetration Test: To ensure the durability of concrete in marine environment, concrete shall be proportioned to have the chloride ion penetration test in accordance with ASTM C1202 and be below 1500 coulombs for concrete specimens tested at 28 days.

B. Factory Inspection: Precast units shall be inspected by the Engineer of Record prior to being transported to the job site. The Contractor shall give notice 14 days prior to the time the units will be available for plant inspection. Neither the exercise nor waiver of inspection at the plant will affect DCR’s right to enforce contractual provisions after units are transported or erected.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to erection, and again after installation, precast members shall be checked for damage, such as cracking, spalling, and honeycombing. As directed by the Engineer, precast members that do not meet the surface finish requirements specified in Part 2 in paragraph entitled "Surface Finish" shall be repaired or removed and replaced with new precast members.

3.02 ERECTION

A. Precast members shall be erected after the concrete has attained the specified compressive strength, unless otherwise approved by the precast] manufacturer. Erect in accordance with the approved Shop Drawings. Refer to PCI MNL-116 and PCI MNL-120 (Chapter 8), for tolerances. Provide a 1:500 tolerance, if no

tolerance is specified. Brace precast members, unless design calculations submitted with the Shop Drawings indicate bracing is not required. Follow the manufacturer's recommendations for maximum construction loads. Place precast members level, plumb, square, and true within tolerances. Align member ends.

3.03 BEARING SURFACES

A. Shall be flat, free of irregularities, and properly sized. Size bearing surfaces to provide for the indicated clearances between the precast member and adjacent precast members or adjoining field placed surfaces. Correct bearing surface irregularities with non-shrink grout. Provide bearing pads where indicated or required. Do not use hardboard bearing pads in exterior locations. Place precast members at right angles to the bearing surface, unless indicated otherwise, and draw-up tight without forcing or distortion, with sides plumb.

3.04 ANCHORAGE

A. Provide anchorage for fastening work in place. Conceal fasteners where practicable. Make threaded connections up tight and nick threads to prevent loosening.

3.05 OPENINGS

A. Holes or cuts requiring reinforcing to be cut, which are not indicated on the approved Shop Drawing, shall only be made with the approval of the Engineer and the precast manufacturer. Drill holes less than 12 inches in diameter with a diamond tipped core drill.

3.06 CONSTRUCTION RECORDS

A Complete construction records shall be kept of the manufacturing, handling, and erection of the precast- concrete members. Records shall be kept for, but not limited to, the following items:

1. Specifications of material used in the manufacture of the members.
2. Records of the inspection of the members each time they are moved.
3. Records of any defects in the member and any corrective measures taken.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 03400-1 FURNISH AND INSTALL PRECAST SHEET PILE CAP will be made on a per LUMP SUM basis for all work described in this

section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 03400-1 FURNISH AND INSTALL PRECAST SHEET PILE CAP will be at the per LUMP SUM contract price. This price shall include full compensation for providing and installing all falsework, steel supports, connections, connection angles, temporary shoring, miscellaneous hardware, reinforcing steel, dowels, lifting attachments, grouts, epoxy adhesives, tie wire, chairs, and spacers, and the furnishing of all labor, including but not limited to forming, finishing, lifting, curing, testing, transportation, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL PRECAST SHEET PILE CAP as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	**DESCRIPTION**	**UNIT**
03400-1	FURNISH AND INSTALL PRECAST SHEET PILE CAP	LUMP SUM

END OF SECTION

SECTION 04410
SITE GRANITE

PART 1 - GENERAL

1.01 DESCRIPTION

A. Attention is directed to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the Commonwealth of Massachusetts Department of Transportation (MassDOT) 2022 Standard Specifications for Highways and Bridges and the Supplemental Specifications, unless otherwise noted herein.

1.02 SUMMARY

A. The principal Work of this Section includes, but may not be limited to:

1. Granite Landscape Curb –Straight, Radial, and Transitional Straight
2. Ornamental Granite Curb Type A and Type B – Straight and Radial
3. Granite Edge at Splashpad –Straight and Radial
4. Reclaimed Granite Block
5. Granite Step
6. Granite Vehicular Curb – Straight and Radial
7. Granite Vehicular Transition Curb – Straight and Radial
8. Remove and Reset Granite Vehicular Curb
9. Existing Granite Curb at Revetment Removed and Reset

1.03 DESCRIPTION OF WORK

A. This Section specifies requirements for the following types of work and related items, but is not limited to:

1. Furnishing and setting granite landscape curb (straight, radial, and transitional straight) to line and grade at the locations shown on the plans and as required by the Engineer.

2. Furnishing and setting ornamental granite curb, Type A and Type B (straight and radial) to line and grade at the locations shown on the plans and as required by the Engineer.

3. Furnishing and setting granite edge at splashpad (straight and radial) to line and grade at the locations shown on the plans and as required by the Engineer.

4. Furnishing and setting reclaimed granite block to line and grade at the locations shown on the plans and as required by the Engineer.

5. Furnishing and setting granite step to line and grade at the locations shown on the plans and as required by the Engineer.

6. Furnishing and setting granite vehicular curb (straight and radial) to line and grade at the locations shown on the plans and as required by the Engineer.

7. Furnishing and setting granite vehicular transition curb (straight and radial) to line and grade at the locations shown on the plans and as required by the Engineer.

8. Remove and reset of granite vehicular curbs to line and grade at the locations shown on the plans and as required by the Civil Engineer.

9. Sawcutting of pavements and sidewalks at the locations shown on the plans and as required by the Engineer.

1.04 RELATED WORK UNDER OTHER SECTIONS

A. Examine all other Items of the specifications for requirements, which affect Work of these Items whether or not such Work is specifically mentioned under these Items. Related Work specified elsewhere:

1. Section 02100 – SITE PREPARATION, DEMOLITION AND REMOVALS
2. Section 02150 – TREE PROTECTION AND PRUNING
3. Section 02200 – SITE EARTHWORK
4. Section 02280 – EXCAVATED SOIL MANAGEMENT
5. Section 02500 – SITE PAVING
6. Section 02510 – VEHICULAR AREAS PAVING
7. Section 02630 – STORM DRAINAGE UTILITIES
8. Section 02665 – WATER PIPING, VALVES AND APPURTENANCES
9. Section 02800 – SITE IMPROVEMENTS

10. Section 02881 – WATER PLAY EQUIPMENT
11. Section 02900 – PLANTING AND LAWNS
12. Section 03300 – CAST IN PLACE CONCRETE
13. Section 05110 – WATERFRONT STRUCTURAL STEEL
14. Section 16100 – PARK AND BOARDWALK LIGHTING

1.05 REFERENCES

A. Referenced Standards: Where references are made in these Specifications to standard specifications, codes, etc., of the U.S. Government, State or local authorities, or professional and industrial societies and associations, the applicable portions thereof shall govern as fully as if they were recited at length herein, and shall include all revisions thereto issued as of the date of the Notice to Contractors pertaining hereto. Comply with the requirements of the following codes and industry standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern. The following reference is used herein and shall mean:

1. AASHTO: American Association of State Highway and Transportation Officials, Standard Specifications, latest edition.
2. ASTM: American Society of Testing and Materials "Annual Book of ASTM Standards", latest edition.
3. ADA: Americans with Disabilities Act, latest edition and latest edition of the "Accessibility Guidelines for Buildings and Facilities, Transportation Facilities and Transportation Vehicles" of the United States Architectural and Transportation Barriers Compliance Board.
4. AAB: Architectural Access Board, Commonwealth of Massachusetts Regulation Chapter 521 CMR, latest edition.
5. OSHA: Occupational Safety and Health Administration, U.S. Department of Labor, latest requirements.

B. Coordinate Work with that of all other trades affecting, or affected by Work of these Items. Cooperate with such trades to assure the steady progress of all Work under the Contract.

1.06 ACCESSIBILITY CODES

A. From time to time there are changes made in the federal and /or state accessibility and /or building codes or it is determined that different codes are applicable to a site. Such determinations or changes may occur during the course of the construction of this project. If changes become necessary to meet codes a change order shall be issued by the Engineer to cover statutory requirements.

B. The Federal PROWAG Guidelines and 521 CMR Rules and Regulations of the AAB and ADA shall be adhered to on this project. The project must be constructed in accordance with 521 CMR.

1.07 QUALITY ASSURANCE

A. Coordinate Work with that of all other trades affecting, or affected by Work of these Items. Cooperate with such trades to assure the steady progress of all Work under the Contract.

B. REFER to Section 03300 – CAST-IN-PLACE CONCRETE for work and materials associated with the construction of base slabs and foundations for Granite Work.

C. Dimensions, locations, and details of anchors, supports, and similar features shown on the Contract Drawings are approximate. Manufacturer's approved shop drawings of equipment to be supported, anchored, or contained thereby shall be consulted for exact location, size and details.

D. Install granite to withstand normal loads from gravity, movement of structure, and thermally induced movement, as well as to resist deterioration under conditions of normal use including exposure to weather, without failure.

E. Obtain each type of granite required from a single quarry with resources to provide materials of consistent quality in appearance and physical properties, including the capacity to cut and finish material without delaying the progress of work.

F. Obtain mortar ingredients of uniform quality and from one manufacturer for each cementitious and admixture component.

G. The Contractor is responsible for meeting the following ADA construction tolerances:

1. Final graded surface of all pedestrian pavement areas is to comply to Federal ADA accessibility regulations with a maximum allowed running slope of 5% and a maximum allowed cross slope of 2%. The Contractor shall be responsible for demonstrating adherence to these regulations at the time of final acceptance and prior to contract completion and final payment.

2. Final graded surfaces of all vehicular pavement areas designated for ADA accessibility on the contract drawings are to comply to Federal ADA accessibility regulations with a maximum allowed running slope of 5% and maximum allowed cross slope of 2%.

3. All paved surfaces are to have a minimum of 1% cross slope on all finished surfaces, which should be pitched to drain as shown on Contract Drawings.

1.08 SUBMITTALS

A. Product Data: For each type of product indicated. Retain quality control records and certificates of compliance for 5 years or period of warranty, whichever is greater.

1. Product analysis and color selection for portland cement for joint mortar.

2. Product analysis for joint sealer.

3. Provide a certificate of origin for all stone material.

B. Design Mixes: For each concrete mix along with compressive strength and water-absorption tests.

C. Shop Drawings: Detailed fabrication and installation of all granite units. Indicate member locations with distinctive marks that match marks placed on the panels. Provide to-scale plans, elevations, dimensions, corner details, shapes, cross sections and relationships to adjacent materials. Indicate locations, tolerances and details of anchorage devices to be embedded in or attached to structure or other construction. Shop drawings shall indicate the relationship of granite pieces to adjacent materials.

1. Submit complete and site-specific shop drawings for layout of Granite Landscape Curb – Straight, Radial, and Transitional Straight.

2. Submit complete and site-specific shop drawings for layout of Ornamental Granite Curb Type A and B – Straight and Radial.

3. Submit complete and site-specific shop drawings for layout of Granite Edge at Splashpad – Straight and Radial.

4. Submit complete and site-specific shop drawings for layout of Granite Step. Refer to Article 3.10 Handrails for coordination of Handrail at Plaza Granite Steps specified in Section 02880 – SITE IMPROVEMENTS.

5. Submit complete and site-specific shop drawings for layout of Granite Vehicular Curb – Straight and Radial.

6. Submit complete and site-specific shop drawings for layout of Granite Vehicular Transition Curb – Straight and Radial.

7. Submit complete and site-specific shop drawings for layout of Remove and Reset Granite Vehicular Curb.

8. Submit complete and site-specific shop drawings for layout of Existing Granite Curb at Revetment Removed and Reset.

9. Contractor shall coordinate granite and concrete shop drawings and submit for review to Landscape Architect and Engineer before construction.

10. Individual granite segments on shop drawings shall be clearly labeled and numbered and used for coordination of granite installation.

11. Design Modifications: If design modifications are necessary to meet the performance requirements and field conditions, submit design alternatives that do not adversely affect the appearance, durability or strength of units when modifying details or materials and maintain the general design concept.

D. Qualification Data for fabricator and professional engineer: List of completed projects with project names and addresses, names and addresses of Resident Engineers and owners, and other information specified.

E. Concrete strengths and mix designs for concrete foundation work. See also Section 03300-Cast In Place Concrete.

F. Material Certificates: Signed by manufacturers certifying that each of the following items complies with requirements.

1. Granite Landscape Curb – Straight, Radial, and Transitional Straight
2. Ornamental Granite Curb Type A and Type B – Straight and Radial
3. Granite Edge at Splashpad – Straight and Radial
4. Granite Step
5. Granite Vehicular Curb – Straight and Radial
6. Granite Vehicular Transition Curb – Straight and Radial
7. Reclaimed Granite Block
8. Concrete materials
9. Reinforcing materials.
10. Admixtures.
11. Mortar and Grout Materials
12. Expansion Joint Materials, including Dowel, Backer Rod and Joint Sealer

G. Manufacturer’s product sheets and color samples for grout, mortar, Laticrete, backer rods, and sealants.

H. Samples:

1. Stone samples for each color, grade, finish, type and variety of granite stone required. Include two or more stone samples in each set of samples showing the full range of variations in appearance characteristics to be expected in completed work.

   a. Granite for Granite Landscape Curb - 12" long representative samples of granite to be used for curbs showing the finishes specified.

   b. Granite for Granite Ornamental Curb - 12" long representative samples of granite to be used for curbs showing the finishes specified.

   c. Granite for Granite Edge at Splashpad - 12" long representative samples of granite to be used for curbs showing the finishes specified.

   d. Granite for Granite Step - 12" long representative samples of granite to be used for steps showing the finishes specified.

   e. Granite for Granite Vehicular Curb - 12" long representative samples of granite to be used for curbs showing the finishes specified.

   f. Granite for Granite Vehicular Transition Curb - 12" long representative samples of granite to be used for curbs showing the finishes specified.

2. Provide photographs of Reclaimed Granite Blocks, showing dimensions and color variations. Provide source location and supplier name and contact information.

3. Provide at least three (3) grout samples after selection from full range of colors provided in manufacturer's literature, in colors slightly darker in similar hue of each color of granites for selection by Landscape Architect.

4. Samples of stainless-steel fasteners, dowels, clips, and other provisions for supporting, anchoring and bonding of stonework as required.

I. Field Mock-ups:

1. Locations of mock-ups shall be reviewed by the Landscape Architect before construction.

2. Mock-ups shall be rebuilt as many times as is required for approval, should construction not follow the requirements of the construction documents and approved samples and submittals.

3. Approved mockup may become part of the final work if appropriately located, or as a stand-alone sample near where the final installation will be constructed.

4. Mock-ups required:

   a. Granite Landscape Curbing shall incorporate at least 10 feet including 6” ht. straight, radial, and transitional straight landscape curb and flush granite landscape curb conditions, showing typical setting, joints, stone, and finish.

   b. Ornamental Granite Curb shall incorporate a six-foot-long section including straight and radial curb, showing typical setting, joints, stone, and finish.

   c. Granite Edge at Splashpad shall incorporate a six-foot-long section including straight and radial curb, showing typical setting, joints, stone, and finish.

   d. Reclaimed Granite Block row at boardwalk location incorporating minimum 2 blocks in a continuous row showing relationship to sloped embankment and decking as per drawings, and showing typical setting, joints, stone, and finish.

   e. Granite Step shall incorporate two steps showing typical setting, jointing and finish.

   f. Granite Vehicular Curbing shall incorporate at least 10 feet including 6” ht. straight and radius landscape curb and granite vehicular transition curb, showing typical setting, joints, stone, and finish.

1.09 DELIVERY, STORAGE, AND HANDLING

A. Contractor shall arrange delivery of materials in a manner timely to the construction schedule at particular site locations and to avoid exposing materials for excessive lengths of time to adjacent construction operations.

B. Store and handle granite and related materials to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion, breakage, chipping or other causes.

C. Store granite on wood skids or pallets, covering with non-staining, waterproof covers or enclosures that allow for air to circulate around stones. Place and stack

skids and granite stones to distribute weight evenly and to prevent breakage or cracking of stones.

D. Store sand and cementitious materials off the ground, under cover in a dry location.

E. Take all necessary precautions to protect all items from moisture, chipping, cracking, or other damage, during the transportation of these materials to the project, unloading and storage on the site. After delivery take all necessary precautions to prevent all items from chipping, cracking, construction dust and debris, or damage of any kind. Damaged units will not be allowed to be installed and should any damage units be found in constructed work, such units shall be removed immediately and replaced with new units, and the Contractor shall assume all expenses incurred.

F. Any surplus materials shall become the property of the Contractor and removed from the site or otherwise legally disposed of.

1.10 QUALIFICATIONS

A. Contractor Qualifications: All construction and installation of concrete and masonry and related work shall be assigned to an experienced and qualified Contractor with a minimum of five (5) years of experience with projects incorporating similar work and who employs experienced workmen who work under the full time supervision of a qualified foreman with a minimum of five (5) years of experience as a supervising foreman.

1.11 GUARANTEES

A. The Contractor shall obtain, in the Engineers' name; the standard written manufacturer’s guarantee of all materials furnished under this Section where such guarantees are offered in the manufacturer’s published product literature. All of these guarantees shall be in addition to, and not in lieu of, other liabilities, which the Contractor may have under law.

B. In addition to manufacturers’ guarantees, the Contractor shall warrant all work, both materials and labor, for a period of one year from date of acceptance by the Engineer. The Contractor shall be held strictly responsible for all parts of his work. If failure in the work develops within one (1) year of the date of final approval and acceptance of the work, the Contractor shall be required to replace all faulty materials at his full expense. To this end, the Contractor is advised to purchase materials under a warranty from the manufacturer guaranteeing proper service under the conditions, which are established by the Drawings, Specifications, and local conditions.

C. The Contractor shall furnish labor and materials to fulfill the requirements of this warranty at no additional cost to the Owner. All labor shall include premium time to correct any faulty material or workmanship and all materials required to complete the work.

PART 2 – PRODUCTS

2.01 GRANITE LANDSCAPE CURB – STRAIGHT, RADIAL, AND TRANSITIONAL STRAIGHT

A. Granite Landscape Curb shall be similar to New Type VA4 and shall meet the requirements of M9.04.1 of the Massachusetts Highway Department Standard Specifications for highways and bridges, except as note herein:

a. Granite Landscape Curb shall have a thermal finish on top with typical VA 4 faces on all other sides and have a minimum of 4’ foot length.

B. Granite Landscape Curb shall be fabricated to dimensions shown on Landscape Architect’s Drawings.

2.02 ORNAMENTAL GRANITE CURB TYPE A – STRAIGHT AND RADIAL

A. Granite for Ornamental Granite Curb Type A shall meet NBGQA Granite Building Stone Standard: ASTM C 615, unless otherwise requested by Contractor and accepted by the Engineer.

1. Granite for Ornamental Granite Curb shall be ***“Cambrian Black”,*** as supplied by:

Polycor
76 Rue Saint-Paul, Suite 100
Quebec City, Quebec Canada G1K3V9
Tel: 202-870-2102, Contact: Igor Zgodic, email: igor@polycor.com,
website: www.polycor.com
or approved comparable, color and performance matched equal. Other granites of similar shade, grain and performance may be submitted by the Contractor for use only after review and acceptance of the color, grain pattern, finish and ASTM testing results by the Landscape Architect.

2. Top and all exposed faces of curb shall be thermal finished. Outside faces shall be vertical with radius top corners and fabricated to dimensions shown on Contract Drawings.

3. Minimum curb lengths to be 4’ unless otherwise noted on Contract Drawings, or in approved shop drawings.

B. Granite color and grain shall be medium to fine grain, free from damage, visible blemishes not typical for approved samples (natural to the stone or caused during delivery, storage, or construction) errant color and iron stains, deposits or seams, and shall match samples approved by the Landscape Architect, or will be rejected. Rust stains from natural cleft deposits or seams that appear after installation and before Final Acceptance may be cause for rejection and replacement of stone at Contractor's expense. Granite appearance, as specified on the Drawings, specified herein, and exhibited in approved sample submittals shall be consistent throughout the Project.

2.03 ORNAMENTAL GRANITE CURB TYPE B – STRAIGHT AND RADIAL

A. Granite for Ornamental Granite Curb Type B shall meet NBGQA Granite Building Stone Standard: ASTM C 615, unless otherwise requested by Contractor and accepted by the Engineer.

1. Granite for Ornamental Granite Curb shall be ***"Cambrian Black",*** as supplied by:

Polycor
76 Rue Saint-Paul, Suite 100
Quebec City, Quebec Canada G1K3V9
Tel: 202-870-2102, Contact: Igor Zgodic, email: igor@polycor.com,
website: www.polycor.com
or approved comparable, color and performance matched equal. Other granites of similar shade, grain and performance may be submitted by the Contractor for use only after review and acceptance of the color, grain pattern, finish and ASTM testing results by the Landscape Architect.

2. Top and all exposed faces of curb shall be thermal finished. Outside faces shall be vertical with radius top corners and fabricated to dimensions shown on Contract Drawings.

3. Minimum curb lengths to be 4' unless otherwise noted on Contract Drawings, or in approved shop drawings.

B. Granite color and grain shall be medium to fine grain, free from damage, visible blemishes not typical for approved samples (natural to the stone or caused during delivery, storage, or construction) errant color and iron stains, deposits or seams, and shall match samples approved by the Landscape Architect, or will be rejected. Rust stains from natural cleft deposits or seams that appear after installation and before Final Acceptance may be cause for rejection and replacement of stone at Contractor's expense. Granite appearance, as specified on the Drawings, specified

herein, and exhibited in approved sample submittals shall be consistent throughout the Project.

2.04 GRANITE EDGE AT SPLASHPAD – STRAIGHT AND RADIAL

A. Granite for Granite Edge at Splashpad shall meet NBGQA Granite Building Stone Standard: ASTM C 615, unless otherwise requested by Contractor and accepted by the Engineer.

1. Granite for Granite Edge at Splashpad shall be ***"Cambrian Black",*** as supplied by:

   Polycor
   76 Rue Saint-Paul, Suite 100
   Quebec City, Quebec Canada G1K3V9
   Tel: 202-870-2102, Contact: Igor Zgodic, email: igor@polycor.com,
   website: www.polycor.com
   or approved comparable, color and performance matched equal. Other granites of similar shade, grain and performance may be submitted by the Contractor for use only after review and acceptance of the color, grain pattern, finish and ASTM testing results by the Landscape Architect.

2. Granite Edge at Splashpad shall be fabricated to dimensions show on the Drawings. Granite Edge at Splashpad to be sawcut on five (5) sides with a thermal finish on top in minimum 4' foot lengths.

B. Granite color and grain shall be medium to fine grain, free from damage, visible blemishes not typical for approved samples (natural to the stone or caused during delivery, storage, or construction) errant color and iron stains, deposits or seams, and shall match samples approved by the Landscape Architect, or will be rejected. Rust stains from natural cleft deposits or seams that appear after installation and before Final Acceptance may be cause for rejection and replacement of stone at Contractor's expense. Granite appearance, as specified on the Drawings, specified herein, and exhibited in approved sample submittals shall be consistent throughout the Project.

2.05 RECLAIMED GRANITE BLOCK

A. Reclaimed Granite Block shall be salvaged and sourced locally. Reclaimed Granite Blocks shall have a naturally aged and weathered appearance free from significant cracks, oil stains, or other deleterious materials. Hand-split or hand-hewn textures are preferred. Landscape Architect reserves the right to reject any Reclaimed Granite Block material that does not meet the specified aesthetic or quality standards.

B. Color shall be typical of New England granites, exhibiting a range of grey, pink, and tan tones.

C. Dimensions: Reclaimed Granite Blocks dimensions are variable but shall typically be 5'-0" to 8'-0" long, 1'-2" to 1'-6" wide, and 2'-3" to 2'-6" high.

2.06 GRANITE STEP

A. Granite for Granite Step shall meet NBGQA Granite Building Stone Standard: ASTM C 615, unless otherwise requested by Contractor and accepted by the Engineer.

1. Granite for Granite Step shall be ***"Cambrian Black",*** as supplied by:

Polycor
76 Rue Saint-Paul, Suite 100
Quebec City, Quebec Canada G1K3V9
Tel: 202-870-2102, Contact: Igor Zgodic, email: igor@polycor.com,
website: www.polycor.com
or approved comparable, color and performance matched equal. Other granites of similar shade, grain and performance may be submitted by the Contractor for use only after review and acceptance of the color, grain pattern, finish and ASTM testing results by the Landscape Architect.

2. Top and all exposed faces of steps shall be thermal finished. Outside top edges shall be eased and fabricated to dimensions shown on Contract Drawings.

B. Granite color and grain shall be medium to fine grain, free from damage, visible blemishes not typical for approved samples (natural to the stone or caused during delivery, storage, or construction) errant color and iron stains, deposits or seams, and shall match samples approved by the Landscape Architect, or will be rejected. Rust stains from natural cleft deposits or seams that appear after installation and before Final Acceptance may be cause for rejection and replacement of stone at Contractor's expense. Granite appearance, as specified on the Drawings, specified herein, and exhibited in approved sample submittals shall be consistent throughout the Project.

2.07 GRANITE VEHICULAR CURB – STRAIGHT AND RADIAL

A. Granite Vehicular Curb shall be New Type VA4 and shall meet the requirements of M9.04.1 of the Massachusetts Highway Department Standard Specifications for highways and bridges.

B. Granite Vehicular Curb shall be fabricated to dimensions shown on Civil Engineer's Drawings and Details.

2.08 GRANITE VEHICULAR TRANSITION CURB – STRAIGHT AND RADIAL

A. Granite Vehicular Transition Curb shall be New Type VA4 and shall meet the requirements of M9.04.1 of the Massachusetts Highway Department Standard Specifications for highways and bridges.

B. Granite Vehicular Transition Curb shall be fabricated to dimensions shown on Civil Engineer's Drawings and Details.

2.09 GROUT

A. Latex Modified Grout for Joints

1. Grout for joints shall be composed of 4:1 mix of stone dust latex modified grout. Joint infill shall be composed of a dry 4:1 mix of stone dust and grout, well watered in.

2. Provide latex-modified Portland cement grout complying with the requirements of ANSI A118.6.

3. Latex admixture shall be acrylic emulsion type. Polyvinyl acetate, styrene butadiene rubber, or ethylene vinyl acetate type admixtures shall not be acceptable.

4. Provide grout in approved colors matching split stone facing w/tooled joints

5. Mix latex modified grout according to manufacturer's recommendations.

6. Remixing or use of partially hardened grout is prohibited.

7. Mortar color for joints shall be selected from samples provided for review by Landscape Architect and shall compliment the color of the dressed cut stone and natural stone salvaged for reuse

2.10 PORTLAND CEMENT CONCRETE FOR USE IN FOUNDATIONS

A. All materials required for installation of concrete cradle foundations relating to granite site improvements shall conform to those specified in Section 03300-CAST IN PLACE CONCRETE.

2.11 MORTAR

A. Mortar Setting Bed

1. Provide flexible latex-portland cement mortar system complying with all requirements of ANSI A118.4. for setting beds for copings and base of facing to sizes indicated on the Drawings

2. Latex admixture shall be acrylic emulsion type. Polyvinyl acetate, styrene butadiene rubber, or ethylene vinyl acetate type admixtures shall not be acceptable.

3. Mix latex-modified mortar per manufacturer's recommendations.

4. Remixing or use of partially hardened mortar is prohibited.

2.12 GRANULAR BASE MATERIALS

A. Granular base materials shall conform to the requirements of MassDOT Gravel Borrow Type ‘B’ as described in Section 02200 SITE EARTHWORK.

PART 3 – EXECUTION

3.01 EXAMINATION AND PREPARATION

A. Contractor shall examine areas to receive granite stonework and conditions under which granite stonework will be installed and report in writing any conditions which are not in compliance with requirements indicated in specifications, Contract Drawings or approved Shop Drawings and Submittals. Do not proceed with installation until areas and conditions comply with requirements.

B. Review subgrades and finished grades to verify ADA compliance in the field before construction and report in writing any ADA compliance issues to Field Engineer for review with Landscape Architect.

C. Ensure that stones are dry and clean, especially surfaces to receive mortar and grout, before installing. Use only clean, potable water and mild cleaning compounds and brushes that do not scratch, abrade, or otherwise damage the surfaces.

D. Coordinate stone fabrication and installation with sleeve locations for utilities, irrigation system and other structural elements or requirements.

3.02 GENERAL

A. Comply with each of the applicable technical Specifications. All granite items located on the Contract Drawings shall be fabricated and installed by the Contractor as detailed on the approved shop drawings, as per suppliers' and fabricators' written installation procedures, as approved by the Landscape Architect. All fabrication and installation work shall be accomplished using the highest standards of workmanship and shall include all excavation, labor, transportation and incidentals to make the work complete.

B. Granite must be protected during transport, delivery, storage, and installation. Any damage or failure such as chipping, scratches, or cracking of any kind in granite before acceptance may be cause for rejection of stone and replacement at Contractor's expense.

C. Contractor shall schedule delivery of items and all necessary equipment and hardware so as to arrive at the site in a timely manner to comply with construction schedule and minimize on-site storage time. The Contractor shall be ready to discuss the purchasing of stonework items with long lead times for procurement and/or fabrication at the beginning of the Contract so suitable arrangements can be made to meet the date of completion. Items delivered to the site prior to scheduled installation time shall be stored in a secured staging area with all small components retained separately by the Contractor. Protect all items from weather, careless handling, ongoing construction in the vicinity, vandals or pilferers.

D. Stake locations of all items in the field and construct mock-up for review and approval of the Landscape Architect before commencing final construction.

E. Contractor shall install all granite items level and with plumb vertical alignment, or as indicated otherwise on the Contract Drawings.

F. Project Conditions: Installation of items shall follow Manufacturer's guidelines for project conditions during installation. Do not mortar or install concrete work of any kind when the temperature is less than 40 degrees or warmer than 90 degrees Fahrenheit or in the rain or when rain is predicted within 24 hours of scheduled construction of site item.

1. Cold Weather Construction: Stone items to be installed and associated materials, such as the base course and mortars, shall be heated when the mean daily temperature is below 40°F or is expected to fall to or below 40°F within 72 hours. The masonry installation shall be protected by covering, heat, or both, for the entire duration of the curing period.

a. Details of handling and protecting of concrete during freezing weather shall be subject to the review and approval of the Engineer. Procedures shall be in accordance with provisions of ACI 306R.

2. Hot Weather Construction: Masonry just mortared shall be protected from the direct rays of the sun and the forms and reinforcement just prior to placing shall be sprinkled with cold water. Every effort shall be made to minimize delays which will result in excessive mixing of the concrete after arrival on the site.

a. During periods of excessively hot weather (95°F., or above), ingredients in the mortar shall be cooled to maintain the temperature at permissible levels in accordance with the provisions of ACI 305. Any mortar with a temperature above 95°F., when ready for use, will be rejected.

b. Temperature records shall be maintained throughout the construction period of hot weather and cold weather giving air temperature, general weather conditions (calm, windy, clear, cloudy, etc.) and relative humidity.

G. Gravel borrow base and backfill for site masonry shall be installed per drawings and in conformance with the construction methods of Section 02200 –SITE EARTHWORK. Compaction shall not be less than 95% dry density.

H. Cast-in-place concrete base and footings for site masonry items shall be installed per the requirements of Section 03300 – CAST IN PLACE CONCRETE.

I. Non-shrink grout for site masonry dowels and fasteners shall be installed in conformance with the following requirements:

1. Preparation: Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles, and disintegrated materials. Use mechanical abrasion as necessary on structural steel and reinforcing steel to remove loose material and expose sound metal. Clean concrete surfaces as necessary, using a degreasing and etching chemical applied in accordance with the manufacturer's written instructions for the particular application. Construct appropriate forms to contain grout at the fluidity level at which it will be used. Saturate foundations and forms with water for a minimum of 24 hours prior to grouting. Take special care to eliminate water from bolt holes and other cavities.

2. Mixing: Mix with potable water according to manufacturer's printed instructions.

3. Placement: Follow manufacturer's placement instructions and recommendations for the particular application. Place grout only from one side to avoid entrapping air. Provide adequate air vent holes in large placements. Work or flow grout into place, filling all cavities. Place grout within time limit specified by manufacturer after addition of water to the batch.

J. Sealant for site masonry shall be placed following the manufacturer's instruction and recommendations for the particular application. Place sealant from one side only to avoid trapping air. Work or flow sealant into place, filling all cavities. Shut down nearby equipment which may cause vibration. Finished sealant surface shall not be recessed and shall not allow for ponding of water. Apply sealant near end of construction after initial acceptance of the work.

K. Any incidence of damage, vandalism, or theft of any item during installation shall be reported immediately to the Landscape Architect, remedial action shall be decided, and repairs made to the satisfaction of the Landscape Architect. The Contractor is required to secure all items of the Work from access by the Public until Final Acceptance, unless otherwise permitted by the Landscape Architect.

3.03 EXCAVATION

A. Contractor shall excavate to the lines and grades shown on the Contract Drawings. Contractor shall take precautions to minimize over-excavation. Over-excavation shall be filled with compacted infill material, as specified under Section 02200 - EARTHWORK, or as directed by the Landscape Architect, at the Contractor's expense.

B. Contractor shall verify location of existing structures and utilities prior to excavation. Contractor shall ensure all surrounding structures are protected from the effects of excavation. Excavation support, if required, is the responsibility of the Contractor.

3.04 GRANITE INSTALLATION **(ALL TYPES)**

A. Granite fabrication and installation work shall include all excavation, base materials, concrete footings, labor, transportation and incidentals to make the work complete.

B. Ensure that curved segments of granite stonework are cut and laid to smooth true curves.

C. After wetting stone and concrete surfaces that will receive mortar, apply mortar to both surfaces sufficiently to result in the final mortar thickness shown on the approved shop drawings. Set stones to comply with pattern and joint requirements

specified in the approved shop drawings and to match as closely as possible items reviewed and approved by Landscape Architect in granite mock-ups. Install all specified anchors, dowels, pins, supports, fasteners, and other attachments indicated or necessary to secure stonework in place and according to manufacturer's instructions. Shim with neoprene shims if required and adjust anchors, supports, and accessories to set stones with uniform joints and edges and faces aligned according to specified tolerances and shown in the Contract Documents.

D. Colored Latex Modified Grout shall be installed where indicated in the Contract Drawings, per ASTM C 476 for "Fine Grout" and per manufacturer of latex-modifier's printed instructions. After grout has set sufficiently to form tight bond, follow manufacturer's instructions and required conditions for installing specific joint materials in granite items and for protect all stone and accessories during installation.

E. Jointing grout, in approved color, shall be installed in joints other than in masonry expansion joints. Grout shall be forced into the joints by troweling, and tooled with slight concave joint, flush at edges of granite. Excess grout shall be immediately removed from surfaces and stone shall be cleaned.

F. Unfilled expansion joints shall be cleaned and dried prior to the installation of joint filler materials. Install foam backer rods at depth indicated on the Contract Drawings or as otherwise recommended in writing by the stone supplier. Joint sealants shall be installed at all expansion joints and as shown on the Contract Drawings and as specified and as matching approved submittals and field mockups. Sealants shall be applied in widths and thicknesses and under environmental conditions specified by the manufacturer of the sealants.

3.05 GRANITE LANDSCAPE CURB – STRAIGHT, RADIAL, AND TRANSITIONAL STRAIGHT

A. Installation of flush and non-flush granite landscape curb shall be in accordance with Section 501 of the Massachusetts Highway Department Standard Specifications for Highway and Bridges.

3.06 ORNAMENTAL GRANITE CURB TYPE AND TYPE B – STRAIGHT AND RADIAL

A. Ornamental Granite Curb Type A and Type B shall be installed true to line and grade in linear or radial layouts, meeting dimensions shown on the Drawings or approved field verified shop drawings and field mockups, adjusted to field conditions with the review of the Landscape Architect.

B. Top of curb shall be installed level and vertical faces plumb.

C. Colored mortar joints shall be flush and neat and in locations shown on the Drawings.

D. Item shall be clean and undamaged as a condition of acceptance.

3.07 GRANITE EDGE AT SPLASHPAD – STRAIGHT AND RADIAL

A. Granite Edge at Splashpad shall be installed true to line and grade in linear or radial layouts, meeting dimensions shown on the Drawings or approved field verified shop drawings and field mockups, adjusted to field conditions with the review of the Landscape Architect.

B. Top of curb shall be installed level and flush with finished grade.

C. Colored mortar joints shall be flush and neat and in locations shown on the Drawings.

D. Item shall be clean and undamaged as a condition of acceptance.

3.08 RECLAIMED GRANITE BLOCK

A. Granite shall be cleaned of all mortar and dirt, refurbished and trimmed as required for close setting and flat faces exposed, set on compacted crushed stone bases.

B. All vertical surfaces shall be plumb, unless otherwise shown on the Contract Drawings. Maximum variation from vertical shall be 1/4 in 10 feet vertical, excepting required cross pitches indicated on the Contract Drawings.

C. Reclaimed Granite Block to be laid as shown on Contract Drawings, horizontal surfaces shall be level, unless otherwise shown on drawings.

D. Locations and orientation of each Reclaimed Granite Block to be approved and verified by the Landscape Architect in the field prior to final construction.

E. Item shall be clean and undamaged as a condition of acceptance.

3.10 GRANITE STEP

A. Granite Steps shall be installed true to line and grade in linear or radial layouts, meeting dimensions shown on the Drawings or approved field verified shop drawings and field mockups, adjusted to field conditions with the review of the Landscape Architect.

B. Top of steps shall be installed with 1% wash as shown on the drawings and vertical faces plumb, on mortar setting bed with two stainless steel dowels set into concrete foundation per stone piece.

C. Colored mortar joints shall be flush and neat and in locations shown on the Drawings.

D. Item shall be clean and undamaged as a condition of acceptance.

3.11 GRANITE VEHICULAR CURB – STRAIGHT AND RADIAL

A. Installation of granite vehicular curb shall be in accordance with Section 501 of the Massachusetts Highway Department Standard Specifications for Highway and Bridges.

3.12 GRANITE VEHICULAR TRANSITION CURB – STRAIGHT AND RADIAL

A. Installation of granite vehicular transition curb shall be in accordance with Section 501 of the Massachusetts Highway Department Standard Specifications for Highway and Bridges.

3.13 GRANITE VEHICULAR CURB REMOVED AND RESET

A. Installation of granite vehicular curb removed and reset shall be in accordance with Section 501 of the Massachusetts Highway Department Standard Specifications for Highway and Bridges.

3.14 EXISTING GRANITE CURB AT REVETMENT REMOVED AND RESET

A. Installation of existing granite curb at revetment removed and reset shall be in accordance with Section 501 of the Massachusetts Highway Department Standard Specifications for Highway and Bridges.

3.15 GRANITE CLEANING

A. Following a minimum mortar and pavement curing period of 3 weeks, clean mortared granite surfaces following manufacturer's directions, with an approved liquid masonry cleaner, which is specifically made for removing cement mortar, as specified, from the color stone installed. Use fiber brushes to remove all mortar film and mortar stains. Test clean a 4-foot square sample area of pavement for review by Engineer prior to proceeding with the balance of work.

B. Protect all adjacent pavements, lawns and plantings from contact with cleaning fluids by completely covering with polyethylene film or other approved method prior to beginning work.

C. Cleaning fluids shall be manually applied, the use of power spray equipment shall not be allowed.

D. Remove all extraneous mortar from utility covers and other site surfaces.

E. Pre-wet area to be cleaned; apply cleaner and scrub with fiber brushes; let cleaner sit for no longer than twenty minutes before rinsing surface thoroughly in accordance with cleaner manufacturer's instructions.

F. Contractor shall replace paving and other materials damaged by the cleaning operation.

3.16 PROTECTION OF COMPLETED WORK

A. Secure and protect masonry work from access or use of any kind for a minimum of two weeks after mortar has been applied to ensure that mortar has set up and is secure.

PART 4- COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 04410-01 GRANITE LANDSCAPE CURB - STRAIGHT will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 04410-02 GRANITE LANDSCAPE CURB - RADIAL will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

C. Measurement for Item 04410-03 GRANITE LANDSCAPE CURB - TRANSITIONAL STRAIGHT will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

D. Measurement for Item 04410-04 ORNAMENTAL GRANITE CURB TYPE A - STRAIGHT will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

E. Measurement for Item 04410-05 ORNAMENTAL GRANITE CURB TYPE A - RADIAL will be made on a per LINEAR FOOT basis for all work described in

this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

F. Measurement for Item 04410-06 ORNAMENTAL GRANITE CURB TYPE B - STRAIGHT will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

G Measurement for Item 04410-07 ORNAMENTAL GRANITE CURB TYPE B - RADIAL will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

H. Measurement for Item 04410-08 GRANITE EDGE AT SPLASHPAD – STRAIGHT will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

I. Measurement for Item 04410-09 GRANITE EDGE AT SPLASHPAD – RADIAL will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

J. Measurement for Item 04410-10 RECLAIMED GRANITE BLOCK will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

K. Measurement for Item 04410-11 GRANITE STEP will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

L. Measurement for Item 04410-12 GRANITE VEHICULAR CURB – STRAIGHT will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

M. Measurement for Item 04410-13 GRANITE VEHICULAR CURB – RADIAL will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

N. Measurement for Item 04410-14 GRANITE VEHICULAR TRANSITION CURB – STRAIGHT will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

O. Measurement for Item 04410-15 GRANITE VEHICULAR TRANSITION CURB – RADIAL will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

P. Measurement for Item 04410-16 GRANITE VEHICULAR CURB REMOVED AND RESET will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

Q. Measurement for Item 04410-17 EXISTING GRANITE CURB AT REVETMENT REMOVED AND RESET will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 04410-01 GRANITE LANDSCAPE CURB - STRAIGHT will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

B. Payment for Item 04410-02 GRANITE LANDSCAPE CURB - RADIAL will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

C. Payment for Item 04410-03 GRANITE LANDSCAPE CURB – TRANSITIONAL STRAIGHT will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

D. Payment for Item 04410-04 ORNAMENTAL GRANITE CURB TYPE A - STRAIGHT will be at the per LINEAR FOOT contract price. This price shall

include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

E. Payment for Item 04410-05 ORNAMENTAL GRANITE CURB TYPE A - RADIAL will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

F. Payment for Item 04410-06 ORNAMENTAL GRANITE CURB TYPE B - STRAIGHT will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

G. Payment for Item 04410-07 ORNAMENTAL GRANITE CURB TYPE B – RADIAL will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

H. Payment for Item 04410-08 GRANITE EDGE AT SPLASHPAD – STRAIGHT will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

I. Payment for Item 04410-09 GRANITE EDGE AT SPLASHPAD – RADIAL will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

J. Payment for Item 04410-10 RECLAIMED GRANITE BLOCK will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

K. Payment for Item 04410-11 GRANITE STEP will be at the per EACH contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified.

L. Payment for Item 04410-12 GRANITE VEHICULAR CURB – STRAIGHT will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified. Sawcutting for the installation of Granite Vehicular Curb - Straight shall be included in the cost of the Granite Curb and no separate payment shall be made.

M. Payment for Item 04410-13 GRANITE VEHICULAR CURB – RADIAL will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified. Sawcutting for the installation of Granite Vehicular Curb – Radial shall be included in the cost of the Granite Curb and no separate payment shall be made.

N. Payment for Item 04410-14 GRANITE VEHICULAR TRANSITION CURB – STRAIGHT will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified. Sawcutting for the installation of Granite Vehicular Transition Curb - Straight shall be included in the cost of the Granite Curb and no separate payment shall be made.

O. Payment for Item 04410-15 GRANITE VEHICULAR TRANSITION CURB – RADIAL will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified. Sawcutting for the installation of Granite Vehicular Transition Curb – Radial shall be included in the cost of the Granite Curb and no separate payment shall be made.

P. Payment for Item 04410-16 GRANITE VEHICULAR CURB REMOVED AND RESET will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified. Sawcutting for the installation of Granite Vehicular Curb Removed and Reset shall be included in the cost of the Granite Curb and no separate payment shall be made.

Q. Payment for Item 04410-17 EXISTING GRANITE CURB AT REVETMENT REMOVED AND RESET will be at the per LINEAR FOOT contract price. This price shall include full compensation for excavation, providing and installing all elements of the work, backfilling, compacting and the furnishing of all labor, materials, tools and equipment, granular base materials such as gravel borrow, concrete footings and field cutting by power saw, and all other incidental work necessary to complete the work as shown on the Drawings and as herein specified. Sawcutting for the installation of Existing Granite Curb at Revetment Removed and Reset shall be included in the cost of the Granite Curb and no separate payment shall be made.

4.03 PAYMENT ITEMS

ITEM NO.	ITEM	UNIT
04410.01	GRANITE LANDSCAPE CURB – STRAIGHT	LINEAR FOOT
04410.02	GRANITE LANDSCAPE CURB – RADIAL	LINEAR FOOT
04410.03	GRANITE LANDSCAPE CURB – TRANSITIONAL STRAIGHT	LINEAR FOOT
04410.04	ORNAMENTAL GRANITE CURB TYPE A	LINEAR FOOT

	– STRAIGHT	
04410.05	ORNAMENTAL GRANITE CURB TYPE A – RADIAL	LINEAR FOOT
04410.06	ORNAMENTAL GRANITE CURB TYPE B – STRAIGHT	LINEAR FOOT
04410.07	ORNAMENTAL GRANITE CURB TYPE B – RADIAL	LINEAR FOOT
04410.08	GRANITE EDGE AT SPLASHPAD – STRAIGHT	LINEAR FOOT
04410.09	GRANITE EDGE AT SPLASHPAD – RADIAL	LINEAR FOOT
04410.10	RECLAIMED GRANITE BLOCK	LINEAR FOOT
04410.11	GRANITE STEP	EACH
04410.12	GRANITE VEHICULAR CURB – STRAIGHT	LINEAR FOOT
04410.13	GRANITE VEHICULAR CURB – RADIAL	LINEAR FOOT
04410.14	GRANITE VEHICULAR TRANSITION CURB – STRAIGHT	LINEAR FOOT
04410.15	GRANITE VEHICULAR TRANSITION CURB – RADIAL	LINEAR FOOT
04410.16	GRANITE VEHICULAR CURB REMOVED AND RESET	LINEAR FOOT
04410-17	EXISTING GRANITE CURB AT REVETMENT REMOVED AND RESET	LINEAR FOOT

END OF SECTION

SECTION 05110

WATERFRONT STRUCTURAL STEEL

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Provide structural steel items including but not limited to accessories as shown on the Contract Drawings, specified herein, and needed for a complete and proper installation.

B. The work includes, but is not limited to, the following items:

1. Epoxy Coated Structural Steel Stringers at Micro Pile Supported Boardwalk and all work incidental thereto.
2. Epoxy Coated Structural Steel Pile Caps at Micro Pile Supported Boardwalk and all work incidental thereto.
3. Epoxy Coated Micro-pile cap plates and all work incidental thereto.
4. Hot Dipped Galvanized Structural Steel Channel Extensions at Timber Pile Supported Boardwalk and all work incidental thereto.
5. Epoxy Coated Structural Steel Channel Extensions at Grade Beam Supported Boardwalk and all work incidental thereto.
6. Epoxy Coated Steel Light Pole framing and all work incidental thereto,
7. Hot Dipped Galvanized Utility support hangers and all work incidental thereto.
8. Any other structural steel as required for to complete the scope of work indicated on the Contract Drawings.

1.02 REFERENCE SPECIFICATIONS AND STANDARDS

A. AISC – American Institute of Steel Construction

B. ANSI – American National Standards Institute
1. A14.3 – Safety Requirements for Fixed Ladders
2. B18.6.3 – Machine Screws and Machine Screw Nuts (M4)
3. B18.21.1 – Lock Washers (Inch Series)
4. B18.22.1 – Plain Washers

C. ASTM – American Society for Testing and Materials
1. A27 – Standard Specification for Steel Castings, Carbon, for General Application.
2. A36 – Standard Specification for Structural Steel.

3. A47 – Standard Specification for Ferritic Malleable Iron Castings.
4. A-53 – Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded, and Seamless.
5. A123 – Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
6. A153 – Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
7. A307 – Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
8. A500 – Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
9. A501 – Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
10. A563 – Standard Specification for Carbon and Alloy Steel Nuts.
11. A780 – Practice for Repair of Damaged Hot-Dip Galvanized Coatings.
12. C1107 – Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Non-Shrink).
13. E488 – Test Method for Strength of Anchors in Concrete and Masonry Elements.
14. F93 – Standard Specification for Stainless Steel Bolts, Hex Cap Screws and Studs.
15. F594 – Standard Specification for Stainless Steel Nuts.

D. AWS – American Welding Society
1. D1.1 – Structural Welding Code – Steel.

1.03 SUBMITTALS

A. Sufficient technical data to demonstrate compliance with the specified requirements.

B. Complete shop drawings detailing all members, profiles, sizes, spacing, proposed cuts, connections, camber, holes, openings, fasteners, and similar data. Erection plans showing the location and field connection of all members. Identify members by piece numbers which correspond to erection numbers. Structural steel connection details not specifically shown in the Contract Documents shall be detailed by the Contractor and included with Shop Drawing submittals.

C. Submit manufacturer's certifications showing that the products meet or exceed the required standards for the following items:
1. Bolts, including nuts and washers.
2. Threaded rods including all hardware.
3. Filler material and flux for welding.
4. Expansion bolts.

D. Submit Certified Mill Test Reports indicating structural strength, destructive and non-destructive test analysis, chemical and physical properties of each type of steel and conformance with ASTM A6.

E. Submit welder's certificates certifying welders employed on the Work, verifying American Welding Society (AWS) qualifications within the previous 12 months.

1.04 Quality Assurance

A. Use adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this section.
B. Perform welding with electric arc process and in accordance with AWS "Code for Arc and Gas Welding in Building Construction."
C. In addition to complying with pertinent codes and regulations, comply with: The American Institute of Steel Construction, AISC, "Steel Construction Manual," Fifteenth Edition.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Structural Steel Shapes shall conform to ASTM A992 or ASTM A572 Grade 50.
B. Structural Steel Tubes shall conform to ASTM A500, Grade B.
C. Steel Angles and Channels shall conform to ASTM A572 Grade 50.
D. Steel Plates shall conform to ASTM A588 Grade 50.
E. Steel Pipes shall conform to ASTM A53, Grade B or ASTM A500, Grade B.
F. Bars, flats, and rounds: A588 Grade B or Equivalent, or for Galvanized Fabrications A572.
G. Anchor rods shall conform to ASTM F1554, for Grades 36, 55 and 105.
H. Carriage bolts and Lag screws shall conform to ASTM A307, Grade A.
I. High Strength Structural Bolts: Shall conform to ASTM F3125 Grade A325 with hexagonal heads.

J. Nuts: Shall be hexagonal and conform to ASTM A563.
K. Washers (except against timber): Shall conform to ASTM F436.
L. Screws: Shall be Grade 316, stainless steel.

M. Threadbar Rods and Nuts: DYWIDAG Threadbar or equivalent accepted by the Engineer, shall conform to ASTM A615 for Grades 60, 70, 80, and 100, and ASTM A722 Grade 150.
N. Adhesive Anchors: Adhesive shall be HIT RE 500 V3 Injection Adhesive Anchor as manufactured by Hilti Corporation, or equivalent acceptable to the Engineer. Anchor rods shall be as specified above for threadbar anchors.
O. Machine bolts. ASTM A307, galvanized when assembling galvanized units, unless designated otherwise.

P. Expansion bolts: Shall be stainless steel HILTI KWIK BOLT 3, as manufactured by HILTI or equivalent accepted by the Engineer.

Q. Mechanical anchors for securing items of miscellaneous metal to concrete and masonry shall be cinch anchors, or approved equal, not less than 3/8", and of the threaded type for anchoring with the bolt head out. Anchor bolts where set in concrete shall be hook type, but not less than ½" and as indicated on the Contract Drawings.

R. Welding Materials:

1. AWS D1.1; Type E70XX or type required for materials being welded.
2. Arc welding electrodes. AWS Series E-70 as required for conditions of intended use, use equivalent rods in corrosion resistant alloy for welds to A588 Grade B steel.

S. Grout: Non-shrink, non-metallic, high-performance cement based grout conforming to ASTM C827 such as Sikagrout 212 as manufactured by Sika Corporation or equivalent accepted by the Engineer.
D. Fabrication:
1. Fabricate items of structural steel in accordance with AISC specifications and as shown on the accepted shop drawings.
2. Properly mark materials for field assembly and for identification of the structure and location intended. Fabricate for delivery sequence which will expedite erection and minimize field handling of Materials.

3. Provide bolts, nuts, and washers of all types and sizes required for completion of field erection.
4. Comply with AWS code for procedures, appearance, and quality of welds, and methods used in correcting welded work.
5. Cut, drill, or punch holes perpendicular to metal surfaces. Do not flame cut holes or enlarge holes by burning. Drill holes in bearing plates. No holes will be allowed unless first shown on the Shop Drawings and accepted by the Engineer.
6. Should holes be required in addition to those provided under this Section, provide all such holes, and strengthen the area as required to compensate but only as accepted by the Engineer.
7. Moment connections shall develop the full strength of joined members. The cold weather welding requirements of AWS shall be required and enforced.
8. Where finishing is required, complete the assembly, including welding of units, before the start of finishing.
9. Provide finish surfaces of members exposed in the final structure free from markings, burrs, and other defects.
10. Assemble and weld built-up sections by methods which will produce true alignment of axes without warp.

E. Protective Coating
1. General: Unless specifically noted otherwise, all items scheduled to receive protective coating shall be fully fabricated with holes, cuts, threads, etc. prior to receiving protective coating, prior to delivery to site.
2. All structural steel sections scheduled for epoxy coating shall be shop coated prior to delivery to site in accordance with Section 09905, Protective Coating.
3. All structural steel scheduled to be hot dipped galvanized shall be galvanized prior to delivery to site in accordance with Section 09905, Protective Coating.
3. Bolts, Nuts, and Washers: All bolts, nuts, and washers shall be hot dipped galvanized in accordance with ASTM A153.
4. Threadbar Rods, and Nuts: Epoxy coated in accordance with ASTM A775.
5. Adhesive Anchor Rods: anchor rods, nuts, and washers shall be hot-dipped galvanized in accordance with ASTM A153.
6. Field Touch-Up of Epoxy-Coated Items: Shall be performed in accordance with Section 09905, Protective Coating.
7. Field Touch-Up of Hot-Dipped Galvanized Items: Touch-up shall be performed with Tnemec 90-97 Tnemec-Zinc primer or equivalent accepted by the Engineer. Surface preparation and coating application shall be in strict accordance with manufacturers written instructions.

F. Other Material
Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the review of the Engineer prior to final installation.

G. Product Handling and Storage
1. Deliver materials to the job site properly marked to identify the location for which they are intended.
2. Use markings corresponding to markings shown on the reviewed Shop Drawings.
3. Store in a manner to maintain identification and prevent damage, off the ground, using pallets or other supports, and to permit easy access for inspection.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Surface Conditions
Examine the areas and verify the conditions under which work of this section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

B. Erection
1. Surveys:
   a. Establish benchmarks necessary for accurate erection of structural steel.
   b. Check elevations of concrete surfaces, and locations of anchor bolts and similar items, before erection proceeds.
2. Temporary shoring and bracing:
   a. Provide temporary shoring and bracing members with connections of sufficient strength to bear imposed loads.
   b. Provide temporary guy lines to achieve proper alignment of the structure as erection proceeds.
   c. Remove temporary connections and members when permanent members are in place and final connections are made.
   d. Field touch-up protective coating where damaged.

3. Anchor bolts:
   a. Install anchor bolts and other connectors required for securing structural steel to adjacent work as shown on the Contract Drawings.
   b. Provide templates and other devices as needed for presetting bolts and other anchors to accurate locations.
4. Field assembly:
   a. Set structural frames accurately to the lines and elevations indicated.
   b. Align and adjust the members forming part of a complete frame or structure before fastening permanently.
   c. Clean the bearing surfaces and other surfaces which will be in permanent contact before assembly.
   d. Adjust as required to compensate for discrepancies in elevation and alignment.
   e. Level and plumb individual members of the structure within specified AISC tolerances.
   f. Establish required leveling and plumbing measurements on the mean operating temperature of the structure, making allowances for the difference between temperature at time of erection and the mean temperature at which the structure will be when completed and in service.
   g. Comply with AISC specifications for bearing, adequacy of temporary connections, alignment, and removal of paint on surfaces adjacent to welds.
5. Gas cutting:
   a. Do not use gas cutting torches for correcting fabricating errors in structural framing, except on secondary members where acceptable to the Engineer.
   b. When gas cutting is permitted, finish the gas cut section to a sheared appearance acceptable to the Engineer.
6. Expansion Bolts and Adhesive Anchors: Install anchors in strict accordance with manufacturers written instructions.
7. Field Welding: Where field welds are scheduled, surfaces to be joined are to be properly prepared, including removal of any existing coatings prior to welding. Following welding, prepare and touch-up all areas requiring coating as set forth in Section 09905, Protective Coating.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 05110-1 FURNISH AND INSTALL EPOXY COATED STRUCTURAL STEEL MICRO-PILE SUPPORTED BOARDWALK will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 05110-2 FURNISH AND INSTALL EPOXY COATED STRUCTURAL STEEL AT CONDO PASS THROUGH will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

C. Measurement for Item 05110-3 FURNISH AND INSTALL STRUCTURAL STEEL HOT DIPPED GALVANIZED TIMBER PILE CAP EXTENSION CHANNELS AT TIMBER PILE SUPPORTED BOARDWALK will be made on a per EACH BENT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

D. Measurement for Item 05110-4 FURNISH AND INSTALL EPOXY COATED STRUCTURAL STEEL GRADE BEAM EXTENSION CHANNELS AT GRADE BEAM SUPPORTED BOARDWALK, will be made on a per EACH BENT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02PAYMENT

A. Payment for Item 05110-1 FURNISH AND INSTALL EPOXY COATED STRUCTURAL STEEL MICRO-PILE SUPPORTED BOARDWALK will be at LUMP SUM contract price. This price shall include full compensation for excavation, providing and installing all structural steel stringers and steel pile caps, hardware, fasteners, stiffeners, base plates, pile cap plates, light pole support framing, gate support framing, connection angles, utility support hangers, protective coating, temporary shoring, backfilling and the furnishing of all labor including certification, preparation, transportation, proper storage, survey, and supervision for fabrication and erection, coating touch-up, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL STRUCTURAL EPOXY COATED STEEL MICRO-PILE SUPPORTED BOARDWALK as shown on the Drawings and as herein specified.

B. Payment for Item 05110-2 FURNISH AND INSTALL EPOXY COATED STRUCTURAL STEEL AT CONDO PASS THROUGH will be at LUMP SUM contract price. This price shall include full compensation for excavation, providing and installing all structural steel pile caps, timber joist connection plates, hardware, fasteners, bent connection plates, protective coating, temporary shoring,

backfilling and the furnishing of all labor including certification, preparation, transportation, proper storage, survey, and supervision for fabrication and erection, coating touch-up, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL EPOXY COATED STRUCTURAL STEEL AT CONDO PASS THROUGH as shown on the Drawings and as herein specified.

C. Payment for Item 05110-3 FURNISH AND INSTALL HOT DIPPED GALVANIZED STRUCTURAL STEEL TIMBER PILE CAP EXTENSION CHANNELS AT TIMBER PILE SUPPORTED BOARDWALK, will be at the per EACH BENT installed contract price. This price shall include full compensation for providing and installing all structural steel timber pile cap extension channels, hardware, fasteners, stiffeners, base plates, connection plates, coating, temporary shoring, and the furnishing of all labor including certification, preparation, transportation, proper storage, survey, and supervision for fabrication and erection, coating touch-up, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL HOT DIPPED GALVANIZED STRUCTURAL STEEL TIMBER PILE CAP EXTENSION CHANNELS AT TIMBER PILE SUPPORTED BOARDWALK, as shown on the Drawings and as herein specified.

D. Payment for Item Item 05110-4 FURNISH AND INSTALL EPOXY COATED STRUCTURAL STEEL GRADE BEAM EXTENSION CHANNELS AT GRADE BEAM SUPPORTED BOARDWALK, will be at the per EACH BENT installed contract price. This price shall include full compensation for excavation, providing and installing all steel grade beam extension channels at the Grade Beam Supported Boardwalk, hardware, fasteners, stiffeners, base plates, connection plates, coating, temporary shoring, backfilling, and the furnishing of all labor, including certification, preparation, transportation, proper storage, survey, and supervision for fabrication and erection, coating touch-up, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL EPOXY COATED STRUCTURAL STEEL GRADE BEAM EXTENSION CHANNELS AT GRADE BEAM SUPPORTED BOARDWALK, as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
05110-1	FURNISH AND INSTALL EPOXY COATED STRUCTURAL STEEL MICRO-PILE SUPPORTED BOARDWALK	LUMP SUM
05110-2	FURNISH AND INSTALL EPOXY COATED STRUCTURAL STEEL AT CONDO PASS THROUGH	LUMP SUM
05110-3	FURNISH AND INSTALL HOT DIPPED GALVANIZED STRUCTURAL STEEL TIMBER PILE CAP EXTENSION CHANNELS AT TIMBER PILE SUPPORTED BOARDWALK	EACH BENT
05110-4	FURNISH AND INSTALL EPOXY COATED STRUCTURAL STEEL GRADE BEAM EXTENSION CHANNELS AT GRADE BEAM SUPPORTED BOARDWALK	EACH BENT

END OF SECTION

SECTION 05510

WATERFRONT MISCELLANEOUS METALS

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Provide miscellaneous structural steel items including but not limited to accessories as shown on the Contract Drawings, specified herein, and needed for a complete and proper installation.

B. The work includes, but is not limited to, the following items:

1. Miscellaneous fabricated connectors that may be required for sheet pile installation.
2. Support seats, stiffeners, gusset plates, connection plates, and closure plates and angles.
3. Other miscellaneous steel elements not otherwise identified.
4. Handrail base plates, posts, rails, and any other material required for railing fabrication are not included in this Specification Section. This work will be included under Specification Section 02800 SITE IMPROVEMENTS.

1.02 REFERENCE SPECIFICATIONS AND STANDARDS

A. AISC – American Institute of Steel Construction

B. ANSI – American National Standards Institute

1. A14.3 – Safety Requirements for Fixed Ladders
2. B18.6.3 – Machine Screws and Machine Screw Nuts (M4)
3. B18.21.1 – Lock Washers (Inch Series)
4. B18.22.1 – Plain Washers

C. ASTM – American Society for Testing and Materials

1. A27 – Standard Specification for Steel Castings, Carbon, for General Application.
2. A36 – Standard Specification for Structural Steel.
3. A47 – Standard Specification for Ferritic Malleable Iron Castings.
4. A-53 – Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded, and Seamless.
5. A123 – Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

6. A153 – Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
7. A307 – Standard Specification for Carbon Steel Bolts and Studs, 60,000 psi Tensile Strength.
8. A500 – Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.
9. A501 – Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing.
10. A563 – Standard Specification for Carbon and Alloy Steel Nuts.
11. A780 – Practice for Repair of Damaged Hot-Dip Galvanized Coatings.
12. C1107 – Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Non-Shrink).
13. E488 – Test Method for Strength of Anchors in Concrete and Masonry Elements.
14. F93 – Standard Specification for Stainless Steel Bolts, Hex Cap Screws and Studs.
15. F594 – Standard Specification for Stainless Steel Nuts.

D. AWS – American Welding Society

1. D1.1 – Structural Welding Code – Steel.

1.03 SUBMITTALS

A. Shop Drawings for all fabricated steel shall be furnished in accordance with the General Provisions. Shop Drawings shall show in detail all sizes, shapes, materials, finishes and methods of attaching miscellaneous metal items to one another, and work of other trades. All connections, bolting layouts, welds, detailing and fabrication shall be designed by the fabricator under the direction of a licensed Professional Engineer in accordance with the applicable portions of the codes listed above, and all submittals shall be certified and sealed by a Professional Engineer licensed in the Commonwealth of Massachusetts.

1.04 Quality Assurance

A. Use adequate number of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this section.

B. Perform welding with electric arc process and in accordance with AWS "Code for Arc and Gas Welding in Building Construction."

C. In addition to complying with pertinent codes and regulations, comply with: The American Institute of Steel Construction, AISC, “Steel Construction Manual,” Fifteenth Edition.

1.05 GENERAL INFORMATION

A. Welding: All welded connections and reinforcements are to be shop welds, except as noted on the Contract Drawings.

B. Cutting: No field drilling or cutting is allowed unless approved in advance of construction by DCR's Engineer. All bolt holes and drainage holes are to be shop cut. Bolt holes shall be suitable oversized to allow for cut faces to be fully coated with epoxy shop coatings as called for under "touch up" in Section 09905, WATERFRONT PROTECTIVE COATING.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Structural Steel Shapes shall conform to ASTM A992 or ASTM A572 Grade 50.

B. Structural Steel Tubes shall conform to ASTM A500, Grade B.

C. Steel Angles and Channels shall conform to ASTM A572 Grade 50.

D. Steel Plates shall conform to ASTM A588 Grade 50.

E. Steel Pipes shall conform to ASTM A53, Grade B or ASTM A500, Grade B.

F. Bars, flats, and rounds: A588 Grade B or Equivalent, or for Galvanized Fabrications A572.

G. Anchor rods shall conform to ASTM F1554, for Grades 36, 55 and 105.

H. Carriage bolts and Lag screws shall conform to ASTM A307, Grade A.

I. High Strength Structural Bolts: Shall conform to ASTM F3125 Grade A325 with hexagonal heads.

J. Nuts: Shall be hexagonal and conform to ASTM A563.

K. Washers (except against timber): Shall conform to ASTM F436.

L. Screws: Shall be Grade 316, stainless steel.

M. Threadbar Rods and Nuts: DYWIDAG Threadbar or equivalent accepted by the Engineer, shall conform to ASTM A615 for Grades 60, 70, 80, and 100, and ASTM A722 Grade 150.

N. Adhesive Anchors: Adhesive shall be HIT RE 500 V3 Injection Adhesive Anchor as manufactured by Hilti Corporation, or equivalent acceptable to the Engineer. Anchor rods shall be as specified above for threadbar anchors.

O. Machine bolts. ASTM A307, galvanized when assembling galvanized units, unless designated otherwise.

P. Expansion bolts: Shall be stainless steel HILTI KWIK BOLT 3, as manufactured by HILTI or equivalent accepted by the Engineer.

Q. Mechanical anchors for securing items of miscellaneous metal to concrete and masonry shall be cinch anchors, or approved equal, not less than 3/8", and of the threaded type for anchoring with the bolt head out. Anchor bolts where set in concrete shall be hook type, but not less than ½" and as indicated on the Contract Drawings.

R. Welding Materials:

1. AWS D1.1; Type E70XX or type required for materials being welded.
2. Arc welding electrodes. AWS Series E-70 as required for conditions of intended use, use equivalent rods in corrosion resistant alloy for welds to A588 Grade B steel

S. Grout: Non-shrink, non-metallic, high-performance cement based grout conforming to ASTM C827 such as Sikagrout 212 as manufactured by Sika Corporation or equivalent accepted by the Engineer.

T. Galvanizing.

1. Iron and steel. ASTM A123, with an average weight per square foot of 2.0 ounces and not less than 1.8 ounces per square foot.
2. Ferrous metal hardware items. ASTM A153 with an average coating weight of 1.3 ounces per square foot.
3. Touch-up material for galvanized coatings. Galvalloy or Galvicon (two heavy coats).
4. To the maximum extent possible, all holes and welds to be completed prior to galvanizing. Plan for field fabrication, cutting, drilling, etc., after galvanizing shall be submitted to the Engineer for approval before fabrication.

PART 3 – EXECUTION

3.01 INSTALLATION

A. WELDING

1. Steel shall be welded by the shielded electric arc method. Reference is made to the current edition of the "Welding Handbook" published by the American Welding Society as a guide for general procedure and qualifications of welders.
2. Surfaces to be welded shall be thoroughly cleaned and welds shall show a uniform section and reasonable smoothness, without any distortion. Exposed surfaces of welded joints shall be dressed and finished to produce invisible connections. Welding alloys shall be furnished in the same color and character as the surfaces of the metals joined.

B. WORKMANSHIP

1. Except for any modifications indicated on drawings and/or specified herein, the AISC Code of Standard Practice for Steel Buildings, and the AWS Code for Fusion Welding and Gas Cutting in Building Construction, both as amended to date, shall govern all materials, fabrication, and erection of all work under this section.
2. Work to be built in with concrete or masonry shall be of the proper form required for anchorage or be provided with concealed anchors.
3. All work shall be formed true to detail, with clean, straight, sharply defined profiles. Exposed joints shall be close fitting and made where least conspicuous.
4. All bolts, anchors, inserts, and other miscellaneous steel and iron fastenings to be installed in forms before concrete is poured or built into masonry shall be provided as indicated on drawings, details, or schedules, or necessary to complete the work. The Contractor shall examine and check the Contract Drawings for number, type, and locations of all such items.

3.02 MISCELLANEOUS ITEMS

A. Furnish, fabricate, and install all miscellaneous angles, plate, clips, anchors, and other miscellaneous metal work required for the complete job as indicated on the Drawings. Such items shall be formed as detailed or, if not detailed, as required for the location and purposes served, and in accordance with the applicable provisions specified herein. Furnish and install all miscellaneous metal items not specifically mentioned herein, or in other sections, but which are customarily considered as part of the work, the same as if fully specified herein and detailed on the Drawings.

3.03 FINISHES

A. All hardware and bolts shall be stainless steel, Grade 316.

B. All other ferris metal items shall be hot dipped galvanized, or epoxy coated as indicated on the Contract Documents.

C. After welding is completed, any damage to the coating or galvanizing of the metal shall be repaired by the application of two heavy coats high solids epoxy. Touch up shall be applied as per manufacturer's instructions to provide a coating equal to the original finish.

PART 4 – COMPENSATION

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 06130

WATERFRONT STRUCTURAL TIMBER

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. The work to be done under this section shall consist of furnishing all materials, labor, supervision, tools, and equipment and performing all operations necessary to complete all timber construction work as shown on the Contract Drawing and as specified.

B. The work includes, but is not limited to, the following items:

1. Construction of new timber stringers at Timber Pile Supported Boardwalk and all work incidental thereto.
2. Timber stringer replacement at Timber Pile Supported Boardwalk and all work incidental thereto.
3. Pile Cap Replacement at Timber Pile Supported Boardwalk and all work incidental thereto.
4. Pile Shim Repair at Timber Pile Supported Boardwalk and all work incidental thereto.
5. Pile Fish Plate Repair at Timber Pile Supported Boardwalk and all work incidental thereto.
6. Timber Bracing Replacement at Timber Pile Supported Boardwalk as indicated on the Contract Drawings and all work incidental thereto.
7. Addition of timber stringers for marina gangway landing light pole anchorage and all work incidental thereto.
8. Construction of pressure treated (PT) timber sleepers on steel stringers for decking all work incidental thereto.
9. Construction of PT timber sleepers on for vertical and horizontal cladding attachment and all work incidental thereto.
10. Construction of PT timber sleepers on existing timber stringers at Grade Beam Supported Boardwalk and all work incidental thereto.
11. Construction of new timber stringers at Grade Beam Supported Boardwalk and all work incidental thereto.
12. Timber Stringer replacement at Grade Beam Supported Boardwalk and all work incidental thereto.
13. Timber work to tie new Grade Beam Supported Boardwalk work into adjacent existing Grade Beam Supported Boardwalk at property line.
14. Construction of new stair stringers and all work incidental thereto.
15. Replacement in kind of timber vertical posts for gate and any timber related timber blocking for gates and gate supports and all work incidental

thereto.

16. In-kind reconstruction of electrical box supports at two (2) locations, as indicated on the Contract Drawings.
17. In-kind timber fender pile replacement, as needed to restore existing conditions.
18. Construction of miscellaneous timber elements including but not limited to timber blocking for benches, timber blocking as required for deck support around light poles, additional timber members for utility hangers and shims to adjust for elevations, etc.

1.02 SUBMITTALS

A. Shop Drawings: Submit framing plan showing member lengths, member sizes (nominal and dimensional), spacing, slopes, hardware, connections etc.
B. Material Certifications: For preservative treated wood products, from manufactures. Indicate type of preservative used and net amount of preservative retained (AWPA quality certification on all treated timber).
C. Certification of timber species and lumber grade.
D. Hardware Certifications, including material specifications, grade and coating.
E. Product information on epoxy to seal countersunk holes, if applicable.
F. Fender Pile Details (if required)

1. Driving plan and schedule for installation of piles.
2. Method of installation of piles including size and type of pile hammer.
3. Templates and falsework to be used for support and layout of piles during driving, as applicable.
4. Fender Pile capping material and installation.

G. Material list with treatment, sizes, and quantities.

1.03 QUALITY ASSURANCE

The Contractor shall comply with all applicable local, state and federal requirements, as well as standard industry standards and practices, regarding materials, methods of work and disposal of excess and waste materials.

1.04 TECHNICAL SPECIFICATIONS/PUBLICATIONS

A. American Society for Testing and Materials Standards (ASTM)

1. D245 - Standard Practice for Establishing Structural Grades and Related Allowable Properties for Visually Graded Lumber.
2. D4761 - Standard Test Methods for Mechanical Properties of Lumber and Wood-Based Structural Materials

3. AISI/ASTM 316, Stainless Steel
4. A123 - Zinc (Hot Galvanized) Coatings on Products Fabricate from Rolled Pressed, and Forged Steel Shapes, Plates, Bars, and Strip
5. A153 - Zinc Coating (Hot-Dip) on Iron and Steel Hardware
6. A276 - Stainless Steel Bars and Shapes
7. A320 – Alloy steel and stainless-steel bolting materials for low temperature service.

B. American Wood-Preserver's Association Standards (APW)

1. C1 - All Timber Products-Preservative Treatment by Pressure Processes
2. C2 - Lumber, Timbers, Bridge Ties and Mine Ties-Preservative Treatment by Pressure Processes.
3. C18 - Pressure Treated Materials in Marine Construction
4. M2 - Inspection of Treated Timber Products
5. M4 - Care of Preservative-Treated Wood Products
6. P5 - Water-Borne Preservatives

C. National Design Specifications for Wood Construction (NDS)

D. American Society for Testing and Materials (ASTM), Specifications: D25 Round Timber Piles

1.05 DELIVERY, STORAGE AND HANDLING

Timber shall not be stored in contact with the ground surface. Care shall be taken to ensure that timber members are stored flat and straight such that damage does not occur prior to installation.

PART 2 - PRODUCTS

2.01 STRUCTURAL TIMBER STRUCTURAL TIMBER

A. All structural timber, including blocking, shall be Southern Pine of the quality defined as Grade No. 1 or better. Grades of southern pine refer to the latest Standard Grading Rules of the Southern Pine Inspection Bureau. All timber shall be dressed sizes.

B. Visually graded structure lumber and wood construction shall conform to ASTM D245 Standard Practice for Establishing Structural Grades and Related Allowable Properties for Visually Graded Lumber.

C. Mechanical strength of timber shall be determined in accordance with ASTM D4761.

D. Structural timber used for braces, stringers, sleepers, and other miscellaneous timber framing, not in contact with public, shall be preservative pressure-treated with CCA to a minimum retention of 2.5 pcf.

E. Structural timber used gate post replacement and any other timber framing, that is in contact with the public, shall be preservative pressure-treated with MCA to a minimum retention of 0.23 pcf.

2.02 GREENHEART FENDER PILES

A. If procurement of new timber fender piles is required for in-kind replacement, timber fender piles shall:
1. Be Greenheart timber.
2. Conform to ASTM D25.
3. Have butt and tip diameters shall be not less than those shown in the following table:

	MINIMUM	DIAMETER
LENGTH	BUTT (or as specified on plan)	TIP
Up to 40 ft.	12 inches	8 inches
40 ft. to 50 ft.	12 inches	7 inches
50 ft. and over	13 inches	6 inches

4. Length of piles and final top of pile elevation shall match pile length removed.
5. The tops of fender piles shall be fitted with poly caps. Color shall be black.

2.03 STEEL HARDWARE

A. All fasteners greater than 1/2” nominal diameter shall be hot-dipped galvanized and shall conform to ASTM A-307 hardware.

B. All fasteners 1/2” nominal diameter and less shall be stainless steel. Stainless steel grade shall be 316.

C. Tops of fender piles shall be fitted with 1” stainless steel bands, spaced at 6” on-center, starting 1 foot below the final cut-off elevation of the pile.

2.04 INSPECTION OF TIMBER

A. Certificates of treatment shall be submitted to the Project Engineer. The Engineer reserves the right to have timber inspected before, during and after treatment. Any material or treatment that does not meet the requirements of these Specifications will be rejected and the Contractor shall furnish other materials that will meet the Specifications, without additional charge or time extensions.

B. The Engineer reserves the right to have timber inspected before, during and after treatment. All treatment tags shall be retained on timbers for inspection by DCR upon request. Any material or treatment that does not meet the requirements of these Specifications will be rejected and the Contractor shall furnish other materials, which will meet the Specifications, without additional charge or time extensions.

PART 3 - EXECUTION

3.01 GENERAL

Timber shall be closely fitted, accurately set to required lines and levels, and rigidly secured in place with stainless steel through bolts, as shown on the Drawings. The following requirements shall be met:

A. Install products in accordance with manufacturer's instructions, approved submittals and in proper relationship with adjacent construction.
B. Holes for bolts of a size to insure a driving fit.
C. Where indicated, holes shall be counter bored.
D. All timber shall be placed with the sap wood on the top side of the piece, if possible.
E. Washers shall be placed under both bolt heads and nuts.
F. The care and handling of treated timber shall conform to the requirements of AWPA Standard M4. All timber shall be handled in a manner to avoid damage to the treated surfaces.
G. Where damaged or cut for fitting, or during handling, treated timber shall be given two brush coats of Wood Preservative Treatment, as approved by the Engineer.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement for Item 06130-1 FURNISH AND INSTALL NEW TIMBER STRINGERS AND MISC. TIMBER FRAMING, BLOCKING, AND POSTS AT TIMBER PILE SUPPORTED BOARDWALK will be made on a per LINEAR FOOT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 06130-2 FURNISH AND INSTALL TIMBER STRINGER REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK will be made on a per LINEAR FOOT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

C. Measurement for Item 06130-3 FURNISH AND INSTALL PILE CAP REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK will be made on a per LINEAR FOOT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

D. Measurement for Item 06130-4 FURNISH AND INSTALL PILE SHIM REPAIR AT TIMBER PILE SUPPORTED BOARDWALK will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

E. Measurement for Item 06130-5 FURNISH AND INSTALL PILE FISH PLATE REPAIR AT TIMBER PILE SUPPORTED BOARDWALK will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

F. Measurement for Item 06130-6 FURNISH AND INSTALL TIMBER BRACING REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK will be made on a per LINEAR FOOT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

G. Measurement for Item 06130-7 FURNISH AND INSTALL TIMBER SLEEPERS ON STEEL STRINGERS AT MICRO-PILE SUPPORTED BOARDWALK will be made on a per LINEAR FOOT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

H. Measurement for Item 06130-8 FURNISH AND INSTALL NEW TIMBER STRINGERS AT GRADE BEAM SUPPORTED BOARDWALK will be made on a per LINEAR FOOT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

I. Measurement for Item 06130-9 FURNISH AND INSTALL TIMBER STRINGER REPLACEMENT AT GRADE BEAM SUPPORTED BOARDWALK will be made on a per LINEAR FOOT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

J. Measurement for Item 06130-10 FURNISH AND INSTALL TIMBER SLEEPERS ON EXISTING TIMBER STRINGERS AT GRADE BEAM SUPPORTED BOARDWALK will be made on a per LINEAR FOOT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

K. Measurement for Item 06130-11 FURNISH AND INSTALL TIMBER STAIR STRINGERS will be made on a LUMP SUM installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

L. Measurement for Item 06130-12 FURNISH AND INSTALL MISCELLANEOUS TIMBER FRAMING FOR BENCHES, LIGHT POLES, AND GATE POSTS will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

M. Measurement for Item 06130-13 FURNISH AND INSTALL NEW TIMBER STRINGERS FOR MARINA GANGWAY LANDING LIGHT POLE ANCHORAGE will be made on a per EACH basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

N. Measurement for Item 06130-14 FURNISH AND INSTALL GRADE BEAM SUPPORTED BOARDWALK TIE-IN SECTION TO EXISTING ADJACENT BOARDWALK AT PROPERTY LINE will be made on a per LUMP SUM basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for Item 06130-1 FURNISH AND INSTALL NEW TIMBER STRINGERS AND MISC. TIMBER FRAMING, BLOCKING, AND POSTS AT TIMBER PILE SUPPORTED BOARDWALK will be at the per LINEAR FOOT installed contract price. This price shall include full compensation for providing and installing the additional timber stringers, bolster posts, blocking, spot light support framing, pavilion framing, pavilion ramp framing, connection angles, stringer hanger plates, hardware, fasteners, treatment, and disposal of surplus materials, and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL NEW TIMBER STRINGERS AND MISC. TIMBER FRAMING, BLOCKING, AND POSTS AT TIMBER PILE SUPPORTED BOARDWALK as shown on the Drawings and as herein specified.

B. Payment for Item 06130-2 FURNISH AND INSTALL TIMBER STRINGER REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK will be at the per LINEAR FOOT installed contract price. This price shall include full compensation for providing and installing replacement timber stringers, connection angles, hardware, fasteners, treatment, and disposal of surplus materials and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL TIMBER STRINGER REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK as shown on the Drawings and as herein specified.

C. Payment for Item 06130-3 FURNISH AND INSTALL PILE CAP REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK will be at the per LINEAR FOOT installed contract price. This price shall include full compensation for providing and installing timber pile caps, pile cap splice plates, hardware, fasteners, treatment, and disposal of surplus materials and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL PILE CAP REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK as shown on the Drawings and as herein specified.

D. Payment for Item 06130-4 FURNISH AND INSTALL PILE SHIM REPAIR AT TIMBER PILE SUPPORTED BOARDWALK will be at the per EACH contract price. This price shall include full compensation for providing and installing pile shim repairs, hardware, fasteners, treatment, and disposal of surplus materials and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL PILE SHIM REPAIR AT TIMBER PILE SUPPORTED BOARDWALK as shown on the Drawings and as herein specified.

E. Payment for Item 06130-5 FURNISH AND INSTALL PILE FISH PLATE REPAIR AT TIMBER PILE SUPPORTED BOARDWALK will be at the per EACH contract price. This price shall include full compensation for providing and installing all timber materials, hardware, fasteners, treatment, and disposal of surplus materials and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL PILE FISH PLATE REPAIR AT TIMBER

PILE SUPPORTED BOARDWALK as shown on the Drawings and as herein specified.

F. Payment for Item 06130-6 FURNISH AND INSTALL TIMBER BRACING REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK will be at the per LINEAR FOOT installed contract price. This price shall include full compensation for providing and installing in-kind replacement of the timber bracing, timber materials, hardware, fasteners, treatment, disposal of surplus material, and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL TIMBER BRACING REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK as shown on the Drawings and as herein specified.

G. Payment for Item 06130-7 FURNISH AND INSTALL TIMBER SLEEPERS ON STEEL STRINGERS AT MICRO-PILE SUPPORTED BOARDWALK will be at the per LINEAR FOOT installed contract price. This price shall include full compensation for providing and installing timber materials for sleepers on the steel stringers, hardware, fasteners, treatment, disposal of surplus material, and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL TIMBER SLEEPERS ON STEEL STRINGERS AT MICRO-PILE SUPPORTED BOARDWALK as shown on the Drawings and as herein specified.

H. Payment for Item 06130-8 FURNISH AND INSTALL NEW TIMBER STRINGERS AT GRADE BEAM SUPPORTED BOARDWALK will be at the per LINEAR FOOT installed contract price. This price shall include full compensation for providing and installing timber stringer materials, connection angles, hardware, fasteners, treatment, disposal of surplus material, and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL NEW TIMBER STRINGERS AT GRADE BEAM SUPPORTED BOARDWALK as shown on the Drawings and as herein specified.

I. Payment for Item 06130-9 FURNISH AND INSTALL TIMBER STRINGER REPLACEMENT AT GRADE BEAM SUPPORTED BOARDWALK will be at the per LINEAR FOOT installed contract price. This price shall include full compensation for providing and installing timber stringer material, hardware, connection angles, fasteners, treatment, disposal of surplus material, and the furnishing of all labor including

certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL TIMBER STRINGER REPLACEMENT AT GRADE BEAM SUPPORTED BOARDWALK as shown on the Drawings and as herein specified.

J. Payment for Item 06130-10 FURNISH AND INSTALL TIMBER SLEEPERS ON EXISTING TIMBER STRINGERS AT GRADE BEAM SUPPORTED BOARDWALK will be at the per LINEAR FOOT installed contract price. This price shall include full compensation for providing and installing timber materials for sleepers on the timber stringers, hardware, fasteners, treatment, disposal of surplus material, and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL TIMBER SLEEPERS ON EXISTING TIMBER STRINGERS AT GRADE BEAM SUPPORTED BOARDWALK as shown on the Drawings and as herein specified.

K. Payment for Item 06130-11 FURNISH AND INSTALL TIMBER STAIR STRINGERS will be at the LUMP SUM installed contract price. This price shall include full compensation for timber stringer materials, blocking, connections, hardware, fasteners, treatment, disposal of surplus material, and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL TIMBER STAIR STRINGERS as shown on the Drawings and as herein specified.

L. Payment for Item 06130-12 FURNISH AND INSTALL MISCELLANEOUS TIMBER FRAMING FOR BENCHES, LIGHT POLES, AND GATE POSTS will be at the LUMP SUM contract price. This price shall include full compensation for miscellaneous timber framing including timber gate posts, gate post blocking, bench blocking materials, light pole blocking, connection angles, hardware, fasteners, treatment, disposal of surplus material and the furnishing of all labor including certification, preparation, transportation, re-installation of steel gates, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL MISCELLANEOUS TIMBER FRAMING FOR BENCHES, LIGHT POLES, AND GATE POSTS as shown on the Drawings and as herein specified.

M. Payment for 06130-13 FURNISH AND INSTALL NEW TIMBER STRINGERS FOR MARINA GANGWAY LANDING LIGHT POLE ANCHORAGE will be at the per EACH installed contract price. This price

shall include full compensation for providing and installing the additional timber stringers, connection angles, hardware, fasteners, treatment, and disposal of surplus materials, and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL NEW TIMBER STRINGERS FOR MARINA GANGWAY LANDING LIGHT POLE ANCHORAGE as shown on the Drawings and as herein specified.

N. Payment for 06130-14 FURNISH AND INSTALL GRADE BEAM SUPPORTED BOARDWALK TIE-IN SECTION TO EXISTING ADJACENT BOARDWALK AT PROPERTY LINE will be at the LUMP SUM contract price. This price shall include full compensation for providing and installing the additional timber stringers, timber sleepers, decking (both IPE and 4x12 PT), connection angles, hardware, fasteners, treatment, and disposal of surplus materials, and the furnishing of all labor including certification, preparation, transportation, and supervision, materials, tools, and equipment, and all other incidental work necessary to complete the FURNISH AND INSTALL GRADE BEAM SUPPORTED BOARDWALK TIE-IN SECTION TO EXISTING ADJACENT BOARDWALK AT PROPERTY LINE as shown on the Drawings and as herein specified

O. There will be no separate measurement of quantities or payments for work covered by this Section for the material or labor related to miscellaneous timber elements, including but not limited to, timber blocking for benches, timber blocking as required for deck support around light poles, additional timber members for utility hangers and shims as required to adjust for elevations etc.

4.03 PAYMENT ITEMS

ITEM	**DESCRIPTION**	**UNIT**
06130-1	FURNISH AND INSTALL NEW TIMBER STRINGERS AND MISC. TIMBER FRAMING, BLOCKING, AND POSTS AT TIMBER PILE SUPPORTED BOARDWALK	LINEAR FOOT
06130-2	FURNISH AND INSTALL TIMBER STRINGER REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK	LINEAR FOOT

ITEM	DESCRIPTION	UNIT
06130-3	FURNISH AND INSTALL PILE CAP REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK	LINEAR FOOT
06130-4	FURNISH AND INSTALL PILE SHIM REPAIR AT TIMBER PILE SUPPORTED BOARDWALK	EACH
06130-5	FURNISH AND INSTALL PILE FISH PLATE REPAIR AT TIMBER PILE SUPPORTED BOARDWALK	EACH
06130-6	FURNISH AND INSTALL TIMBER BRACING REPLACEMENT AT TIMBER PILE SUPPORTED BOARDWALK	LINEAR FOOT
06130-7	FURNISH AND INSTALL TIMBER SLEEPERS ON STEEL STRINGERS AT MICRO-PILE SUPPORTED BOARDWALK	LINEAR FOOT
06130-8	FURNISH AND INSTALL NEW TIMBER STRINGERS AT GRADE BEAM SUPPORTED BOARDWALK	LINEAR FOOT
06130-9	FURNISH AND INSTALL TIMBER STRINGER REPLACEMENT AT GRADE BEAM SUPPORTED BOARDWALK	LINEAR FOOT
06130-10	FURNISH AND INSTALL TIMBER SLEEPERS ON EXISTING TIMBER STRINGERS AT GRADE BEAM SUPPORTED BOARDWALK	LINEAR FOOT
06130-11	FURNISH AND INSTALL TIMBER STAIR STRINGERS	LUMP SUM
06130-12	FURNISH AND INSTALL MISCELLANEOUS TIMBER FRAMING FOR BENCHES, LIGHT POLES, AND GATE POSTS	LUMP SUM
06130-13	FURNISH AND INSTALL NEW TIMBER STRINGERS FOR MARINA GANGWAY LANDING LIGHT POLE ANCHORAGE	LUMP SUM

ITEM	DESCRIPTION	UNIT
06130-14	FURNISH AND INSTALL GRADE BEAM SUPPORTED BOARDWALK TIE-IN SECTION TO EXISTING ADJACENT BOARDWALK AT PROPERTY LINE	LUMP SUM

END OF SECTION

SECTION 06150

WATERFRONT WOOD DECKING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. The work to be done under this section shall consist of furnishing all materials, labor, supervision, tools, and equipment and performing all operations necessary to complete all work as shown on the Contract Drawing and as specified.

B. The work includes, but is not limited to, the following items:

1. Construction of Kebony™ Clear Radiata or Thermally Modified and Furfuryl Impregnated Wood Approved Equal as used in the following applications:
   a. Wood decking,
   b. Wood decking perimeter frame,
   c. Wood decking accessories
   d. Trim wood cladding at the Pavilion area ramp,
   e. Trim wood cladding at the North side of the Pavilion Pier structure, to match existing limits.
   f. Trim wood cladding at the perimeter of Pavilion Pier structure to match existing limits.
   g. Trim wood cladding along the exposed perimeter of the Harbor Masters Area ramp and landing.
   h. Trim wood cladding at the Harbor Masters area along the face of the exposed sheet pile is exposed.
   i. Trim wood cladding along the North Corner Ramp.
   j. Stair treads, risers, and all work incidental thereto.
   k. Railing cap and all work incidental thereto.
2. And any other incidental work.

1.02 REFERENCES

A. Specification Section 02800 Site Improvements

B. Specification Section 06130 Waterfront Structural Timber

C. ASTM D143-14 – Standard Test Methods for Small Clear Specimens of Timber.

D. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.

E. ASTM D 4761-13, Section 8.5.3.1 – Standard Test Methods for Mechanical Properties of Lumber and Wood-Based Structural Materials 4.

F. ASTM E648-17 "Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source". The foregoing test procedure is comparable to NFPA No. 253

G. International Code Council (ICC) Evaluation Service Report (ESR) issued and active, meeting the criteria of Acceptance Criteria AC47: ESR-3756.

H. ENVIRONMENTAL PRODUCT DECLARATION (EPD) in accordance with ISO 14025, ISO 21930 and EN 15804

I. MAAB: Massachusetts Architectural Access Board, Commonwealth of Massachusetts Regulation Chapter 521 CMR, latest edition.

J. ADA: Americans with Disabilities Act, latest edition.

1.03 WARRANTY

A. Provide a minimum 25-year warranty for wood decking materials against insect damage and decay.

B. Provide a minimum 30-year warranty for wood cladding materials against insect damage and decay.

1.04 DESIGN / PERFORMANCE REQUIREMENTS

A. Deck floor live load: 100 psf

1.05 SUBMITTALS

A. Product Data and Literature: Manufacturer's product data sheets, specifications, performance data and installation instructions for cladding, installation hardware, adhesives and accessories covered under the scope of work defined in this section.

1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. End grain sealant product for field cut ends.
4. Solvent Resistant Acrylic Flashing Tape.
5. Proposed stainless steel screw product including material and length. Use manufacturers’ recommended fasteners in accordance with the requirements of this Specification.

B. Installation methods including installation recommendations and instructions.

C. Shop Drawings: Deck board layout including stagger joint locations, decking perimeter frame boards layout and corner details, decking perimeter frame boards, joint locations, base plate locations, decking layout at all stairs, ramps, and gangway landings, vertical and horizontal cladding layout, any deck openings including but not limited to light poles, and any other details required to install the boardwalk decking to be approved by Landscape Architect and Engineer prior to procurement of material.

D. Certificates of Compliance.

1. Certificate of Compliance Forest Stewardship Council: FSC Controlled Wood, Chain of Custody

2. MSDS (Material Safety Data Sheet) – Submit a Material Safety and Data Sheet for the wood products supplied on the project.

3. ENVIRONMENTAL PRODUCT DECLARATION (EPD) in accordance with ISO 14025, ISO 21930 and EN 15804.

4. ICC ESR-3756

E. Chain-of-Custody: Written documentation providing evidence of compliance with Chain-of-Custody supply of wood products, and compliance with FSC® standards.

1. Demonstrate that products are FSC® certified by providing vendor invoices. Invoices will contain the vendor's chain of custody number and identify each chain of custody certified product on a line-item basis. A "vendor" is defined as the company that furnishes wood products to project contractors and/or subcontractors for on-site installation.

F. Samples: Provide pre-finished samples of decking at least 9 inches (229mm) in length. Wood decking shall be a natural brown color. Over time, exposure of the wood decking to outdoor elements will release lignins on the wood surface, eventually aging to a silver gray patina.

G. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic cleaning and maintenance of all components.

H. Warranty Information.

1.06 QUALITY ASSURANCE

A. Manufacturer Qualifications: Products covered under this Section shall be supplied by a single manufacturer/vendor with a minimum of ten years' proven production and supply experience.

B. Installer Qualifications: Company specializing in performing Work of this section with minimum 5 years documented experience.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

1. Review mock-up locations with Landscape Architect/Engineer before proceeding. Locations shall be at or near final location for that item.
2. Mock-ups shall include all items including fasteners, finishes and pavement surrounds as applicable, as shown in the Drawings. Do not proceed with the remaining work until workmanship is approved by Landscape Architect/Engineer
3. Refinish the mock-up area as required to produce acceptable work.
4. Accepted mock-up shall be comparison standard for remaining Work.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver items to the site until all specified submittals have been submitted to, and approved by, the Engineer.

B. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.

C. Storage and Handling Requirements:

1. Protect materials during shipment, storage and construction against damage.

2. All units shall be individually strapped to wood pallets or blocking of a minimum thickness to allow the egress of lift forks using high strength strapping. Transport and handle materials in a manner that will prevent damage.

3. Store a minimum of 4 inches off the ground in a dry location and cover with polyethylene to protect from contact with materials which would cause staining or discoloration. Store in a dry, well-ventilated and protected location elevated from the ground.

4. When actively using an open unit of wood decking, to flip over (reverse) the top boards so that they are face down. This keeps the face of the board from being exposed to the elements prematurely and this will help reduce the likelihood of having boards with different degrees of fading.

5. Protect materials from moisture, sunlight, and potential damage from construction operations and other causes.

6. Prior to installation, keep cladding and decking protected from moisture and sunlight in its original packaging. Incorporate

permeable coverings and vent stacks to prevent moisture from being trapped within coverings.

7. Contractor shall be required to replace items that are damaged during delivery, storage, or installation.

D. Prior to installation, allow for proper on-site acclimation of wood materials as recommended by the manufacturer.

1. Per the manufacturer, Kebony clear decking does not require an acclimation period, however it is recommended that installation occurs no longer than 7 days after delivery.

2. Approved or Equal products should be acclimated, stored, and installed in accordance with manufacturer's recommendations.

1.08 SEQUENCING

Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.09 PROJECT CONDITIONS

Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside the manufacturer's absolute limits.

PART 2 – PRODUCTS

1.01 MANUFACTURERS

A. Basis of Design Manufacturer: To establish a standard of quality, design and function desired, Drawings and specifications have been based on:

1. Kebony™ Clear Radiata by Kebony AS, Tel: 855.230.5656, info@kebony.us, www.kebony.us
2. OR Thermally Modified and Furfuryl Impregnated Wood Approved Equal approved equal.
3. Bamboo, composite woods, Ipe, Kebony Character, or tropical hardwoods will not be permitted.

B. Moisture Content:

1. Moisture content of 4 to 8 %; all dimensions when net thickness is over 1 inch.

C. Surface:

1. S4S (surfaced four sides), E2E (eased two edges). Edges shall be eased to a radius of 3.5mm.

2. Knots/Pitch pockets: May be visible and are a natural occurrence in wood.
3. Cupping: Max 1 % of width.

D. Wood Decking Profiles:

1. For Main Decking:
   a. Profile: Kebony™ Clear Radiata #2747, no. 2x8, Net Finished Dimensions 1-1/2 inches by 7-1/2 inches or Thermally Modified and Furfuryl Impregnated Wood Approved Equal
2. For Perimeter Trim Decking
   a. Profile: Kebony™ Clear Radiata #2522, no. 2x6, Net Finished Dimensions 1-1/2 inches by 5-1/2 inches (where indicated on drawings) or Thermally Modified and Furfuryl Impregnated Wood Approved Equal
   b. Profile: Kebony™ Clear Radiata #2746, no. 2x4, Net Finished Dimensions 1-1/2 inches by 3-1/2 inches (where indicated on drawings) or Thermally Modified and Furfuryl Impregnated Wood Approved Equal
3. For Vertical Cladding at Pavilion:
   a. Profile: Kebony™ Clear Radiata #2522, no. 2x6, Net Finished Dimensions 1-1/2 inches by 5-1/2 inches or Thermally Modified and Furfuryl Impregnated Wood Approved Equal
4. For Horizontal Cladding at Pavilion:
   a. Profile: Kebony™ Clear Radiata #2522, no. 2x6, Net Finished Dimensions 1-1/2 inches by 5-1/2 inches or Thermally Modified and Furfuryl Impregnated Wood Approved Equal
5. For Vertical Cladding at Harbor Master Area and Ramp:
   a. Profile: Kebony™ Clear Radiata #2226, no. 5/4x6, Net Finished Dimensions 7/8 inches by 5-5/8 inches or Thermally Modified and Furfuryl Impregnated Wood Approved Equal
6. For Vertical Cladding at North Corner Ramp:
   a. Profile: Kebony™ Clear Radiata #2226, no. 5/4x6, Net Finished Dimensions 7/8 inches by 5-5/8 inches or Thermally Modified and Furfuryl Impregnated Wood Approved Equal
7. For Stair Treads:
   a. Profile: Kebony™ Clear Radiata #2522, no. 2x6, Net Finished Dimensions 1-1/2 inches by 5-1/2 inches or

Thermally Modified and Furfuryl Impregnated Wood
Approved Equal

8. For Leaning Rail:
   a. Profile: Kebony™ Clear Radiata #2522, no. 2x6, Net Finished Dimensions 1-1/2 inches by 5-1/2 inches or Thermally Modified and Furfuryl Impregnated Wood Approved Equal

E. Length:

1. Lumber shall be supplied at or over specified length for final fit in the field. Full length boards should be utilized whenever possible.
2. Lumber shall be supplied precision trimmed to specified lengths only when specified in writing.

F. All ends, whether they are cut on site or from the factory, shall be treated with an end sealant in accordance with Part 3.04B.

G. Mechanical Properties: Meet or exceed the following when tested in accordance with ASTM D143:

1. Bending Strength (MOR): 5,235 psi, 36.1 MPa 2
2. Modulus of Elasticity (MOE): 1,798,468 psi, 12.4 GPa
3. Compression Parallel to Grain: 13,200 psi. 1553 psi (Note: Average)
4. Compression Perpendicular to Grain: (Note: Average)
   a. @ 0.02”: 325.5 psi
   b. @ 0.04”: 1581.5 psi
   c. @ 0.10”: 2638.5 psi
5. Average Air-Dry Density: Approximately 42 lb/ft2 , 670 Kg/m3
6. Basic Specific Gravity: Ranges from 0.80-0.91
7. Max. Swelling: 4% (dry to wet, tangential)
8. Live Deflection shall be limited to L/360.

H. Fire Rating, Acute Inhalation, Combustion Toxicity Requirements: Meet or exceed the following.

1. Lumber supplied shall be fire resistant without the use of any fire-resistant treatments to meet ASTM E84-15a,"Standard Method of Test for Surface Burning Characteristics of Building Materials". The foregoing test procedure is comparable to UL 723, ANSI/NFPA No. 255, and UBC No. 8-1.

I. Environmental Compliance:

1. Certified Wood: Materials shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship."

2. ENVIRONMENTAL PRODUCT DECLARATION (EPD) in accordance with ISO 14025, ISO 21930 and EN 15804

2.02 DECK ACCESSORIES

A. Decking and cladding shall be fastened with #8, Marine Grade 316L or 316A4 stainless steel, flathead (countersunk), heat-treated deck screws, two (2) per support location. Contractor to field verify and submit proposed screw length for Engineer review and approval. Care shall be taken at edges of deck board to minimize splitting or splintering. If splitting or splintering occurs, Contractor shall replace the damaged board at no additional cost to DCR.

1. Manufacturer: FixingGroup
2. Manufacturer: Eurotec
3. Or Approved Equal

B. Leaning Rails shall be fasted in accordance with details indicated on the Contract Drawings.

C. Field Cut End Treatment

1. Saicos End Grain Sealing Wax
2. Or Approved Equal

D. Joist Tape shall be provided to isolate dissimilar materials in accordance with the Contract Drawings.

1. Solvent Resistant Acrylic Flashing Tape: G-Tape
2. Or Approved Equal

PART 3 – EXECUTION

3.01 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Verify support framing is ready to receive decking and cladding. Ensure that supports are spaced not greater than 36 inches on center.

C. If substrate preparation is the responsibility of another installer, notify Landscape Architect/Engineer of unsatisfactory preparation before proceeding.

3.02 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Coordinate placement of bearing or support items.

C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

D. Install solvent resistant acrylic flashing tape, (G-tape or approved equal) over stringers and appropriate wood substructures including but not limited to beams, ledger boards, and stringers.

3.03 INSTALLATION

A. General: decking must be properly framed, closely fitted and accurately set to the required lines and levels and shall be rigidly secured in place.

1. Framing should be level within ⅛” (3 mm). Provide shims if there are variations in framing.
2. Scribe and cut work to fit adjoining work closely.
3. Use full length boards whenever possible to minimize field cuts.
4. Refinish cut surfaces of prefinished boards.
5. Use 1/4” (6 mm) spacing between butted boards and finish all cut ends with a small chamfer or bevel (routered edge with a finished rounding radius of 1/8” (3 mm) to 1/5” (5 mm))

B. Wood decking attachment shall be by face fastening only and requires predrilling a hole that is 1/32 inch (0.8mm) smaller in diameter than the screw and counter-bore for screw head’s taper. Utilize depth stop to ensure size of screw head and counter-bore are the same.

C. Minimum screwing distance from edge: 1 inch (19mm) Minimum screwing distance from end: 1 1/2 inch (39mm).

D. Maintain a 1/4 inch (6mm) gap between cladding boards.

E. Maintain a 1/4 inch (6mm) gap between deck boards. Install decking with a minimum number of end joints. Stagger joints in adjacent decking boards as indicated on the contract drawings/plans. Each board must rest on and be fastened to a minimum of three (3) stringers. Install decking perpendicular to framing members, with ends staggered over firm bearing.

F. Allow expansion space at edges along vertical interfaces with existing buildings and structures equal to ½”.

G. Decking shall be installed with eased edges up. Contractor shall remove and replace deck boards with visible imperfections as determined by the Engineer or Landscape Architect.

3.04 FINISHING

A. All hand contact surfaces shall be free of splinters and if needed, sanded smooth to the touch.

B. The Contractor shall seal ends of boards within 24 hours after arrival on site and within the 24-hours after any the initial field cuts, with Saicos End Grain Sealing Wax or approved equal, to manufacturer's standards including but not limited to surface preparation and product application.
   1. Application Method: Foam Roller

3.05 TOLERANCES

A. Maintain a maximum variation for of 1/8 inch in 8 feet (3mm/2438mm) for plumb and level and a maximum of 1/16 inch (1.5mm) offset from adjoining surfaces intended to be flush.

B. Set vertical and horizontal cladding boards such that maximum gap between adjacent board edges is ¼" based on moisture content of boards for temperature range during installation.

C. Set decking boards such that maximum gap between adjacent board edges is ¼" based on moisture content of boards for temperature range during installation.

D. Set decking boards such that maximum gap between butt end joints and mitered end joints based on moisture content of boards for temperature range during installation.

E. Set Leaning Rail such that the maximum gap between adjacent cap sections is ¼" based on moisture content of boards for temperature range during installation.

F. All screw holes shall be pre-drilled with the appropriately sized drill bit, and screws shall be installed flush with the top of the deck boards, without crushing or marring the face of the board.

G. The Contractor shall apply an appropriate end-grain sealant be added to cut ends within 24 hours of the cut or per the manufacturer's recommendation.

3.06 CLEANING

A. Daily clean work areas by sweeping and disposing of scraps and sawdust.

B. Upon completion of the work of this Section in any given area, remove tools, equipment and all rubbish and debris from the work area; leave area in broom-clean condition.

3.07 PROTECTION

A. During the installation and finishing of exterior wood decking and cladding, protect the work of other trades against undue soilage and damage by the exercise of reasonable care and precautions. Repair or replace any work so damaged and soiled. Remove and replace work which cannot be satisfactorily repaired.

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

PART 4 – COMPENSATION

2.01 MEASUREMENT

A. Measurement for Item 06150-1 FURNISH AND INSTALL WOOD DECKING will be made on a per SQUARE FOOT installed basis for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

B. Measurement for Item 06150-2 FURNISH AND INSTALL WOOD CLADDING will be made on a LUMP SUM basis installed for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

C. Measurement for Item 06150-3 FURNISH AND INSTALL WOOD STAIR TREADS AND RISERS will be made on a LUMP SUM basis installed for all work described in this section not otherwise listed below, complete to the lines and grades indicated by the Contract Drawings.

D. There will be no separate measurements of quantities or payments for work to furnish and install the wood leaning rail, included under this Specification Section. Measurement and Payment to furnish and install the wood leaning rail and any work associated with it, shall be paid for under Specification Section 02800.

2.02 PAYMENT

A. Payment for Item 06150-1 FURNISH AND INSTALL WOOD DECKING will be at the per SQUARE FOOT installed contract price. This price shall include full compensation for providing and installing all decking, decking perimeter frame boards, hardware, fasteners, preservative treatment of all field cuts, dissimilar material isolation elements, certification, and the furnishing of all labor, materials, tools, and equipment for, preparation, disposal of surplus material transportation, survey, supervision, and all other incidental work necessary to complete the FURNISH AND INSTALL WOOD DECKING along the boardwalk, deck areas and ramp locations as shown on the Drawings and as herein specified.

B. Payment for Item 06150-2 FURNISH AND INSTALL WOOD CLADDING will be at the LUMP SUM installed contract price. This price shall include full compensation for providing and installing all decking, PT

sleepers and or blocking to accept cladding, hardware, fasteners, treatment, certification, and the furnishing of all labor, materials, tools, and equipment for, preparation, disposal of surplus material transportation, survey, supervision, and all other incidental work necessary to complete the FURNISH AND INSTALL WOOD CLADDING including the vertical WOOD cladding at the Pavilion area ramp, the horizontal WOOD cladding at the North side of the Pavilion Pier structure, to match existing limits, the vertical WOOD cladding at the perimeter of Pavilion Pier structure to match existing limits, the vertical WOOD cladding along the exposed perimeter of the Harbor Masters Area ramp and landing, the vertical WOOD cladding at the Harbor Masters area along the face of the exposed sheet pile is exposed and the vertical WOOD cladding along the North Corner Ramp as shown on the Drawings and as herein specified.

C. Payment for Item 06150-3 FURNISH AND INSTALL WOOD STAIR TREADS AND RISERS will be at the LUMP SUM installed contract price. This price shall include full compensation for providing and installing all decking, blocking, hardware, fasteners, treatment, certification, and the furnishing of all labor, materials, tools, and equipment for, preparation, disposal of surplus material transportation, survey, supervision, and all other incidental work necessary to complete the FURNISH AND INSTALL WOOD STAIR TREADS AND RISERS including the WOOD stair treads and riser boards as shown on the Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	**DESCRIPTION**	**UNIT**
06150-1	FURNISH AND INSTALL WOOD DECKING	SQUARE FOOT
06150-2	FURNISH AND INSTALL WOOD CLADDING	LUMP SUM
06150-3	FURNISH AND INSTALL WOOD STAIR TREADS AND RISERS	LUMP SUM

END OF SECTION

SECTION 09905

WATERFRONT PROTECTIVE COATING

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

The furnishing of all plant, labor, materials, tools and equipment, and the performance of all operations and incidentals necessary for the coating, handling, storing, and shipping of plant coated steel sheet piling, structural steel, and any miscellaneous ancillary items.

1.02 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the Work of this Section.

B. Through the Engineer, DCR reserves the right of approval of any Subcontractor pre-qualified and selected for this portion of the Work by the Contractor. Approval will be based, in part, on:

1. Documented successful experience in performing work of a similar nature.
2. Acceptable schedule of unit prices for measurement and payment in the event of changes in the Work of this Section.

C. Coating materials shall be handled, stored, and applied in accordance with the manufacturer's specifications, or as directed by an authorized representative of the coating manufacturer.

D. All references to SSPC shall be interpreted as Steel Structures Painting Council.

E. Structural steel fabrications shall be received by coating applicator free of all oil and grease.

1.03 SUBMITTAL

Submit material certification data for the coating system to the Engineer for review no later than the time of delivery of materials to the site. Certification shall include a statement by the coating applicator that the protective coating was installed in strict accordance with manufacturers written instructions, including all surface preparation.

1.04 PRODUCT DELIVERY AND STORAGE

The Contractor guarantees that material shall be stored in a safe manner within DCR-designated area provided at the site.

PART 2 - PRODUCTS

2.01 EPOXY COATING

A. Material used for factory epoxy coating of all scheduled surfaces shall be BAR-RUST 235 Multi-Purpose Epoxy Coating as manufactured by Devoe Coatings or equivalent accepted by the Engineer.

B. Epoxy coating field touch-up material shall be identical to factory coating.

C. The topcoat color for all surfaces is to be black.

D. For handrail coating specifications, See Specification Section 02800 SITE IMPROVEMENTS.

PART 3 – EXECUTION

In general, all steel exposed to air or water shall have protective coating. Unless specifically noted otherwise, all items scheduled to receive protective coating shall be fully fabricated with holes, cuts, threads, etc. prior to receiving protective coating, prior to delivery to site and shall be shop coated by galvanizing or with an Epoxy Coating as appropriate.

3.01 EPOXY COATING

For steel sections scheduled to receive an Epoxy Coating, steel sections shall be shop coated prior to delivery to site as follows:

A. All steel shown shall be shop coated with primer coat and two (2) coats of Coal Tar Epoxy, each having an 8-mil dry film thickness, for a total thickness of 16-mil, in accordance with the manufacturer’s recommendations. The two coats are to be applied separately with at least 3 hours cure time between coats (90 to 32 deg range). Refer to Manufacturer specs for other temperature information.

B. Shop Surface Preparation

1. Prior to coating, the metals shall be cleaned to a Near-White condition in conformance with SSPC Specification SP-10 with an abrasive blast system. Coating shall progress no later than 24 hours after cleaning.

2. Surfaces shall be prepared in strict accordance with the protective coating system manufacturers written instructions. Surfaces are to be abrasion-blasted to a near-white surface cleanliness in accordance with SSPC-SP-10. Blast profile on steel shall be 1.5 to 2.5 mils in depth and be of a sharp, jagged nature as opposed to a “peen” pattern (from shot blasting). Surfaces shall be sound, dry, clean, free of oil, grease, dirt, mildew, form release agents, curing compounds, loose and flaking paint, grit dust, and other foreign substances. Roto blasted surfaces are not acceptable.
3. Application of coating shall be in accordance with coating manufacturer.
4. In all cases wire brushing or grinding is not considered an acceptable substitute for the abrasive blast finish.

C. Touch-Up of Epoxy Coated Items

1. Touch-up of coatings shall be performed at all locations of damaged, defective, or failed coating. Touch-up shall be performed with the same coating used for the existing or original coat. The resulting minimum dry film thickness shall be equal to the existing or original coating.
2. Touch up field-applied corrosion protection shall be applied to all steel members at welded connections or wherever the factory applied corrosion protection has been damaged or disturbed. Surface preparation shall conform to SSPC-SP 2 or SSPC-SP 3 then SSPC-SP 1.
3. Repair coating shall consist of compatible prime coat and finish coat with dry film thickness meeting or exceeding shop fabricated coating.

D. Field Touch-Up of Epoxy-Coated Items

1. Surfaces shall be prepared in strict accordance with the protective coating system manufacturers written instructions.
2. The protective coating shall be installed in strict accordance with manufacturers written instructions in order to achieve the required film thickness as stated by the manufacturer.
3. All holidays or other imperfections in the coating shall be removed or repaired at the Contractors expense prior to final acceptance of the Work.
4. Surfaces requiring field touch-up of any required areas shall be prepared as follows:
5. Clean all surfaces to be repaired per SSPC-SP1 Solvent Clean to remove chlorides and general surface contamination.
6. Grind all welded areas to provide a smooth surface with no sharp edges.
7. Feather existing coatings back to sound material.
8. Clean all other surfaces to be repaired per SSPC-SP2 (Hand Tool Clean) or SSPC-SP3 (Power Tool Clean). Do not grind surfaces smooth; maintain adequate surface profile from original blast cleaning.

9. Stripe coat all welds and edges with the epoxy coating prior to painting to ensure adequate film thickness.
10. Repair coating shall be of the same manufacturer as original coating and shall be formulated to be applied and cured in a marine environment.

E. All holidays or other imperfections in the coating shall be removed or repaired at the Contractors expense prior to final acceptance of the Work.

3.02 HOT DIPPED GALVANIZED (HDG) PROTECTIVE COATING

A. For those items indicated for galvanizing, apply zinc coating by the hot-dip process, galvanize structural steel in accordance with ASTM A123, with an average weight per square foot of 2.0 ounces and not less than 1.8 ounces per square foot.
B. Galvanize metal hardware items in accordance with ASTM A153 with an average coating weight of 1.3 ounces per square foot.
C. Touch-up material for galvanized coatings. Galvalloy or Galvicon (two heavy coats).
D. To the maximum extent possible, all holes and welds to be completed prior to galvanizing. Plan for field fabrication, cutting, drilling, etc., after galvanizing shall be submitted to the Engineer for approval before fabrication.
E. Field Touch-Up of Hot-Dipped Galvanized Items: Touch-up shall be performed with Tnemec 90-97 Tnemec-Zinc primer or equivalent accepted by the Engineer. Surface preparation and coating application shall be in strict accordance with manufacturers written instructions.

3.03 Defective Protective Coating Materials

A. Coating which, in the opinion of the Engineer, does not meet acceptance due to improper coating, storage, handling, installation or other damage shall be rejected. The rejected materials shall be, at the sole discretion of the Engineer, either replaced with coated new material or completely cleaned to base material and re-coated in accordance with these specifications for shop coating of materials. This work shall be done at no additional cost to DCR.

PART 4 – COMPENSATION

4.01 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section.

END OF SECTION

SECTION 16100
PARK AND BOARDWALK LIGHTING

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. Include to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) Standard Specifications for Highways and Bridges and the Supplemental Specifications.

1.02 DESCRIPTION OF WORK

A. The work of this Section consists of providing all labor, equipment, materials, incidental work, and construction methods necessary to furnish and install the lighting and electrical system, as indicated on the Contract Documents and as specified herein.

B. The work of this Section consists of all electrical work and related items as indicated on the Drawings and/or as included herein and but not necessarily limited to the following:

1. Electrical Work shall consist of the furnishing and installation of shoreline lighting, walkway lighting, and various electrical components. The complete system shall include luminaires, conduit, wire, splash pad wiring, splash pad ground grid, handholes, light poles, connections, and any other equipment required to complete the installation as follows:
    a. Electric Utility Company Service Connection – Including manhole break/conduit riser, coordination with and fees borne of Electric Utility Company.
    b. Excavation for lighting system – This Work will consist of saw cutting and patching pavement, excavation and backfill of all trenches for lighting system conduits, handholes, and control cabinets foundation.
    c. Excavation, removal and proper disposal of existing lighting system in accordance with all applicable local, state and federal regulations.

1.03 REFERENCES

A. The following standards shall apply to the work of this Section. The publications listed below shall be of current issue number and date and shall form a part of these Specifications to the extent referenced. The publications are referred to in the text by basic designation only.

1. American National Standards Institute (ANSI) Publications:
   a. C2 - 93 National Electrical Safety Code, 2766-0879
   b. C82.4 - 85 High Intensity Discharge Lamp Ballasts (Multiple Supply Type), 0652-3721

2. American Society for Testing and Materials (ASTM) Publications:
   a. A48 Gray Iron Castings
   b. A123 Zinc (Hot Dipped Galvanized) Coatings on Iron and Steel Products
   c. A153 Zinc Coating (Hot Dip) on Iron and Steel Hardware
   d. A366/A366M Steel, Sheet, Carbon, Cold Rolled, Commercial Quality
   e. A526/A526M Steel Sheet, Zinc-Coated, (Galvanized) by the Hot-Dip Process, Commercial Quality
   f. A580 Stainless and Heat-Resisting Steel Wire
   g. A853 Steel Wire, Carbon, for General Use
   h. B108 Aluminum-Alloy Permanent Mold Castings
   i. B597 Practice for Heat Treatment of Aluminum Alloys
   j. B633 Electro deposited Coatings of Zinc on Iron and Steel
   k. D1435 Outdoor Weathering of Plastics
   l. D1784 Rigid Polyvinyl Chloride (PVC) Compounds and Chlorinated Polyvinyl Chloride (CPVC) Compounds
   m. D2564 Solvent Cements for Polyvinyl Chloride (PVC) Plastic Piping Systems

3. Board of Fire Prevention Regulations:
   a. 527CMR 12.00 Massachusetts Electrical Code (Article 27 of Mass State Building Code, 6th Edition)

4. Illuminating Engineering Society (IES) Publication:
   a. IES – 2000 Lighting Handbook, Ninth Edition

5. National Electrical Manufacturers Association (NEMA) Publication:
   a. ICS2 – 88 Industrial Control Devices, Controllers, and Assemblies, 3100-1839
   b. ICS6 - 4/1990(rev) Enclosures for Industrial Controls and Systems (Base, 1988)

6. National Fire Protection Association (NFPA) Publication:
   a. 70 National Electrical Code
   b. 101 Code for Safety to Life from Fire in Buildings and Structures

7. Underwriter's Laboratories Inc. (UL) Publications:

a. 50 Electrical Cabinets and Boxes

b. 57 Electrical Lighting Fixtures

c. 508 Standards for Industrial Control Equipment

d. 773 – 87 Plug In, Locking Type Photo Controls for Use With Area Lighting, 3851-0887

e. 773A – 89 Non-Industrial Photoelectric Switches for Lighting Control, 3870-2446

8. Illuminating Engineering Society Recommended Practice

a. RP-33-14 Lighting for Exterior Environments

b. RP-8 Recommended Practice for the Design and Maintenance of Roadway and Parking Facility Lighting – also in reference to Bikeway and Walkway Lighting

1.04 SUBMITTALS

A. At least thirty days prior to intended use, the Contractor shall provide the following samples, Shop Drawings, and submittals in conformance with the requirements of Division 1 and as stated herein. Contractor shall not begin shop drawings until receiving Engineer's review of proposed material. Contractor shall not order materials until receiving Engineer's review of samples, certification, or test results. Delivered materials shall closely match the approved samples.

1. Complete Shop Drawings for the following:

a. Each luminaire, including fabrication and assembly drawings, mounting detail, and bill of material.

b. Luminaire photometric data, including isolux lines of horizontal foot-candles based on required mounting height; average and minimum ratio, computerized candlepower distribution data graphically representing in polar coordinates the average vertical transverse through 75 degree lateral, coefficients of utilization curves (street and house side).

c. Lighting calculations

d. Panelboards Electrical Equipment and Wiring.

e. Lighting poles, including dimensions, wind loading calculations, pole deflection and other applicable information. Wind loading calculations shall be stamped by a Registered Professional Structural Engineer in the state of Massachusetts.

B. Manufacturer's data shall be submitted for the following:

a. Luminaires, including lamps, drivers, and photocells

b. Light Poles, arms, and arm-to-luminaire adapters

c. Conduits, fittings and all associated components required for a complete conduit installation.

d. Conductors

e. Handholes

f. Lighting load center

g. Splices

h. Wire Types and Sizes.

i. Warning Tape

C. Samples shall be submitted for the following:

1. Each type Luminaire.

2. Pole and luminaire finish

D. Certified Test Reports:

1. Distribution data according to ANSI/IES classification type (as defined in IES Lighting Handbook).

2. Field Test Reports: The Contractor shall submit field test reports to the Engineer in accordance with the requirements of the Division I specification for the following items.

a. Wire Megger Testing

b. Ground Rod Resistance Testing

c. Grounding System Testing

E. Calculations:

1. Wind loading calculations shall be completed for the submitted light pole. Effective projected area (EPA) for the light pole, mounting arms, and attached luminaires shall be included in the calculation. The calculations shall be stamped by a Massachusetts State Registered Structural Professional Engineer. Submitted calculations which are not stamped by a Massachusetts State Registered Structural Professional Engineer will not be reviewed.

2. Point-by-point light calculations shall be completed when providing an equal to a luminaire listed in the specifications. These point-by-point light calculations shall be completed by the Contractor (or luminaire manufacturer) showing maintained horizontal illuminance in foot candles on a 5 foot by 5 foot grid on the base map of the area using photometric data for the submitted luminaires. The base map shall include the parking lot entrance, parking area, and turnaround as well as the park walkways to be lit with site features. The drawings shall be plotted at 1” = 20 foot scale. Calculations shall be for maintained values, i.e. Light Loss Factor (LLF) = 0.71, where LLF = LLD x LDD. Lamp Lumen Depreciation (LLD) shall be 0.86, Luminaire Dirt Depreciation (LDD) shall be 0.82. The parking lot, including the entrance, parking area, and turnaround shall have an minimum average illuminance of 0.5 foot candles with a maximum to minimum uniformity ratio of 15:1 or average to minimum uniformity of 4:1.

The park walkway shall have a minimum maintained average illuminance of 1.5 foot candles on the ground with an average to minimum uniformity ratio of 4:1. Documentation shall be submitted with the luminaire photometric data in electronic format, luminaire

mounting heights, luminaire data sheets, and 20-scale drawing showing light levels at each point as specified above.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Ship lighting fixtures/accessories and all electrical apparatus securely packaged and labeled for safe handling in shipment and to avoid damage or distortion.

B. Store lighting fixtures/accessories and all electrical apparatus in secure and dry facility and in original packaging in a manner to prevent soiling, physical damage, wetting or corrosion prior to installation.

1.06 WARRANTIES

A. All warranties that the Contractor receives from the manufacturer of equipment and materials pertinent to the complete and satisfactory operation of the lighting system installation shall be turned over to the DCR at the time of acceptance of the system, at no cost to the DCR. Each Warranty so furnished shall indicate its expiration date.

1. The Electrical System shall be completed one month prior to the contract completion date. The lighting system shall then be put in operation for the specified one month period during which time fine tuning and adjustments are to be made at no additional cost to the DCR.

2. The Contractor shall be completely responsible for all maintenance, repairs and replacement of damaged equipment during the functional test and throughout the performance warranty period.

3. The Contractor shall provide a performance warranty for one year on the work performed under this contract including the performance of all equipment and components of the park lighting system specified. The performance warranty responsibility of the contractor shall commence after official acceptance by the responsible agency.

4. If within 48 hours after notification by the Engineer of a malfunction, the Contractor fails to make such repairs as necessary, the Engineer will undertake repairs of which all costs are the responsibility of the Contractor.

5. The cost of any maintenance necessary, except electrical energy, shall be at the Contractor's expense and will be considered as included in the price paid for the Contract item involved and no additional compensation will be allowed therefore.

PART 2 PRODUCTS

2.01 GENERAL

A. All electrical equipment and materials shall be designed, manufactured, tested, and rated to conform to the latest requirements, issues, and revisions of the National Electric Code (NEC), Federal Specifications, the National Electrical Manufacturers Association (NEMA), the Underwriters Laboratories, Inc. (UL), the American Society for Testing and Materials (ASTM),

the American National Standards Institute (ANSI), and the American Institute of Electrical Engineers (AIEE).

B. All material shall have the name or trademark of the manufacturer stamped thereon, where such identification is customary.

2.02 RIGID PLASTIC CONDUIT

A. Conduit of the sizes shown on the plans shall be new grey heavy wall rigid plastic conduit of homogeneous polyvinyl chloride construction with standard wall thickness. The conduit shall conform to NEMA Standards Publication TC-2 for Schedule 80 type EPC Conduit. A 3/8 inch polypropylene pull rope shall be installed in conduits not to be used immediately.

B. The rigid plastic conduit shall conform to and meet all current requirements and testing procedures of the American Society of Testing and Materials whenever such standards and test shall apply. The following ASTM standards shall apply as applicable:

1. ASTM Specification D1784 - Schedule 80 - Extra Heavy Wall Rigid Plastic Conduit

2. ASTM Specification D2564 - Specification for Solvent Cements for PVC Plastic Pipe & Fittings

C. Couplings and Fittings

1. Conduit couplings shall be constructed of polyvinyl chloride rigid plastic formed to fit the outside diameter of the conduit, to be used in conjunction with a heavy bodied solvent cement.

2. ASTM D2564 - Specifications for Solvent Cements for Polyvinyl Chloride Plastic Pipe and Fittings.

3. Conduit Duct Bell Ends shall be polyvinyl chloride rigid plastic approved by Underwriters' Laboratories, Inc. for use on threadless rigid plastic conduit, to be used in conjunction with a heavy bodied solvent cement.

2.03 RIGID STEEL CONDUIT

A. Rigid steel conduit shall be mild hot-dipped galvanized steel piping not less than 3/4 inch size. The galvanized coating of zinc shall be of uniform thickness both inside and outside, and shall be applied to the threads of the conduit. The conduit shall be further protected by one or more of the following:

1. Electro-galvanized after hot-dipped galvanizing and/or

2. An alkaline cleaner bath and rinse and a chromic acid bath to form a film of zinc chromate over all and/or

3. A thin polyvinyl or a lacquer coating baked on the inside and outside of conduit.

4. Conduit protected solely by enamel, electro-galvanizing, or other processes, etc., will not be acceptable. Conduit shall also conform to the following specifications:

   a. Federal Specification WW-C-581.

   b. ANSI Standard C80.1.

   c. ASTM Standard A 120.

   d. Underwriters' Laboratories UL 6.

5. Conduit shall be as manufactured by Allied Tube and Conduit Corp., Wheatland Tube Co., Republic Steel Corp. or equal.

2.04 UNDERGROUND WARNING TAPE

A. Warning tape shall be permanent, bright-colored, continuous-printed, vinyl tape, not less than 6”-wide by 5 mils thick. Tape shall be compounded for permanent direct-burial service and embedded with a continuous detectable metallic strip or core. Tape shall have a printed legend that indicates type of underground line with color conforming to the latest American Public Works Association (APWA) Uniform Color Code.

B. Tape shall conform to the specifications of OSHA Regulation 1926-956 and the DOT Office of Pipeline Safety USAS B31.8. Manufacturer's data for underground warning tape shall be submitted with conduit submittal.

2.05 WIRE AND CABLE

A. The conductor shall be composed of soft drawn 7-strand copper of the gauge shown and the insulation shall be installed as a single jacket of cross-linked polyethylene of Underwriter's Laboratories Type USE-2 or RHH-RHW-2 rated at 90 degrees C continuous in wet and dry locations 600 volt as per the National Electrical Code conforming to UL 44.

B. Wire and cable furnished and used shall be new and shall have the size, grade of insulation, voltage and manufacturer's name permanently marked on the outer covering at regular intervals. Wire and cable shall be delivered to the site in complete coils or reels with identifying size, type and insulation tags. Wire and cable shall be protected from weather and damage during storage and handling.

2.06 GROUNDING CONDUCTORS

A. Grounding Electrode Conductors:

1. All conductors in conduit and handholes shall be insulated.

2. Insulated: No. 10 AWG and smaller shall be solid copper per ASTM B3. Type shall be the same as power conductors. Color shall be green.

3. Uninsulated: No. 8 AWG and smaller shall be solid copper per ASTM B3.

4. Uninsulated No. 6 AWG and larger copper conductors shall be stranded copper per ASTM B835.

B. Equipment Grounding Conductors:

1. Insulated: No. 10 AWG and smaller shall be solid copper per ASTM B3. Type shall be the same as power or branch circuit conductors. Covering shall be continuous green color.

2. Uninsulated: No. 8 AWG and smaller shall be solid bare copper per ASTM B3.

2.07 SPLICING AND TERMINATION MATERIALS FOR 600 VOLT RATED WIRE AND CABLES

A. Connectors and Splicing Materials

1. All splices, outside of the lighting load center, shall be waterproof

2. Splices shall be made in accordance with the Electrical Code by Journeymen Electricians holding "Certificate B" issued by the Board of State Examiners of Electricians.

3. The conductors shall be joined by the use of connectors and terminal lugs, listed by Underwriters Laboratory, and meet all requirements of the Massachusetts Electrical Code.

4. Splices shall be insulated. Unless otherwise specified, the Contractor may use any of the following:

a. Splices shall be suitable for continuous submersion in water. In underground raceway systems splices shall be made only in accessible locations such as handholes. Splices shall be made using a compression connector on the conductors and then covering with an insulation and jacket material equivalent to that of the cable. Method shall be by pouring a thermosetting resin into a mold that surrounds the joined conductors, or by utilizing a sealant-filled, thick-wall, heat-shrinkable, thermosetting tubing. **Spring connectors ("Wire-nuts") shall not be used.**

B. Tapes:

1. Vinyl Tape: Conforming to ANSI/UL 510 and ASTM D3005

a. Interior Dry Locations: 7 mils, ASTM D3005 (Type 1), Scotch (3M) No. 33, or accepted equal

b. Exterior or Damp and Wet Locations: 8.5 mils, ASTM D3005 (Type II), Scotch (3M) No. 88, or accepted equal.

2. Rubber Tape: 30 mils thick, ethylene propylene rubber (EPR) based, rated for 130 degrees C operation, conforming to ASTM D1373, Scotch (3M) No. 130C, or accepted equal.

2.08 CEMENT CONCRETE FOR LIGHTING LOAD CENTER FOUNDATION

A. Cement concrete shall have a compressive strength of 4,000 pounds per square inch (psi) required at 28 days, with minimum cement factor of 610 pounds, and 3/4 inch maximum size crushed aggregate.

B. Portland Cement: Cement shall conform to AASHTO M85, Type II.

C. Fine Aggregate: Fine aggregate shall be washed, inert, natural sand conforming to the requirements of AASHTO M6.

D. Coarse Aggregate: Coarse aggregate shall consist of well graded washed gravel or crushed stone conforming to the requirements of AASHTO M80.

E. Water: Water used in mixing concrete shall be clean and free from deleterious materials.

F. Admixtures for water reducing, retarding, accelerating, improving bond, and for other specific properties may be used when specifically recommended and designed by the manufacturer of concrete and approved by the Engineer. Refer to Specification Section 03300 – Concrete for concrete and reinforcing steel placement.

2.09 16’ PEDESTRIAN LIGHT POLES

A. The light pole and all its materials used in its manufacture shall meet the requirements of the American Association of State Highways and Transportation Officials (AASHTO); specifically, the Standard Specification of Structural Supports for Highway Signs, Luminaires, and Traffic Signals. The pole shall be Philips Lumec catalog number APR5R-16-BKTX with a MJ-1A-R5-BKTX bracket or approved equal.

B. The shaft shall be 16’ tall and shall be made from a 5” round 6061-T6 extruded aluminum tubing having a 0.247” wall thickness, welded to the bottom and top of the anchor plate.

C. The pole shall have a 2" x 4 1/2" (51mm x 114mm) maintenance opening centered 20" (508mm) from the bottom of the anchor plate, complete with a weatherproof aluminum cover and a copper ground twin lug.

D. The pole shall have a two-piece square base cover made from formed aluminum, mechanically fastened with stainless steel screws.

E. The pole shall have a tenon and a tenon mounted welded bracket arm made from 6061-T6 bent aluminum tubing with a 2 3/8” outside diameter. The adaptor for the arm shall be made of cast 356 aluminum and sized to fit on the pole tenon. It shall be mechanically attached to the pole using two sets of four set screws at 90 degrees around the bracket.

F. The anchor bolts shall be made of ASTM F1554 grade 55 steel having a minimum yield strength of 55000 psi. The nuts shall be made of ASTM A563 grade A steel or better. Washers shall be made of ASTM grade F-844 steel or better. All galvanized parts shall be hot dip galvanized per ACNOR G-164 minimum.

G. The finish color shall be black textured RAL9005TX (BKTX) in accordance with the AAMA 2603 standard. Finish shall be accomplished by application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The thermosetting resin shall provide a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and shall be humidity proof in accordance with the ASTM D2247 standard. The surface treatment shall achieve a minimum of 2000 hours for salt spray resistant finish in accordance with the ASTM B117 standard.

H. Refer to Structural Foundation drawings for Light Pole Foundation details.

2.10 20’ PEDESTRIAN LIGHT POLES

A. The light pole and all its materials used in its manufacture shall meet the requirements of the American Association of State Highways and Transportation Officials (AASHTO); specifically, the Standard Specification of Structural Supports for Highway Signs, Luminaires, and Traffic Signals. The pole shall be Philips Lumec catalog number ATR64V-20-BKTX with a MJ-1A-R4-BKTX bracket or approved equal.

B. The shaft shall be 20’ tall and shall be made from spun aluminum 6063-T4 tempered to T6 after welding, having a base diameter of 6” and a top diameter of 4”, with a 0.25” wall thickness, welded to the bottom and top of the anchor plate.

C. The pole shall have a 3" x 5" (51mm x 114mm) maintenance opening centered 20" (508mm) from the bottom of the anchor plate, complete with a weatherproof aluminum cover and a copper ground lug.

D. The pole shall have a tenon and a tenon mounted welded bracket arm made from 6061-T6 bent aluminum tubing with a 2 3/8” outside diameter. The adaptor for the arm shall be made of cast 356 aluminum and sized to fit on the pole tenon. It shall be mechanically attached to the pole using two sets of four set screws at 90 degrees around the bracket.

E. The anchor bolts shall be made of ASTM F1554 grade 55 steel having a minimum yield strength of 55000 psi. The nuts shall be made of ASTM A563 grade A steel or better. Washers shall be made of ASTM grade F-844 steel or better. All galvanized parts shall be hot dip galvanized per ACNOR G-164 minimum.

F. The finish color shall be black textured RAL9005TX (BKTX) in accordance with the AAMA 2603 standard. Finish shall be accomplished by application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The thermosetting resin shall provide a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and shall be humidity proof in accordance with the ASTM D2247 standard. The surface treatment shall achieve a minimum of 2000 hours for salt spray resistant finish in accordance with the ASTM B117 standard.

G. Refer to Structural Foundation drawings for Light Pole Foundation details.

2.11 DECORATIVE FLOOD LIGHTING POLES

A. The poles shall be the Structura Reed model series or approved equal, with the appropriate heights and bends as indicated on the plan detail sheets.

B. The shaft shall be one-piece construction and made of rolled galvanized steel.

C. Each pole base shall require (4) 36” long hot dipped galvanized anchor bolts. The bolt circle is not to exceed 10”.

D. The entire assembly complete with luminaires shall be capable of withstanding wind speeds exceeding 130 mph.

E. After construction, the galvanized steel is to be powder coated painted with the finish called out by the architect.

F. Refer to Structural Foundation drawings for Light Pole Foundation details.

G. Provide receptacles mounted to poles as indicated on drawings.

2.12 LUMINAIRES

A. Pendant Luminaires

1. The basis-of-design luminaires are Lumec catalog number DMS50-35W32LED3K-T-LEXF-VOLT-DMG-BKTX (Type A), DMS50-80W48LED3K-T-LEXF-VOLT-DMG-BKTX (Type B) and DMS50-108W48LED4K-T-LEXF (Type B1) where the X in LEXF denotes the distribution type as per plans. Subject to compliance with the following requirements, provide products from one of the following:

   a. Lumec

   b. King Luminaire

   c. Sternberg Lighting

2. The luminaire shall be UL listed for use in wet locations.

3. The luminaire shall output not less than 85 lumens per watt.

4. The hood shall consist of a die cast A360.1 aluminum dome complete with a cast-in technical ring with latch and hinge. The mechanism shall offer tool-free access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofing.

5. The housing shall be round and made of cast 356 aluminum, provided with a watertight grommet, mechanically assembled to the bracket with four bolts 3/8-16 UNC.

6. The heat sink shall be made of die cast A360 aluminum, complete with a cast in skirt and technical ring. The heat sink shall be passive and not have any moving parts.

7. The lens shall consist of soda-lime clear tempered flat glass lens, mechanically assembled and sealed onto the lower part of the heat sink.

8. The light color temperature shall be 3000K (Types A and B) and 4000K (Type B1) with a minimum color rendering index of 70.

9. The optical system shall be Composed of high-performance optical grade PMMA acrylic refractor lenses and the assembly shall be rated IP66. The light distribution type shall be as indicated on the plans for each location. The street side of the luminaire shall be indicated on the housing and when installed, the luminaire shall be oriented so that the street side is directed towards the adjacent park path, roadway, or parking lot. The luminaire shall be dark sky complaint with 0% uplight and U0 per IESNA TM 15.

10. The access mechanism shall be a die cast A360 aluminum technical ring with latch and hinge with a weatherproof, embedded memory retentive gasket. Access to the inside of the luminaire shall be tool free.

11. The heat sink shall have no moving parts and be made of cast aluminum.

12. The electronic driver shall be capable of dimming via 0-10V and have a high power factor of 95%. The driver shall have an auto adjusting universal voltage input from 120 to 277V rated for both application line to line or line to neutral, Class I, THD of 20% maximum. The maximum ambient operating temperature is from -40°F (-40°C) to 130°F (55°C). Certified in compliance to UL1310 cULus requirement. The driver is assembled on a unitized removable tray with quick disconnect plug resisting to 221°F (105°C).

13. The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min).

14. Each luminaire shall be provided with a twist-lock type receptacle on an arm-to-luminaire adapter and ubicell by Ubicquia.

15. The LED life rating shall be determined in accordance with IESNA LM-80-08.

16. The surge protector shall be tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) model specification for LED roadway luminaires electrical immunity requirements for High Test Level 10kV / 10kA.

17. The High Performance white LEDs will have a life expectancy of approximately 100,000 hours with not less than 70% of original brightness (lumen maintenance), rated at 25°C.

18. The luminaire shall have a minimum 7500 initial delivered lumen rating and a maximum of 85W when operated at steady state with an average ambient temperature of 25°C (77°F).

19. The finish shall be a 100 micron coating of electrostatically applied textured polyester powder. The chemical composition shall include a thermosetting polyester resin which provides a highly durable finish that is resistant to UV rays and corrosion. The color is to be black. The surface treatment shall achieve a minimum of 2000 hours for salt spray resistance in accordance with testing performed and per ASTM B117 standard.

20. The luminaire shall be free from all defects in materials and workmanship for a period of five (5) years from the date of manufacture.

21. The luminaire manufacturer shall warrant the LED boards/system, during the stated warranty period, against failure defined as more than three (3) simultaneous non-operating LEDs.

22. The driver shall be warranted for five (5) years.

B. Flood Lighting Luminaires

1. The luminaire shall be Bega catalog number 77 653 K3 or approved equal.

2. The luminaire shall be constructed of a one piece die-cast aluminum housing. The LED module shall be paired with an inner reverse-tapered casting to provide maximum heat transfer to the outer housing. The die castings shall be marine grade, copper free (≤ 0.3% copper content) A360.0 aluminum alloy.

3. The optical system shall consist of a reflector of pure anodized aluminum. The lens and optical assembly shall be secured by a die cast aluminum trim ring using (3) stainless steel captive fasteners.

4. The luminaire shall have a minimum 4200 initial delivered lumen rating and a maximum of 55 input watts. It shall have a minimum starting temperature of not more than -20°C.

5. The driver shall be capable at operating from 120-277V

6. The light color temperature shall be 3000K with a CRI of not less than 90.

7. The luminaire finish shall be polyester powder coat with a minimum 3 mil thickness and shall have a finish color as called out by the architect.

8. The luminaire shall be rated IP65 or better.

2.13 PRE-CAST POLYMER CONCRETE HANDHOLE

A. All handholes shall be installed as shown on the drawings to the approved grade, except as approved deviations may be required to meet field conditions. The top of the handhole and cover shall be set flush with the finished grade.

2.14 LIGHTING LOAD CENTER

A. The lighting load center shall be constructed by the manufacture and factory wired to include all the components listed herein. The lighting load center shall be UL 508 listed. The lighting load center shall be Milbank, Myers Power Products (MEUG16), VIT Strong Box, or approved equivalent.

B. The lighting load center shall be NEMA 3R and shall be constructed of aluminum or stainless steel to the minimum dimensions shown on the contract drawings. All seams shall be welded solid and ground smooth. Door hinges shall be continuous and constructed of stainless steel. The enclosure shall be provided with all required mounting hardware and anchor bolts to be mounted to the specified concrete foundation. Refer to contract drawings for paint finish.

C. The lighting load center shall be provided with a customer compartment and a separate, lockable section for Electric Utility Metering equipment and electric service terminations. The distribution equipment in the customer compartment shall be behind an internal door.

D. The doors on the enclosure shall be constructed from the same material as the enclosure. The external door for the customer compartment shall be provided with louvers in the lower section

and with filter frame and paper filter element on the inside of the enclosure. Additional hardware shall include a brass padlock, directory frame and eight sets of keys. Two sets of keys shall be sent to the electric utility and six sets of keys shall be sent to the DCR.

E. Anchor bolts shall be provided with the enclosure. The anchor bolts shall be galvanized steel. Galvanized steel nuts, lock washers, and flat washers shall be provided with the anchor bolts.

F. The lighting load center shall include the meter socket, panelboard, lighting contactor, HOA switch, receptacle, internal light fixture, time clock and photo-electric switch control. All required electrical equipment shall be provided in the lighting load center by the manufacturer. All electrical equipment shall be factory wired. The lighting load center shall be shipped to the site ready for installation by the Contractor.

G. The lighting load center shall be suitable for use for a 208Y/120 Volt, three (3) phase, four (4) wire electric service. The service and distribution equipment located within the cabinet shall be rated for 100 Amperes, minimum, with a fault current interrupting capacity of 10,000 Amperes symmetrical.

H. The lighting load center shall be labeled as follows: DCR LIGHTING CONTROL

I. The label shall be factory stamped into the door of the lighting load center. Text height shall be 1-inch tall.

J. All work shall be constructed as shown on the plans or as required by the utility company and required by the Engineer. The Contractor shall give adequate notice to the utility company for scheduling of work by utility.

K. Lighting load center foundation shall be constructed as detailed on the Contract Drawings and to the relevant provisions of Section 801 of the Standard Specification for Highways and Bridges.

L. The lighting load center shall be installed atop the foundation as noted in this Specification and the Contract Drawings. The cabinet door shall face away from the roadway, or as required by the Engineer. It shall be determined that no obstruction, including a light pole, will interfere with opening, closing, or access to the controller.

M. Each location, as shown on the plans, may be diagrammatic only, and the location shall be such as to not interfere with access to private property or to detract from the general appearance of the area. The location shall not inhibit pedestrian travel of the public way, including minimum obstruction free access of 3 feet. The Contractor shall call to the attention of the Engineer a location that may look objectionable before commencing work at the controller site.

N. The electrical equipment to be installed in each controller shall be securely fastened to the backboard in a neat and workmanlike manner. Electrical equipment shall be arranged in the controller and wired in accordance to the wiring diagrams on the detail sheets, or as specified herein.

O. Within the controller, the Contractor shall bind wire groups together with cable ties; and all conductors shall be permanently identified with circuit numbers using vinyl cloth, plasticized card stock tags with pre-printed legends. Tags shall be fastened to cables with cable ties.

P. The Contractor shall submit for approval a wiring diagram of the controller interior.

Q. The centralized ubicell by Ubicquia.for flood lighting luminaires shall be located as indicated on the plans.

PART 3 EXECUTION

3.01 GENERAL

A. All underground installations, including any required wiring, shall be completed before the finished surface is placed on the paved surfaces, sidewalks, and landscaped areas. All excavations in paved surfaces and sidewalks required for the installation of conduit, handholes, and pole foundations shall be completed prior to placing and compacting gravel base course. The raceway system shall be completed prior to placement of all plantings.

B. The Contractor is responsible for all equipment until final acceptance of the Contract, and for all damage from any cause whatsoever.

3.02 DEMOLITION OF EXISTING LIGHTING SYSTEM

A. The contractor is responsible for the excavation, removal and disposal of the existing park and boardwalk lighting and electrical system including but not limited to handholes, poles, luminaires, conductors and load centers. The Contractor is responsible for performing this demolition work and disposing of materials in accordance with all applicable local, state and federal regulations. The excavated areas shall be refilled with suitable selected materials as specified in Section 02200 – SITE EARTHWORK.

B. Existing underground raceways and conduit shall be abandoned in place.

C. The cutting and backfilling of existing light pole foundations to be abandoned in place is the work of this Section 02200 – SITE EARTHWORK.

3.03 CONDUIT

A. PVC Conduit shall be encased in sand as called for in the Contract Drawings.

B. Underground Warning Tape shall be installed over all underground conduit within 12" of finished grade.

C. Plastic conduits entering pre-cast polymer concrete handholes shall be terminated 1-1/2 inches inside the wall of the handhole and shall have attached a Duct Bell End of the required size, using the solvent cement as called for in the specifications. Conduits shall be installed a minimum of 3” above the bottom of the handhole.

D. All conduit installed in handholes shall be installed in knockouts provided in the handhole and No Excess knockouts shall be made. The knockouts are designed to be made prior to backfilling around the handholes. After the conduit has been installed in the handhole, the open space between the handhole and the conduit shall be sealed. Any conduit installed in such a manner as to block complete access to any other conduit shall be removed and reset.

E. Terminations:

1. Where raceways are terminated with threaded hubs, screw raceways or fittings tightly into hub so end bears against wire protection shoulder. Where chase nipples are used align raceways so coupling is square to box; tighten chase nipple so no threads are exposed.

2. Install pull wires in empty raceways. Use polypropylene or monofilament plastic line with not less than 200-lb tensile strength. Leave at least 12 inches of slack at each end of pull wire.

3.04 INSTALLATION OF WIRES AND CABLES RATED 600 VOLT AND BELOW

A. General: Installation shall conform to the requirements of NFPA 70, Massachusetts Electrical Code and to the requirements specified herein.

B. No wire shall be drawn into any conduit until all work which may cause cable damage is complete.

C. All wire shall be continuous from fixture base to fixture base without running splices in conduits. All wires shall extend 24" above the base, connected at ends and rolled back into the base.

D. All wire terminals, taps and splices shall be made secure with connectors, splicing materials and methods as hereinafter specified.

E. All splices in handholes shall be with solderless connectors. The neutral and ground connection in the post top shall be with an insulated pressure connector.

F. All incoming wires and outgoing wires in lighting control boxes, handholes and poles shall be banded with 1/2-inch colored plastic marking tape installed at two locations 6 inches from the taped splice and 18 inches from the taped splice.

G. Coatings and rust on conduits and grounding rods shall be removed at the location where the ground fittings are to be installed.

H. The bare copper conductor shall be connected to the continuous insulated bonding lead which shall be identified with green plastic marking tape as noted in the specifications. Bonding leads for lighting fixtures on posts shall be an insulated conductor, marked green, which shall be extended to the nearest handhole and interconnected to the bare copper conductor and the ground rod.

I. All grounding shall conform to the applicable provisions of the National Electrical Code.

J. Minimum Conductor Sizes: No. 10 AWG for power and branch circuit wiring, No. 14 AWG for control and signal wiring, except where shown otherwise on the Contract Drawings.

K. Conductor Identification:

1. All wires and cables shall be identified by circuit numbers in all cabinets, boxes, manholes, wireways and other enclosures and access locations and at all terminal points.

2. Circuit designations shall be as shown on the Contract Drawings.

3. The tag ties shall be wrapped around all conductors comprising the circuit or feeder to be identified.

4. Cable Tags:

   a. Dry Locations: Fiber Tags, 1/16 inch thick and 3/4 inch wide, indented with letters and numbers approximately 5/16 inch high, fastened to cables with nylon cable ties.

   b. Wet Locations: Stainless steel grade 304 or 316 metal tags, No. 28 gauge and 3/4-inch wide, embossed with letters and numbers approximately 5/16 inch high, fastened to the cable or wire with nylon cable ties.

5. Color coding and phasing shall be required on all new and/or altered electrical work. All conductors shall be identified at all points of termination by color coded conductors and/or by colored, gummed or plastic tape applied to the conductors as follows:

   a. 208/120V, 4 wire, three phase
      1) The phase conductors shall have Black, Red and Blue Bands

   b. All neutral Conductors shall be white.

   c. All equipment ground wires shall be green.

   d. The same colors shall be used for the same phases throughout the entire project.

6. All existing live circuits shall remain in operating condition while new cables are being installed and during new duct and conduit construction. Disconnection of any circuit wires or cables, will be permitted only at such time and for such length of time as directed by the Authority.

L. Splices and Terminations:

1. General: Splices and terminations shall be made in outlet, junction or pull boxes in wireways or in equipment cabinets and shall be made mechanically and electrically secure, using proper splicing and termination equipment and components as specified herein.

2. Ends of cables shall be sealed watertight until ready for terminations.

3.05 LIGHT POST FOUNDATIONS

A. All foundations shall be installed at the location as shown on the plan except as approved deviations are required to meet field conditions. All bases shall be set plumb and true to grade. All bases shall be installed to a depth of 2 inches above finish grade, and under NO conditions may any portion of the securing hardware, i.e. threaded rods or nuts, be concealed below grade.

B. The Contractor shall carefully mark the proposed location of the concrete base and then he/she shall determine if any utilities or underground or overhead obstruction will prevent the installation at this location. Similar marking shall be done for the conduit runs to the base. If such an obstruction is evident the Contractor shall request permission from the Engineer to move or adjust the location of the base.

C. If no obstruction is apparent at the proposed base location the Contractor shall make an opening not to exceed forty-two inches by forty-two inches to be accomplished with hand digging.

Mechanical excavating equipment may be used if approved by the Engineer and the excavation may exceed forty-two inches by forty-two inches limits; if this means is used, the Contractor shall provide a six inch cushion of gravel borrow under the base and shall backfill using gravel borrow well tamped in six inch lifts; compacted to 95% of the maximum dry density prior to the installation of the foundation. Gravel backfill shall be placed in the area surrounding the base, compacted to 95% of the maximum dry density in 6 inch lifts, for a distance of 5 feet surrounding the base.

D. The backfill tamping shall be accomplished by means of a pneumatic hammer equipped with a round dirt tamping pad with a minimum diameter of six inches driven by an air compressor with a minimum of 100 psi pressure. The use of an impactor attachment on a standard backhoe with a dirt tamping pad may substitute for the pneumatic hammer with the permission of the Engineer. Use of a vibrator type compactor around the pre-cast subbase or handhole is prohibited.

E. If the Contractor encounters no difficulty in the excavation and the soil conditions are suitable to support the base, the Contractor shall install a standard pre-cast concrete sub-base furnished by the Contractor. The top of the base shall be level and installed as indicated on the plans.

3.06 LIGHTING SYSTEM

A. All luminaires, boxes, and electrical equipment components of the lighting system shall be handled in loading, unloading and erecting in such a manner that they will not be damaged. Any parts that are damaged due to the Contractor's operation shall be repaired or replaced at the Contractor's expense.

B. All installed lights shall be set true and shall be in proper alignment in both vertical and horizontal planes in accordance with the aiming angles recommended by the manufacturer.

C. All lights shall be free of light leaks, warps, dents, crazing, cracks, or other faults which are a result of poor workmanship in installation.

D. All lights, lamps, controls, and other appurtenances that are installed by the Contractor shall be completely operable and in clean condition. Failure by the Contractor to comply with these requirements shall be cause for replacement at the expense of the Contractor.

E. All lights shall be U.L. approved prior to the bidding of this Contract and shall bear the U.L. label. No exceptions shall be made. If required by the Engineer, the Contractor shall furnish notarized letters substantiating the validity of the U.L. label. Such letter shall contain the U.L. test number and the date when the fixture was approved by U.L.

F. Contractor shall provide manufacturer's service technicians, appropriate equipment and all labor to make necessary field adjustments. Service technicians shall make all necessary adjustments within the physical constraints of the lighting system approved by the Engineer. Field adjustments of lighting alignment and position shall be approved by the DCR, and the Engineer.

G. Contractor shall aim each of the flood lighting luminaires at the direction of the Engineer during a nighttime aiming session. Contractor shall coordinate the time and date of the aiming session within 10 days of final aiming. Contractor shall provide all equipment and personnel necessary for adjusting and aiming luminaires.

H. General Contractor shall coordinate all issues and components of paving, lighting, cast-in-place concrete, precast concrete, unit masonry piers, and fencing to ensure fully integrated systems. Coordination shall include but not be limited to scheduling, field measurement, shop drawings, delivery, storage, installation, testing, repairs and replacements.

3.07 GROUNDING SYSTEM TESTING

A. Testing: Engage a qualified testing agency to perform the following field quality-control testing:

B. Testing: Perform the following field quality-control testing:

1. After installing grounding system but before permanent electrical circuitry has been energized, test for compliance with requirements.

2. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal, and at ground test wells. Measure ground resistance not less than two full days after the last trace of precipitation, and without the soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance. Perform tests, by the fall-of-potential method according to IEEE 81.

a. Provide drawings locating each ground rod and ground rod assembly and other grounding electrodes, identify each by letter in alphabetical order, and key to the record of tests and observations. Include the number of rods driven and their depth at each location and include observations of weather and other phenomena that may affect test results. Describe measures taken to improve test results.

b. All Ground Rods: 10 ohms.

C. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Engineer promptly and include recommendations to reduce ground resistance.

3.08 MANUFACTURING TESTS, FIELD TESTS, AND INSPECTION

A. Provide labor, installation, supervision, test equipment, material, power supplies, devices, etc. required to perform the work indicated.

B. Test and inspect all parts of the Work provided under this Section and as required by manufacturers, codes, standards or authorities having jurisdiction. Conduct all tests and inspections to the complete satisfaction of the Engineer and all authorities. Tests shall be completed and Electrical work 100 percent operational including any interfaces with other systems prior to performing Acceptance Demonstrations. Notify the Engineer, the DCR via General Contractor, and all involved authorities at least one week (seven days) prior to testing or inspection. Do not cover work prior to testing or inspection. Testing shall be completed prior to Substantial Completion.

C. Prior to the date of Substantial Completion and Acceptance Demonstrations, furnish the Engineer, with certificates of testing and inspection for all systems furnished or installed under this Section indicating the approval of all authorities having jurisdiction, manufacturers and a letter from the installer stating conformance with all requirements of the Contract Documents.

D. All systems shall test free from short circuits and grounds, shall be free from mechanical and electrical defects, and shall show an insulation resistance between phase conductors and ground of not less than the values recommended by the manufacturer.

E. Test all circuits and for proper neutral and grounding connections.

F. Lighting fixtures shall be tested with specified lamps in place for not less than ten hours; the fixtures may be checked in sections.

G. Testing recommended by manufacturers shall be required; the Engineer may waive this requirement in writing.

H. Failure or defects in workmanship or materials revealed by tests or inspection shall be corrected promptly and retested. Defective material shall be replaced at no additional expense to the DCR.

I. Provide all temporary connections, necessary testing equipment, labor and materials, required for the testing of the systems and equipment. All systems shall be prepared for testing and protected from damage. The cost of all tests shall be included in the contract price.

J. Test systems installed for proper operation and adherence to specifications.

K. The equipment grounding shall be checked to ensure continuity of the ground return path.

L. Provide a written report on all testing and device settings. Include a copy in the Operation and Maintenance Manual.

3.09 ACCEPTANCE DEMONSTRATIONS

A. Systems installed under this section shall be demonstrated to the DCR and Engineer. Demonstrations are in addition to necessary testing and training sessions. Notify all parties at least 7 days prior to the scheduled demonstration. Schedule demonstrations in cooperation with and at times convenient to all parties and so as to not disturb ongoing activities.

B. Systems shall be tested prior to the demonstrations and each system shall be fully operational and tested prior to arranging the Acceptance Demonstration. Final payments will be withheld until a satisfactory demonstration is provided for all systems indicated or requested.

C. If the demonstration is not totally complete, performing all functions, features and connections or interfaces with other systems, or if there is a failure during the demonstration, additional demonstrations shall be arranged. Provide and pay for all costs, labor and expenses incurred for all attendees for each additional demonstration required for acceptance and demonstration of complete system operation.

D. Demonstrations shall be scheduled in ample time to complete all activities prior to final acceptance and DCR occupancy. Demonstrations shall take place at least 30 days prior to the scheduled project completion date and 30 days prior to DCR's use and occupancy.

E. As a minimum, provide demonstrations for systems indicated under "Work Included" under Part One of the Specifications. Provide demonstrations of additional systems as requested by the DCR, Engineer.

3.10 PROJECT OWNER COORDINATION

A. Prior to Substantial Completion, the Contractor shall coordinate final flood light aiming with the architect, engineer, and DCR's representative.

B. Prior to Substantial Completion of the project and in ample time to address and resolve any coordination issues, request and arrange meetings between the DCR, DCR's Vendors and Consultants, Engineer and General Contractor to discuss the Scope of Work for each system being provided and the interface required for a fully functional and operational system upon project completion. Initial meetings shall be scheduled three months prior to the scheduled Substantial Completion date or as soon as Submittals are submitted and reviewed for projects with shorter schedules.

C. At these meetings the required interface with the DCR shall be reviewed, requests for information required to complete programming or for coordination shall be presented and system operation and philosophy shall be discussed.

D. Additional meetings shall be held as requested by any party so that all issues are resolved and with the goal and intent being that all systems are fully operational and functional upon project Substantial Completion and that the responsibility for all components required is clearly established.

3.11 CLEANING UP

A. Upon completion of all work, lamping, and testing, thoroughly inspect all exposed portions of the electrical installation and completely remove all exposed labels, markings, and foreign material.

B. The interior of all boxes and cabinets shall be left clean; exposed surfaces shall be cleaned and plated surfaces polished.

C. Repair damage to finish surfaces resulting from work under this section.

D. Remove material and equipment from areas of work and storage areas.

E. All fixtures shall be clean from dirt, dust, and fingerprints prior to final acceptance.

F. Touch up all damaged pre-finished equipment using materials and methods recommended by the Manufacturer.

3.12 PROJECT CLOSEOUT

A. Provide close out submittals as required herein and in Division One including the following close out submittals.

1. Operation and Maintenance Manuals

2. Record Drawings.

3. Test Reports.

4. Extra Materials.

B. Obtain written receipts of acceptance close out submittals submitted. Receipts shall specifically detail what is being delivered (description, quantity and specification section) and shall be dated and signed by firm delivering materials and by the Engineer.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement for PARK AND BOARDWALK LIGHTING for the park and boardwalk lighting and electrical system will be made on a LUMP SUM basis in compliance with the Contract Drawings and Specifications.

4.02 PAYMENT

A. Payment for PARK AND BOARDWALK LIGHTING for the park and boardwalk lighting and electrical system will be at the LUMP SUM contract price. This price shall include full compensation for conduit, wire, service connections, electric utility service coordination, utility work order and associated utility service connection fees, underground warning tape, grounding conductors, splash pad grounding grid, cable splicing and terminations, wire connection, handholes, luminaires, lighting poles, lighting load center and foundation, receptacle post foundations, excavation, backfill, gravel, sand, nighttime luminaire aiming session, all labor, materials, equipment, tools, and incidentals required to provide a fully operational, tested, lighting and electrical system, as indicated by the Contract Drawings.

B. The proposed light pole foundations will be the work of Section 02360 – DRILLED PIERS.

C. Sand, concrete and rebar required under this Section shall be included in the bid price as incidental to PARK AND BOARDWALK LIGHTING.

D. Demolition of the existing lighting and electrical system including removal and proper disposal of materials in accordance with all applicable local, state and federal regulations shall be included in the bid price as incidental to PARK AND BOARDWALK LIGHTING.

E. The backfilling of existing light pole foundations to be abandoned in place will be the work of Section 02200 – SITE EARTHWORK.

F. Adjusting the electrical handhole in the new wheelchair ramp at the Lynnway entrance shall be included in the bid price as incidental to PARK AND BOARDWALK LIGHTING.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
16100.01	PARK AND BOARDWALK LIGHTING	LUMP SUM

END OF SECTION

SECTION 16421
BOARDWALK ELECTRICAL UTILITIES

PART 1 – GENERAL

1.01 GENERAL REQUIREMENTS

A. Include to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) *Standard Specifications for Highways and Bridges* and the Supplemental Specifications.

1.02 DESCRIPTION OF WORK

A. Work under this Section includes field investigation and line tracing of existing electrical power, telephone, cable and CCTV systems, disconnecting and re-instating existing systems, demolition and disposal of abandoned conduits and raceways underground and under the boardwalk, disposal of indicated cabling, and all labor, tools, equipment, materials, and incidental work required the complete the work as required. This utilities work is limited to the South portion of boardwalk as shown on the Plans.

B. This Section specifies requirements for the following types of work and related items, but is not limited to:

1. Field verifying and inspecting existing power, telephone, telecommunication and security installations as shown on the Plans.

2. Removing abandoned utilities and equipment serving only abandoned facilities.

3. Temporarily disconnecting existing utilities during the demolition of the existing concrete seawall and installation of the proposed sheetpile wall.

4. Storing and/or temporarily supporting existing conduits.

5. Establishing existing raceways through the sheetpile wall and all fittings, adapters, hangars, cable tray and ancillary materials needed to support each utility.

6. Reconnecting existing utilities following installation of the proposed sheetpile wall and raceways.

7. Agreement with Utility Company for permanent electric service including payment of Utility Company charges for service.

8. All required utility company collaboration and coordination, including work order applications, and scheduling.

9. Providing advanced notification of all power and telecommunication interruptions.

10. Work shall be performed and completed during the period while the Marina is shut down for other waterfront work such as construction of the new steel bulkhead seawall. Refer to Section 02010.

1.03 QUALITY ASSURANCE

A. Install work in accordance with Utility Company's rules and regulations.

B. Conform to requirements of ANSI/NFPA 70 - National Electrical Code for 600 volt work.

PART 2 – PRODUCTS

A. Trapeze hangers and threaded rod: as shown on drawings

B. Sheet pile penetration: as shown on drawings

C. Cable:
   1. 600 volt – RHW copper AWG
   2. Temporary power – THWN copper AWG

D. Conduit PVC coated Rigid Steel or PVC schedule 80 as shown on drawings

E. Junction or Pull Boxes as sized on the drawings: PVC or NEMA 4X Stainless Steel

F. Provide temporary power and panelboard (120/240V single phase) at the job site, located

above the boardwalk above the waterline, with two 20 ampere GFI duplex, waterproof receptacles with an in-use cover, and one 30 ampere 240 volt receptacle. Connect this panelboard to an 80 ampere, two pole 10,000 AIC circuit break in a spare space in an existing panel in the Marina Equipment room. Connect the neutral to the neutral bus and the ground to an isolated ground bus, bonded to the enclosure of the existing panel. Provide 3 # 2 AWG copper and a #6 AWG green ground, THWN conductors in a 2" Schedule 80 PVC conduit. Provide NEMA 4X PVC junction boxes located and sized per NFPA 70.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify field measurements and circuiting arrangements are as shown on Drawings.

B. Verify that abandoned wiring and equipment serve only abandoned facilities.

C. Demolition drawings are based on casual field observation and existing record documents. Report discrepancies to Engineer before disturbing existing installation.

D. Beginning of demolition means installer accepts existing conditions.

3.02 PREPARATION

A. Disconnect electrical systems under boardwalk scheduled for removal.

B. Coordinate utility service outage with Utility Company and DCR as required.

C. Temporary wiring and connections shall not be required to maintain existing systems in service during construction.

3.03 DEMOLITION AND EXTENSION OF EXISTING ELECTRICAL WORK

A. Demolish and extend existing electrical work under provisions of this Section.

B. Remove, relocate, and extend existing installations to accommodate new construction.

C. Remove abandoned wiring to source of supply.

D. Remove exposed abandoned conduit, including abandoned conduit above accessible ceiling finishes. Cut conduit flush with walls and floors, and patch surfaces. Provide knockout seals for conduit removed from equipment which remains in place.

E. Disconnect abandoned outlets and remove devices. Remove abandoned outlets if conduit servicing them is abandoned and removed. Provide blank cover for abandoned outlets which are not removed. Ensure intact grounding system remains in place. Extend or rework grounding system as necessary.

F. Disconnect and remove abandoned panelboards and distribution equipment as required.

G. Disconnect and remove electrical devices and equipment serving utilization equipment that has been removed.

H. Repair adjacent construction and finishes damaged during demolition and extension work.

I. Maintain access to existing electrical installations which remain active. Modify installation or provide access panels as appropriate.

J. Extend existing installations using materials and methods compatible with existing electrical installations, or as specified.

3.04 CLEANING AND REPAIR

A. Clean and repair existing materials and equipment which remain or are to be reused. Re-gasket and reseal as required to maintain watertight or weatherproof enclosures. Provide penetrations as indicated and per the detail on drawing.

B. Panelboards: Clean exposed surfaces and check tightness of electrical connections. Replace damaged circuit breakers and provide closure plates for vacant positions. Provide typed circuit directory showing revised circuiting arrangement. Provide knockout seals to close unused knockouts. Modify connections in existing Panelboards as necessary.

3.05 INSTALLATION

A. Install relocated materials and equipment under the provisions as shown on Contract Drawings.

B. Make arrangements with Utility Company for modifications per the Project Contract Documents. Comply with City of Lynn Requirements.

C. Underground Conduits.: Install per Contract Drawings.

D. Temporary Panelboard: Locate the panel in a central location to the work area as noted in Part 2, Paragraph F.

E. Pay for all utility charges for extension of existing services and modifications necessary by Utility Company for connection of service entrance. All work shall comply with OSHA regulations, NFPA 70 – The National Electrical Code and NFPA 70E – The National Electrical Safety Code.

PART 4 – COMPENSATION

4.01 MEASUREMENT

A. Measurement for FIELD INVESTIGATION & EXISTING ELECTRICAL, TELEPHONE, CABLE TELEVISION & CCTV UTILITY LINE TRACING + EQUIPMENT RENTAL at the South Boardwalk will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, completed as indicated by the Contract Drawings.

B. Measurement for REMOVE AND REPLACE existing utilities at the South Boardwalk will be made on a LUMP SUM basis for each respective utility (telephone, cable television CCTV, and electrical power) as described in this section not otherwise listed below, completed as indicated by the Contract Drawings.

C. Measurement for DEMOLISH CONDUIT under the appropriate size will be made on a per LINEAR FOOT basis for conduit removed and properly disposed of, including existing electrical power system connections, telephone, cable television and CCTV (Security Camera Lines), and for all work as described in this section not otherwise listed below, completed as indicated by the Contract Drawings.

D. Measurement for REMOVE AND REPLACE EXISTING CABLE TRAY will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, completed as indicated by the Contract Drawings.

E. Measurement for MODIFY CIRCUITS AT EXISTING PANELBOARDS will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, completed as indicated by the Contract Drawings.

F. Measurement for PVC under the appropriate size and coating will be made on a per LINEAR FOOT basis for all work described in this section not otherwise listed below, completed as indicated by the Contract Drawings.

G. Measurement for CONDUIT SLEEVES IN SHEETPILE BULKHEAD will be made on a per EACH basis for all work described in this section not otherwise listed below, completed as indicated by the Contract Drawings

4.02 PAYMENT

A. Payment for FIELD INVESTIGATION & EXISTING ELECTRICAL, TELEPHONE, CABLE TELEVISION & CCTV UTILITY LINE TRACING + EQUIPMENT RENTAL at the South Boardwalk will be made at the LUMP SUM contract price. This price shall include full compensation for the field investigation, line tracing, Utility and DCR coordination, all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

B. Payment for REMOVE AND REPLACE existing utilities at the South Boardwalk will be made at the LUMP SUM contract price for each respective utility (telephone, cable television CCTV, and electrical power). This price shall include full compensation for all work required to remove, disconnect and safely stow away existing system cabling/wiring during construction activities. This shall also include the removal and replacement of existing system cabling/wiring and or raceway if upon field investigation it is determined that the disconnection of existing systems would permanently damage beyond the ability to replace. The Contractor shall provide new cabling/wiring to replace the existing electrical systems including connections with adaptors as required on both ends. This price also includes all labor, materials, tools,

and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

C. Payment for DEMOLISH CONDUIT under the appropriate size will be at the per LINEAR FOOT contract price. This price includes full compensation for the removal and proper disposal of conduits including existing electrical power system connections, telephone, cable television and CCTV (Security Camera Lines). This price also includes all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

D. Payment for REMOVE AND REPLACE EXISTING CABLE TRAY will be at the LUMP SUM contract price. This price includes full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

E. Payment for MODIFY CIRCUITS AT EXISTING PANELBOARDS will be at the LUMP SUM contract price. This price includes full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

F. Payment for PVC under the appropriate size and coating will be at the per LINEAR FOOT contract price. This price includes full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

G. Payment for CONDUIT SLEEVES IN SHEETPILE BULKHEAD will be at the per EACH contract price. This price includes full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to complete the work of this item as indicated on the Contract Drawings and as herein specified.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
16421.01	FIELD INVESTIGATION & EXISTING ELECTRICAL, TELEPHONE, CABLE TELEVISION & CCTV UTILITY LINE TRACING +	LS

	EQUIPMENT RENTAL	
16421.02	REMOVE AND REPLACE TELEPHONE	LS
16421.03	REMOVE AND REPLACE CABLE TELEVISION LINES	LS
16421.04	REMOVE/MOVE AND REPLACE CCTV (SECURITY CAMERA LINES)	LS
16421.05	REMOVE AND REPLACE ELECTRICAL POWER SYSTEMS	LS
16421.06	DEMOLISH 9" CONDUIT	LF
16421.07	DEMOLISH 6" CONDUIT	LF
16421.08	DEMOLISH 4" CONDUIT	LF
16421.09	DEMOLISH 3" CONDUIT	LF
16421.10	DEMOLISH 2" CONDUIT	LF
16421.11	DEMOLISH 1" CONDUIT	LF
16421.12	REMOVE AND REPLACE EXISTING CABLE TRAY	LS
16421.13	MODIFY CIRCUITS AT EXISTING PANELBOARDS	LS
16421.14	6" SCH. 80 PVC	LF
16421.15	4" RGS PVC COATED	LF
16421.16	4" SCH. 80 PVC	LF
16421.17	3" RGS PVC COATED	LF
16421.18	3" SCH. 80 PVC	LF
16421.19	2" SCH. 80 PVC	LF
16421.20	1" RGS PVC COATED	LF
16421.21	1" SCH. 80 PVC	LF
16421.22	CONDUIT SLEEVES IN SHEETPILE BULKHEAD	EA

END OF SECTION

SECTION 23100
FUEL SYSTEMS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

A. Include to the CONTRACT AND GENERAL CONDITIONS and all Sections within DIVISION 1 – GENERAL REQUIREMENTS, which are hereby made a part of this Section of the Specifications.

B. Examine all other Sections of the specifications for requirements which affect Work of this Section whether or not such work is specifically mentioned in this Section.

C. Coordinate work with that of all other trades affecting or affected by Work of this Section. Cooperate with such trades to assure the steady progress of all Work under the Contract.

D. The work shall conform to the relevant provisions of the latest Commonwealth of Massachusetts Department of Transportation (MassDOT) *Standard Specifications for Highways and Bridges* and the Supplemental Specifications.

1.2 DESCRIPTION OF WORK

A. Provide the following:

1. Excavate, remove, install and upgrade piping, connectors, sumps and any other necessary component parts required to provide a complete fuel dispensing system (gasoline and diesel) after the installation of a new seawall.
2. Piping for the fueling system removed and installed and connected to existing dock lines at intermediate sump number 1.
3. Repair piping and conduit sump penetrations within Intermediate Sump #1 to make sump water tight. If contractor is not able to make sump penetrations water tight, then a new sump shall be fabricated to enclose the primary piping, ball valves, and pipe termination fittings completely within the sump.
4. Install new sump sensors, wiring,conduit and associated fittings in the proposed transition sump and intermediate sump#1 and reprogram in the existing Veeder Root environmental monitoring console.
5. Install new wiring for solenoid located in the transition sump.
6. Restore site to original condition.
7. Contractor is responsible to remove and properly dispose of all unused existing piping, electrical wiring and conduits.

8. Coordinate utility service outage with Utility Company and DCR as required.
9. Work shall be performed and completed during the period while the Marina is shut down for other waterfront work such as construction of the new steel bulkhead seawall. Refer to Section 02010.

1.3 REFERENCES:

A. National Fire Protection Association (NFPA)

NFPA 30 – Flammable and Combustible Liquids

NFPA 30A- Code for Motor Fuel Dispensing Facilities and Repair Garages

NFPA 70 – National Electric Code

NFPA 303 – National Fire Protection Standard for Marinas and Boatyards

B. 310C MR80.00 - Massachusetts Underground Tank Systems

C. Petroleum Equipment Institute

PEI RP1000-09: Recommended Practices for the Installation of Marina Fueling Systems

D. Underwriters Laboratories, Inc. (U.L.)

UL 971 - Nonmetallic Underground Piping for Flammable Liquids.

UL 913 - Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous Locations.

E. American Society for Testing of Materials

F. National Electrical Manufacturers Association:

NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

NEMA WD 1 - General Requirements for Wiring Devices.

NEMA WD 6 - Wiring Devices-Dimensional Requirements.

1.4 SUBMITTALS

A. Product Data: Submit manufacturer's product data, shop drawings and installation instructions for the following items:

1. Piping.
2. Transition and intermediate sumps and lids.
3. Valves and fittings.
4. Sump entry fittings.
5. Manufacturer’s testing and installation data.
6. Monitoring system and related components including VeederRoot sensors.
7. Wiring Devices.
8. Conduits.
9. Devices.

1.5 QUALITY ASSURANCE

A. Perform work with installer specializing in aboveground/underground storage tank upgrades with a minimum of five years successful experience. Installer shall also specialize in marina fueling installations.

B. Regulatory agencies requirements shall be followed as minimum requirements for equipment required by the Project. Stricter requirements indicated in the Contract Drawings or the Specifications shall have precedence over the requirements listed below.

C. NFPA Compliance.

D. State Code: In compliance with applicable portions of the latest editions of The Commonwealth of Massachusetts Building and Fire Protection Code and The Commonwealth of Massachusetts Fire Marshal requirements. The Commonwealth of Massachusetts of Department of Environmental Protection underground tank Regulations and the City of Lynn Fire Department.

E. EPA: Conform to local, State, and Federal EPA requirements.

F. Fuel valves shall be listed by UL or FM for use with flammable liquids.

G. Piping system and leak detection system materials and components shall be Underwriter's Laboratories listed and labeled.

H. All equipment shall be Underwriters Laboratories (UL) listed for underground storage of petroleum products. They shall also meet the provision of NPFA 30 and 31, the Uniform Fire Code Article 79, and Environmental Protection Agency requirements.

I. Each operator's certificate shall be on file at the site and shall be made available to the Commissioner upon request.

J. Contractor Qualifications: Installation and alterations of fuel equipment, specialties and accessories, and repair and servicing of equipment shall be performed only by a qualified Contractor. The term qualified means experienced in such work. The Contractor shall have a minimum of five Projects in the past similar in size and scope to this Project. The Contractor shall be familiar with all precautions required and shall comply with all the requirements of the authority having jurisdiction. Upon request, submit evidence of such qualifications to the Commissioner.

K. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this Section shall have a minimum of five years documented experience.

L. Contractor shall be certified by the manufacturer to install APT piping systems, and VeederRoot tank monitoring systems.

1.6 DELIVERY, STORAGE AND HANDLING:

A. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

1.7 WARRANTY

A. Provide one (1) year warranty from date of substantial completion of the project, on all equipment and workmanship. Warranty to include any excessive settlement of trenches and walkway areas.

1.8 PERMITS

A. Refer to Section 01000 – General Conditions of Contract.

PART 2 - PRODUCTS

2.1 GENERAL:

A. The Contractor will furnish all specified items as listed in the drawings and specifications. Contractor will furnish appurtenant accessories not listed in the drawings and specifications as required to complete the entire installation.

B. The Contractor will install all equipment. Contractor to provide conduits and wire for complete electrical system and shall include the necessary, breakers, and junction boxes as required.

C. The Contractor will install all tank monitoring systems sensors, wiring and conduit for system controls.

D. All secondary containment systems shall pass a post-installation test, which meets the approval of the local agencies with jurisdiction.

E. Contractor shall certify that the installation of the piping meets the following conditions below.

1. The installer has been adequately trained as evidenced by a certificate of training issued by the piping manufacturers.
2. The installer has been certified or licensed by the applicable State License Board.
3. The primary piping and any secondary containment, was installed according to applicable standards and any manufacturer's written installation instructions.
4. All work listed in the manufacturer's installation checklist has been completed.
5. The installation has been inspected and approved by the local agencies or, if required by the local agencies, inspected and certified by a registered professional engineer who has education in and experience with aboveground storage tank system installation.

2.2 BASIS OF DESIGN MANUFACTURERS

A. Underground Piping Manufacturers: APT or approved equal

B. Transition Sump #1 Manufacturer: OPW or approved equal

C. Vent Sump Manufacturer: Bravo or approved equal

D. Tank Accessories Manufacturers: Franklin Fueling Components, Morrison Brothers, or approved equal

E. Environmental Monitoring System Manufacturer: VeederRoot or pre-bid approved equal

F. Piping Transition Fitting Manufacturer: Franklin Fueling or approved equal

G. Safety Breakaway Valve: M. Carter or equal

2.3 BELOW GROUND PIPING

A. Product Piping: 2” double walled flexible piping

B. Piping runs shall be continuous between sumps with no buried fittings.

C. Piping shall be placed in gentle “S” curves as required by manufacturer.

D. Provide 2” full port ball valve and 2” solenoid valve at the connection in the transition sump.

2.4 TRANSITION SUMPS

A. Vent Access Manway: Provide fiberglass vent sump with water tight lid. And fitting for the transition of underground to above ground piping vents.

B. Transition Sump 1: Provide a fiberglass transition sump with water tight lid and fittings for the transition from the UST piping to the Marina grade APT piping. The sump shall be accessible with a water tight lid that can be secured when not in use. The sump shall be a OPW PSTF-4630 model. The sump shall be accessible by a water tight Fiberlite Lid that can be secured when not in use. Contractor shall provide one FL7 lifting handles.

2.5 PUMPS AND ACCESSORIES

A. 2” full port ball valves at each submersible pump and as shown

B. 2” solenoid valve at intermediate sump.

C. 2” ball valves at transition and intermediate sumps.

2.6 MONITORING SYSTEM

A. System Components:

1. A non-discriminating sensor shall be installed in the transition sump and existing intermediate sump #1.

General:

A. The Contractor shall provide all necessary technical installation documents.

B. The Contractor shall furnish all materials and equipment to install the system, including cable.

C. The Contractor shall be responsible for the correct location of all equipment. If there are any discrepancies between the details in the proposed and as-built

dimensions of the equipment, rooms, or buildings, they shall be reported in writing immediately upon discovery to the Engineer.

D. Provide all necessary programming to accomplish the indicated system operation and control functions.

E. All conduit, control wiring, power wiring, relays, and other equipment and devices required to form a complete and operational system shall be provided as part of this Contract.

Installation Parameters:

A. The installation, wiring, calibration, testing and adjustment of the system and its components shall be assisted and supervised by a qualified manufacturer's representative. The Contractor shall provide proof that the manufacturer's representative has successfully supplied, tested and serviced the type of equipment proposed for a minimum of five (5) years.

B. The Contractor shall install the system as prescribed by the approved point-to-point wiring diagrams provided by the equipment manufacturer. Perform any continuity testing required to ensure system completeness and performance.

C. The Contractor shall provide all of the application engineering, documentation, and testing required obtaining Local/Federal approval and system acceptance.

D. The Contractor is responsible to review the entire plan set to ascertain the number and type of interfaces and connections required to equipment controlled and monitored by this system and to provide same if not indicated but required for an approved system.

E. All wiring shall be the same approved type and shall meet the requirements of the National Electric Code. All wires shall be labeled and referenced on the "As-Built" drawings. All circuits shall be checked to be free from any mechanical failures.

F. Exact installation wiring counts shall be indicated on the "As-Built" wiring diagrams and installation drawings required upon project acceptance.

G. The cable and wire entries into the equipment shall be equipped with strain relief and shall resist the entry of dust and moisture.

H. The plastic sheathing of all cables shall be secure inside the control unit.

I. All wiring and cabling shall be installed in conduit.

J. FIELD QUALITY CONTROL

1. The equipment manufacturer(s) shall provide the services of competent and effective manufacturer's field service engineer as recommended by

the manufacturer and as necessary to commission and turn-over the entire/complete Environmental Monitoring System to the DCR at the completion of the project. No additions to the Contract for these services shall be considered.

2. Provide performance tests of all hardware supplied as part of the Environmental Monitoring System in accordance with manufacturer recommendations. The performance test shall prove operation of the Environmental Monitoring System during "normal" conditions and during "abnormal conditions".

K. ACCEPTANCE TESTING

1. Acceptance testing will not be complete until the Environmental Monitoring System installation is complete and has been through the acceptance test. After completion of the demonstration to the DCR or its designated representative, the Contractor shall perform an acceptance test for the local authority having jurisdiction.
2. Design Authority Assistance:
   a. The Contractor shall provide personnel to assist the Engineer or his representative during all construction review visits. The Contractor shall provide all necessary tools and equipment to demonstrate the system operation and provide access to equipment.
   b. Energize and de-energize circuits and equipment as directed. Demonstrate operation of equipment as directed by the Engineer.

L. CERTIFICATION

1. Subsequent to the final inspection and the successful completion of the System described herein, the equipment manufacturer shall submit certification that a representative of the manufacturer has witnessed or performed the testing and reviewed the installation as follows:
2. The system was reviewed and is installed in accordance with the manufacturer's recommendations.
3. The system was tested and all devices and system components were operating and the system performed in accordance with the specifications.

M. CONTROL WIRING INSTALLATION

1. Install wiring between Environmental Monitoring System panel and remote devices.
2. Bundle, train and support wiring in enclosures.

N. CONNECTIONS

1. Conduit installation requirements as specified. Drawings indicate general arrangement of conduit, fittings and specialties.

2.7 BEDDING AND BACKFILL MATERIAL

A. Underground Piping shall be installed with only backfill that is approved by the piping manufacturer. All underground piping trenches shall be lined with geotextile fabric.

B. Contractor shall reuse excavation material. Trench shall be backfilled and compacted. Any excess material shall be removed and properly disposed of by the contractor.

2.8 CONCRETE

A. Concrete for transition sump cover pads shall have a minimum 28-day compressive strength of 4000 psi, with a maximum slump of 4 inches. Concrete shall be broom finished.

B. Reinforcing bar shall comply with ASTM A-615.

2.9 CONDUITS

A. Electrical conduits shall comply with the following:

1. Rigid Conduit: Conduits shall be new rigid galvanized steel sized in accordance with NFPA 70, but no smaller than 3/4" diameter. Flexible Conduit: Flexible conduit in NEC, Class I, Division 1 Classified Areas shall be Crouse-Hinds, flexible couplings type "ED" series or equal. Flexible conduit in NEC, Class I, Division 2 or Non-Classified Areas shall be liquid-tight metallic-core galvanized steel, grounding type with extruded PVC cover. Under-pier conduits shall be 316 stainless steel. Any under-pier junction boxes or connectors shall be 316 stainless steel. Adapters and connectors shall be liquid-tight Crouse-Hinds "LT" type connectors or equal.
2. All underground conduits, when at the point of emergence from grade or at the point where they exit from below any pile supported pad to below any paved, landscaped, or other area not covered by a pile supported pad, shall be equipped with expansion/deflection joints capable of axial expansion, angular misalignment, and parallel misalignment. The expansion/deflection joints on each conduit pipe shall be:
    a. Crouse-Hinds XJGD Combination Expansion/Deflection Coupling and Expansion Joint, Internally Grounded, or approved equal.
3. Magnetic safety tape shall be used above all underground conduit.

2.10 WIRE AND CABLE

A. General

1. Provide wire with a minimum insulating rating of 600 volts, except for wire, used in 50 volts or below applications for control of signal systems use 300 volt minimum or 600 volt where permitted to be incorporated with other wiring systems.
2. All wire and cable installed within conduits that exit, enter, or go through a hazardous area shall conform to NEC, Article 501-13 for conductor insulation.

B. Conductor

1. Electrical grade annealed copper, tinned if rubber insulated, and fabricated in accordance with ASTM standards. Minimum size AWG # 12 for branch circuits.
2. The conductors illustrated on the drawings are copper. Except as otherwise noted.
3. All conductors shall be THHN or THWN except as noted.
4. All conductors shall be petroleum resistant.

C. Stranding.

1. All connectors shall be stranded in accordance with ASTM Class B stranding designations.
2. Control wires stranded in accordance with ASTM Class B stranding designations.

D. Insulated Single Conductors

1. Type THHN/THWN - Flame retardant: Heat-resistant thermoplastic insulation, nylon jacket rated for 90 C dry/75C wet operation. Use for branch circuit wiring.
2. Use type THHN/THWN or RHW or XHHW, rated for 90 C, for feeder circuits.

E. Multi-Conductor Power Cable

1. Not authorized on this project.

F. Color Coding

1. Provide consistent color coding of all circuits as follows:

a. 120/208 volts code

i. Phase A - Black.
ii. Phase B - Red.
iii. Phase C - Blue.

iv. Neutral - White.

v. Ground - Green.

2.11 CONNECTORS

A. Make connections, splices, and taps and joints with solderless devices, mechanically and electrically secure. Protect exposed wires and connecting devices with electrical tape or insulation to provide protection not less than that of the conductor.

2.12 ELECTRICAL TAPE

A. Specifically designed for use as insulating tape.

B. Super 33+ Scotch vinyl electrical tape as manufactured by 3M.

2.13 LUBRICANT

A. Use lubricant where the possibility of damage to conductors exists. Use only a lubricant approved by the cable manufacturer and one which is compatible with cable and raceways.

2.14 OUTDOOR LOCATIONS

A. Provide weather proof covers for devices located outdoors.

2.15 RACEWAY TYPES

A. Standard Threaded Rigid Steel Conduit.

1. Rigid conduit heavy wall galvanized.

2. Threaded type fittings: "Erickson" couplings where threaded cannot be used.

B. Stainless Steel Rigid Conduit – Type 316

1. Rigid conduit type 316 stainless steel.

2. Threaded type fittings

C. Electrical Metallic Tubing

1. Continuous, seamless tubing, galvanized on the exterior, coated on the interior with a smooth hard finish of lacquer, varnish, or enamel.

2. Couplings and connectors:

D. Indoor and two (2") inches in size and smaller, shall be steel set-screw type fittings.

E. 2-1/2 inch size and larger shall employ steel compression gland fittings.

F. Outdoor shall be rain tight steel compression gland fittings.

1. Indent type fittings shall not be used.
2. All connectors shall have insulated throat.
3. Where installed in slab or concrete work, provide approved concrete tight fittings.

G. Flexible Steel Conduit

1. Single strip, continuous, flexible interlocked, double-wrapped steel, galvanized inside and outside, forming smooth internal wiring channel.
2. Maximum length: (six 6) feet.
3. Each section of raceway shall contain an equipment grounding wire bonded at each end and sized as required. Provide connectors with insulating bushings.
4. Steel squeeze-type or steel set screw type fittings.

H. Liquid Tight Flexible Electrical Conduit

1. Same as flexible steel conduit except with tough, insert water-tight plastic outer jacket.
2. Cast malleable iron body and gland nut, cadmium plated with one-piece brass grounding bushings which thread to interior of conduit. Spiral molded vinyl sealing ring between gland nut and bushing and nylon insulated throat.

I. Non-Metallic Raceway

1. The use of non-metallic raceway is not authorized.

J. Aluminum Conduit - The use of aluminum conduit is not authorized.

2.16 LOCKNUTS AND BUSHINGS

A. Locknuts shall be steel. Die cast locknuts shall not be used.

B. All bushings shall be insulated. Use nylon insulated metallic bushings for sizes 1"and larger.

C. Plastic bushings may be used in 1/2" and 3/4" sizes.

2.17 OUTLET, JUNCTION, AND PULL BOXES

A. All exterior, sump, and fuel component outlet boxes not in a designated electrical room, shall carry a NEMA 4 or NEMA 4X rating unless otherwise indicated

elsewhere in these specifications or construction drawings. All outlet boxes in the Hazard areas shall be rated in accordance with Chapter 5 of NFPA 70.

B. Cast Type Conduit Boxes, Outlet Bodies and Fittings

1. Provide surface mounted outlet and junction boxes, in indoor locations, where exposed to moisture and in outdoor locations.
2. Use Ferrous Alloy boxes and conduit bodies with Rigid Steel or IMC.
3. Use Ferrous Alloy or cast aluminum boxes and conduit bodies with Electrical Metallic Tubing.
4. Covers: Cast or sheet metal unless otherwise required.
5. Tapered threads for hubs.

C. Galvanized Pressed Steel Outlet Boxes

1. General
   a. Pressed steel, galvanized or cadmium-plated, minimum of four (4") inches, octagonal or square, with galvanized cover or extension ring as required.
2. Four (4") inch octagon with a removable backplate and 3/8" fixture stud, if required. Depth of box shall allow for a minimum of one (1") inch of concrete to be poured above the backplate.
3. Plug any open knockouts not utilized.

D. Heavy, thermo-resistant industrial grade adhesive, for adhesion of label to any surface without curling, peeling or falling off.

E. Label Designations, Nominal System Voltages Applied to the covers of all medium and low voltage pull, splice and junction boxes.

F. Machine printed.

2.18 UNDERGROUND WARNING TAPE

A. Manufacturers:

1. TEK ID
2. PRESCO
3. Approved equal.

B. Description: 3 inch wide plastic tape, detectable type, colored red with approved warning legend describing buried electrical lines. The warning tape shall list the

utility covered, e.g., “CAUTION BURIED ELECTRIC LINE BELOW”, TEK ID MODEL # DULT-1-3.

PART 3 - EXECUTION

3.1 INSTALLATION QUALITY CONTROL:

A. All underground piping sumps shall be tested in accordance with manufactures requirements and guidelines.

B. After completion of the underground piping, and after backfilling and setting concrete, test all underground piping with a precision method capable of detecting leaks of 0.005 GPH. The precision test shall be performed by a third party independent testing company and shall provide a certified report of tightness to the owner within 5 days of completion.

C. All sumps shall be hydraulically tested and maintain a constant level for 24 hours.

D. FIELD QUALITY CONTROL - WIRE

1. Testing
   a. Test system wiring for continuity, grounds and short circuits prior to connection of any equipment.
   b. Test final equipment connections for continuity of grounds and short circuits.
2. Insulation Resistance of Feeders and Subfeeders
   b. Test with megger for insulation resistance.
   c. Correct faults and replace sections with faulty insulation.
   d. Demonstrate installation is free of grounds and short circuits and that insulation resistance complies with ICEA values.
   2. Test direct burial cables after completion of backfilling.

D. FIELD QUALITY CONTROL - DEVICES

1. Inspect each wiring device for defects.

2. Operate and test each device.

3. Make electrical connections.

4. Install interconnecting conduit and wiring between devices and equipment to complete equipment wiring requirements.

3.2 INSTALLATION

A. Install new sensor. Install new transition, sump.

B. Install valves, fittings, breakaways and piping.

C. Provide necessary wire and conduits for electrical power to solenoid and sensor to electrical junction box/disconnect on building. Coordinate electrical requirements, conduit sizes and code requirements with owner.

D. Route electrical conduit away from piping. Ensure minimum 6 inches clearance between conduit and piping. Terminate electrical wiring and conduits on building.

E. Install all wire and conduits for leak monitoring devices and solenoids for a complete operational system.

F. Install fuel piping systems free of leaks.

G. Install underground piping and sumps leading to fuel dock.

H. Backfill and restore all disturbed areas to match existing surfaces.

I. WIRE AND CABLE

1. Provide a complete system of conductors in raceway system. All conductors of all systems shall be installed in a raceway system.

2. Use No. 12 AWG, minimum.

3. Do not install wire in incomplete conduit runs or until after the concrete work and plastering is completed and moisture is swabbed from conduits. Eliminate splices wherever possible. Where necessary, splice in readily accessible pull, junction, or outlet box.

4. Flashover or insulation value of joints shall be equal to that of the conductor. Provide Underwriters' Laboratories listed connectors rated to 600 volts for general use and 1,000 volts for use between ballasts and lamps or gaseous discharge fixtures.

5. Use terminating fittings, connectors, etc., of a type approved for the specified cable furnished. Make bends in cable at termination prior to installing compression device. Make fittings tight.

6. Extend wire sizing for the entire length of a circuit, feeder, etc. unless specifically noted otherwise.

J. WIRE INSTALLATION

1. General
   a. Provide tools, equipment, and materials to pull all wire and cable into place and to make required splices and termination.

2. Wire and Cable in Conduit, Duct or Wireway
   a. Utilize roller bearing swivel to prevent twisting of cable entering conduit or duct.
   b. Take precautions to avoid entrance of dirt and water into conduit and ducts.
   c. Clean existing conduits and ducts to remove any pulling compound prior to pulling new cables.
   d. Do not damage conductor insulation, braid jacket or sheath.
   e. Do not bend conductors to less than manufacturer's recommended radius.
   f. Make splices only in pull boxes, junction boxes and outlet boxes.
   g. Utilize cable reels on jacks for pulling through pull boxes, ducts and conduits so bends will not be excessive and conductors will not touch sharp edges; use feeding tube where required.
   h. For large diameter cables, utilize properly sized pulling grips (endless woven basket two to four feet long of ductile steel).
   i. Do not exceed maximum recommended pulling tension of wire and cable.

3. Splices, Terminations, and Connections
   a. General: Except where lugs are furnished with equipment, provide terminals and connectors approved for quantity, conductor size and direction of entry (top or bottom).
   b. Insulated Flanged Terminals: Install for connection of conductors No. 12 AWG and smaller to device terminals; do not exceed three terminals at single connections.
   c. Circumferential Compression Type Connectors: Install for splices and connections No. 4 AWG and larger.
      i. Use for incoming and outgoing cable connections at enclosures and for ground connections.
      ii. Use manufacturer's approved tool and correct hex head that embosses die number on connector lug.
      iii. Make crimped indentations parallel with conductor.
      iv. Fill voids and irregularities with insulation putty.

v. Cover neatly with four (4) layers of vinyl plastic tape except where insulated covers are permitted; half-lap tape in two directions.

vi. Use spring-held bakelite covers over splices or taps only with approval of DCR's Representative.

d. Conductor Arcproofing

i. Cover two or more power feeder cables occurring in the same switchboard section, junction box or pull box (including pull boxes over switchboards) with arcproof and flameproof tape.

ii. Provide tape "Scotch" Irvington Tape No. 7700 or Plymouth Rubber Co. Slipknot No. 30 to provide an insulation capable of withstanding a 200-amp arc for not less than 30 seconds.

iii. Apply tape in a single layer, half lapped, or as recommended by the manufacturer to conform to the above requirements. Apply with a random wrap of 1/2 inch (15mm) wide pressure-sensitive, plastic film tape color coded as specified in the "conductor identification" paragraph.

K. INSTALLATION - DEVICES

1. All devices shall be flush-mounted except as otherwise noted on the drawings.

2. Locations

a. Comply with layout drawings for general location; contact DCR's Representative for questions about locations and mounting methods.

b. Relocate outlets obviously placed in a location or manner not suitable to the room finish.

c. Avoid placing outlets behind open doors.

3. Align devices vertically and horizontally. Device plates shall be aligned vertically with a tolerance of 1/16". All four edges of device plates shall be in contact with the wall surface.

4. Mounting Heights as indicated on the Drawings and according to ADA requirements.

5. Fastening - securely fasten devices into boxes and attach appropriate cover plates.

L. INSTALLATION – EQUIPMENT CONNECTIONS

1. Make electrical connections.

2. Make conduit connections to equipment using flexible conduit. Use liquid-tight flexible conduit with watertight connectors in damp or wet locations, including in all sumps and fueling equipment areas.

3. Install approved strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.

4. Install disconnect switches, controllers, control stations, and control devices to complete equipment wiring requirements.

5. Install terminal block jumpers to complete equipment wiring requirements.

6. Install interconnecting conduit and wiring between devices and equipment to complete equipment wiring requirements.

M. CLEANING

1. Clean exposed surfaces to remove splatters and restore finish.

N. HAZARDOUS LOCATIONS

1. Install electrical wiring and components in strict accordance with Chapter 5 and Articles 514 and 515 of the NEC.

O. SENSOR TESTING

1. Complete functionality of the VeederRoot sensor. In the presence of the engineer, put sensor into an alarm condition.

3.3 CLOSEOUT SUBMITTALS

A. Comply with pertinent provisions of the appropriate Division I regarding - Contract Closeout. In addition, comply with the specifics and additional provisions of this chapter. For the purposes of this section, the terms “Manuals and Instructions” and Closeout Documents” are used interchangeably.

1. Provide Electronic (PDF format for documents and jpeg format for photos) of all closeout documents, record documents, drawings, manuals, operating instructions, warranties, and all other documents referenced in this and related sections.

2. Manuals, Instructions, and Closeout Documents shall include the following items

   a. A minimum of 24 high resolution (no less than 3 mega-pixel) digital (.jpeg format) photographs depicting the installation at each critical construction phase. Particular attention shall be paid to underground, buried, and normally inaccessible components.

   b. Underground piping manufacturers’ installation checklists with proof of delivery to manufacturer.

   c. Underground sump test records (transition and dispenser sumps)

   d. Copies of any State/Local approvals, authorizations, permits, and registrations.

   e. Tank and Piping Test Results and Test Results for all secondary containment structures or annuluses and all containment sumps.

   f. Records of all other inspections and tests.

   g. Automatic line leak detector test results and electronic release detection equipment (sensors and probes) test results on state regulatory agency forms.

   h. Warranties for all equipment and apparatus. In general, any product / manufacturer documentation that was provided with the equipment shall be provided as part of the closeout documents. Any warranty requiring forms or checklists shall be completed and fully executed.

   i. All instruction bulletins, preventive maintenance schedules, operational instructions, and parts lists provided with the tanks, dispensers, monitoring system, and all other systems.

   j. Waste disposal documentation (if any).

   k. Other environmental information or permits (if any).

l. Provide directions for and sequences of operation Gasoline and Related Systems. Sequence shall list valves, switches, and other devices used to start, stop and control systems.

m. Operating manuals and instructions for each major system. Manuals shall include the following materials and information for all specified materials and equipment:

i. All Subcontractor's warranties.

ii. Name and telephone number of local representative and supplier.

iii. Manufacturers' maintenance procedures: Systems which require preventive maintenance to maintain efficient operation shall be furnished with complete necessary maintenance information. Required routine maintenance actions, as specified by the manufacturer, shall be stated clearly and incorporated on a readily accessible label on the equipment. Such label may be limited to identifying, by title or publication number, the operation and maintenance manual for that particular model and type of product.

iv. Exploded drawings and parts lists.

v. Troubleshooting checklists with potential problems and possible causes.

vi. As-built Record drawings.

vii. Equipment warranties and guaranties.

viii. Sequence of Operations and Systems Descriptions.

ix. Additional requirements specified in other sections.

3.4 FIELD QUALITY CONTROL

A. Qualifications: Use adequate numbers of skilled, licensed individuals who are thoroughly trained and experienced in the installation and testing of the

specified systems and who are completely familiar with the requirements and the methods needed for proper performance of the work of this Section.

B. Substitutions: Comply with the Instructions to Bidders and Division I.

C. Materials and Equipment shall be manufactured, installed, and tested as specified in latest editions of applicable publications, standards and ruling of:

1. Local and State building, plumbing, mechanical, electrical, fire and health department codes.
2. National Fire Protection Association (NFPA).
3. Occupational Safety and Health Act (OSHA).
4. Factory Mutual Association (FM).
5. Underwriter's Laboratories (UL).
6. American Petroleum Institute (API).

D. The most recent editions of applicable specifications and publications of the following organizations form part of the Contract Documents:

1. American National Standards Institute (ANSI).
2. American Society of Mechanical Engineers (ASME).
3. National Electric Manufacturers Association (NEMA).
4. American Society for Testing of Materials (ASTM).
5. American Welding Society (AWS).
6. Manufacturers Standardization Society of the Valve and Fitting Industry (MSS).

E. Tests of all Contractor secured materials and products being submitted for approval to determine conformance with all requirements of the Contract Documents, including borrow materials proposed for use, shall be performed by an independent testing laboratory retained and compensated by this Contractor.

F. As materials are incorporated into the project, on-site and off-site quality control tests shall be performed during construction to determine

conformance with the Contract Documents by an independent testing laboratory retained and compensated by this Contractor.

G. Quality assurance testing to validate results of quality control tests performed by the Contractor's testing laboratory shall be performed by an independent testing laboratory retained and compensated by the DCR.

H. Complete the fuel system installation in accordance with the requirements of the Commonwealth of Massachusetts Department of Environmental Protection (MADEP) and the City of Lynn Board of Health.

1. Comply with the testing and field quality control requirements elsewhere in this section. Contractor Furnished Testing:
2. Tighten all fittings and pneumatically test AST in accordance with manufacturer's installation instructions and PEI Recommended practices.
3. After completion of primary piping, test primary piping in accordance with manufacturer's installation instructions and PEI Recommended Practices. Notify the Project Engineer in Advance of when such test is to take place.
4. Underground piping tightness test
5. Line leak detector testing.
6. Hydraulic testing of transition sumps.

J. Complete test and certification of tank monitoring system including testing of all probes, sensors, communication devices and other items required by owner, engineer or manufacturer.

PART 4 - COMPENSATION

4.01 MEASUREMENT

A. Measurement for FUEL SYSTEM - COMPLETE will be made on a LUMP SUM basis for all work described in this section not otherwise listed below, completed as indicated by the Contract Drawings.

4.02 PAYMENT

A. Payment for FUEL SYSTEM - COMPLETE will be at the LUMP SUM contract price. This price shall include full compensation for all labor, materials, tools, and equipment, and all other incidental work necessary to provide a fully operational, tested and permitted fuel dispensing system (gasoline and diesel) as indicated on the Contract Drawings and as herein specified. There is no separate payment for coordination work with the Utility and DCR.

4.03 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
23100.01	FUEL SYSTEM - COMPLETE	LUMP SUM

END OF SECTION

APPENDIX A

1 A-001 Site Layout

Abbreviations	
A	Architectural
PE	Plumbing & Electrical Layout

Drawing #	Drawing Name	Rev#
A-001	Site Layout	00
PE-001	Plumbing & Electrical Layout	00

VORTEX

VORTEX USA Inc.
3500 South Dupont Highway, Suite EP-101
Dover, Delaware
United States 19901
Phone: +1 (877) 586-7839

COPYRIGHT VORTEX USA Inc-THIS DOCUMENT AND THE IDEAS, RENDERINGS AND OTHER CONTENTS CONTAINED THEREIN ARE THE SOLE PROPETY OF VORTEX USA Inc AND MAY NOT BE DISSEMINATED, COPIED, REPRODUCED OR OTHERWISE USED WITHOUT PRIOR WRITTEN CONSENT OF VORTEX USA Inc.

Heritage State Park

Project Location
MA

Project Number
33958

Version
VA

Date	Revision Description	No.	By
11/April/2023	Issued for Approval	00	BR

Drawing Title
Site Layout

Drawn by	Verified by
BR	MAB
Scale: 1/8"=1'-0"	Date: 11/April/2023

Page # A-001

1 PIPING

1.1 WDS CONFIGURATION ARE SCHEMATIC AND MAY BE MOVED OR ADJUSTED ON SITE BY VORTEX CERTIFIED INSTALLER TO ADJUST FOR SITE CONDITIONS

1.2 ANY REQUIRED WATER METER ON THE CITY WATER MAIN SHALL BE PROVIDED BY INSTALLER. PRESSURE REGULATOR AND BACKFLOW PREVENTER ARE PROVIDED BY VORTEX.

1.3 ALL PIPE LINES TO FEATURES TO HAVE A 1% MINIMUM RECOMMENDED SLOPE FOR PROPER WINTERIZATION.

1.4 ALL LINE SIZING (FEATURE CONNECTION TABLE) ASSUMES A MAXIMUM DISTANCE OF 100 FEET BETWEEN THE WATER DISTRIBUTION MANIFOLD AND THE FURTHEST PLAY PRODUCT. DISTANCES ABOVE 100 FEET MAY REQUIRE AN INCREASE IN LINE SIZING. PLEASE CONTACT VORTEX.

1.5 QUANTITY AND LOCATION OF DRAINS BASED ON MAXIMUM FLOW FOR THE INDICATED PIPE DIAMETER AT 1% SLOPE. MODIFICATIONS MAY BE REQUIRED DUE TO SPECIFIC SITE CONDITIONS AND LOCAL CODE.

1.6 PRESSURE LINES ARE RECOMMENDED TO BE SCHEDULE 80 PVC OR PEX, AND NON-PRESSURE LINES TO BE SCHEDULE 40, UNLESS OTHERWISE REQUESTED BY LOCAL CODE.

1.7 DRAINAGE LINES ARE RECOMMENDED TO BE SDR 35, UNLESS OTHERWISE REQUESTED BY LOCAL CODE.

1.8 PIPING SHOULD BE INSPECTED AFTER TRANSPORTATION FOR CUTS, SCRATCHES, GOUGES OR SPLITS; DAMAGED SECTIONS MUST BE DISCARDED OR CUT OUT.

1.9 PIPE SHALL BE INSTALLED BELOW THE FROST LEVEL NOT LESS THAN 12" (ASTM F-645) UNLESS OTHERWISE REQUESTED BY LOCAL CODE.

1.10 PIPE INSTALLATION MINIMUM COVER SHOULD BE EVALUATED ACCORDING TO ASTM D-2774, UNLESS OTHERWISE REQUESTED BY LOCAL CODE.

1.11 SPECIAL CONSIDERATIONS SHOULD BE TAKEN FOR THERMAL CONDITIONS, EXPANSION AND CONTRACTIONS DUE TO TEMPERATURE SHOULD BE EVALUATED BEFORE THE INSTALLATION BY THE CONTRACTOR.

1.12 VALVE NUMBER 1 IS LOCATED TO THE LEFT OF THE MANIFOLD FACING THE SOLENOID.

1.13 MINIMUM 50 PSI REQUIRED AT THE INLET OF THE BACKFLOW PREVENTER AND PRESSURE REGULATING DEVICE.

1.14 MAXIMUM FLOW CAPACITY OF MANIFOLD IS 72 GPM.

1.15 TOTAL FLOW OF FEATURE IS 56 GPM.

1.16 FACTORY MAXIMUM SEQUENCING FLOW IS 39.5 GPM ACTUAL FLOW MAY VARY DUE TO SITE CONDITIONS.

2 ELECTRICAL

2.1 WIRING FROM THE CONTROLLER TO EACH ACTIVATOR SHALL BE #22 AWG. A TOTAL OF FIVE (5) CONDUCTORS PER ACTIVATOR.CABLE LENGTH UP TO 246' (75m), PROVIDED BY VORTEX.

2.2 ALL CONNECTIONS TO THE CONTROLLER AND OTHER VORTEX ELECTRICAL PANEL SHALL BE PERFORMED USING AN APPROVED NEMA 4X CONNECTOR.

2.3 WIRE FROM MAIN POWER TO VORTEX PANEL TO BE DETERMINED BY OTHERS RESPECTING THE LOCAL CODE.

2.4 MAINTAIN A MINIMUM CLEARANCE ZONE OF 36" IN FRONT OF ELECTRICAL PANEL, UNLESS OTHERWISE REQUESTED BY LOCAL CODE.

2.5 USE #8 BARE SOLID COPPER BONDING WIRE BETWEEN FEATURES TO A GROUNDING ROD IN THE SOIL, TIED INTO REBAR GRID, OR AS PER LOCAL CODE. SPRAYLINKS FEATURE DO NOT REQUIRE BONDING.

2.6 AS PER ELECTRICAL CONSTRUCTION AND SAFETY CODES: CONTROLLER CONTROLLER AND ANY OTHER ELECTRICAL ENCLOSURES MUST BE HARD-WIRED TO A GROUND FAULT CIRCUIT INTERRUPTER (GFCI) FROM THE INPUT POWER SOURCE.

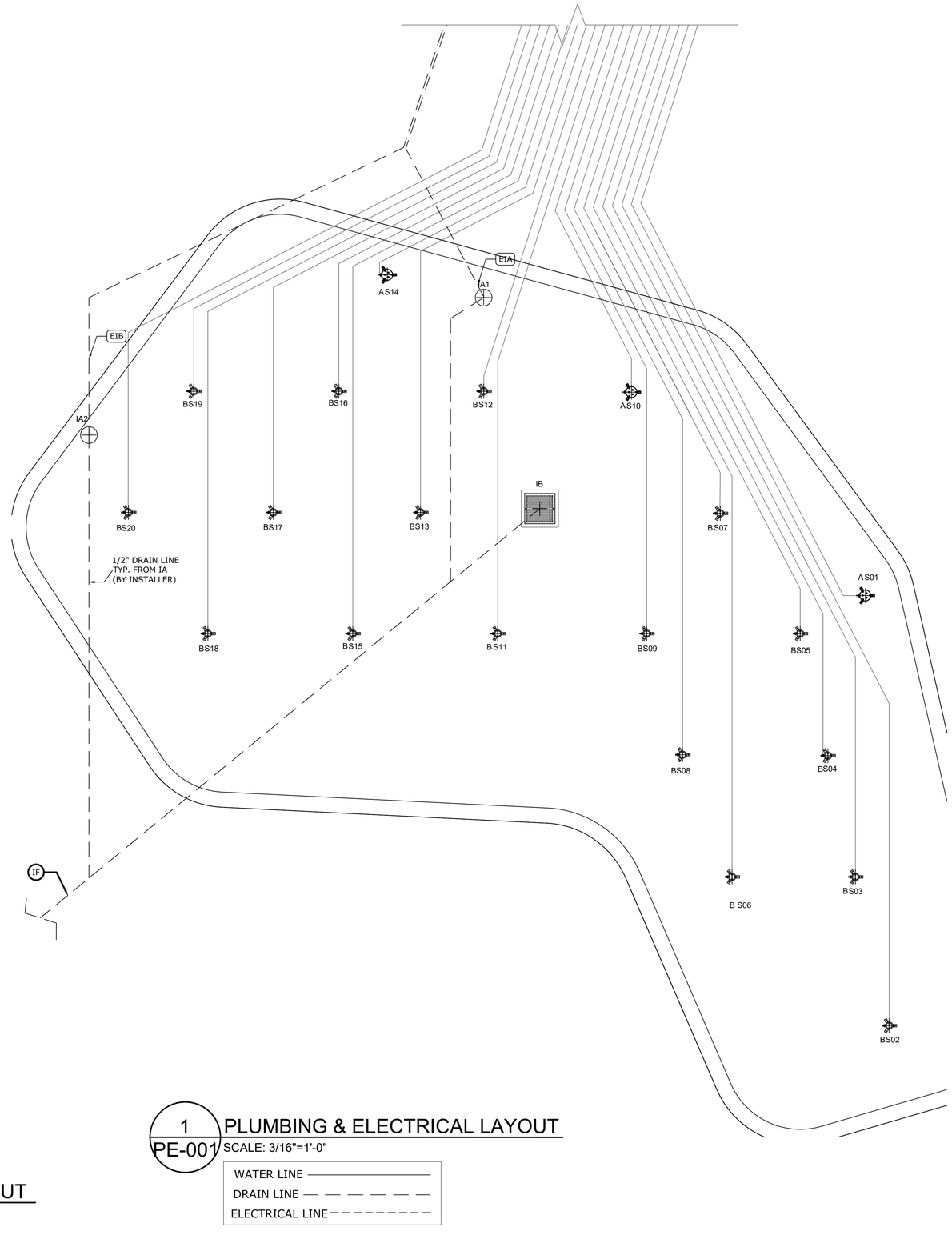
2.7 ALL ELECTRICAL WORK SHOULD BE PERFORMED BY A LICENCE ELECTRICIAN IN ACCORDANCE TO LOCAL ELECTRICAL CONSTRUCTION AND SAFETY CODES.

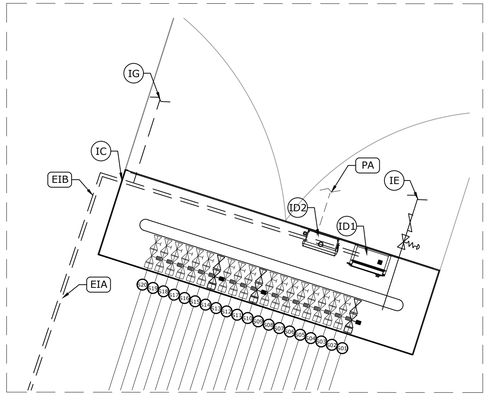
2.8 THE MAESTROPRO CONTROL PANEL IS POWERED THROUGH A MAESTROPRO POWER BOX.

2.9 THE POWER CABLE TO MAESTROPRO POWER BOX IS SUPPLIED BY INSTALLER.

2.10 THE MAESTROPRO CONTROL PANEL INTEGRATES 24 DIGITAL OUTPUTS WITH 24 VAC AND 12 DIGITAL INPUTS.

2.11 FOR REMOTE ACCESS ABILITY, A HARD CONNECTION TO AN EXISTING NETWORK IS REQUIRED USING A CAT 5 CABLE OR A CELLULAR NANO-SIM CARD WITH DATA-PLAN. INSTALLER.





2 PE-001 PLUMBING & ELECTRICAL LAYOUT
SCALE: 1/2"=1'-0"

1 PE-001 PLUMBING & ELECTRICAL LAYOUT
SCALE: 3/16"=1'-0"

WATER LINE
DRAIN LINE
ELECTRICAL LINE

Feature Connection Table

Manifold Output Ref.	Valve Size	Feature Ref.	Feature	Qty	Line Size	Gpm	Output (ID1)
S01	1" Std	A	Magic Mist N°2 VOR 8099	1	1"	4.5	1
S02	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	2
S03	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	3
S04	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	4
S05	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	5
S06	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	6
S07	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	7
S08	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	8
S09	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	9
S10	1" Std	A	Magic Mist N°2 VOR 8099	1	1"	4.5	10
S11	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	11
S12	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	12
S13	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	13
S14	1" Std	A	Magic Mist N°2 VOR 8099	1	1"	4.5	14
S15	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	15
S16	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	16
S17	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	17
S18	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	18
S19	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	19
S20	1/2" FAV	B	Jet Stream N°1 VOR 7512	1	3/4"	2.5	20

Electrical Line Connections Power

Product Code	From	To	# Conductors	Gauge/Type	Note
PA	Main Power Line (by Owner)	ID2-120VAC	3	TBD (by Other)	120V, 1 Phase, 60Hz, 10Amps Breaker Recommended ± 5% Voltage Drop is Acceptable

Electrical Line Connections Controller Inputs

Product Code	From	To	# Conductors	Gauge/Type	Note
EIA	ID1-Input 1	IA1	5	22	Foot Activator 24 VDC, Max 345 mA, 246' (75m) Long Cable (by Vortex)
EIB	ID1-Input 2	IA2	5	22	Foot Activator 24 VDC, Max 345 mA, 246' (75m) Long Cable (by Vortex)

Product Legend

Product Ref.	Product	Qty
IA1,IA2	Foot Activator VOR-0606	2
IB	Deck Drain VOR-1000	1
IC	Water Distribution System; ECCC Cabinet Command Center 2.0 33958D2303R00	1
ID1	MaestroPRO Controller 24 out / 12 in VOR-33907.3200	1
ID2	MaestroPRO Power Box VOR-33907.3200	1
IE	2" City Water Line (by Installer)	1
IF	8" Drain line To municipal Drain (by Installer)	1
IG	4" TYP Drain Line With Strainer Connected to Drainage System. Ensure P-Trap is Below Frost Line to Prevent Freezing. (by Installer)	1
	2" Pressure Regulator (by Vortex)	1
	2" Backflow Preventer (by Vortex)	1
	1" Solenoid Valve with Ball Valve & Union (by Vortex)	3
	1" Fast Acting Valve with Gate Valve & Union (by Vortex)	17

VORTEX USA Inc.
3500 South Dupont Highway, Suite EP-101
Dover, Delaware
United States 19901
Phone: +1 (877) 586-7839

COPYRIGHT VORTEX USA Inc-THIS DOCUMENT AND THE IDEAS, RENDERINGS AND OTHER CONTENTS CONTAINED THEREIN ARE THE SOLE PROPETY OF VORTEX USA Inc AND MAY NOT BE DISSEMINATED, COPIED, REPRODUCED OR OTHERWISE USED WITHOUT PRIOR WRITTEN CONSENT OF VORTEX USA Inc.

Heritage State Park

Project Location
MA

Project Number
33958

Version
VA

Date	Revision Description	No.	By
11/April/2023	Issued for Approval	00	BR

Drawing Title
Plumbing & Electrical Layout

Drawn by	Verified by
BR	MAB
Scale: 1/2"=1'-0"	Date: 11/April/2023

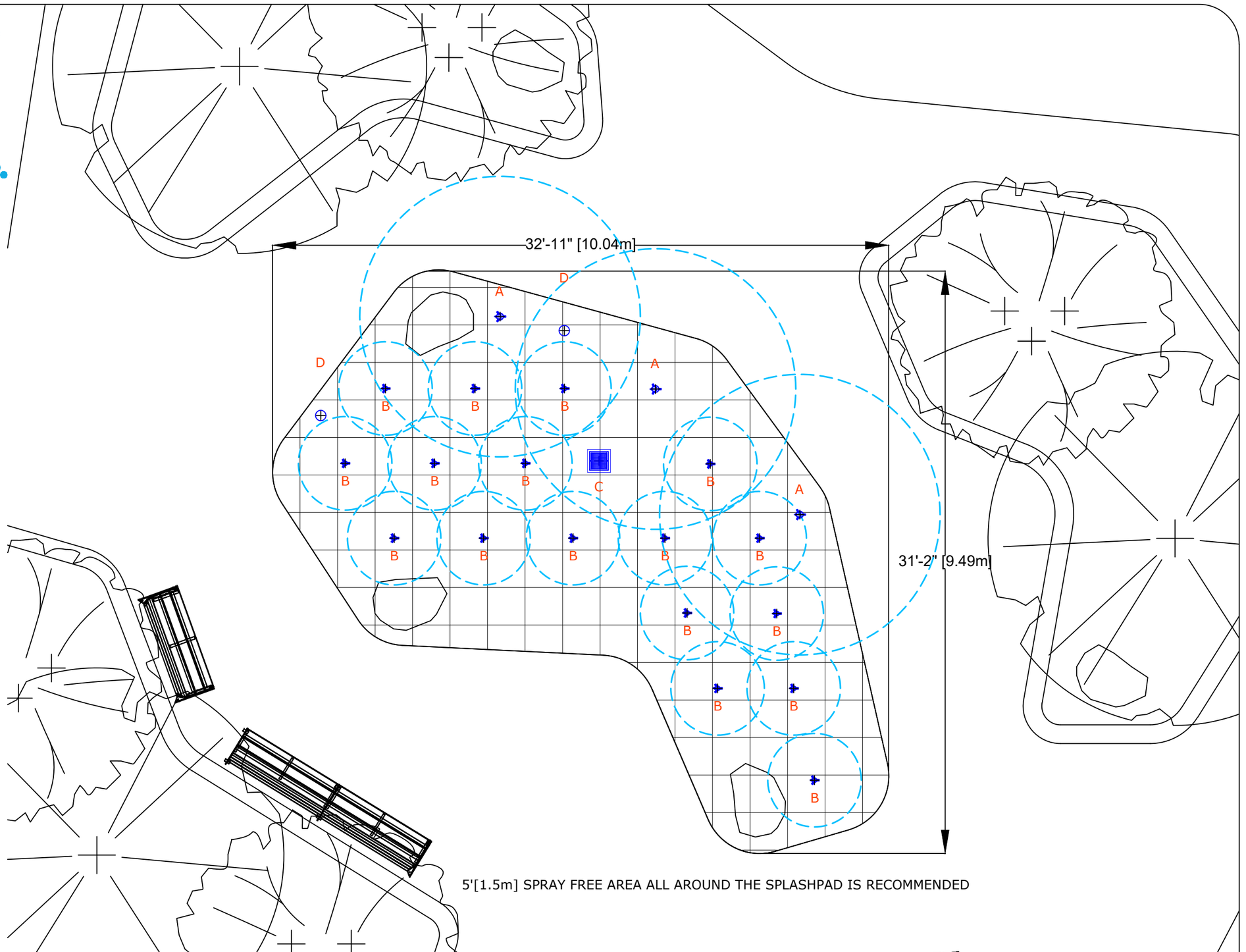
Page #
PE-001

SPLASHPAD DIMENSION

TOTAL AREA :	583 ft²	54 m²
SPRAY AREA :	583 ft²	54 m²
GRID SIZE :	2 x 2 ft	0.6 x 0.6 m

PRODUCT LEGEND

REF	PRODUCT	QTY	GPM	LPM
A	Magic Mist N°2 VOR 8099	3	13.5	51.1
B	Jet Stream N°1 VOR 7512	17	42.5	160.9
C	Deck Drain VOR-1000	1	0	0
D	Foot Activator VOR-606	2	0	0
		QTY	GPM	LPM
	TOTAL	23	56	212



5'[1.5m] SPRAY FREE AREA ALL AROUND THE SPLASHPAD IS RECOMMENDED

Heritage State Park Splashpad, MA

33958 - Version A

March 23, 2023

SPLASHPAD LAYOUT DRAWING

SCALE :6/32":1'

11" X 17" sheet size

COPYRIGHT VORTEX AQUATIC STRUCTURES INTERNATIONAL 2006-THIS DOCUMENTS AND THE IDEAS, RENDERINGS AND OTHER CONTENTS CONTAINED THEREIN ARE THE SOLE PROPERTY OF VORTEX AQUATIC STRUCTURES INTERNATIONAL AND MAY NOT BE DISSEMINATED, COPIED, REPRODUCED OR OTHERWISE USED WITHOUT PRIOR WRITTEN CONSENT OF VORTEX AQUATIC STRUCTURES INTERNATIONAL

APPENDIX B

EC10 EC20
EQUIPMENT CABINETS

1.0 SMARTFLOW™ EQUIPMENT CABINETS :

The Equipment Cabinet, as described below. It consists of an enclosure, door access, a manifold, a pressure regulator and solenoid valves.

This above grade equipment cabinet with up to twenty (20) valves shall be a pre-fabricated water distri-bution system containing piping, valves and electrical wiring. They shall be factory assembled, water pres¬sure tested and delivered from the Splashpad equipment manufacturers facilities. They shall be equipped with threaded connections for the water inlet and slip-on for water outlets. The solenoid valves shall be pre-wired to the controller or to a junction box when the controller is placed in a remote location. The in¬staller shall provide the plumbing equipment required from the water source to the water inlet or backflow preventer device and pressure regulator if so configured.

The installer shall provide the plumbing equipment required from the water outlets to the Splashpad Play Products, as well as adequate drainage ball valves at the low point of each of the Play Product's water distribution lines when required. Should the controller be located remotely, the installer shall supply the electrical equipment required from the power switch with branch circuit protection.

2.0 GENERAL MATERIALS SPECIFICATIONS :

2.1. Enclosure shall be constructed of aluminum powder coat painted finish with no sharp edges, buffed weldings and tamper proof hardware. Main lockable door on hinges.

2.2. Chassis shall be constructed of pre-galvanized steel U channel with no sharp edges,

2.3. Manifold shall be constructed of 3 ½" outside diameter Stainless Steel 304/304L pipes powder coat painted finish with no sharp edges and buffed weldings. Each water distribution port shall be a 1'' NPT connection. The manifold shall be equipped with a pressure gauge. All welded joints shall be watertight and pressure tested to 150 psi.

2.4. Piping and fitting shall be constructed of SCH 40 PVC, 150 PSI pressure tested

This document is the sole property of Vortex Aquatic Structures Intl Inc. Reproduction or redistribution in whole or in part without the express written consent of Vortex Aquatic Structures Intl is prohibited

July 2021, Version 1.00

2.5. Solenoids valves (different possible combinations of sizes) shall be constructed of PVC or Brass with or without ball valve, all with water resistant solenoid, all rated up to 150 PSI. There shall be one (1) solenoid valve installed on each of the water distribution ports for the Play Products. They shall be a normally closed 24 VAC 50/60 cycle solenoid actuated globe/angle pattern design. The valve body and bonnet shall be constructed of PVC with stainless steel fasteners. The valve shall have a manual override capability (manual open/close control). It shall house a fully encapsulated, one-piece solenoid. Each Solenoid valve shall have in integrated flow control adjustment valve stem for fine tuning of spray effects.

2.6. Gate & ball valves (different possible combinations of sizes) shall be constructed of PVC rated up to 150 PSI

2.7. Inlets (different possible combinations of sizes) shall be constructed of PVC or PVC and Brass unions, all rated up to 150 PSI

2.8. Electrical Enclosures, Conduit, Wiring and Connections: All electrical wiring shall be # 18 AWG with a 600V rating. All electrical connections, enclosures, and conduit shall be Nema 4x watertight.

2.9. Controllers: see controllers specification sheet for detailed information

2.10. Tamper Proof Hardware shall be constructed of Stainless Steel 304

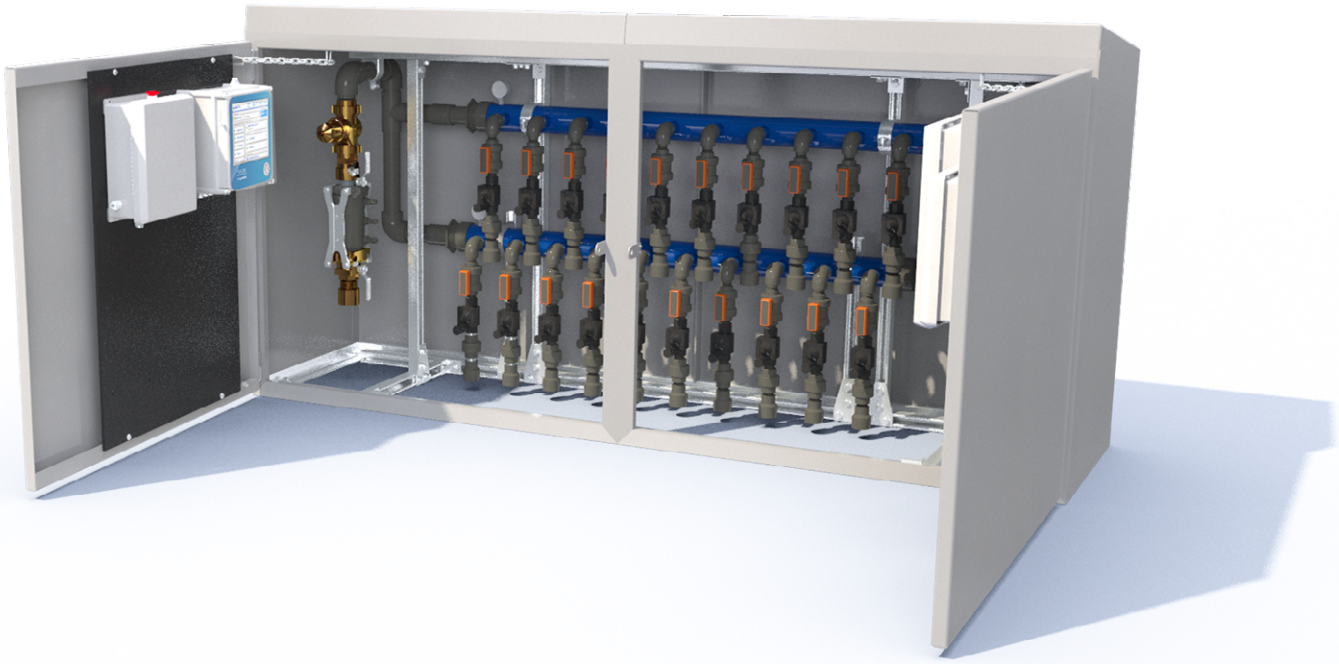
3.0 INSTALLATION CHARACTERISTICS :

3.1. Electrical Connections: All main power electrical connections to the Splashpad Controller are to be performed per local codes.

3.2. Drawings and Instructions: Product drawings and installation manuals shall be supplied by the manufacturer for ease of installation.

3.3. The installer shall provide the concrete base to anchor the equipment cabinet in place.

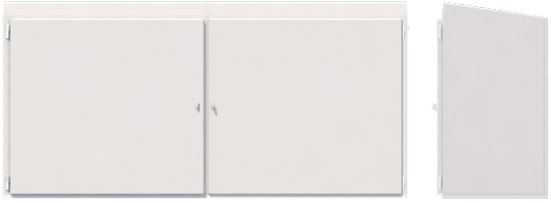
This document is the sole property of Vortex Aquatic Structures Intl Inc. Reproduction or redistribution in whole or in part without the express written consent of Vortex Aquatic Structures Intl is prohibited



**The product shown in the image may differ from the actual product sold.*

EC10, EC20

EQUIPMENT CABINETS



The Smartflow™ self-enclosed Command Center is the versatile control solution for Splashpads® with flow-through systems.

Suited for both indoor and outdoor facilities, this equipment cabinet ensures every component is within arm's reach.

VORTEX

VORTEX-INTL.COM • INFO@VORTEX-INTL.COM
1.877.586.7839 (free USA/CANADA)
+1.514.694.3868 (INTERNATIONAL)

PRODUCT HIGHLIGHTS

- Self-enclosed system featuring up to 20 valves
- Front access door(s) for easy adjustments
- Angled roof for natural water drainage and prevent snow accumulation
- Strong welded door hinges and lock holders
- Door mounted controllers and power boxes
- 1" lines stainless steel manifold with pre-assembled valves
- Easy ball valves maintenance with union connections
- Pressure regulator included
- Drain access point for line winterization
- Meets ASTM F2461 and CSA Z614-98 regulations for public playgrounds
- Back flow preventor and additionnal power pack are optional and will fit within enclosure

SPECIFICATIONS

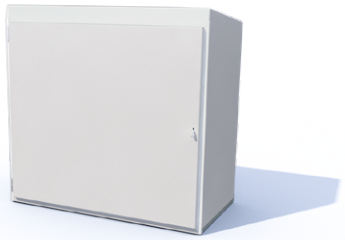
Material
Aluminum enclosure
Stainless steel manifold
PVC piping

Color choices
Enclosure Grey RAL 7035
Manifold Vortex Blue RAL 5017

MODELS

EC10: Up to 10 valves

H./W./L.
49.8 / 29.4 / 53.3 in
126.5 / 74.7 / 135.4 cm



EC20: Up to 20 valves

H./W./L.
49.8 / 29.4 / 106.4 in
126.5 / 74.7 / 270.3 cm

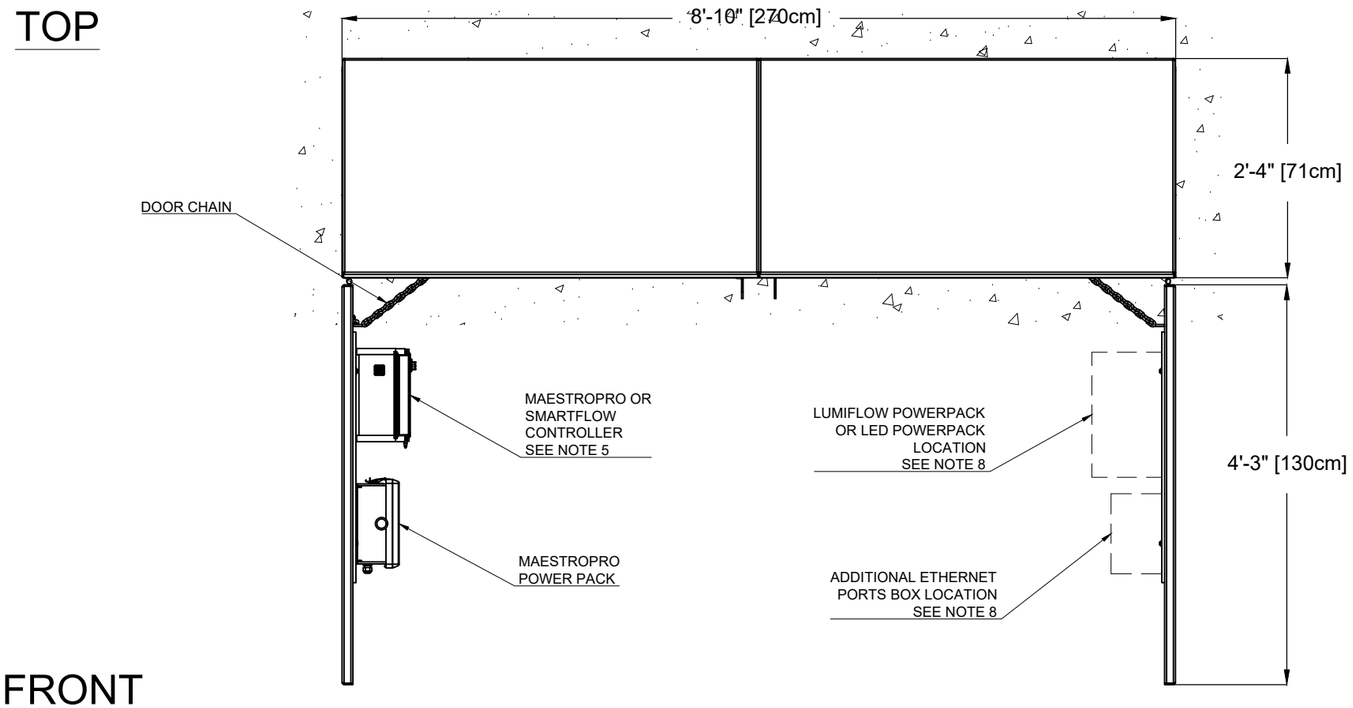
Version 1.0 July 2021 © Vortex Aquatic Structures International, 2021

VORTEX

VORTEX-INTL.COM • INFO@VORTEX-INTL.COM
1.877.586.7839 (free USA/CANADA)
+1.514.694.3868 (INTERNATIONAL)

THESE DRAWINGS PROVIDE A GENERIC OVERVIEW OF THE INSTALLATION. THEY ARE NOT PROJECT SPECIFIC OR REFLECT ANYCUSTOMIZATION UNLESS NOTED. PLEASE CONTACT VORTEX AQUATIC STRUCTURES INTERNATIONAL FOR MORE DETAILS.

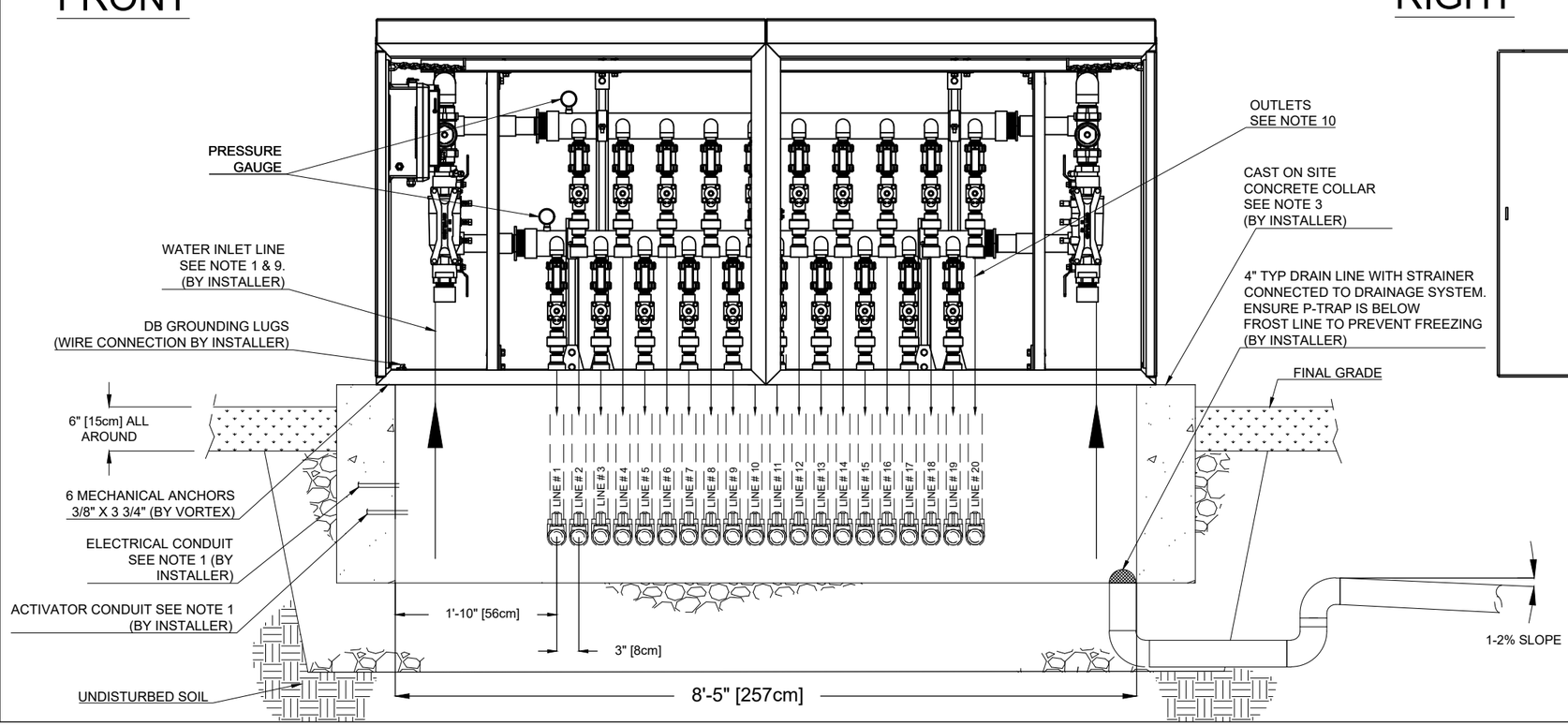
TOP



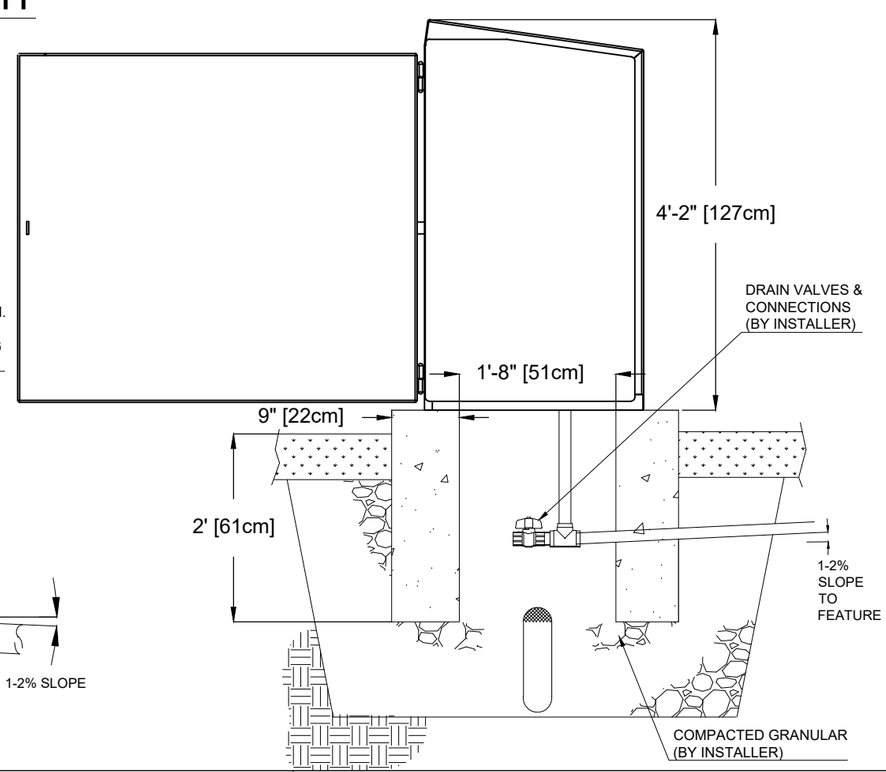
NOTES:

1. REFER TO P&E DRAWINGS FOR PIPE SIZES AND ELECTRICAL CONNECTIONS
2. REFER TO PRODUCT SPECIFICATION DOCUMENT FOR ADDITIONAL INFORMATION
3. CONCRETE SURFACE,VERIFY LOCAL CODES FOR TYPE, THICKNESS & REINFORCEMENTS REQUIREMENTS.
4. "BY INSTALLER" MAY REFER TO SERVICE PROVIDERS OTHER THAN EQUIPMENT MANUFACTURER. PLEASE REFER TO THE PROJECT SCOPE OF WORK FOR DETAILS OF RESPONSIBILITIES.
5. IF THE CONTROLLER IS REMOTE LOCATED, CONDUCTORS # 18 AWG AT 10' LONG ARE PROVIDED BY VORTEX. FOR QUANTITY SEE PIPING AND ELECTRICAL SCHEMATIC DETAIL. GROUNDING OF J-BOX DONE BY INSTALLER.
6. DIRECTION OF FLOW FOR PLUMBING SHALL BE LABELED USING DIRECTIONAL SYMBOLS.
7. VALVES AND PLUMBING LINES SHALL BE LABELED WITH DESCRIPTION OF SOURCE OR DESTINATION.
8. OPTIONAL EQUIPMENTS
9. INLETS CAN BE CONFIGURED UP TO TWO WITH;
   - -3" NO BFP / PR
   - -3" REDUCED TO 2" PR
   - -3" REDUCED TO 2" BFP / PR
   - -2" NO BFP / PR
   - -2" WITH PR
   - -2" WITH BFP / PR
10. OUTLETS CAN BE A COMBINATION UP TO 20 OF:
    - -1" GATE VALVE
    - -1" BRASS OR PVC SOLENOID VALVE WITH OR WITHOUT BALL VALVE
    - -1" FAST ACTING SOLENOID VALVE
11. SEE PRODUCT INSTALLATION MANUAL FOR INSTALLATION TIPS

FRONT



RIGHT



PRODUCT NAME:	EQUIPMENT CABINET 20 (EC20)	DATE: 04/08/2021	SHEET NO: 1/1	11"x17" SHEET SIZE

VORTEX

COPYRIGHT VORTEX AQUATIC STRUCTURES INTERNATIONAL-THIS DOCUMENT AND THE IDEAS, RENDERINGS AND OTHER CONTENTS CONTAINED THEREIN ARE THE SOLE PROPERTY OF VORTEX AQUATIC STRUCTURES INTERNATIONAL AND MAY NOT BE DISSEMINATED, COPIED, REPRODUCED OR OTHERWISE USED WITHOUT PRIOR WRITTEN CONSENT OF VORTEX AQUATIC STRUCTURES INTERNATIONAL

VOR 33907.32XX
MAESTROPRO™

1.0 GENERAL MATERIALS SPECIFICATIONS :

1.1. Equipment Enclosures :

Shall be made from corrosion resistant hot compression moulded fiberglass reinforced polyester which does not contain halogens. Enclosures shall be UL listed per UL Standard 508A, NEMA 4X; CSA Certified per Standard C22.2-0, 0.4, 0.7, 0.6, 94 Type 3, 3R, 4, 4X, 12 and 13.

1.2. Operating temperature :

Maestro**PRO™** shall be operating in an ambient temperature range of 32°F (0°C) to 131°F (55°C).

2.0 MAESTROPRO™ CONTROLLER MAIN – 33907.12B2 :

2.1. The Maestro**PRO™** control panel shall be made from corrosion resistant hot compression moulded fiberglass reinforced polyester which does not contain haloge.

2.2. The Maestro**PRO™** control panel is a Water Playground Controller cULus and FCC Certified and Marked product. Maestro**PRO™** Controller is designed in a compliance to the CE Standards requirements.

2.3. The Maestro**PRO™** control panel shall be supplied with a 10.4'' touch screen user interface with controls for each output, activation device(s), and operation hours. These selector settings allow the user to select the operational mode of the components (i.e. Manual, Off and Automatic).

2.4. The Maestro**PRO™** control panel shall be supplied by power through a Maestro**PRO™** Power Box : providing power through two 100VA transformers 120 VAC primary / 24 VAC secondary OR 240 VAC primary / 24 VAC secondary, depending on Maestro**PRO™** Power Box associated, with built- in electrostatic shield protection, and by a power supply 120/240 VAC primary to 24 VDC secondary and 100 VA.

This document is the sole property of Vortex Aquatic Structures Intl Inc. Reproduction or redistribution in whole or in part without the express written consent of Vortex Aquatic Structures Intl is prohibited

12/22/2020, Version 1.01

2.5. The Maestro**PRO™** control panel shall integrate 24 digital outputs with 24 VAC (per output : max 1.6 Amp inrush, max 0.3 Amp nominal) and 12 digital inputs with selectable 5 or 24 VDC (1A max over all inputs).

2.6. The Maestro**PRO™** control panel shall surge at any time a maximum of 4 Amp over each of its two "12 digital outputs" sets.

2.7. The Maestro**PRO™** control panel shall have the capacity to receive digital signals from activation devices or sensors, operating on 5 or 24VDC. (Activator, Rain Sensor,...)

2.8. The Maestro**PRO™** control panel shall have the ability to provide a 24VAC auxiliary signal. This signal can be used to trigger a relay for Pumps, Chemical, UV system, or any other item following electrical specification. All outputs are electrically protected against over consumption with resettable fuses.

2.9. The Maestro**PRO™** control panel shall have the capacity to operate a Rain Diverter Valve with a 24V AC max 1.6 Amp signal to prevent rain water to go into the sewer network when the Splashpad® is not in function. That requires 2 outputs from Maestro**PRO™** control panel.

2.10. The Maestro**PRO™** main control panel shall have the ability to control Fast Acting Valves supplied by 24 VAC max 1.6 Amp inrush each.

2.11. Maestro**PRO™** control panel shall have the capacity to receive pulse signal from items compatible with 24 VDC (Paddle wheel water meter, Anemometer,..).

2.12. The Maestro**PRO™** control panel shall have capability to be interconnected with any Maestro**PRO™** Expansion (33907.22B2) using a dedicated RJ45 connector (located on I/O board).

2.13. The Maestro**PRO™** control panel shall have capability to be interconnected with max 1 Ethernet based item like the Maestro Light Controller (33908.0xxx) by using an Ethernet RJ45 Cat5 cable. If more than 1 Ethernet based items need to be connected, an Ethernet switch junction box (44900.0011) must be used.

2.14. Maestro**PRO™** control panel shall have removable terminal blocks for easy wiring.

2.15. The Maestro**PRO™** firmware shall be factory programmed with spray and light sequences designed according to the requirements of the project. Users shall have the flexibility to modify sequence duration specifically to each operation schedule directly through the interface. New sequences (created by Vortex) shall be added into the program using either a transportable USB Key or with an internet connection. A 24hr/7day user programmable Agenda, which shall allow the user to set the operational hours of the facility. Sequence quantity is not limited. For any further details about user interface, please refer to the Maestro**PRO™** Manual provided by Vortex.

2.16. Operation schedule shall be set by week day or by specific date (month and day number). For both cases, schedule is set by hours in the day (start/end time). Operation schedule quantity is not limited, and all different schedules will be displayed in a paginated style.

2.17. The Maestro**PRO™** firmware operates in English, French and Spanish.

This document is the sole property of Vortex Aquatic Structures Intl Inc. Reproduction or redistribution in whole or in part without the express written consent of Vortex Aquatic Structures Intl is prohibited

2.18. The Maestro**PRO™** firmware shall have the ability to soft start ramp up the Splashpad® to minimize potential water hammer.

2.19. The Maestro**PRO™** firmware shall have the ability to automatically purge all water lines based on the user selected time and duration (i.e. every day at 5 am). It shall also, be configured to purge all lines after a user defined period of inactivity (i.e. after 4 hours of inactivity).

2.20. The Maestro**PRO™** firmware in the interface lets the user modify easily the water consumption while keeping the sequence capability.

2.21. The Maestro**PRO™** firmware shall have the ability to handle automatic Backwash process once connected to a multi positions valves.

3.0 MAESTROPRO™ CONTROLLER EXPANSION – 33907.22B2 :

3.1. The Maestro**PRO™** control panel is TYPE 1, housed in a fiberglass corrosion resistant NEMA 4X Enclosure.

3.2. The Maestro**PRO™** Expansion control panel shall be physically connected to the Maestro**PRO™** main (33907.12B2) or to another Maestro**PRO™** Expansion (33907.22B2). All Maestro**PRO™** control panels are connected together following a daisy-chain pattern. Cat 5 Ethernet cable with RJ-45 connector must be used.

3.3. The Maestro**PRO™** Expansion control panel shall be supplied by two 100VA transformers 120V AC primary / 24 VAC secondary or 240 VAC primary / 24 VAC secondary, depending on Maestro**PRO™** Power Box associated, with built- in electrostatic shield protection, and by a power supply 120/240 VAC primary to 24 VDC secondary and 100 VA.

3.4. The Maestro**PRO™** Expansion control panel shall integrate 24 digital outputs with 24VAC (per output : max 1.6A inrush, max 0.3A nominal) and 12 digital inputs with selectable 5 or 24 VDC (1A max over all inputs).

3.5. The Maestro**PRO™** Expansion control panel shall have the capacity to receive digital signals from activation devices or sensors, operating on 5 or 24 VDC.

3.6. The Maestro**PRO™** Expansion control panel shall have the ability to provide a 24VAC auxiliary signal. This signal can be used to trigger a relay for Pumps, Chemical, UV system, or any other item following electrical specification. All outputs are electrically protected against over consumption with resettable fuses.

3.7. The Maestro**PRO™** Expansion control panel shall have the ability to control Fast Acting Valves supplied by 24V AC max 1.6Amp (inrush) each.

3.8. The Maestro**PRO™** Expansion control panel shall have removable terminal blocks for easy wiring.

3.9. In case of emergency, pushing the Red Emergency Button will power down the entire controller.

This document is the sole property of Vortex Aquatic Structures Intl Inc. Reproduction or redistribution in whole or in part without the express written consent of Vortex Aquatic Structures Intl is prohibited

4.0 MAESTROPRO™ POWER BOX – 33907.13BX :

4.1. The Maestro**PRO™** Power Box shall be housed in a fiberglass corrosion resistant NEMA 4X rated enclosure.

4.2. Power consumption : Maximum power fully loaded forced manually is 200W. Power while in standard sequence in operation hours shall be approx. 100W, Power while in idle mode shall be approx. 10W – i.e. out of operation hours or without sequence running.

4.3. Maestro**PRO™** control panel shall be protected by fuses sized according to voltage and transformer size.

4.4. In case of emergency, pushing the Red Emergency Button will power down the associated controller.

4.5. The Maestro**PRO™** Power Box shall be powered using whether a 120VAC 60Hz or 240VAC 50Hz power input with a maximum of 5Amps.

5.0 REMOTE CONNECTION :

If remote connection ability is required, the operating system shall be connected to internet.

5.1. A hard connection to an existing network can be set. Maestro**PRO™** control panel integrates a LAN port set by default as DHCP client with RJ45 physical connector.

5.2. Maestro**PRO™** control panel shall include a built-in LTE/4G cellular module. In order to connect to internet, a NANO-SIM card previously activated by carrier must be inserted into the control panel on the Main board.

6.0 VOR-33923.XXXX SAFEGUARD MODULE (APPLICABLE IF WR OR WQMS) :

6.1. The contractor shall provide and install the following Water Quality Management System Module as manufactured by VORTEX, 7800 Trans-Canada Hwy, Pointe-Claire, Quebec H9R 1C6, (514) 694-3868.

6.2. The Water Quality Management System Module shall be factory assembled and water pressure tested before delivery.

This document is the sole property of Vortex Aquatic Structures Intl Inc. Reproduction or redistribution in whole or in part without the express written consent of Vortex Aquatic Structures Intl is prohibited

6.3. The Water Quality Management System Module shall be fully serviceable and accessible for ease of maintenance and use.

6.4. All electrical equipment, including flow switches, shall be tested before delivery.

6.5. All equipment shall be mounted directly onto a galvanized steel base using galvanized steel hardware prior to delivery.

6.6. Controller shall control electrical solenoid valves for play features and bypass with a 24V AC max 1.6Amp signal with a total of 10Amp over all 24 outputs with the included 200VA transformer.

6.7. The chemical controller shall have an alarm system that shall close all valves to the aquatic play features in case of a loss of proper water chemistry. The 120V AC from the chemical controller will switch a relay connected to the controller.

6.8. The chemical controller shall be wired to the Safeguard Module on site.

6.9. Controller shall control UV system (part of the UV module) with a 24V AC max 250mA signal and will be wired on site.

6.10. A flow switch shall be present on the feature pump to monitor flow and shut down the feature system in the event of no flow. It shall be wired to the Safeguard Module on site.

6.11. A flow switch shall be present on the flow cell located on the filter loop module to monitor flow and shut down the filter pump in the event of no flow. All valves to the aquatic play features will be closed until the filter no flow event is cleared.

Note : Modular WQMS has to be installed inside a closed room protected from the elements.

7.0 INSTALLATION CHARACTERISTICS :

7.1. Electrical Connections :

All main power electrical connections to the Splashpad Controller are to be performed per local codes.

7.2. Drawings and Instructions :

Product drawings and installation manuals shall be supplied by the manufacturer for ease of installation.

7.3. As per Electrical Construction and Safety Codes:

Controller and/or LED power panels and/or any other electrical equipment must be hard-wired to a ground fault circuit interrupter (GFCI) from the input power source. All electrical work should be performed by a licence electrician in accordance to local electrical construction and safety codes.

This document is the sole property of Vortex Aquatic Structures Intl Inc. Reproduction or redistribution in whole or in part without the express written consent of Vortex Aquatic Structures Intl is prohibited

Exclusive VORTEX technology

MAESTRO**PRO**™
INTELLIGENT CONTROLLER

MAESTROPRO™

PRODUCT HIGHLIGHTS

High processing power

- Advanced sequencing capabilities
- Unlimited solenoids and activators control
- Real-time flow control for efficient energy and water usage

Visual interface

- Large 8 7/16 x 6 3/8 inch colour touchscreen, clear and easy-to-read display, even in the full sun!
- Simple user interface for intuitive control

Connectivity

- Remote access for maintenance, reducing and operation onsite
- Online technical support directly from Vortex

VORTEX

VORTEX-INTL.COM • INFO@VORTEX-INTL.COM
1.877.586.7839 (free USA/CANADA)
+1.514.694.3868 (INTERNATIONAL)

BENEFITS

MaestroPRO™ Remote Access

Provides remote functioning capacity for Splashpad® maintenance personnel. Offers on/off functions and changing of operating times for Splashpad® list.

Vortex remote support

Once Maestro**PRO**™ is connected to the Internet (through your choice of techniques), Vortex can connect for maintenance operations such as updates and configuration changes.

Automatic restart

In the event of power failures, automatic restart of Maestro**PRO**™ will be active. No need for site visits by the technical team.

Connectivity

Maestro**PRO**™ can be connected to the Internet in several ways: direct connection to a wired - WiFI router for joining a WiFi private network. Built-in LTE cellular connection (nanoSIM is required). Quick cellphone personal hotspots using USB cord (iOS and Android).

Wind Speed Reader

The system self-adjusts water consumption in response to wind, maintaining the visual experience of the water effect.

High Temperature

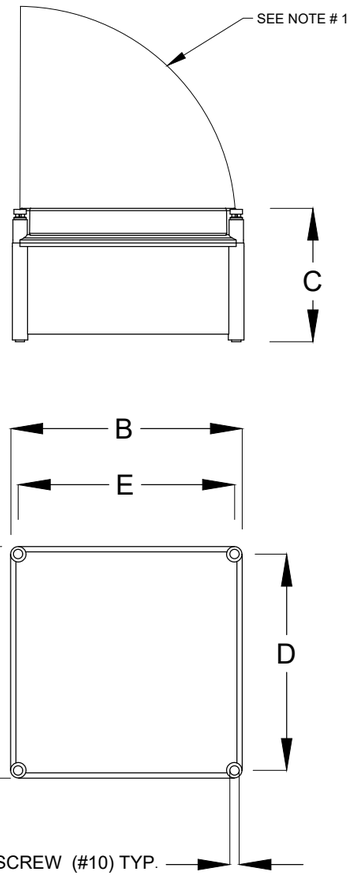
The combination of built-in software logic and high-grade electronic makes Maestro**PRO**™ resistant to high temperatures. Above 55 ºC (131 ºF), the SAFE mode will switch the controller into a minimal operating mode in order to keep the Splashpad® experience, while processing units will be turned off for cooling down.

INSTALLATION DRAWING - DIMENSIONS FOR MAESTROPRO ENCLOSURES 33907.XXBX

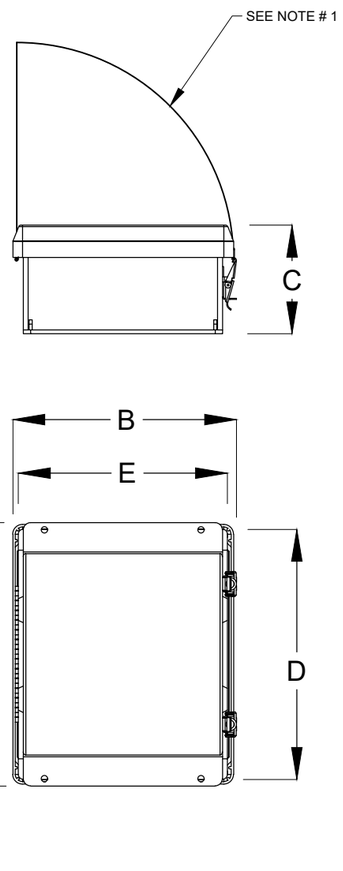
NOTE:

1 - ENSURE ENOUGH CLEARANCE FOR THE DOOR OPENING

MAESTROPRO CONTROL ENCLOSURE



MAESTROPRO POWER BOX ENCLOSURE



MAESTROPRO ENCLOSURES DIMENSIONS

REFERENCE No.	DESCRIPTION	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
33907.12B2	MAESTROPRO CTRL 24OUT/12IN 120VAC/240HZ	11.88"	11.88"	6.85"	11.08"	11.08"
33907.22B2	MAESTROPRO CTRL EXP 24OUT/12IN 120VAC/240HZ	11.88"	11.88"	6.85"	11.08"	11.08"
33907.13B0	MAESTROPRO POWERBOX 24OUT/12IN 120VAC/60HZ	12.308"	10.215"	5.57"	12.058"	9.965"
33907.13B1	MAESTROPRO POWERBOX 24OUT/12IN 240VAC/50HZ	12.308"	10.215"	5.57"	12.058"	9.965"

REFER TO THE PIPING AND ELECTRICAL SHEET FOR THE CONTROLLER NUMBER

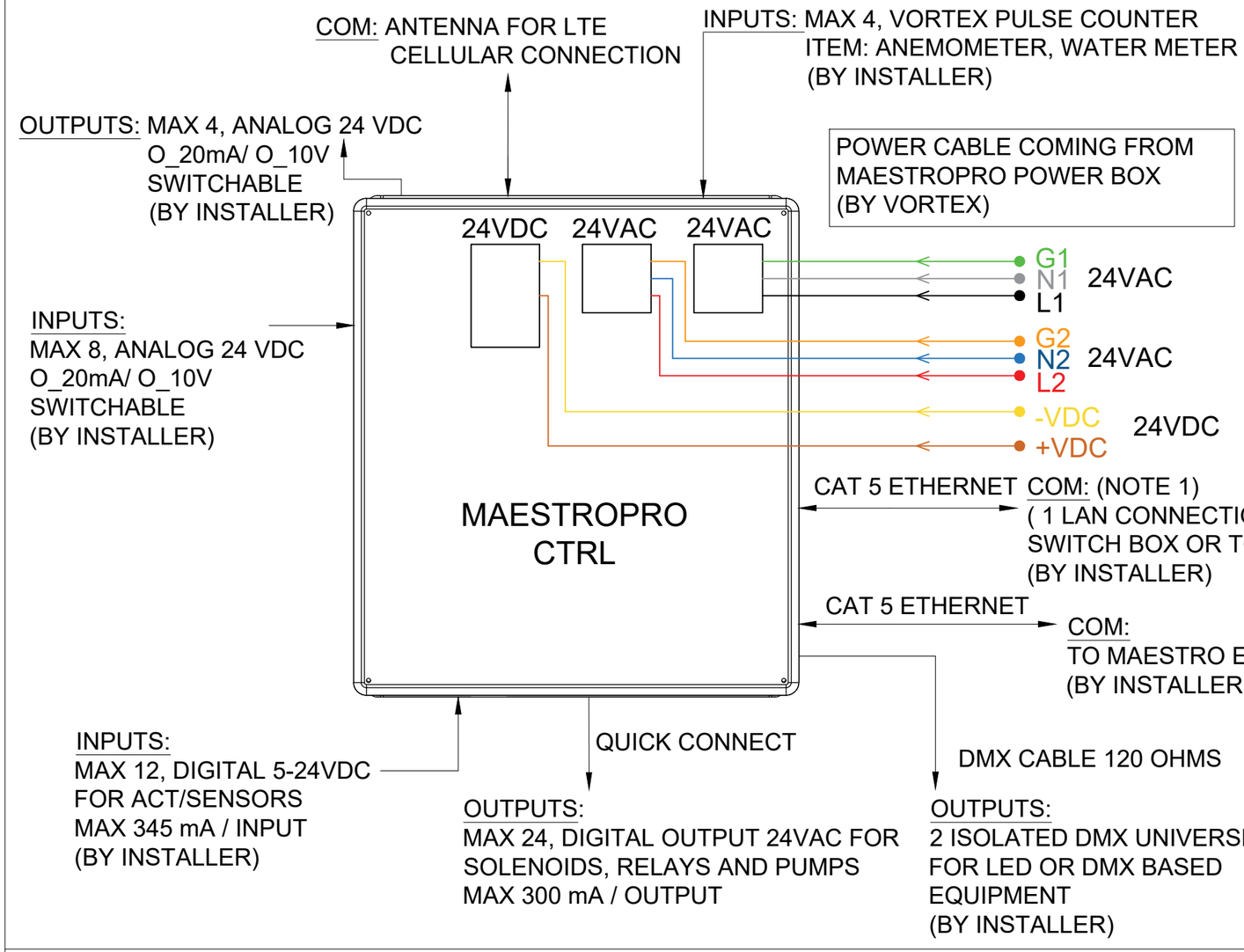
PRODUCT NAME: INSTALLATION DRAWING - DIMENSIONS FOR MAESTROPRO ENCLOSURES 33907.XXBX			VORTEX
PRODUCT NUMBER: 33907.XXBX	DATE: 04/06/20	SHEET NO: 1/3	11"x17" SHEET SIZE

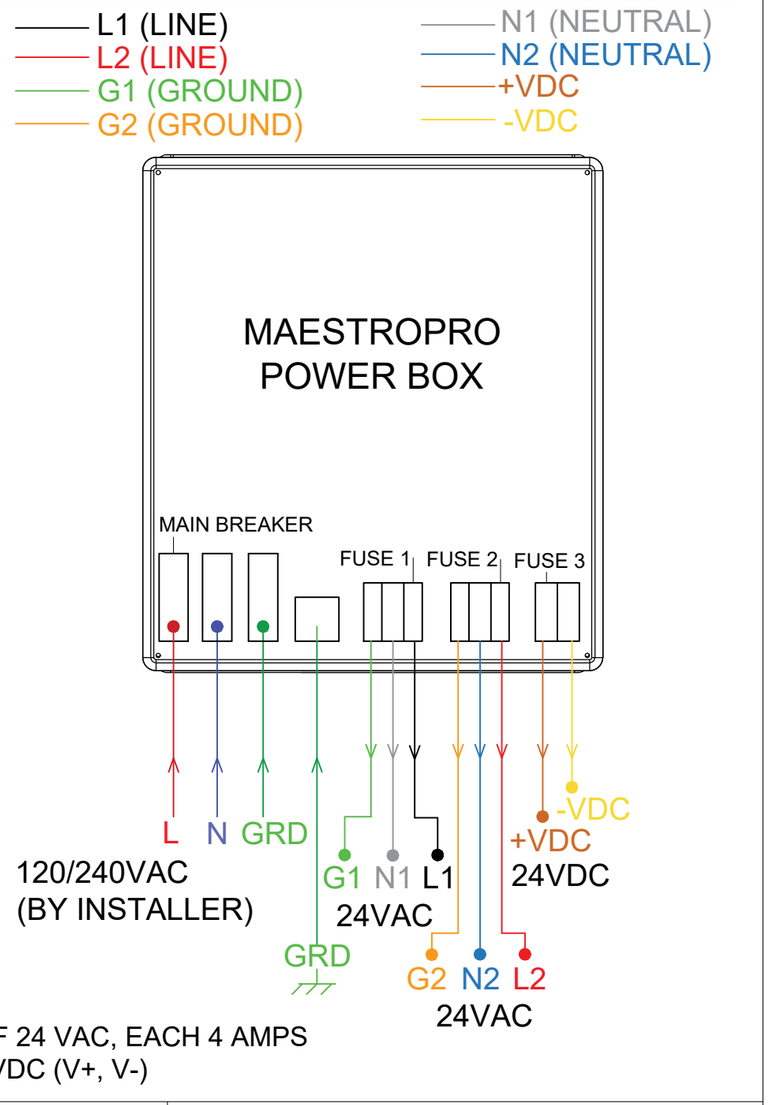
COPYRIGHT VORTEX AQUATIC STRUCTURES INTERNATIONAL-THIS DOCUMENT AND THE IDEAS, RENDERINGS AND OTHER CONTENTS CONTAINED THEREIN ARE THE SOLE PROPERTY OF VORTEX AQUATIC STRUCTURES INTERNATIONAL AND MAY NOT BE DISSEMINATED, COPIED, REPRODUCED OR OTHERWISE USED WITHOUT PRIOR WRITTEN CONSENT OF VORTEX AQUATIC STRUCTURES INTERNATIONAL

INSTALLATION DRAWING - MAESTROPRO CTRL 33907.12B2 AND MAESTROPRO POWER BOX 33907.13BX CONNECTIONS

NOTE:
1 - A MAXIMUM OF 1 ETHERNET CAT 5 CONNECTIONS IS AVAILABLE PER MAESTROPRO.
IF MORE ETHERNET LAN CONNECTIONS ARE NEEDED, THEN IT REQUIRES AN ETHERNET SWITCH BOX (SOLD SEPARATELY).
2 - FOR DIGITAL INPUT, 5-24 VDC SUPPLIED BY MAESTROPRO. REFER TO THE CORRESPONDING SCHEMATIC DRAWING MANUAL FOR WIRING DETAILS.
3 - MAESTROPRO IS DHCP ADDRESSED BY CONNECTED LAN DEVICE.
4- WHEN USED WITH EXPANSION UNITS, AN ETHERNET CAT 5 CABLE IS REQUIRED BETWEEN EACH UNIT.
5- WATER TIGHT CONNECTIONS WITH MAESTROPRO DONE BY INSTALLER.
6- ALL WIRES AND CABLES ELECTRICAL CALCULATION ARE BY INSTALLER AND SHALL BE APPROVED ACCORDING TO LOCAL CODE AND BRAND NEW.

CIRCUIT BREAKER & FUSE	AMPS MAX	CIRCUIT
MAIN BREAKER; 3 AMPS	4 MAX	PRIMARY 120/240 VAC
FUSE 1; 5 AMPS	5 MAX	SECONDARY 24 VAC
FUSE 2; 5 AMPS	5 MAX	SECONDARY 24 VAC
FUSE 3; 5 AMPS	5 MAX	POWER SUPPLY 24 VDC





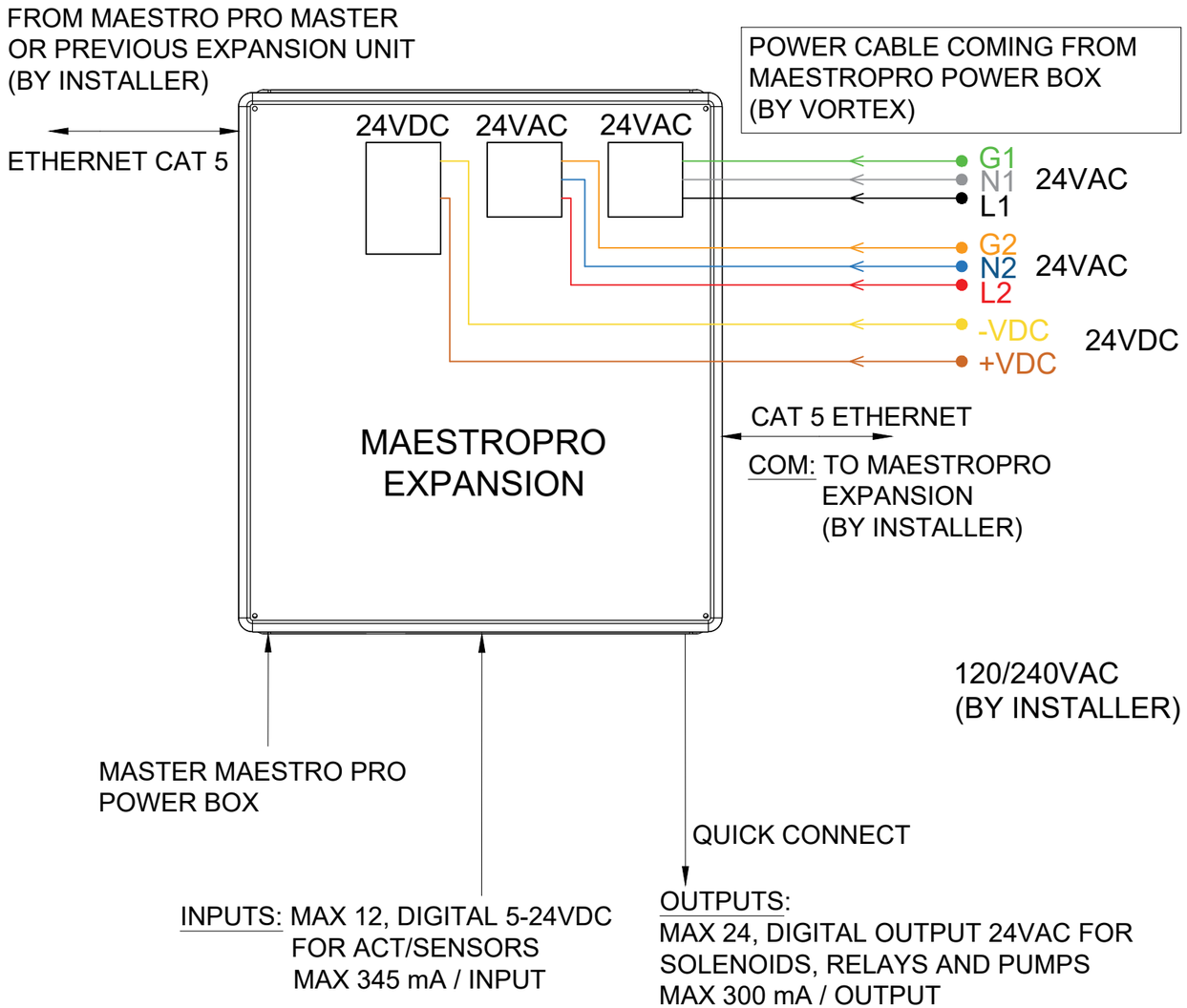
PRODUCT NAME: INSTALLATION DRAWING - MAESTROPRO CTRL 33907.X2BX AND MAESTROPRO POWER BOX 33907.13BX CONNECTIONS			
PRODUCT NUMBER: 33907.XXBX	DATE: 05/04/20	SHEET NO: 2/3	11"x17" SHEET SIZE

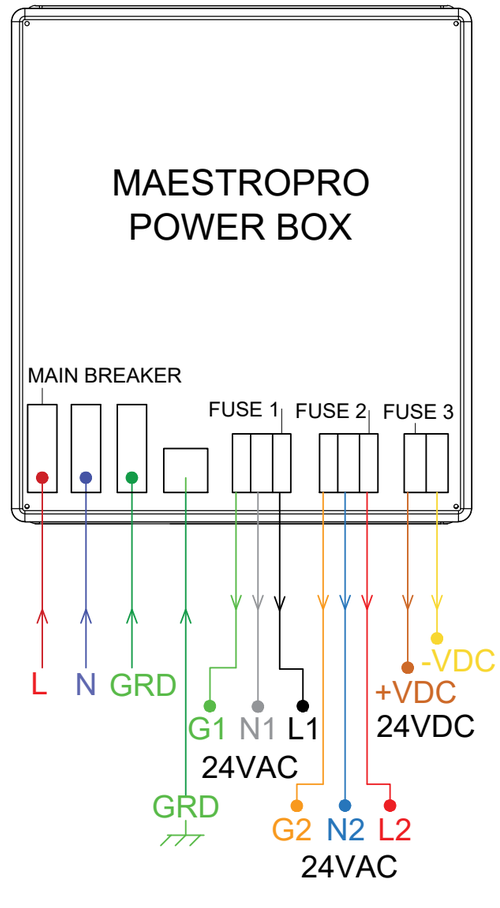
VORTEX

COPYRIGHT VORTEX AQUATIC STRUCTURES INTERNATIONAL-THIS DOCUMENT AND THE IDEAS, RENDERINGS AND OTHER CONTENTS CONTAINED THEREIN ARE THE SOLE PROPERTY OF VORTEX AQUATIC STRUCTURES INTERNATIONAL AND MAY NOT BE DISSEMINATED, COPIED, REPRODUCED OR OTHERWISE USED WITHOUT PRIOR WRITTEN CONSENT OF VORTEX AQUATIC STRUCTURES INTERNATIONAL

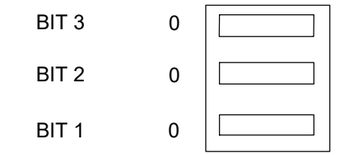
INSTALLATION DRAWING - MAESTROPRO EXPANSION UNIT 33907.22B2 AND MAESTROPRO POWER BOX 33907.13BX CONNECTIONS

NOTE:
1 - ALL COMMENTS ARE THE SAME AS PAGE 2





DIP SWITCH OPTIONS:



EXPANSION 1:	BIT 1_0	BIT 2_0	BIT 3_1
EXPANSION 2:	BIT 1_0	BIT 2_1	BIT 3_0
EXPANSION 3:	BIT 1_0	BIT 2_1	BIT 3_1
EXPANSION 4:	BIT 1_1	BIT 2_0	BIT 3_0

CIRCUIT BREAKER & FUSE	AMPS MAX	CIRCUIT
MAIN BREAKER; 3 AMPS	4 MAX	PRIMARY 120/240 VAC
FUSE 1; 5 AMPS	5 MAX	SECONDARY 24 VAC
FUSE 2; 5 AMPS	5 MAX	SECONDARY 24 VAC
FUSE 3; 5 AMPS	5 MAX	POWER SUPPLY 24 VDC

- L1 (LINE)
- L2 (LINE)
- G1 (GROUND)
- G2 (GROUND)
- N1 (NEUTRAL)
- N2 (NEUTRAL)
- +VDC
- -VDC

PRODUCT NAME:	INSTALLATION DRAWING - MAESTROPRO EXPANSION UNIT 33907.X2BX AND MAESTROPRO POWER BOX 33907.13BX CONNECTIONS		
PRODUCT NUMBER: 33907.XXBX	DATE: 05/04/20	SHEET NO: 3/3	11"x17" SHEET SIZE

VORTEX

COPYRIGHT VORTEX AQUATIC STRUCTURES INTERNATIONAL-THIS DOCUMENT AND THE IDEAS, RENDERINGS AND OTHER CONTENTS CONTAINED THEREIN ARE THE SOLE PROPERTY OF VORTEX AQUATIC STRUCTURES INTERNATIONAL AND MAY NOT BE DISSEMINATED, COPIED, REPRODUCED OR OTHERWISE USED WITHOUT PRIOR WRITTEN CONSENT OF VORTEX AQUATIC STRUCTURES INTERNATIONAL

APPENDIX C

Stantec

Memo

To:	David Andrews, Principal	From:	Jen Ducey, PE John Hayden, PE Marlin Hueil, EIT
	Brown, Richardson & Rowe Boston, MA		Stantec Consulting Services Inc. Burlington MA Office
File:	179410750	Date:	December 8, 2020

Reference: Lynn Heritage State Park
Task A: South Boardwalk Utility Study and Existing Conditions Plan
Summary of Findings Memo

Stantec was tasked to perform supplemental utility investigation work in support of the proposed south boardwalk improvements at Heritage State Park in Lynn, MA. These supplemental investigations were limited to the utilities at the south boardwalk where a sheet pile wall is proposed to replace a failing concrete seawall. Currently, various utilities penetrate the existing concrete seawall. Some of these lines truncate seaward of the wall, are attached to the wall face, and/or are supported beneath the boardwalk to provide utility service to the marina.

The recommended design calls for cutting down the existing concrete seawall above the stone revetment and installing a new steel sheetpile wall landward of the concrete seawall footing. The existing boardwalk decking will also be replaced and the superstructure (stringers and deck) lengthened to the new steel sheetpile wall. As a result, each utility penetrating or attached to the existing concrete seawall needs to be suspended during construction and then reconnected to the existing system in the final condition.

The goal of this Task A utility study was to determine the location, type, and ownership of existing utilities based on a combination of record plans, photographs, Ground Penetrating Radar (GPR), and field investigations. For the purposes of this study, it was assumed that the utilities at the south boardwalk consisted of drainage, sewer, water, electrical, communication, and fuel systems (both diesel and gasoline). There did not appear to be any fire protection service.

This memo serves as a summary of findings from the field investigations and the basis for discussing recommended next steps for each impacted utility.

Field Investigation

Dawood, as a subconsultant to Stantec, performed a field survey of the south boardwalk area and engaged a contractor (Ground Penetrating Radar Systems, Inc.) to investigate the utility connections located between the condo building/underground storage tanks to the existing seawall using GPR and an electromagnetic locator (active and passive sweeps). Unfortunately, GPR penetration depths were extremely limited throughout that area, with a maximum depth of ~ 2 feet. This was most likely caused by the compacted asphalt and poor fill material beneath the surface. The GPR contractor tried to actively induce a tone on all lines, but some materials did not allow the signal to carry through and therefore inhibited the trace out of those lines. Dawood provided an updated survey baseplan based on the information available along with an elevation view along the seawall depicting the survey details.

Stantec staff visited the site on November 13th, 2020 with the compiled baseplan with the intent to best determine the type and purpose of various utility connections. Electrical staff were unable to visit the site and conducted a desktop review of the available information.

The field investigation included a review of the baseplan, wall penetrations, utility room within the building, boardwalk, and marina dock facilities. We gained access to the marina office utility room and was escorted throughout the site by Seaport Landing Marina personnel (Mr. David McQuarrie).

Reference: **Lynn Heritage State Park**
Task A: South Boardwalk Utility Study and Existing Conditions Plan
Summary of Findings Memo

Summary of Findings

The utilities identified within the south boardwalk area are listed below by type and shown on the attached figures. The existing seawall is shown as a dark black line and the proposed sheetpile wall will be located landward of this line beyond the existing footing of the seawall.

All utilities other than the storm drainage system appear to solely service marina operations.

Utilities penetrating the existing seawall include:

Utility System	Notes
Storm drainage	24-inch RCP pipe and outfall
Sanitary sewer	2-inch HDPE pressure line for boat pump-outs
Water	Four lines of varying diameter and material supplying domestic water to the marina
Air	2-inch PVC conduit for pressurized air for an un-used bubbler system
Electrical	Various conduits/lines
Communications	Telephone, CATV and CCTV conduits servicing marina shack operations and the marina security system
Fuel	Two fuel tanks, vent piping and flexible fuel lines for diesel and gasoline

Unfortunately, due to the lack of record plans and subsurface information obtained through GPR, we were unable to verify the landside connections of the utilities shown on the baseplan during the field investigation. Many of these utilities appear to originate/terminate at the condo building and likely connect to the marina office utility room located at ground level. There is a hatch pit below grade as well. It also proved difficult to verify the function of each pipe and conduit supported under the boardwalk.

Recognizing this lack of information, we have included a narrative description of each system below with supporting photographs. The attached figures are annotated with (STN) to depict estimated utility service connections based on our field visit and on-site conversations with marina personnel.

Reference: **Lynn Heritage State Park**
Task A: South Boardwalk Utility Study and Existing Conditions Plan
Summary of Findings Memo

Storm Drainage

Storm Drainage Description

A 24-inch Reinforced Concrete Pipe collects stormwater from the driveway of the condo building (Figure 1) and discharges to the harbor via an outfall in the existing seawall.

Storm Drainage Recommendations

Drainage will need to remain in service during construction. A temporary gravity or pumped bypass around the construction work area will be required to manage stormwater flows until the drainpipe and outfall can be reconstructed in the same location. Work should be performed around wet weather and high tide periods.

Figure 1: Storm drainage manhole in driveway area, looking east

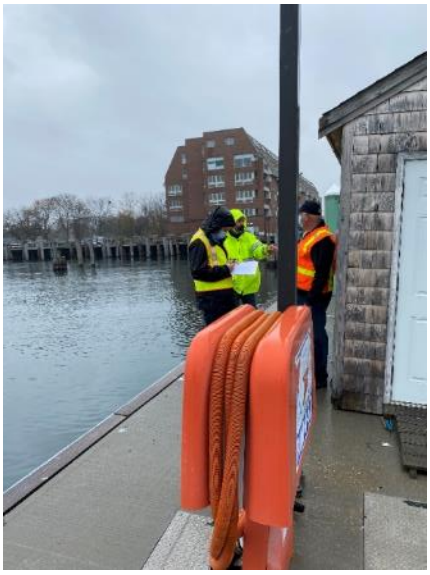


Figure 2: "Pump-A-Head" sewer system on marina fueling dock, looking north

Figure 3: Underground sewer discharge chamber adjacent to condo building, looking north

Sanitary Sewer

Sanitary Sewer Description

A 2-inch HDPE pressure line extends from a “Pump-A-Head” system on the marina fueling dock (Figure 2) beneath the south boardwalk where it bends and penetrates the existing seawall to connect to an underground discharge chamber adjacent to the condo building (Figure 3). The discharge location is noted as MH septic cover on the survey baseplan. A test pit may be required to verify the diameter of the underground sewer pipe to be removed during construction of the sheetpile wall.

Sanitary Sewer Recommendations

It needs to be determined if sewer service to the marina can be suspended during construction. If not, a temporary pressure line bypass line phased around the contractor’s construction work area will be required to redirect flows around the work area to the discharge manhole until the sewer connection can be reconstructed in the same location.

Reference: **Lynn Heritage State Park**
Task A: South Boardwalk Utility Study and Existing Conditions Plan
Summary of Findings Memo

Water

Water Description

There are a total of four water penetrations along the existing seawall supplying domestic water to the marina. The main water feed for the marina is a 6-inch cast iron water line that has a flange reducer to a 2-inch diameter valve and 2-inch PVC water pipe. Figure 4 below shows the flange transition from the side and top views. There is also a 2-inch secondary water line that penetrates the seawall (Figures 5 and 6). It is currently cut off after a valve on the riser. Near the secondary water is a 1-inch red rubber hose used for winter water (Figure 6). This hose is routed through an existing sleeve back under the building to the utility room. Lastly there is a 2-inch water line on the far eastern end of the boardwalk near the corner of the existing seawall (Figure 7). This line appears to be outside the limits of the seawall modifications. Access to shut off the marina piping and winter hose is in the marina office utility room.

The exact layout of the water lines between the seawall and the utility room could not be determined.

Water Recommendations

It needs to be determined if water service to the marina can be suspended during construction. If not, a temporary bypass line phased around the contractor's construction work area will be required until the water connections can be reconstructed in the same locations.

A new section of ductile iron pipe will need to be installed through the sheetpile wall and reconnected to the main water 2-inch PVC line service to the marina. The secondary water will also need to be reestablished through the sheetpile wall in the same location. The winter water hose could be disconnected and pulled back through the construction area. Following installation of the sheetpile wall, the winter water hose can be pulled through new sleeve section to reconnect to the marina tubing under the boardwalk.

Reference: **Lynn Heritage State Park**
Task A: South Boardwalk Utility Study and Existing Conditions Plan
Summary of Findings Memo

Figure 4: 6-inch to 2-inch main water line

Figure 5: 2-inch secondary water line (cut-off)

Figure 6: 2-inch secondary water line (cut-off) with winter fire hose in background

Figure 7: 2-inch water line on eastern end of boardwalk

Reference: **Lynn Heritage State Park**
Task A: South Boardwalk Utility Study and Existing Conditions Plan
Summary of Findings Memo

Air Conduit

Air Conduit Description

A 2-inch PVC conduit penetrates the existing seawall to provide pressurized air for a bubbler system. This system is not currently in use and is cut off after the penetration (Figure 8).

Air Conduit Recommendations

The line may be taken out of service during construction and reinstated upon completion of the sheetpile wall with wall sleeves for possible future use. The exact layout of the pipe from the wall penetration to the building is unknown.

Figure 8: Air conduit (cut-off) with winter fire hose in background

Electrical

Electrical Description

Electrical lines extend underground and under the south boardwalk to the marina. Based on initial review there are 10 electrical conduit/lines penetrating the seawall. It is unknown if all of these lines are still operational. Raceway size, conductor/cable size, quantity of cables/conductors and physical condition is also unknown. A tracing survey from the power source of all electrical lines, presumably the marina office utility room back to each service point would be needed to verify the routing and use of each line.

Electrical Recommendations

It needs to be determined if electrical services to the marina can be suspended during construction. If so, the conduits may be taken out of service during construction and reestablished through the sheetpile wall in the same location. The existing power or control conductors will need to be removed back to the most adjacent junction structure or power source, whichever is closer. The existing conduit or raceway in which these conductors/cables were installed will be cut as required. Once the sheetpile wall is installed, new conduit can be routed through the wall to re-connect the separated segments of existing conduit or raceway. Existing conductors and cables that were disconnected and pulled back during sheet pile work will be re-installed to match existing circuitry.

Reference: **Lynn Heritage State Park**
Task A: South Boardwalk Utility Study and Existing Conditions Plan
Summary of Findings Memo

Communications

Communications Description

Telephone, CATV and CCTV lines extend underground, under the south boardwalk and along the east boardwalk to the marina. The telephone lines include data lines for charge card readers for the marina fueling facility and office, and cable television lines and CCTV security camera systems for the marina. See Figures 9 through 12.

The exact route of each communication conduit under the boardwalk and landside of the seawall is still uncertain. A tracing survey from the marina office utility room back to each service point would be needed to verify the routing and use of each line.

The layout of the telephone lines is not exactly known. Marina personnel indicated they may be grouped with electric conduits. There is a telephone terminal box pedestal on the gangway platform located on the east corner of the south boardwalk.

The cable television line is reported to enter out under the south boardwalk from under the ramp down to the boardwalk along the east side of the condominium building.

The CCTV for security cameras is reported to extend from the marina office under and alongside the east boardwalk.

Communications Recommendations

It needs to be determined if communication/security system services to the marina can be suspended during construction. If not, temporary cabling shall be required from the equipment housed into the marina office utility room to the terminal box located on the boardwalk. This can be achieved by running the cabling along the side of the building and then either passing under or over the east boardwalk. The existing conduit route and penetrations shall be reinstated through the sheetpile wall utilizing the new cabling provided for the temporary connection. The telephone may need a new dedicated conduit.

If communications/security systems can remain offline during construction, the existing conduit can be cut on either side of the existing seawall and subsequently reinstated through the sheetpile wall utilizing the existing cabling assuming it can be spliced back together. If the cabling is of type that cannot be spliced, new cabling shall be provided.

Reference: **Lynn Heritage State Park**
Task A: South Boardwalk Utility Study and Existing Conditions Plan
Summary of Findings Memo

Figure 9: Various cabling

Figure 10: Cable raceway tray

Figure 11: East boardwalk, looking south towards gangway

Figure 12: Telephone terminal box pedestal, looking south towards gangway

Reference: **Lynn Heritage State Park**
Task A: South Boardwalk Utility Study and Existing Conditions Plan
Summary of Findings Memo

Fuel System

Fuel System Description

The two fuel dispensers located on the dock are served by two underground storage tanks (diesel and gasoline). The product piping from the tank to the dispensers is flexible double walled piping. This piping is provided with a 4-inch rock guard (corrugated plastic piping). The piping travels underground from the storage tank piping sumps, through the existing seawall and enters a transition sump that is located under the dock. (Figures 13 and 14)

The vent piping from the two underground storage tanks travels underground to two vent riser pipes located next the existing seawall. This piping does not penetrate the seawall. (Figure 15)

There are two additional fiberglass fuel pipes penetrating the existing headwall that are capped approximately 1 foot after penetrating the seawall. These pipes appear to be abandoned and not in use. This piping should be removed.

There is a conduit from the fuel dispensing area penetrating the seawall adjacent to the fuel piping.

Figure 13: Gasoline and diesel product piping from underground storage tanks (to the right of the photo) to boardwalk (to the left of photo)

Figure 14: Fuel system transition sump accessible from boardwalk surface

Figure 15: Underground storage tank vent piping (unprotected)

Reference: **Lynn Heritage State Park**
Task A: South Boardwalk Utility Study and Existing Conditions Plan
Summary of Findings Memo

Fuel System Recommendations

The following fuel system utilities would be affected during construction: fuel piping (diesel and gasoline), underground storage tank vent piping, and power conduit. The following section describes recommendations for disconnecting and reconnecting each.

During construction, the flexible fuel product piping could be disconnected at the transition sump outside of the seawall and the tank piping sump and removed without excavation. The remaining rock guard piping would need to be excavated and removed during the installation of the new sheetpile wall. Once the sheetpile wall is completed, the rock guard would need to be reinstalled and the backfilled. The existing product piping would be reinstalled within the rock guard and reconnected in the transition sump (provided that the new penetrations are in approximately the same location).

The tanks would need to have temporary vents installed during construction and the existing vent piping would need to cut/removed, capped and reinstalled after construction. These vents should be protected from vehicle impacts during and after construction.

The conduit and wiring from the dock to the underground tank will need to be removed and replaced during construction.

Figure 16: Underground storage tank manholes and tank pad

The existing underground tank pad, manholes, fills and concrete pads should be properly protected during construction to avoid damage to the tank components (Figure 16). Heavy equipment should not be placed on the manways (tank top access points).

This work must be performed by a licensed underground storage tank contractor. The proper removal, excavation, backfill and installation of any fuel system piping and equipment must adhere to the manufacturers installation requirements as well local and state regulations.

Additional Comments and Observations

If the underground tanks are taken out of use for an extended period of time, the tanks should be placed in temporary closure as per MADEP regulations.

The existing systems both have a mechanical line leak detector that is monitoring the entire product piping (both the aboveground and below ground) and may detect false leaks if subject to large temperature swings. The removal and reinstallation of the underground piping should include a modification to properly monitor the section of piping that is underground as required by code.

The fuel system appears to be under renovation at the time of the site visit. The recommendations included in this observation report do not include any work, design or information relating the fuel system beyond the transition sump located near the fuel tanks immediately adjacent to the seawall. It is assumed that the fuel system work that is in progress will be installed, completed, and tested to meet requirements of applicable codes and regulations.

When the fuel system reconnection is complete, the interstitial space of the piping should be confirmed to be open to a monitored sump such that leaking product piping can be detected.

Reference: **Lynn Heritage State Park**
Task A: South Boardwalk Utility Study and Existing Conditions Plan
Summary of Findings Memo

The existing tanks are single walled, fiberglass tanks installed in 1986. These tanks are reaching the end of their service life. Consideration should be made to replace the tanks with double walled tanks in the future.

Recommendations Summary

The following recommendations were discussed during a phone call on December 8, 2020 between DCR, BRR, and Stantec.

As the south boardwalk piles and stringers will remain, Stantec recommends the existing utilities penetrate the proposed sheetpile wall in the same location as under current conditions to avoid the need to re-lay or potentially re-route the utility lines underground landward of the wall and waterside along the length of the boardwalk.

Unfortunately, due to the lack of record plans and subsurface information obtained through GPR, our team was unable to verify the landside connections of the utilities shown on the baseplan during the field investigation. A decision needs to be made whether to conduct additional test pits and tracing surveys during the design phase to ascertain the landside utility connections or to include this work as part of the bid package and price the work accordingly. DCR wants to evaluate which utilities were previously permitted by the department. These conversations may also provide further information about the unknown utilities which could not be identified on record plans or picked up by survey/GPR.

There is collective agreement amongst DCR and the project team that the utilities impacted will likely need to be brought up to code during construction. What this entails and which entity will be responsible for funding these upgrades requires further discussion between DCR and the responsible local and state entities. Also, the preference is to temporarily suspend utility services to the marina during construction of the sheetpile wall. Drainage from the condo parking lot will need to be maintained during construction. Further research is needed to determine the marina schedule.

The design plans should identify any work zone constraints placed on the contractor but not dictate constructions means and methods. For example, noting the need to avoid placing heavy equipment over the underground underground tank pad, manholes, fills and concrete pads, and/or providing waterside access as an alternative.

Stantec Consulting Services Inc.

Attachment: Utility Figures dated 12/8/2020

2" PERF. ACCMP

D.I. #7
RIM 12.3
INV. 10.1

2" IRRIGATION LINE
SEE DWG. S1-1

60'-6" U' DRAIN

62'-6" U'DRAIN

INV.=7.8
20'-24" ACCMP

INV.=7.7

PROP. DRINKING FOUNTAIN - SEE DWG. NO. L-1

-16.0

-17.5

-19.5

-15.0

-12.0 -12.0 -12.0 -12.0 -15.0 -13.5

WHARF

RETAINING WALL

14" FO

-12

-14

-16

Stantec

Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020
1982/3 RECORD DRAINAGE PLAN

0 20 50 100

SCALE: 1" = 20'

2" PVC., 2 #4 & 1 #4 GROUND
2 #4 & 1 #4 GROUND

INV.=7.8

HARDHOLE ECMP

INV.=7.7

-16.0

-17.5

-16

-19.5

-18.5

-15.0

-12.0

-12.0

-12.0

-12.0

-15.0

-13.5

STUB

WHARF

RETAINING WALL

-12

-14

-16

14.0

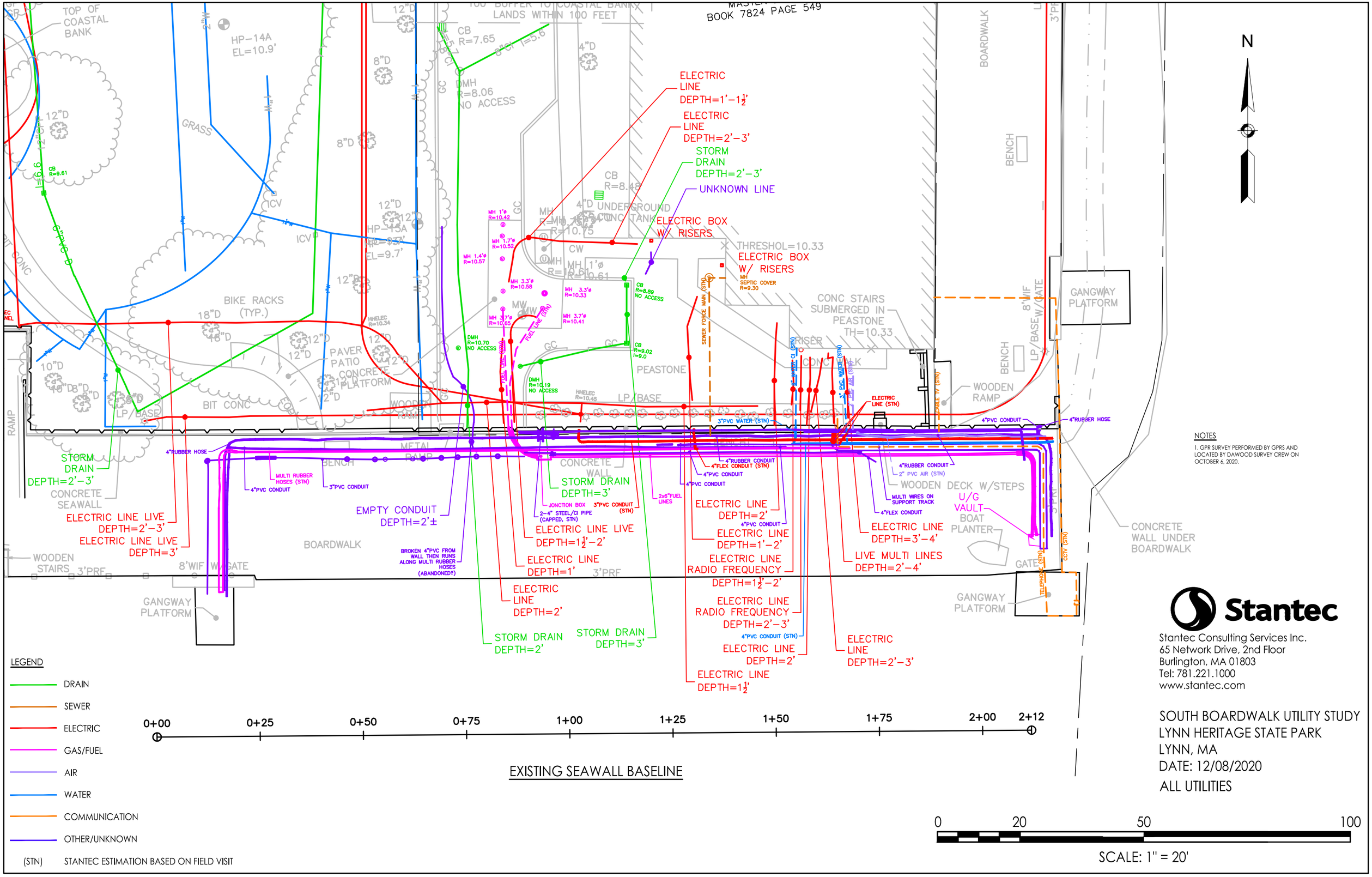
Stantec

Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020
1982/3 RECORD ELEC. PLAN

0 20 50 100

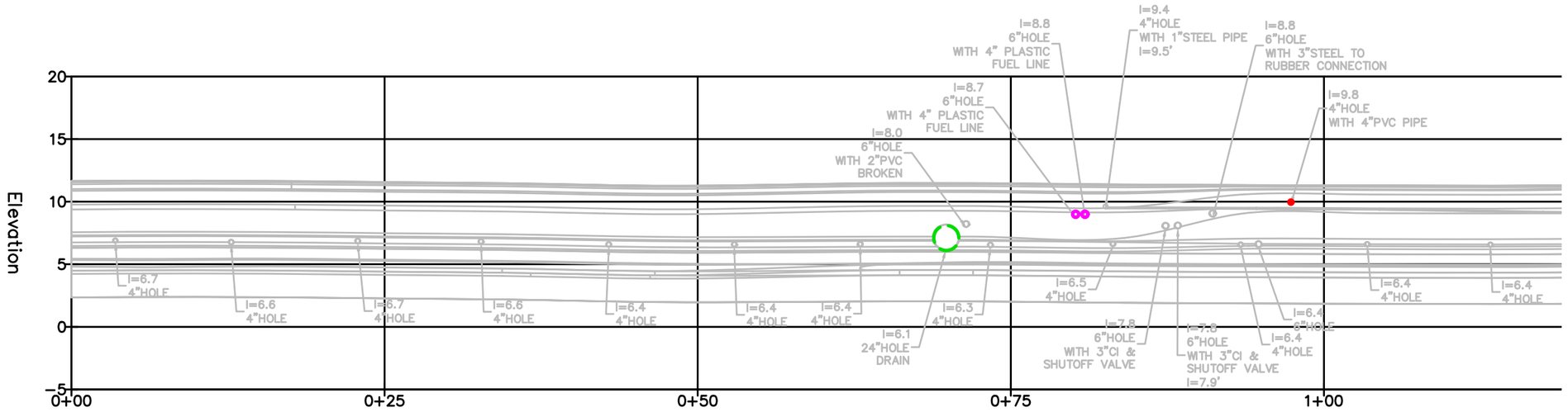
SCALE: 1" = 20'

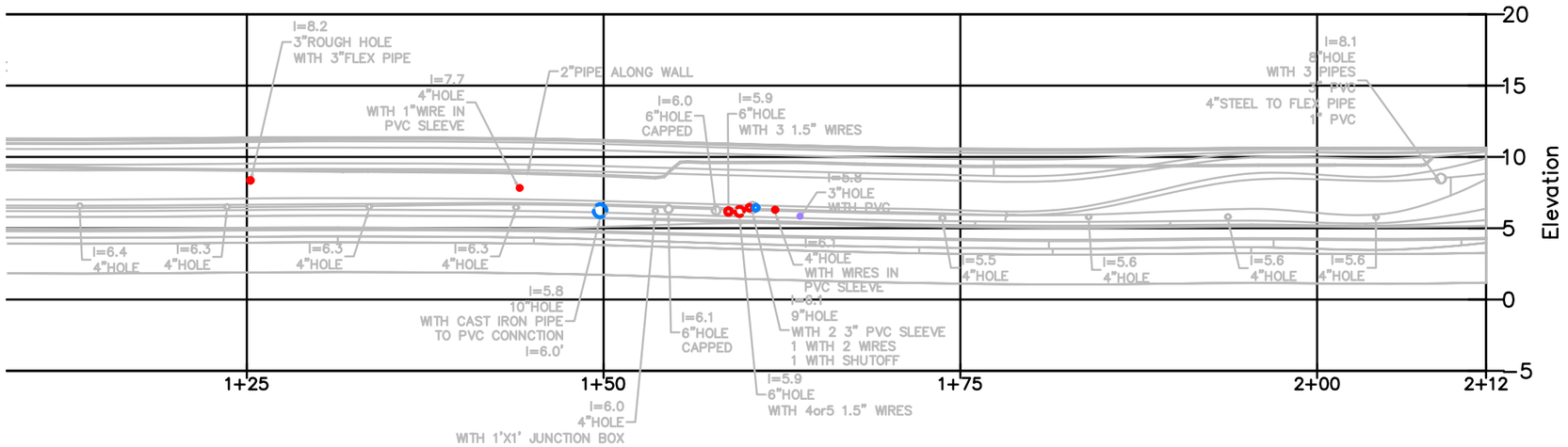


Stantec

Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020
ALL UTILITIES





LEGEND

- DRAIN
- SEWER
- ELECTRIC
- GAS/FUEL
- AIR
- WATER
- COMMUNICATION
- OTHER/UNKNOWN
- (STN) STANTEC ESTIMATION BASED ON FIELD VISIT

EXISTING SEAWALL ELEVATION

Stantec
Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020
ALL UTILITIES - SEAWALL ELEV.

0 20 50 100

SCALE: 1" = 10'

MASTER
BOOK 7824 PAGE 549

TOP OF COASTAL BANK
LANDS WITHIN 100 FEET
100' BUFFER TO COASTAL BANK
HP-14A EL=10.9'
HP-15A EL=9.7'
GRASS
BIT CONC
BIKE RACKS (TYP.)
PAVER PATIO
CONCRETE PLATFORM
WOODEN RAMP
LP/BASE
METAL RAMP
BENCH
CONCRETE SEAWALL
BOARDWALK
WOODEN STAIRS
GANGWAY PLATFORM
8'WIF W/GATE
CB R=9.61
CB R=7.65
DMH R=8.06 NO ACCESS
CB R=8.48
4'D UNDERGROUND CONC TANK
MH R=10.75
MH R=10.61
CB R=8.89 NO ACCESS
CB R=9.02 I=9.0
DMH R=10.70 NO ACCESS
DMH R=10.19 NO ACCESS
MW
ELECTRIC BOX W/ RISERS
THRESHOL=10.33 ELECTRIC BOX W/ RISERS
SEPTIC COVER R=9.30
CONC STAIRS SUBMERGED IN PEASTONE TH=10.33
RISER
CONC WALK
PEASTONE
BENCH
BOARDWALK
GANGWAY PLATFORM
8'WIF LP/BASE W/GATE
WOODEN RAMP
WOODEN DECK W/STEPS
U/G VAULT
BOAT PLANTER
CONCRETE WALL UNDER BOARDWALK
GATE
ELECTRIC LINE DEPTH=1'-1½'
ELECTRIC LINE DEPTH=2'-3'
UNKNOWN LINE
STORM DRAIN DEPTH=2'-3'
STORM DRAIN DEPTH=3'
STORM DRAIN DEPTH=2'
STORM DRAIN DEPTH=2'-3'
CONCRETE WALL
JONCTION BOX 2-4" STEEL/CI PIPE (CAPPED, STN)
3"PVC CONDUIT (STN)
EMPTY CONDUIT DEPTH=2'±
BROKEN 4"PVC FROM WALL THEN RUNS ALONG MULTI RUBBER HOSES (ABANDONED?)
2x6"FUEL LINES
ELECTRIC LINE LIVE DEPTH=2'-3'
ELECTRIC LINE LIVE DEPTH=3'
ELECTRIC LINE LIVE DEPTH=1½'-2'
ELECTRIC LINE DEPTH=1' 3'PRF
ELECTRIC LINE DEPTH=2'
ELECTRIC LINE DEPTH=2'
ELECTRIC LINE RADIO FREQUENCY DEPTH=1½'-2'
ELECTRIC LINE RADIO FREQUENCY DEPTH=2'-3'
ELECTRIC LINE DEPTH=2'
ELECTRIC LINE DEPTH=1½'
ELECTRIC LINE DEPTH=2'-3'
ELECTRIC LINE DEPTH=3'-4'
LIVE MULTI LINES DEPTH=2'-4'
MULTI RUBBER HOSES (STN)
MULTI WIRES ON SUPPORT TRACK
4"RUBBER HOSE
4"PVC CONDUIT
4"RUBBER CONDUIT
4"FLEX CONDUIT (STN)
2" PVC AIR (STN)
3"PVC WATER (STN)
6" WATER CI (STN)
3" PVC WATER (STN)
2" PVC AIR (STN)
ELECTRIC LINE (STN)
FUEL LINE (STN)
SEWER FORCE MAIN (STN)
TELEPHONE (STN)
CITY (STN)
3'PRF
MH 1'ø R=10.42
MH 1.7'ø R=10.52
MH 1.4'ø R=10.57
MH 3.3'ø R=10.58
MH 3.3'ø R=10.33
MH 3.7'ø R=10.65
MH 3.7'ø R=10.41
HHELEC R=10.34
HHELEC R=10.45
12"D
8"D
10"D
18"D
6"D
4"D
2"W
1"W
6"PVC D
9"PVC D
12"CMP
I=9.6
I=5.6

NOTES

1. GPR SURVEY PERFORMED BY GPRS AND LOCATED BY DAWOOD SURVEY CREW ON OCTOBER 6, 2020.

LEGEND

- DRAIN
- SEWER
- ELECTRIC
- GAS/FUEL
- AIR
- WATER
- COMMUNICATION
- OTHER/UNKNOWN

(STN) STANTEC ESTIMATION BASED ON FIELD VISIT

0+00 0+25 0+50 0+75 1+00 1+25 1+50 1+75 2+00 2+12

EXISTING SEAWALL BASELINE

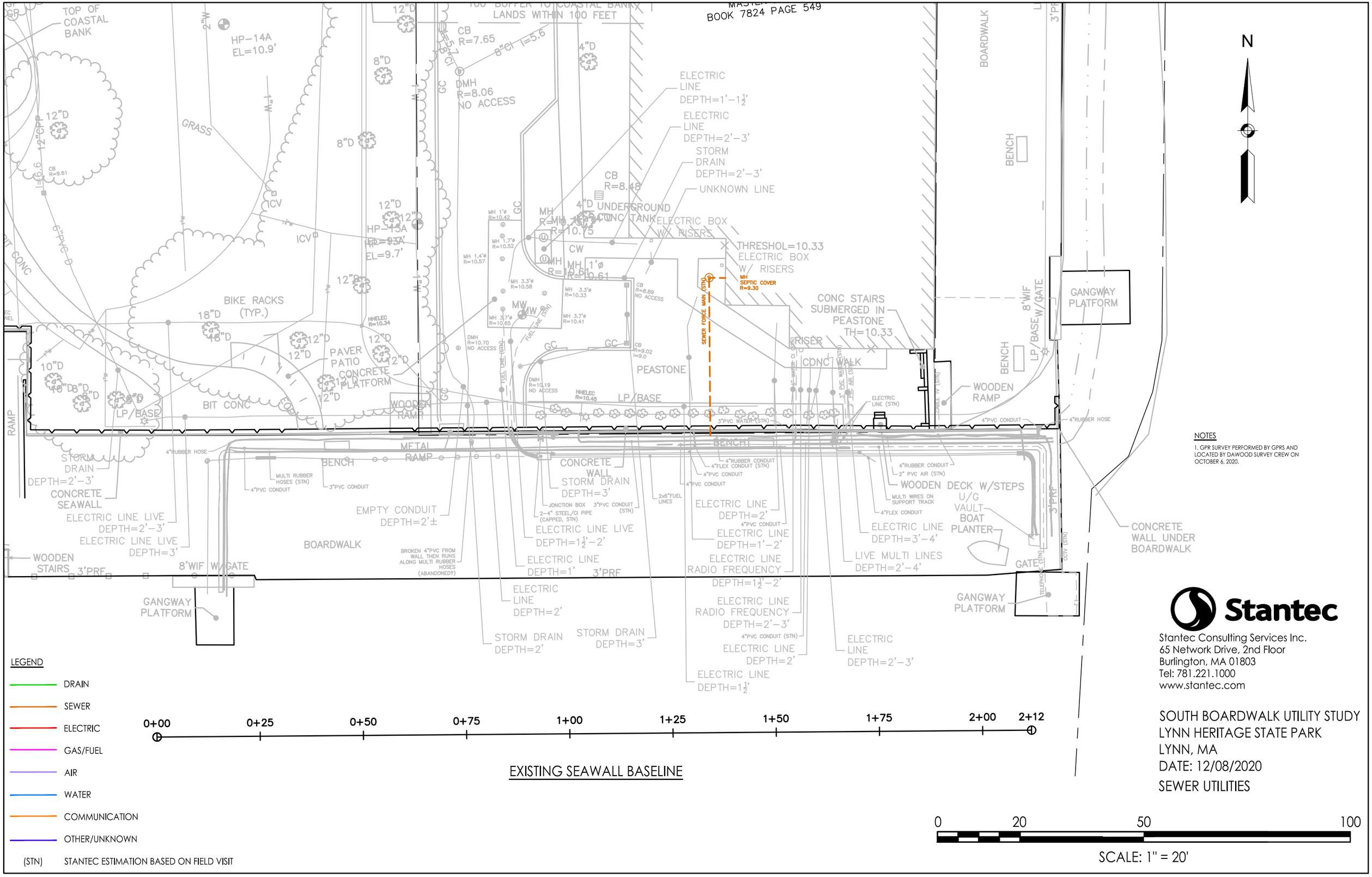
0 20 50 100

SCALE: 1" = 20'

N

Stantec
Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020
DRAIN UTILITIES



NOTES

1. GPR SURVEY PERFORMED BY GPRS AND LOCATED BY DAWOOD SURVEY CREW ON OCTOBER 6, 2020.

LEGEND

- DRAIN
- SEWER
- ELECTRIC
- GAS/FUEL
- AIR
- WATER
- COMMUNICATION
- OTHER/UNKNOWN

(STN) STANTEC ESTIMATION BASED ON FIELD VISIT

Stantec

Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020
SEWER UTILITIES

MASTER
BOOK 7824 PAGE 549

TOP OF COASTAL BANK
100' BUFFER TO COASTAL BANK
LANDS WITHIN 100 FEET
HP-14A EL=10.9'
HP-15A EL=9.7'
GRASS
ICV
CB R=7.65
8"CI I=5.6
DMH R=8.06 NO ACCESS
CB R=9.61
12"CI I=6.6
6"PVC D
CB R=8.48
4'D UNDERGROUND CONC TANK
ELECTRIC BOX W/ RISERS
MH R=10.75
MH R=10.61
CW
MW
MH 1'ø R=10.42
MH 1.7'ø R=10.52
MH 1.4'ø R=10.57
MH 3.3'ø R=10.58
MH 3.3'ø R=10.33
MH 3.7'ø R=10.65
MH 3.7'ø R=10.41
CB R=8.89 NO ACCESS
CB R=9.02 I=9.0
DMH R=10.70 NO ACCESS
DMH R=10.19 NO ACCESS
HHELEC R=10.34
HHELEC R=10.45
ELECTRIC LINE DEPTH=1'-1½'
ELECTRIC LINE DEPTH=2'-3'
STORM DRAIN DEPTH=2'-3'
UNKNOWN LINE
THRESHOL=10.33 ELECTRIC BOX W/ RISERS
SEPTIC COVER R=9.30
SEWER FORCE MAIN (STN)
FUEL LINE (STN)
BOARDWALK
BENCH
8'WIF W/GATE
LP/BASE W/GATE
GANGWAY PLATFORM
CONC STAIRS SUBMERGED IN PEASTONE TH=10.33
RISER TO CONC WALK
PEASTONE
LP/BASE
WOODEN RAMP
ELECTRIC LINE (STN)
4"PVC CONDUIT
4"RUBBER HOSE
3"PVC WATER (STN)
2" PVC WATER (STN)
2" PVC AIR (STN)
FIBER TV (STN)
BIKE RACKS (TYP.)
18"D
12"D
10"D
8"D
6"D
PAVER PATIO
CONCRETE PLATFORM
BIT CONC
EOP
RAMP
STORM DRAIN DEPTH=2'-3'
CONCRETE SEAWALL
ELECTRIC LINE LIVE DEPTH=2'-3'
ELECTRIC LINE LIVE DEPTH=3'
WOODEN STAIRS
3'PRF
8'WIF W/GATE
GANGWAY PLATFORM
METAL RAMP
BENCH
MULTI RUBBER HOSES (STN)
4"PVC CONDUIT
3"PVC CONDUIT
EMPTY CONDUIT DEPTH=2'±
BOARDWALK
BROKEN 4"PVC FROM WALL THEN RUNS ALONG MULTI RUBBER HOSES (ABANDONED?)
CONCRETE WALL STORM DRAIN DEPTH=3'
JONCTION BOX
2-4" STEEL/CI PIPE (CAPPED, STN)
3"PVC CONDUIT (STN)
ELECTRIC LINE LIVE DEPTH=1½'-2'
ELECTRIC LINE DEPTH=1'
ELECTRIC LINE DEPTH=2'
STORM DRAIN DEPTH=2'
STORM DRAIN DEPTH=3'
2x6"FUEL LINES
4"RUBBER CONDUIT
4"FLEX CONDUIT (STN)
ELECTRIC LINE DEPTH=2'
ELECTRIC LINE DEPTH=1'-2'
ELECTRIC LINE RADIO FREQUENCY DEPTH=1½'-2'
ELECTRIC LINE RADIO FREQUENCY DEPTH=2'-3'
4"PVC CONDUIT (STN)
ELECTRIC LINE DEPTH=2'
ELECTRIC LINE DEPTH=1½'
ELECTRIC LINE DEPTH=3'-4'
LIVE MULTI LINES DEPTH=2'-4'
ELECTRIC LINE DEPTH=2'-3'
4"RUBBER CONDUIT
2" PVC AIR (STN)
WOODEN DECK W/STEPS
MULTI WIRES ON SUPPORT TRACK
4"FLEX CONDUIT
U/G VAULT
BOAT PLANTER
3'PRF
CITY (STN)
TELEPHONE (STN)
GATE
CONCRETE WALL UNDER BOARDWALK

N

NOTES
1. GPR SURVEY PERFORMED BY GPRS AND LOCATED BY DAWOOD SURVEY CREW ON OCTOBER 6, 2020.

LEGEND
- DRAIN
- SEWER
- ELECTRIC
- GAS/FUEL
- AIR
- WATER
- COMMUNICATION
- OTHER/UNKNOWN

(STN) STANTEC ESTIMATION BASED ON FIELD VISIT

0+00 0+25 0+50 0+75 1+00 1+25 1+50 1+75 2+00 2+12

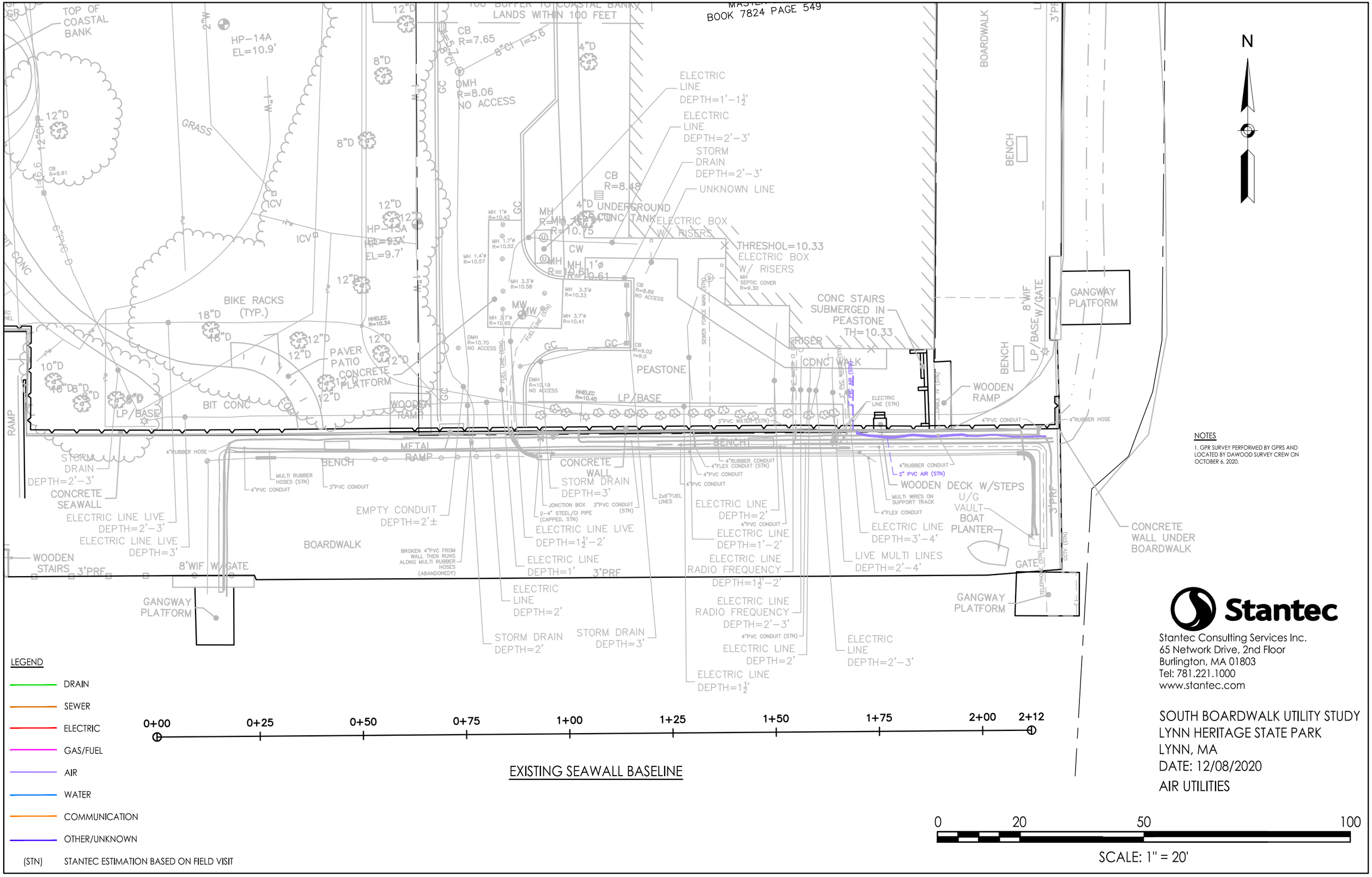
EXISTING SEAWALL BASELINE

0 20 50 100

SCALE: 1" = 20'

Stantec
Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020
WATER UTILITIES



NOTES

1. GPR SURVEY PERFORMED BY GPRS AND LOCATED BY DAWOOD SURVEY CREW ON OCTOBER 6, 2020.

LEGEND

- DRAIN
- SEWER
- ELECTRIC
- GAS/FUEL
- AIR
- WATER
- COMMUNICATION
- OTHER/UNKNOWN

(STN) STANTEC ESTIMATION BASED ON FIELD VISIT

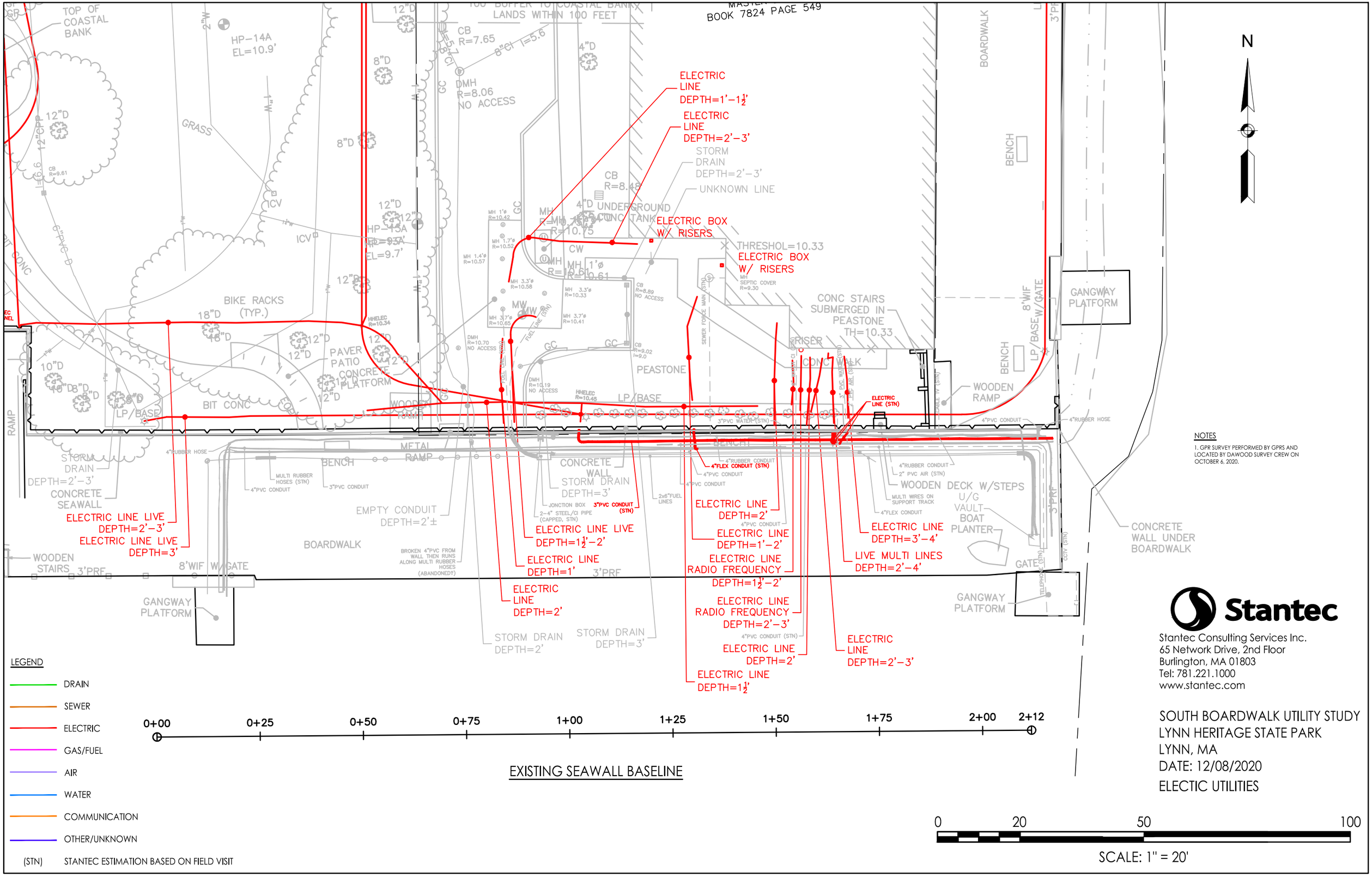
Stantec
Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020

AIR UTILITIES

0 20 50 100

SCALE: 1" = 20'



Stantec
Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020
ELECTIC UTILITIES

MASTER
BOOK 7824 PAGE 549

TOP OF COASTAL BANK
100' BUFFER TO COASTAL BANK
LANDS WITHIN 100 FEET
HP-14A EL=10.9'
HP-15A EL=9.7'
GRASS
BIT CONC
BIKE RACKS (TYP.)
PAVER PATIO
CONCRETE PLATFORM
WOODEN RAMP
LP/BASE
PEASTONE
CB R=7.65
DMH R=8.06 NO ACCESS
CB R=8.48
4'D UNDERGROUND CONC TANK
MH R=10.75
MH R=10.61
CW
MW
ELECTRIC BOX W/ RISERS
THRESHOL=10.33 ELECTRIC BOX W/ RISERS
MH SEPTIC COVER R=9.30
CB R=8.89 NO ACCESS
CB R=9.02
DMH R=10.70 NO ACCESS
DMH R=10.19 NO ACCESS
HHELEC R=10.34
HHELEC R=10.45
ELECTRIC LINE DEPTH=1'-1½'
ELECTRIC LINE DEPTH=2'-3'
STORM DRAIN DEPTH=2'-3'
UNKNOWN LINE
FUEL LINE (STN)
SEWER FORCE MAIN (STN)
6" WATER CL (STN)
3" PVC WATER (STN)
2" PVC AIR (STN)
CONC STAIRS SUBMERGED IN PEASTONE TH=10.33
RISER
CONC WALK
BOARDWALK
BENCH
8'WIF W/GATE
LP/BASE W/GATE
GANGWAY PLATFORM
WOODEN RAMP
ELECTRIC LINE (STN)
FIBER TV (STN)
4"PVC CONDUIT
4"RUBBER HOSE
N

STORM DRAIN DEPTH=2'-3'
CONCRETE SEAWALL
ELECTRIC LINE LIVE DEPTH=2'-3'
ELECTRIC LINE LIVE DEPTH=3'
WOODEN STAIRS
3'PRF
8'WIF W/GATE
GANGWAY PLATFORM
BOARDWALK
EMPTY CONDUIT DEPTH=2'±
BROKEN 4"PVC FROM WALL THEN RUNS ALONG MULTI RUBBER HOSES (ABANDONED?)
MULTI RUBBER HOSES (STN)
4"PVC CONDUIT
3"PVC CONDUIT
BENCH
METAL RAMP
4"RUBBER HOSE
CONCRETE WALL STORM DRAIN DEPTH=3'
JONCTION BOX
2-4" STEEL/CI PIPE (CAPPED, STN)
3"PVC CONDUIT (STN)
ELECTRIC LINE LIVE DEPTH=1½'-2'
ELECTRIC LINE DEPTH=1'
ELECTRIC LINE DEPTH=2'
STORM DRAIN DEPTH=2'
STORM DRAIN DEPTH=3'
2x6"FUEL LINES
4"RUBBER CONDUIT
4"FLEX CONDUIT (STN)
4"PVC CONDUIT
ELECTRIC LINE DEPTH=2'
ELECTRIC LINE DEPTH=1'-2'
ELECTRIC LINE RADIO FREQUENCY DEPTH=1½'-2'
ELECTRIC LINE RADIO FREQUENCY DEPTH=2'-3'
4"PVC CONDUIT (STN)
ELECTRIC LINE DEPTH=2'
ELECTRIC LINE DEPTH=1½'
ELECTRIC LINE DEPTH=2'-3'
4"RUBBER CONDUIT
2" PVC AIR (STN)
WOODEN DECK W/STEPS
MULTI WIRES ON SUPPORT TRACK
4"FLEX CONDUIT
U/G VAULT
BOAT PLANTER
ELECTRIC LINE DEPTH=3'-4'
LIVE MULTI LINES DEPTH=2'-4'
3'PRF
GATE
TELEPHONE (STN)
CATV (STN)
GANGWAY PLATFORM
CONCRETE WALL UNDER BOARDWALK

NOTES
1. GPR SURVEY PERFORMED BY GPRS AND LOCATED BY DAWOOD SURVEY CREW ON OCTOBER 6, 2020.

LEGEND
- DRAIN
- SEWER
- ELECTRIC
- GAS/FUEL
- AIR
- WATER
- COMMUNICATION
- OTHER/UNKNOWN
- (STN) STANTEC ESTIMATION BASED ON FIELD VISIT

0+00 0+25 0+50 0+75 1+00 1+25 1+50 1+75 2+00 2+12

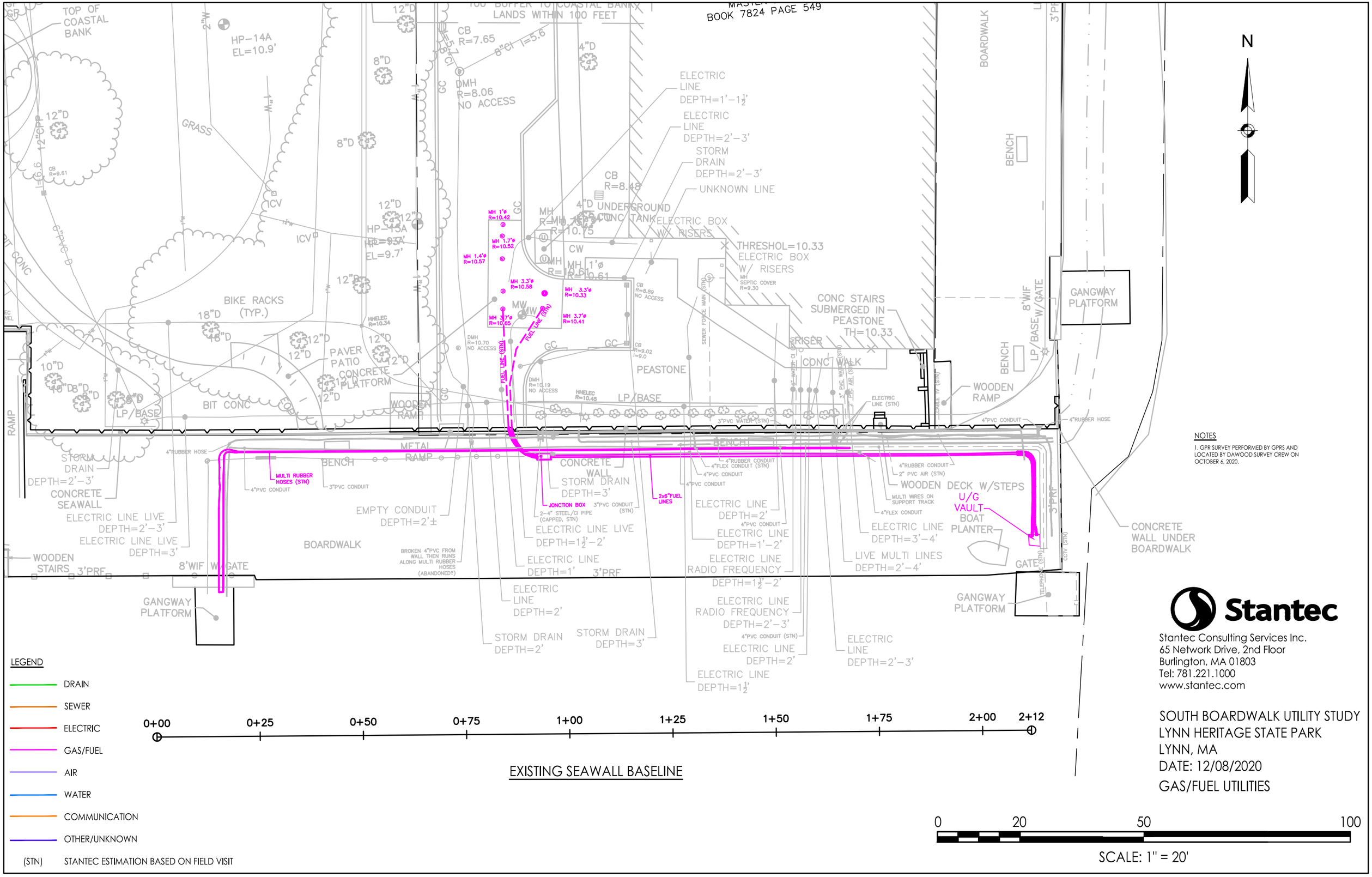
EXISTING SEAWALL BASELINE

0 20 50 100

SCALE: 1" = 20'

Stantec
Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020
COMMUNICATION UTILITIES



NOTES

1. GPR SURVEY PERFORMED BY GPRS AND LOCATED BY DAWOOD SURVEY CREW ON OCTOBER 6, 2020.

LEGEND

- DRAIN
- SEWER
- ELECTRIC
- GAS/FUEL
- AIR
- WATER
- COMMUNICATION
- OTHER/UNKNOWN

(STN) STANTEC ESTIMATION BASED ON FIELD VISIT

Stantec
Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020
GAS/FUEL UTILITIES

MASTER
BOOK 7824 PAGE 549

TOP OF COASTAL BANK
100' BUFFER TO COASTAL BANK
LANDS WITHIN 100 FEET
HP-14A EL=10.9'
HP-15A EL=9.7'
GRASS
BIT CONC
BIKE RACKS (TYP.)
PAVER PATIO
CONCRETE PLATFORM
LP/BASE
WOODEN RAMP
RAMP
METAL RAMP
BENCH
STORM DRAIN DEPTH=2'-3'
CONCRETE SEAWALL
ELECTRIC LINE LIVE DEPTH=2'-3'
ELECTRIC LINE LIVE DEPTH=3'
WOODEN STAIRS
3'PRF
8'WIF W/GATE
GANGWAY PLATFORM
BOARDWALK
CB R=7.65
DMH R=8.06 NO ACCESS
CB R=8.48
4'D UNDERGROUND CONC TANK
ELECTRIC BOX W/ RISERS
THRESHOL=10.33
ELECTRIC BOX W/ RISERS
MH SEPTIC COVER R=9.30
CB R=8.89 NO ACCESS
CB R=9.02 I=9.0
DMH R=10.70 NO ACCESS
DMH R=10.19 NO ACCESS
MW
CONC STAIRS SUBMERGED IN PEASTONE TH=10.33
RISER
CONC WALK
PEASTONE
BENCH
8'WIF W/GATE
LP/BASE W/GATE
GANGWAY PLATFORM
WOODEN RAMP
ELECTRIC LINE (STN)
3"PVC WATER (STN)
3" PVC WATER (STN)
2" PVC AIR (STN)
CABLE TV (STN)
ELECTRIC LINE DEPTH=1'-1½'
ELECTRIC LINE DEPTH=2'-3'
STORM DRAIN DEPTH=2'-3'
UNKNOWN LINE
FUEL LINE (STN)
SEWER FORCE MAIN (STN)
GAS LINE (STN)
HHELEC R=10.34
HHELEC R=10.45
MH 1'ø R=10.42
MH 1.7'ø R=10.52
MH 1.4'ø R=10.57
MH 3.3'ø R=10.58
MH 3.7'ø R=10.65
MH 3.3'ø R=10.33
MH 3.7'ø R=10.41
MH 1'ø R=10.61
CW
4"RUBBER HOSE
4"PVC CONDUIT
3"PVC CONDUIT
MULTI RUBBER HOSES (STN)
EMPTY CONDUIT DEPTH=2'±
BROKEN 4"PVC FROM WALL THEN RUNS ALONG MULTI RUBBER HOSES (ABANDONED?)
4"RUBBER CONDUIT
4"FLEX CONDUIT (STN)
JONCTION BOX
3"PVC CONDUIT (STN)
2-4" STEEL/CI PIPE (CAPPED, STN)
2x6"FUEL LINES
CONCRETE WALL STORM DRAIN DEPTH=3'
ELECTRIC LINE LIVE DEPTH=1½'-2'
ELECTRIC LINE DEPTH=1'
ELECTRIC LINE DEPTH=2'
STORM DRAIN DEPTH=2'
STORM DRAIN DEPTH=3'
ELECTRIC LINE DEPTH=2'
ELECTRIC LINE DEPTH=1'-2'
ELECTRIC LINE RADIO FREQUENCY DEPTH=1½'-2'
ELECTRIC LINE RADIO FREQUENCY DEPTH=2'-3'
4"PVC CONDUIT (STN)
ELECTRIC LINE DEPTH=2'
ELECTRIC LINE DEPTH=1½'
ELECTRIC LINE DEPTH=3'-4'
LIVE MULTI LINES DEPTH=2'-4'
ELECTRIC LINE DEPTH=2'-3'
4"RUBBER CONDUIT
2" PVC AIR (STN)
WOODEN DECK W/STEPS
MULTI WIRES ON SUPPORT TRACK
4"FLEX CONDUIT
U/G VAULT
BOAT PLANTER
CONCRETE WALL UNDER BOARDWALK
GATE
TELEPHONE (STN)
CITY (STN)
STAIRS
0+00 0+25 0+50 0+75 1+00 1+25 1+50 1+75 2+00 2+12
EXISTING SEAWALL BASELINE

N

NOTES
1. GPR SURVEY PERFORMED BY GPRS AND LOCATED BY DAWOOD SURVEY CREW ON OCTOBER 6, 2020.

Stantec
Stantec Consulting Services Inc.
65 Network Drive, 2nd Floor
Burlington, MA 01803
Tel: 781.221.1000
www.stantec.com

SOUTH BOARDWALK UTILITY STUDY
LYNN HERITAGE STATE PARK
LYNN, MA
DATE: 12/08/2020
OTHER/UNKNOWN UTILITIES

0 20 50 100
SCALE: 1" = 20'

APPENDIX D

FINAL GEOTECHNICAL ENGINEERING REPORT

Gateway City Parks Program
Lynn Heritage State Park
Lynn, Massachusetts

Prepared for:
Brown, Richardson & Rowe, Inc.
3 Post Office Square, 3rd Floor
Boston, MA 02110

Prepared by:
Stantec Consulting Service, Inc.
5 Burlington Wood Drive Suite 210
Burlington, Massachusetts 01803-4542

December 11, 2018

SIGN OFF SHEET

This document entitled FINAL GEOTECHNICAL ENGINEERING REPORT was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Brown, Richardson & Rowe, Inc. (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by _____

(signature)

Nicholas C. D'Agostino, P.E.
Senior Associate, Geotechnical Engineer

Reviewed by _____

(signature)

Trey Dykstra, P.E.
Associate, Geotechnical Engineer

Table of Contents

1.0 INTRODUCTION 1

2.0 SITE AND PROJECT INFORMATION 1
2.1 SITE DESCRIPTION 1
2.2 1982 PARK DESIGN 3
2.3 CURRENT CONDITIONS 4

3.0 SUBSURFACE INFORMATION 6
3.1 TEST BORING EXPLORATION PROGRAM 6
3.1.1 Phase I Drilling Program (2017) 7
3.1.2 Phase 2 Drilling Program (2018) 8
3.1.3 Test Pit Exploration Program 8

4.0 SUMMARIZED SUBSURFACE CONDITIONS 8
4.1 ASPHALT 8
4.2 FILL 9
4.3 SAND/SILT 9
4.4 BOSTON BLUE CLAY CRUST 9
4.5 BOSTON BLUE CLAY 10
4.6 GLACIAL TILL 10
4.7 BEDROCK 10
4.8 GROUNDWATER 10

5.0 LABORATORY TESTING 10

6.0 INFILTRATION TESTING 13

7.0 BOARDWALK DISCUSSION AND RECOMMENDATIONS 14
7.1 FINDINGS 14
7.1.1 Boardwalk South of 154 Lynnway 14
7.1.2 Boardwalk East of 154 Lynnway 15
7.1.3 Boardwalk South of 152 Lynnway 15
7.1.4 Boardwalk West of 150 Lynnway 16
7.2 FOUNDATION TYPE CONSIDERATIONS 16
7.2.1 Helical Piles 16
7.2.2 Micro Piles 17

8.0 RIPRAP SEAWALL DISCUSSION AND RECOMMENDATIONS 18
8.1 FINDINGS 18

9.0 PARK DISCUSSION AND RECOMMENDATONS 19
9.1 FINDINGS 19

9.2 PARK DEVELOPMENT OPTIONS 21
9.2.1 Pile Supported Shade Structures and Light Poles 22
9.2.2 Option 1 -Partial Depth Excavation to Water Table, Screen, and Reuse 23
9.2.3 Option 2 - Surficial Excavation/ Pile Support Structures 24
9.2.4 Option 3 - Surficial Site Excavation and Stabilization, No Off-Site Disposal of Excavated Material / Pile Support Structures 24

10.0 PARKING AREA PAVEMENT DESIGN RECOMMENDATIONS 25

11.0 BACKFILL FOR SUBSIDENCE AREAS 26

12.0 CONSTRUCTION CONSIDERATIONS 27
12.1 EXCAVATION AND DEWATERING 27
12.2 SUBGRADE STABILIZATION 27
12.3 SUBGRADE PROOF-ROLL AND COMPACTION 28
12.4 PLACEMENT OF BACKFILL 28
12.5 PROTECTION OF UTILITIES 29

13.0 LIMITATIONS 29
13.1 USE OF REPORT 29
13.2 SUBSEQUENT INVOLVEMENT 29
13.3 REPRESENTATION AND INTERPRETATION OF DATA 30

LIST OF TABLES

TABLE 5-1 GRAIN SIZE DISTRIBUTION TEST RESULTS 11
TABLE 5-2 ATTERBERG LIMITS TEST RESULTS 11
TABLE 5-3 CONSOLIDATION TEST RESULTS 11
TABLE 5-4 MOISTURE AND ORGANIC CONTENT 12
TABLE 5-5 INDEX PROPERTIES – PARKING LOT SAMPLES 12
TABLE 6-1 SUMMARY OF SOIL PERMEABILITY RESULTS - PARKING LOT AREA 13
TABLE 7-1 SUMMARY OF SOIL BORING OBSERVATIONS - BOARDWALK 14
TABLE 8-1 SUMMARY OF LAND BORING OBSERATIONS - RIPRAP SEAWALL 18
TABLE 8-2 SUMMARY OF WATER BORING OBSERVATIONS - RIPRAP SEAWALL 19
TABLE 9-1 SUMMARY OF SOIL BORING OBSERVATIONS - PARK AREA 20
TABLE 9-2 SOIL STRATA ENGINEERING PROPERTIES 21
TABLE 10-1 PAVEMENT DESIGN RECOMMENDATIONS 26
TABLE 11-1 SPECIAL BORROW GRADATION REQUIREMENTS 27

LIST OF FIGURES

FIGURE 1 - SITE LOCATION PLAN
FIGURE 2 - BORING LOCATION PLAN
FIGURE 3 - BOARDWALK TYPICAL SECTION
FIGURE 4 - BORING LOCATIONS PLOTTED ON 1982 SITE CONDITIONS
FIGURE 5 - SUBSURFCE PROFILE SECTION A-A
FIGURE 6 - SUBSURFACE PROFILE SECTION B-B
FIGURE 7 - SUBSURFACE PROFILE SECTION C-C

LIST OF APPENDICES

APPENDIX A TOPOGRAPHIC SURVEY – EXISING CONDITIONS 2018 ..... A.1
APPENDIX B DESIGN DRAWINGS 1982 ..... B.1
APPENDIX C BORING LOGS C.1
APPENDIX D TEST PIT LOGS D.1
APPENDIX E LABORATORY TEST RESULTS E.1

1.0 INTRODUCTION

The Commonwealth of Massachusetts Department of Conservation and Recreation (DCR) anticipates the redevelopment of the Lynn State Heritage Park will include a new parking area with an additional vehicular access point, improved sight lines into the park, a large splash pad area, a flexible public plaza with performance stage, overhead shade structures, a stepped waterside overlook deck, a large lawn for passive recreation, and a wide paved promenade. After repair of the seawall and resolution of ground settlement issues, a new boardwalk will be provided as well as a repaired pavilion. Features within the redevelopment will consist of the following:

Parking Area

- Expanded parking area (48 spaces)

Waterfront Public Plaza

- A large active and flexible public plaza for gathering and events;
- Splash pad and play area with perimeter seating and a play lawn;
- Colorful overhead shade canopies with moveable tables and chairs;
- Waterslide stepped deck overlook area
- Wood deck for performances or outdoor movies;
- Wood clad seat walls at edges of public space
- 15 to 30 feet wide promenade with feature lighting and seating areas.

Central Lawn

- Large mown lawn for passive recreation
- Seating along promenade with harbor views

Boardwalk

- Repair existing boardwalks;
- Improve covered pavilion/seating area
- Boardwalk seating and lighting

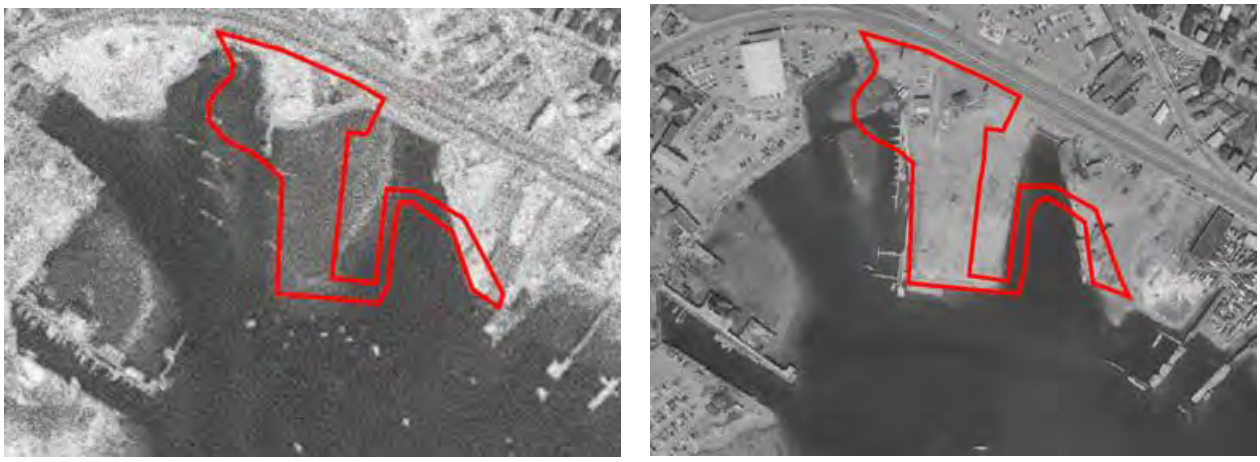
2.0 SITE AND PROJECT INFORMATION

2.1 SITE DESCRIPTION

The Site is located at the Lynn Heritage State Park in the City of Lynn, MA and is grass covered with localized areas of trees, benches and asphalt paved paths. The property is owned by the Massachusetts Department of Conservation and Recreation (DCR) and is approximately 800 feet long from north to south and varies in width along the east-west axis from approximately 400 feet to 150 feet. The Site includes approximately 1,250 feet of boardwalk. There is an asphalt paved parking lot at the north end of the property and a wooden boardwalk with a pavilion to the south. The property is surrounded by Lynn Harbor to the west and south. To the east of the park is

a six-story north-south orientated residential apartments/condominium at 154 Lynnway. There is an east-west oriented three story mixed-use commercial businesses at 152 Lynnway and a six story residential apartments/condominium at 150 Lynnway. North of the property is the Lynnway and north of that is the campus for North Shore Community College. A concrete and metal walkway spans the Lynnway connecting the North Shore Community College campus and the Park.

Based upon previous reports, historical mapping, and aerial photographs, the Site was formerly a tidelands area within Lynn Harbor. Between 1829 and the mid-1900's the northern portion of the Site was filled with soil, harbor dredging material, and rubble from the "Great Lynn Fire of 1889" and further filled with debris from the 1973 Chelsea Fire. As shown below, the following Historical air photographs indicate that the limits of the park were filled into its 1982 configuration sometime between 1960 and 1969.



1960 *1969*

Lynn Heritage State Park - Historical Images

During the subsurface investigation conducted at the Site, evidence of anthropogenic fill including brick, concrete, glass, metal debris, ash, asphalt, etc. was observed in soil across the Site to depths of 15 to 20 feet. In addition, material dredged from the harbor immediately around the park was moved to two separate disposal areas in 1983; Dredge Disposal Area I is located north of the seawall between 150 and 152 Lynnway and extended to the northbound lanes of the Lynnway. Dredge Disposal Area 2 is located within the northeast corner of the park and was filled land in the harbor. The boardwalk wraps around the waterfront along the south and east face of 154 Lynnway, the south face of 152 Lynnway and the west face of 150 Lynnway

It is our understanding that the building foundations for each of the structures at 150, 152, and 154 Lynnway are pile supported. The wooden boardwalk along the south side of the 154 Lynnway is supported on 45 feet long timber piles and has not undergone significant differential settlement. There is a concrete seawall structure (5'x7'x1.5' thick) along the north side of the boardwalk that was founded on a shallow L-shaped footing with bottom of footing at El 5.2. The boardwalks located along the east side of the condominium building at 154 Lynnway, south of the mixed-use building at152 Lynnway and west of the condominium building at150 Lynnway, are supported on 6-inch wide by 48-inch deep reinforced concrete footings connected to a reinforced concrete sill

spaced 10 feet on center that is 6-inches wide by 18 inches deep. The original top of deck elevation (El) was estimated to be at El 12.19 ± (NAVD88). The wooden boardwalk decking is 4 inches thick by 8 inches wide. The surface of the east boardwalk varies between El 11.31 and El 8.97; the south boardwalk between El 11.86 and El 11.58. Settlement of the east boardwalk is visible when compared with the level of the deck on the south boardwalk at El 11.94. The southwest side of Lynn Heritage State Park has also undergone significant uneven settlement, where settlement of the sidewalk along the top of the riprap has occurred between the pavilion and 180 feet north of the pavilion and varies between El 10.56 and El 7.95. It is assumed that the top of the riprap seawall along the west side of the park was originally graded in 1983 to match the elevations of the boardwalks at El 12.19.

2.2 1982 PARK DESIGN

There is a riprap seawall that protects the slopes along the west boundary of the park, beneath the boardwalk to the south of the park and the building at154 Lynnway, along the east side of the condominium building and 154 Lynnway, to the south of a mixed use building at152 Lynnway, and west of the condominium building at 150 Lynnway. Stantec reviewed several drawings from the original design of Lynn Heritage State Park dated September 1982. These drawings included the following and are presented in Appendix A:

G-1	Plot Plan
G-2	Layout Plan
DG-1	Dredge/Fill Plan
DG-2	Dredge Disposal & Storage Details
SW-1	Typical Sections - Riprap Sloped Embankment

From drawing G-1, it appears that the central and southern park area was regraded with an excavation of up to 7.5 feet (El 19.8 to El 10.8). Note, the elevations presented on the original design drawings were based on NGVD29 vertical datum. The elevations discussed herein have been converted to NAVD88 vertical datum by subtracting 0.81 feet from the NGVD29 elevations. The stationing referenced herein is based on drawing G-1 and is presented in Appendix A.

The riprap slope protection installed, per drawing SW-1, was 3 feet thick underlain by 12-inches of bedding material and a filter fabric. Along the west riprap protected slope between Stations (Sta) 16+05 and 19+61, the riprap was placed at a slope of 2 horizontal (H) to 1 vertical (V) with the toe of slope at El -10.4 and top at El +12.19. The dredging extended to El -12.6. Along the riprap protected slope to the east of 154 Lynnway between Sta. 22+11 and 24+98 the riprap was placed at a slope of 1.5H to 1V. Per drawing G-1, the dredging extended between El -15.9 and El -10.4 moving from south (Sta 22+11) to north (Sta 24+98). In all areas, the organic silt was dredged a horizontal distance of 3 feet at the base of the slope and rose at a slope of 1H to 1V to the original harbor bottom. This zone at the toe of the riprap was backfilled with material that was not defined on the drawings. Beneath the organic silt was a medium to stiff Boston Blue Clay crust that the riprap was placed onto.

Per 1982 design drawings DG-2 and SW-1, between Sta 11+33 and Sta 16+05 an embankment fill was placed within the harbor to allow for the placement of Dredge Fill Area 2 to the east of the riprap seawall. The exterior slopes were 2H to 1V and the interior slope was 1.5H to 1V. This disposal area had 8 feet of fill material placed over 10 feet of dredged material (bottom at El -4±). The dredged material was placed in lifts of 2 feet separated by 1 foot of sand filter material. The underlying organic silt layer (about 6 feet thick, bottom at El -12±) had wick drains installed to facilitate settlement as the fill material was added above. Based on borings HP-23A through HP-25A drilled through Dredge Disposal Area 2, the upper 8 feet ranged in density from loose to very dense. It is assumed that the upper 8 feet of fill material was placed as an engineered fill with some level of compaction.

Between Sta 16+05 and Sta 19+61 the dredging operation did not extend to the 1982 bulkhead line which encompassed about half of the riprap seawall base. Organic silt is present within this area that was estimated to be about 4 feet to 6 feet thick. The settlement of the riprap seawall is most evident between Sta18+10 and Sta 19+61 where this organic silt layer that was located inland of the 1983 dredging operation and remained in place beneath the upper half of the riprap seawall slope.

Between Sta 24+98 and 27+09, to the north of the existing east-west riprap slope between 154 Lynnway and 152 Lynnway, an embankment was built within the harbor to allow the placement of dredge disposal material inland that was placed over the organic silt in this area. The side slopes were 2H to 1V on both the land and water sides of the embankment. The top of slope was 12 feet wide with the top at El +12.19. The toe of slope on the water side ranged between El -10.8 (Station 25+50) to El -18.4 (Station 26+50 to Station 27+09). A surcharge fill was placed in Dredge Disposal Area I with top at El +25.0 and wick drains were installed at a spacing of 4 feet on center to facilitate settlement prior to construction.

Areas of Lynn Heritage State Park have undergone significant uneven subsidence/settlement over the past 35+ years. Based on borings drilled in 2017 and 2018, subsurface conditions within the park consist of an uncontrolled fill layer believed to be from the remains of the Chelsea and Lynn fires mixed with traditional debris fill materials (sand, silt, wood, and brick) that extend to a depth of up to 20 feet. Beneath the fill is desiccated silty clay crust underlain by a very soft Boston Blue Clay. In addition, dredged material consisting of compressible organic silt material up to 27 feet thick was disposed within the limits of the park above a layer of organic silt up to 9 feet thick.

2.3 CURRENT CONDITIONS

A topographic survey of Lynn Heritage State park was performed by SMC Surveying and Mapping Consultants, Braintree, MA dated October 29, 2018 and is presented in Appendix B.

The riprap seawall on the western park boundary between Sta 17+80 and 19+61 and the sidewalk have areas that have undergone significant settlement, in some areas greater than 2 feet. The sidewalk at the top of the riprap slope protection has uneven rolling settlement. The grassed area adjacent to the sidewalk has undergone significant movement. The riprap seawall that was placed at a slope of 2H to 1V in this area appears to have undergone vertical settlement and

moved laterally towards the harbor pulling adjacent soil downward over a length of about 350 feet as depicted in photos 1 and 2.

Photo 1 looking north

Photo 2 looking south

Settlement of sidewalk between Stations 15+00 and 19+00 (note lateral movement of granite curb and drainage pipe with reversed slope)

The riprap on the east side of the building was placed at a steeper slope of 1.5H to 1V for 400 feet. In this area, it appears that 2 ± feet of vertical movement have occurred evidenced by the rolling appearance of the boardwalk between Station 23+00 and 24+50. The boardwalk then turns east at the north end of the condominium building where it has undergone settlement of 16-inches as evidenced by the step that has developed as shown in photo 3.

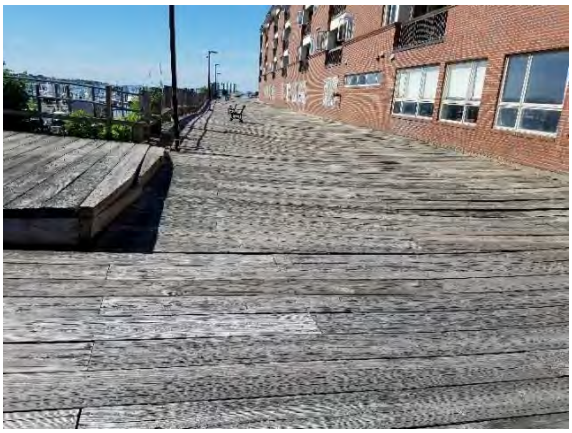


Photo 3 looking south

Photo 4 looking south

Settlement of boardwalk between Sta 23+00 and 25+00

The boardwalk at the south end of the condominium building between the pavilion near Sta. 19+25 and Sta. 22+11 is pile supported and thus did not undergo significant settlement. The portion of the boardwalk on the east side of the building between Sta. 22+11 and Sta.27+00 were supported on shallow footings and has undergone significant movement possibly (Photo4) due to the steeper riprap slope placing additional load on the underlying clay or the decomposition of wood debris encountered in the borings. This was evidenced by a significant dip in the area between Sta. 23+00 and 25+00.

The two condominium buildings (north-south orientation (154 and 150 Lynnway) and mixed use building east-west orientation (152 Lynnway)) within the Seaport Landing Marina and the boardwalk at the southern end of the condominium at 154 Lynnway are pile supported and visually do not appear to have settlement issues other than the subsidence of the surrounding soil adjacent to the structures. The east to west oriented boardwalk between the two condominium buildings (Stat. 25+00 to 26+00), has undergone significant settlement and there are numerous tripping/safety issues as shown in Photo 3.

Additional areas inland of the seawalls show signs of settlement evidenced by a boardwalk drop along the east side of 154 Lynnway of up to 2.5 feet (assuming the top of boardwalk was originally at El 12.19) with a maximum differential vertical movement of 9-inches. In addition, the lawns west of 154 Lynnway condominium have rolling ground surface depressions.

Settlement of the soil, paving, decking, etc. on all sides of the condominium building at 154 Lynnway is evident, especially at the main entrance on the north side of the building where a metal ramp has been installed in an area that previously had been at grade and now has at least a 6 to 8- inch step up into the building from the sidewalk. The driveway along the west side of the condominium building has shown evidence of significant settlement where there are dips in the pavement near the southern end of the building.

The boardwalk decking appears to not have any significant repairs over the past 30+ years since its construction in 1980s and is in need of upgrades.

3.0 SUBSURFACE INFORMATION

3.1 TEST BORING EXPLORATION PROGRAM

The subsurface investigation program was conducted in two phases at Lynn Heritage State Park with each phase consisting of the drilling of land borings and water borings.

All borings were advanced using drive and wash methods with 4-inch diameter casing and a 3-7/8-inch tri-cone roller bit. Standard Penetration Tests (SPTs) were performed in each boring in accordance with ASTM D1586. The SPT consists of driving a 1-3/8-inch inside diameter split spoon sampler with a 140-pound hammer falling 30-inches. The number of blows for each 6 inches of penetration is recorded for a total of 24 inches. The sum of the blows required to drive the sampler from 6 to 18-inches penetration is referred to as the Standard Penetration Resistance, or N-value, which is an index of measure of in-situ soil density or consistency. For granular soils, N values less 4 are considered to be very loose; between 4 and 10 loose; between 10 and 30 medium dense; between 30 and 50 dense; and greater than 50 very dense.

Cohesive soils encountered were field tested with a pocket penetrometer to provide a preliminary assessment of the strength of the sample/deposit. The pocket penetrometer is a device that provides a quick measure of the unconfined compression strength of clay by failing the clay in a "punching" mode under normal stresses. The unconfined compressive strength is theoretically twice the undrained shear strength. For cohesive soils, N value less than 2 are considered to be

very soft; between 2 and 4 soft; between 4 and 8 medium stiff; between 8 and 15 stiff; between 15 and 30 very stiff; and greater than 30 hard.

Continuous split spoon sampling occurred from the ground surface to depths between 28 feet to 33 feet.) The remaining depths in the borings were sampled at standard intervals of 5 feet. A Stantec geotechnical engineer monitored drilling operations, collected recovered soil samples, observed groundwater conditions at time of drilling, and prepared field records of the subsurface conditions. The as-drilled boring locations are presented on Figure 2. Soil samples from the test borings were visually classified in the field in accordance with ASTM D 2487 entitled "Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System, or USCS)."

Details of drilling and sampling methods are indicated on the borehole logs presented in the Appendix C of this report. The soil borings were located in the field by SMC Surveying and Mapping Consultants of Braintree, MA and by referencing existing site features for boring locations that required relocation.

3.1.1 Phase I Drilling Program (2017)

Drilling and sampling of the land borings were conducted between July 5, 2017 and July 14, 2017 by New England Boring Contractors of Derry, NH, under subcontract to Stantec. Borings on the west side of the condominium building at 154 Lynnway were advanced using a truck mounted drill rig and borings on the east side of the building were advanced along the boardwalk using a limited access Acker Scout track mounted drill rig. Four borings were drilled along the asphalt paved walkway on the west side of the property (HP-1 through HP-4) and two borings along the east side of the condominium (HP-6 and HP-7).

Two water borings, W-1 and W-2 were drilled along the toe of the existing riprap protected slope on September 1, 2017 (W-2) and September 5, 2017 (W-1) utilizing a barge mounted skid rig with spuds to elevate the barge above tidal variations (Photo 5). Water boring W-1 located adjacent to boring HP-6 on the east side of 154 Lynnway was advanced to a depth of 37 feet below the mudline. Boring W-2, located along the west side of 154 Lynnway and adjacent to boring HP-3, was advanced to a depth of 40 feet below the mudline.

A total of four undisturbed soil samples (3-inch diameter Shelby Tubes) were pushed into the soft silty clay/clayey silt soils for laboratory testing to establish engineering properties of this material.

Photo 5 - Drill Rig on Water Boring W-2 opposite Land Boring HP-3

3.1.2 Phase 2 Drilling Program (2018)

The Phase 2 subsurface investigation program was also conducted by New England Boring Contractors and included the drilling of six additional borings along the boardwalk adjacent to 150 and 152 Lynnway (HP-5A, HP-8A through HP-12A). Three additional water borings were drilled adjacent to the south boardwalk (W-3A through W-5A). A total of 15 borings (HP-13A through HP-27A) were drilled within Heritage State Park. As was utilized in 2017, the water borings were drilled utilizing a barge mounted skid rig with spuds to elevate the barge above tidal variations. Drilling and sampling of the land and water borings were conducted between September 17, 2018 and October 12, 2018 by New England Boring Contractors of Derry, NH, under subcontract to Stantec.

3.1.3 Test Pit Exploration Program (2018)

Three test pits (TP-1, TP-3, and TP-5) were excavated by New England Boring Contractors of Derry, NH on October 17 and 18, 2018 using a rubber-tired Kubota KX057-4 backhoe. The test pits provided additional information as to the nature of the material used to fill the tidelands at the north end of the park where the existing parking lot is located. Test Pit Logs are presented in Appendix D.

4.0 SUMMARIZED SUBSURFACE CONDITIONS

The subsurface conditions encountered at the boring locations are described in detail on the borehole logs located in Appendix C of this report and are summarized in the paragraphs below. The conditions are based on moderately spaced explorations and variations in conditions should be anticipated. The subsurface soil conditions encountered in the soil borings consisted of the following strata in order of increasing depth.

4.1 ASPHALT

A 2 to 4-inch-thick layer of asphalt was encountered in the borings on the west side of the Site (HP-1 through HP-4) and was drilled through the sidewalk along the edge of the top of the rip-rap.

4.2 FILL

The entire park consists of filled land. The fill layer encountered was believed to be sourced from the remains of a local fire in Chelsea, MA along with traditional fill materials. Areas of wood and brick were found in all borings. Black wood which appeared charred supports the information from residents that the remains of the fire was the majority of the fill. The area where wood was the primary component ranged from depths between 3 and 21 feet below ground surface.

The fill was described as either wood with black/brown medium to fine sand with varying amounts of silt and trace to little amounts of clay and gravel or a black/brown sand with some to trace amounts of silt, gravel, clay, wood, and brick. The first eight to seventeen feet of fill had greater amounts of sand with increasing amounts of silt with increasing depth.

SPT N-values ranged from 2 blows per foot (bpf) to refusal in the fill layer. SPT values above 30 can be considered artificially high due to the sampler bouncing off or penetrating through wood. Photo 6 presents wood below groundwater encountered in boring HP-14A at a depth of 19 to 21 feet shown in the split spoon sampler that is fairly well preserved.

Photo 6 - Preserved wood below groundwater

4.3 SAND/SILT

A 1-foot to 11 feet thick natural silt/sand layer was encountered below the fill in the borings. The Silt was described as a gray or dark gray clayey silt with trace sand and an organic odor. The SPT N-values for the layer ranged from 6 to 28 bpf corresponding to a loose to medium dense consistency.

4.4 BOSTON BLUE CLAY CRUST

A weathered clay crust is present at the top of the clay. This crust is the result of desiccation, oxidation, and capillary stress. The presence of the stiffer crust plays an important role in the support of structures in the area. Extensive laboratory testing programs by researchers and practitioners reveal that the stiff clay has been pre-consolidated to four or more times the overburden stress. The over-consolidation ratio decreases with depth so the underlying softer clay is considered to be normally consolidated. The clay crust was described as an olive gray to tan clay from a depth ranging between16 feet to 27 feet below ground surface. SPT N-values

ranged from 9 to 35 bpf indicative of a stiff to hard soil. Pocket penetrometer readings in the gray/tan clay ranged from 0.75 tons per square foot (tsf) to over 5 tsf.

4.5 BOSTON BLUE CLAY

Below the weathered clay crust is a gray/olive gray clay in all borings. The gray/olive gray clay commonly referred to as Boston Blue Clay was encountered between 22 feet to 27 feet below ground surface. The clay was described as a gray/olive gray plastic clay with occasional silty clay or sandy clay lenses. Traces of gravel were seen in all borings except for HP-4. SPT N-values ranged from the weight of the rod (WOR) to 10 bpf, which is consistent of a very soft to stiff clay. Pocket penetrometer readings ranged from 0 tsf to 1 tsf.

4.6 GLACIAL TILL

In the borings where the Boston Blue Cay was fully penetrated, a thin layer of glacial till was encountered above the bedrock. The glacial till layer ranged between depths of 34.5 feet to 59 feet. The deepest land-based borings were advanced to a maximum depth of 61 feet and did not encounter bedrock. The till was described as a fine angular gravel or with some to trace amounts of medium to coarse sand, trace clay, and trace to no silt.

4.7 BEDROCK

Bedrock was not encountered in any of the borings drilled.

4.8 GROUNDWATER

Groundwater was encountered at each boring. Groundwater levels will vary due to tidal fluctuations due to the Site's proximity to Lynn Harbor. Groundwater was observed to be 6.4 to 11 feet below ground surface at the time of drilling. Actual groundwater levels will vary daily due to seasonal changes in precipitation and temperature, snowmelt, surrounding and on-site drainage characteristics, but predominately due to tidal fluctuations. Mean High Water for Lynn Harbor is at El +4.8 and Mean Low Water is at El -4.5 (NAVD88 datum).

5.0 LABORATORY TESTING

Laboratory tests were conducted on representative soil samples obtained from the Phase I test borings to assist in soil classification and to evaluate engineering properties. Selected soil samples were submitted to GeoTesting Express geotechnical laboratory for physical analyses. These tests included five(5) grain size analysis, ten (10) Atterberg Limits, fifteen (15) moisture content, six (6) ash and organic matter content, and three (3) incremental consolidation tests. The tests were conducted in general accordance with American Society for Testing and Measures (ASTM) standards and are summarized in Tables 5-1 through 5-5. The laboratory test report is presented in Appendix E.

TABLE 5-1 GRAIN SIZE DISTRIBUTION TEST RESULTS

Test Boring	Sample Number	Depth (feet)	USCS Description	Moisture Content (%)	Percent Gravel	Percent Sand	Percent Silt & Clay
HP-1	S-4	7 to 9	SM	28	13.1	58.5	28.4
HP-3	S-4	7 to 9	OL	208.3	83.7	8.9	7.4
HP-3	S-8	16 to 18	CL	75.1	8.5	8.1	83.4
HP-6	S-2	2 to 4	SM	34.5	19.3	57.2	23.5
HP-6	S-7	12 to 14	OL	87.6	23.2	50.8	26

TABLE 5-2 ATTERBERG LIMIT TEST RESULTS

Test Boring	Sample Number	Depth (feet)	USCS Description	Moisture Content (%)	LL (%)	PL (%)	PI (%)
HP-1	S-10	19 to 21	CL	25.9	43	22	21
HP-1	S-15	29 to 31	CL	34.6	41	20	21
HP-1	ST-1	33 to 35	CL	28.0	37	17	20
HP-3	S-14	28 to 30	CL	31.7	45	21	24
HP-4	ST-1	32 to 34	CL	30.4	45	20	25
HP-6	S-9	16 to 18	CL	30.9	46	24	22
HP-6	ST-1	27 to 29	CL	34.4	40	22	18
HP-6	S-16	37 to 39	CL	36.0	47	21	26
HP-7	S-7	12 to 14	OL	126.3	Organic material, mostly charred wood		
HP-7	S-9	16 to 18	CL	29.9	48	22	26

Notes: PL = Plastic Limit; LL = Liquid Limit; PI = Plasticity Index; ST = Shelby Tube (undisturbed sample)
USCS = Unified Soil Classification System per ASTM D 2487

TABLE 5-3 CONSOLIDATION TEST RESULTS

Test Boring	Sample Number	Depth (feet)	USCS Description	Moisture Content (%)	Dry Unit Weight (pcf)	Void Ratio (%)	Cc
HP-1	ST-1	33-35	CL	26.8	99.0	0.74	0.243
HP-4	ST-1	32-34	CL	34.2	88.0	0.96	0.315
HP-6	ST-1	27-29	CL	32.4	91.0	0.90	0.270

TABLE 5-4 MOISTURE AND ORGANIC CONTENT

Test Pit or Boring No.	Depth (feet)	Soil Description	Moisture Content (%)	Organic Content (%)
HP-1	7-9	Moist, dark gray clayey sand	28	4.7
HP-3	7-9	Moist, black organic material	208	76.7
HP-3	16-18	Moist, dark gray clay with organics	79	7.4
HP-6	2-4	Moist, black silty sand with gravel and organics	41	10.3
HP-6	12-14	Moist, black silty sand with gravel and organics	65	8.4
HP-7	12-14	Moist, brown organic material	125	87.9
Parking Lot Area				
TP-1	7-7.5	Moist, very dark gray sandy clay with organics	35	6.8
HP-26A	10-12	Moist, gray sandy clay	26	2.2
HP-26A	14-16	Moist, dark gray gravel and sand, trace silt	18	3.3
TP-3	10.0-12.0	Moist, very dark gray clay	27	3.0
HP-27A	13.0-15.0	Moist, dark gray clay with sand	33	2.6
TP-5	5.0-8.0	Moist, dark gray silty sand with organics	21	8.1

Table 5-5 INDEX PROPERTIES – PARKING LOT SAMPLES

Test Pit Boring No.	Depth (feet)	Gravel (%)	Sand (%)	Silt/Clay (%)	Moisture Content (%)	Atterberg Limits			USCS
						LL	PL	PI	
TP-1	7-7.5	0.9	29.2	69.9	34	46	23	23	CL
HP-26A	10-12	2.5	31.1	66.4	25	35	18	17	CL
HP-26A	14-16	52.2	40.2	7.6	18	Non-Plastic			GP
TP-3	12	0.8	13.9	85.3	27	33	18	15	CL
HP-27A	11-13	37.6	42.1	20.3	-	Non-Plastic			SM
HP-27A	13-15	5.9	15.5	78.6	35	41	19	22	CL
TP-5	5-8	11	51.5	37.5	23	47	30	17	ML

6.0 INFILTRATION TESTING

Three test pits (TP-1, TP-3, TP-5) were conducted along the south side of the proposed parking lot. Test pits TP-2 and TP-4, proposed along the north side of the parking lot were deleted from the program due to buried electrical lines that service the lights in the parking lot. All three test pits encountered fill for the full depth of the excavation to a depth of about 12 feet.

In borings HP-26A and HP-27A, Stantec performed falling head permeability testing in 4-inch diameter cased borings with soil flush with the bottom of the to provide an estimate of soil permeability. Groundwater was at a depth of 6 feet in each boring.

The tabulated data and plots of the test data, showing incremental infiltration rates versus elapsed time, are presented in Appendix D. The results are summarized in Table 6-1 below.

Table 6-1 – Summary of Soil Permeability Results – Parking Lot Area

Location	Depth (feet)	Soil Description	Soil Permeability (cm/sec)
HP-26A	14.0	Black Gravel, little Silt, Little Sand (Fill)	2.09×10^{-4}
HP-27A	15.0	Gray Brown Clayey Silt, trace shells, organic odor	3.09×10^{-5}

Due to the variability of the fill within the existing and proposed parking lot, stormwater infiltration is not recommended for this location. Underground stormwater detention/storage is recommended with discharge after treatment to Lynn Harbor to the west.

7.0 BOARDWALK DISCUSSION AND RECOMMENDATIONS

7.1 FINDINGS

A subsurface investigation program consisting of eight borings were drilled through the existing boardwalks to the east of 154 Lynnway, south of 152 Lynnway, and west of 150 Lynnway. The subsurface conditions encountered are presented in Table 7-1.

TABLE 7-1 – SUMMARY OF SOIL BORING OBSERVATIONS – BOARDWALK

Boring	Boardwalk Surface El	Gap between Deck and Ground (feet)	Debris Fill Layer (feet)	Sand/Silt Layer (feet)	Boston Blue Clay Crust (feet)	Boston Blue Clay (feet)	Till Layer (feet)	Soil Boring Depth (feet)	Water Table Depth (feet)(1)
HP-5A	10.0	2.5	2.5-19		19-27	27-53		53	NR
HP-6	9.51	0	0-14	14-16	16-24	24-58.5		58.5	NR
HP-7	11.0	0	0-14		14-28	28-57	57-58	58	6.4
HP-8A	11.86	2.5	2.5-19	19-21	21-33	33-53		53	NR
HP-9A	11.85	3	3-19	19-34	34-39	39-46		46	NR
HP-10A	11.80	3	3-24	24-28	28-52.5		52.5-55	55	NR
HP-11A	11.86	2.5	2.5-19.	19-24	24-56			56	NR
HP-12A	11.77	2.5	2.5-14	14-28	28-53			53	NR

1. Observed water table depths at the time of drilling are variable and subject to tidal influences.
2. NR – Not Recorded

7.1.1 Boardwalk South of 154 Lynnway

The boardwalk along the south end of 154 Lynnway is pile supported (45 feet long timber piles with tip at El – 33 ±) and did not shown signs of visible differential settlement (varies between El 11.95 and El 11.90) although borings W-3A through W-5A show the pile tips to be in the soft Boston Blue Clay. Assuming the boardwalk deck had an initial top at El 12.19, less than 4 inches of settlement has occurred over 35 years.

The south boardwalk is pile supported and has not undergone significant settlement. However, the concrete seawall at the north side of the boardwalk is supported on an L-shaped concrete footing and has undergone settlement and cracking. The only issue with the boardwalk is the deterioration of the decking itself. The deteriorated boardwalk is 28 feet wide by 300 feet long and the deteriorated floor of the pavilion at the west end of the boardwalk is 40 feet long by 25 feet wide.

7.1.2 Boardwalk East of 154 Lynnway

The 390 feet of boardwalk located along the eastern side of the condominium at 154 Lynnway is supported on shallow footings that extend to a depth of 4 feet below the top of deck and originally had a bottom of footing at El 8.2 that was underlain by 12 inches of gravel. Assuming the boardwalk was constructed at the same elevation (El 12.19) between Stations 22+10 and Station 26+00 it has undergone significant differential settlement with the top of deck varying between El 8.97 and 11.31. Three borings were drilled through the boardwalk (HP-5A, HP-6 and HP-7) and one water boring (W-1) was drilled along the toe of slope opposite boring HP-6. The upper 14 feet consisted of uncontrolled fill materials in each of the borings. The borings drilled on land also showed evidence of decomposed burned wood and either loose sands or very soft clay.

The settlement along the boardwalk on the east side of 154 Lynnway is based upon apparent placement of charred wood debris/backfill recovered in the borings that has undergone decomposition and resulting settlement/subsidence over the past 35+ years.

- Boardwalk decking are assumed to be original based upon the observed conditions and should be replaced. The impacted boardwalk is 28 feet wide and 390 feet long.
- Significant settlement has occurred at the north end of the boardwalk. There is a 12-inch step between the north-south boardwalk to the east of 154 Lynnway and the east- west boardwalk south of 152 Lynnway that at one time was assumed to be at the same grade.
- Borings indicated burned wood debris and loose sand fill in the upper 14 feet of the material below the boardwalk. This material is underlain by an 8 feet thick layer of stiff Boston Blue Clay crust.
- A pile supported foundation is recommended for the entire boardwalk to the east of 154 Lynnway to bypass the decomposing fill materials.

7.1.3 Boardwalk South of 152 Lynnway

The boardwalk south of 152 Lynnway has undergone significant settlement at the connection to the boardwalk at 154 Lynnway for a distance of approximately 70 feet to the east. There is a step between the north-south boardwalk and the east- west boardwalk that was assumed originally to be at the same grade and has undergone 14 inches of differential movement.

- The impacted boardwalk is 28 feet wide and 70 feet long.
- Borings indicated burned wood debris and loose sand fill in the upper 14 feet. There is an 8 feet thick layer of stiff Boston Blue Clay crust beneath the fill.
- A pile supported foundation is recommended for the eastern most 70 feet of the boardwalk south of 152 Lynnway to bypass the decomposing fill materials.

7.1.4 Boardwalk West of 150 Lynnway

The boardwalk west of 150 Lynnway has undergone settlement of less than 4 inches with minimal differential settlement (original elevation at EL 12.19; current varies between El 11.76 and 11.86). This area would only need to have the decking replaced.

7.2 FOUNDATION TYPE CONSIDERATIONS

The boardwalk east of 154 Lynnway and south of 152 Lynnway for a distance of 70 feet should be replaced with a pile supported structure to bypass the underlying decomposing wood and demolition debris that had been used to fill the harbor. It is anticipated that the boardwalk will be subjected to minimal lateral forces and the loading from the boardwalk will be compression. It is recommended that either helical piles extended into the Boston Blue Clay Crust layer or micropiles extended into glacial till be utilized to support the boardwalk at these locations due lower vibration generated during installation. Other traditional pile options were evaluated, however were not well-suited for equipment access to the confined area.

7.2.1 Helical Piles

Helical piles consist of a single plate or multiple plates, formed into the shape of a helix (one pitch of a screw thread), and attached to a central shaft. The pile is installed by applying torque to the shaft and screwing it into the earth until a desired load capacity is achieved. Helical piles have advantages of rapid installation with small equipment and no hammering or vibration.

Helical piles are hot-dip galvanized for corrosion protection. Additional service life of these piles can be obtained by estimating the amount of corrosion that would occur in the steel components over a certain time period and increasing the thickness of the steel to compensate for the corrosion.

It is recommended that the shallow footings supporting the boardwalk to the east of 154 and 70 feet south of 152 Lynnway be removed and helical piles installed to bridge the zone of loose compressible soil and/or decomposing wood. It is anticipated that the piles should extend into the stiff Boston Blue Clay Crust with the bottom of pile at a depth of about 21 feet or to about El -8. The helical piles would be spaced 5 feet apart and be embedded into a concrete pile cap to support the stringers that support the bottom of the boardwalk decking. The boardwalk is 28 feet wide and the distance between each pile bent (6 piles each) would be 10 feet. Assuming the dead and live vertical load is 300 pounds per square foot (psf) and lateral loads are negligible, the required compression load per helical pile would be about 14,000 lbs. A factor of safety of 2 should be used in the design. The top most helix plate (12-inches) would be at a depth of 18 feet and a second helix plate (10-inches) would be at a depth of 20.5 feet. A Type SS-125 series with a 1.25-inch round corner square shaft with 3/8-inch thick plates would be utilized to provide the required vertical capacity. The installation torque would be 2,050 foot-pounds. The piles would be 21 feet long plus 2 to 3 feet of stickup to the bottom level of the boardwalk. An allowable load of 300 psf was used to accommodate emergency/maintenance vehicles on the boardwalk to the east of 154 Lynnway. A total of 41 pile bents will each consist of 6 piles spaced 10 feet on center for a total of 246 piles. Pile load tests should be run to confirm pile capacity.

Helical piles are proposed for the western most 70 feet of the boardwalk south of 152 Lynnway to also bypass the decomposing fill materials. The piles would again be 21 feet long plus 2 to 3 feet of stickup to the bottom level of the boardwalk. Two helical plates are proposed; a 12-inch plate at 18.5 feet and 10-inch plate at 20.5 feet. Based on an allowable load of 300 psf along the boardwalk, a total of 8 pile bents will consist of 6 piles each spaced 10 feet on center for a total of 48 piles.

7.2.2 Micro Piles

An alternative to the helical piles is to utilize micro piles that are advanced to the glacial till at an assumed depth of 65 feet. Bedrock was not encountered to the depth that the borings were advanced. The advantage of the micro piles is the increased load bearing capacity and fewer piles required to support the boardwalk bents.

Micropiles are small-diameter deep foundation elements that bypass poor bearing soils and transfer loads into a competent underlying bearing stratum. Micropiles derive their capacity entirely by friction or adhesion along the interface between the grout and the surrounding soil. The tip capacity is negligible due to the relatively small cross-sectional area of the pile tip. The bond strength along the micropile depends on the characteristics of the soils that surround it, the material characteristics of the micropile, and the micropile installation process.

Micropiles would be designed for a working load of 84 kips in compression per pile bent. There are a total of 41 bents needed to support the boardwalk east of 154 Lynnway and 8 bents south of 152 Lynnway. Assuming two piles per bent, each pile would need to support 42 kips in compression resulting in a total 98 piles. The Micropiles would be advanced through the fill and soft Boston Blue Clay to the underlying glacial till at depths of around 55 to 60 feet, followed by the advancement of a minimum 15-foot bond length into the glacial till.

A micropile design with steel casing from the pile top to the bearing materials and a full-length core steel reinforcing bar is recommended. Consistent with structure loadings, the micropiles should be a nominal 8- inches in diameter. These piles are typically constructed with casing having a wall thickness of about 1/2 inch, using API-N80 pipe manufactured from steel with a yield stress of 80 kips per square inch.

Installation would utilize a 7-5/8-inch diameter micropile casing outfitted with teeth on the leading edge to construct an 8-inch diameter bond zone beyond the casing in the glacial till deposit. A single#8 thread bar (Grade 75 ksi) would be inserted full length into the cementitious grout as the core steel to transfer the load into the bond zone. The friction micropiles should be designed to be cased through the soft Boston Blue Clay and bonded into the glacial till.

It is recommended that a pile loading test be performed to confirm that the Contractor's installation procedures will develop the design support capacities. In developing such a testing program, consideration should be given to testing a non-production micropile in both compression and tension. Testing a sacrificial pile both to a conventional condition of at least twice the design load capacities and to a failure condition would obtain a measure of the settlement deflections and the ultimate load supporting capacities. A sequence of loading and

unloading cycles to increasing maximum loads will enable an evaluation of the pile support that is developed.

8.0 RIPRAP SEAWALL DISCUSSION AND RECOMMENDATIONS

8.1 FINDINGS

A subsurface exploration program was conducted to evaluate the potential for additional movement of the soil along the riprap seawall. Four borings (HP-1 through HP-4) were drilled to a depth of 50 feet between Sta. 16+00 and 19+00 along the top of slope along the west shoreline of the park to define current subsurface conditions and obtain soil samples for laboratory testing and one water boring (W-2) drilled along the toe of slope opposite boring HP-3.

The borings drilled showed evidence of charred wood in the upper 14 feet of the ground surface between Sta. 16+00 and 19+00. The riprap along the slope has settled/shifted in several areas due to the decomposition of the organic materials but the slope appears to be stable as shown in the photo. There are several stormwater outlets that appear to be elevated causing the pipeline to not drain properly. A review of the 1982 Design Drawing DG-1 indicates that half of the riprap slope was installed over filled land that did not have the organic silt removed during the dredging for the riprap seawall. It is assumed that the settlement that has occurred between Sta 16+09 and Sta 19+62 is due to the presence of the underlying organic silt layer that has compressed over time from the weight of the riprap. A visual observation of the riprap seawall indicates that a slope failure (slide) has not occurred and the slope appears to be stable.

A total of 5 borings were drilled along the toe of the riprap seawall in 2017 (W-1 and W-2) and 2018 (W-3A and W-5A). Boring W-1 was located to the east of 154 Lynnway and boring W-2 was drilled to the west of the park near where the riprap had settled. Borings W-3A through W-5A were located to the south of the southern boardwalk. A summary of the subsurface conditions encountered along the riprap seawall on land is presented in Table 8-1 and the borings drilled in the harbor near the toe of the riprap seawall is presented in Table 8-2.

TABLE 8-1 – SUMMARY OF LAND BORING OBSERVATIONS – RIPRAP SEAWALL

Boring	Ground Surface El	Fill Layer (feet)	Debris Fill Layer (feet)	Sand/Silt Layer (feet)	Boston Blue Clay Crust (feet)	Boston Blue Clay (feet)	Till Layer (feet)	Boring Depth (feet)
HP-1	9.7	0-5	5-17		16-25	25-40	40-45	45
HP-2	8.5	0-2	2-14		14- 26	26-52		52
HP-3	8.5	0-1.5	1.5-14	14-18	18-30	30-52		52
HP-4	9.8	0-3	3-17	17-22	22-32	32-57		57

TABLE 8-2 – SUMMARY OF WATER BORING OBSERVATIONS – RIPRAP SEAWALL

Boring	Water Column (feet)	Top of Mud Line EL	Organic Layer (feet)	Sand/Silt Layer (feet)	Boston Blue Clay Crust (feet)	Boston Blue Clay (feet)	Till Layer (feet)	Boring Depth (feet)
W-1	14	-12.0	14-21		21-51			51
W-2	14	-9.0	14-22		22-44	44-54		54
W-3A	20	-18.0	20-25		25-29	29-82		82
W-4A	19	-14.8	19-23		23-27	27-68	68-71	71
W-5A	20	-16.2	20-30	30-73			73--77	77

The riprap seawall to the west of the park has undergone settlement with the majority of the seawall in fair condition. The riprap was placed on a 2H to 1V slope and is approximately 3 feet thick. There is one area located between the pavilion and 150 feet north of the pavilion that has undergone settlement. It appears that this area was filled land over soft organic silt that was not removed during the harbor dredging in 1983. In order to restore the uniform appearance of the seawall, this section of the seawall should either have the riprap removed, the subgrade excavated to remove the underlying compressible organic silt to the clay crust, backfilled with granular fill and then reset the riprap to meet the original configuration or add additional riprap to provide a uniform appearance. During our investigation, it was noted that the riprap around the marina had small stones chinked in between the large granite blocks. The riprap along the west side of the park did not have this chinked stone between the riprap. Consideration should be given to installing this stone between the blocks to enhance stability.

9.0 PARK DISCUSSION AND RECOMMENDATONS

9.1 FINDINGS

A majority of Lynn Heritage State Park is comprised of tidelands that had been filled over the years. Based on historical topographic maps and Sanborn maps, Stantec observed that approximately 95% of the Site was originally part of the harbor that has been filled. Reports indicate the fill includes harbor dredging, soil, and debris from the Great Lynn Fire of 1889 and the Chelsea Fire of 1973. As noted above, the fill consists of charred wood, brick, coal ash, glass and miscellaneous unsuitable materials. The fill material was not placed as an engineered fill and ranged in density from very loose to very dense. The organic material (e.g. wood) above the mean low water elevation (El -4)and subject to tidal fluctuations have been subject to decomposition resulting in localized collapse and/or settlement. Due to the variability of the demolition fill debris, significant differential settlement has occurred resulting in depressions and the rolling appearance of the sidewalk along the west side of the park. The settlement has caused drainage pipe outlets to no longer function as originally intended.

The three test pits excavated in the parking lot area confirmed that the fill extended to the northern end of the park and also included wood debris.

Because of the potential for onsite and offsite residual impacts, soils or groundwater associated with any proposed excavation and off-site disposal will require a Soil/Groundwater Management Plan and implementation of a Health and Safety Plan. Soils generated for offsite disposal during construction activities will need to be characterized and properly disposed offsite.

A total of 19 borings were drilled within Heritage State Park between the 2017 and 2018 subsurface investigation programs (Borings HP-1 through HP-4 and HP-13A through HP-27A). A summary of the subsurface conditions encountered are presented in Table 9-1.

TABLE 9-1 – SUMMARY OF SOIL BORING OBSERVATIONS – PARK AREA

Boring	Ground Surface El	Fill Layer (feet)	Debris Fill Layer (feet)	Sand/Silt Layer (feet)	Boston Blue Clay Crust (feet)	Boston Blue Clay (feet)	Glacial Till Layer (feet)	Soil Boring Depth (feet)	Groundwater Depth (feet)(1)
HP-1	9.7	0-5	5-17		16-25	25-40	40-45	45	11.0
HP-2	8.5	0-2	2-14		14- 26	26-52		52	NR
HP-3	8.5	0-1.5	1.5-14	14-18	18-30	30-52		52	NR
HP-4	9.8	0-3	3-17	17-22	22-32	32-57		57	NR
HP-13A	10.0	0-2	2-17	17-19	19-26	26-61		61	9.5
HP-14A	11.0	0-2	2-20	20-24	24--29	29-61		61	9.1
HP-15A	10.0	0-3	3-19	19-20	20-27	27-61		61	9.5
HP-16A	10.0	0-4	4-19		19-30	30-61		61	11.5
HP-17A	11.0	0-2	2-19	19-27	27-33	33-61		61	12.6
HP-18A	10.8	0-2	2-19	19-24.5	24.5-34	34-46		61	NR
HP-19A	13.0	0-6	6-34		34-37	37-59	59-61	61	11.0
HP-20A	14.0	0-7	7-13	13-19	19-34.5		34.5-41	41	NR
HP-21A	11.8	0-3	3-22		22-31			31	8
HP-22A	12.5	0-3	3-29		29-42	42-48	48-51	51	11
HP-23A	12.2	0-2	2-20	20-29	29-37	37-59	59-61	61	12.1
HP-24A	12.2	0-2	2-24		24-35	35-53	53-61	61	6
HP-25A	13.0	0-2	2-24		24-34	34-56	56-61	61	6

TABLE 9-1 – SUMMARY OF SOIL BORING OBSERVATIONS – PARK AREA (continued)

Boring	Ground Surface El	Fill Layer (feet)	Debris Fill Layer (feet)	Sand/Silt Layer (feet)	Boston Blue Clay Crust (feet)	Boston Blue Clay (feet)	Glacial Till Layer (feet)	Soil Boring Depth (feet)	Groundwater Depth (feet)(1)
HP-26A	13.0	0-4	4-14	14-24	24-35	35-50	50-51	51	6
HP-27A	11.0	0-1	1-13	13-24	24-33	33-53	53-56	56	6

1. Observed water table depths at the time of drilling are variable and subject to tidal influences.
2. NR = Not recorded

Figure 4 presents "Boring Locations Plotted on 1982 Site Conditions" which shows site features and/or conditions prior to the park development in 1983. Figures 5, and 6 present north-south "Subsurface Profiles A-A and B-B." Figure 7 presents an east-west oriented "Subsurface Profile C-C" which runs through Dredge Disposal Area 2 and recommended location for the Splash Pad. Table 9-2 presents estimated engineering properties for the various soil deposits for use in design.

TABLE 9-2 - SOIL STRATA ENGINEERING PROPERTIES

Soil Deposit	Soil Unit Weight (pcf)	Shear Strength (psf)	Friction Angle (degrees)
Fill	125	0	30
Debris Fill	115	50	28
Organic Silt and Silty Fine Sand	105	400	20
Stiff Boston Blue Clay Crust	125	2,000	30
Soft Boston Blue Clay	110	400	10
Glacial Till	138	2,000	38

9.2 PARK DEVELOPMENT OPTIONS

Three options were evaluated for addressing settlement and subsidence/collapse issues to facilitate improvements at Heritage State Park and include partial excavation and removal within the southern-most 1.5 acres of the park. Due to the continued decomposition of wood building debris and ensuing collapse/subsidence within the upper 10 feet of the park, in each option presented herein, the shade structures and light poles would be supported on pile foundations supported within the Boston Blue Clay Crust layer or the underlying glacial till.

9.2.1 Pile Supported Shade Structures and Light Poles

9.2.1.1 Helical Piles

Based on soil conditions encountered at the site, a two-plate helical pile with plate diameters of 10 and 12 inches can be used to support light poles and shade structures within the park. The estimated depth of the bottom plate of the helical pile is about 20 to 25 feet below the ground surface. Because the vertical load per pile is expected to be small, settlement is expected to be less than 1.0 inch. However, due to the small diameter of the vertical shaft, helical piles are not capable to develop lateral resistance to design wind loads. Therefore, the helical piles should have batter piles installed or be laterally braced against other structural elements to resist lateral loads. The helical piles must be designed to be resistant to corrosion.

Final design of the helical piles should be the responsibility of the contractor. For conceptual design we have estimated the allowable compressive load of 4,500 psf on the helical piles based on the following:

- Two helices per pile;
- The bottom helix having a minimum diameter of 10 inches;
- The bottom helix located at least 20 feet below the finished ground surface;
- A minimum vertical spacing between two adjacent helices of three times the diameter of the smaller helix;
- A minimum center-to-center pile spacing of three times the maximum helix diameter or three feet, whichever is greater.
- A Type SS-125 series with a 1.25-inch round corner square shaft with 3/8-inch thick plates would be utilized to provide the required vertical capacity. The installation torque would be 2,050 foot-pounds.

9.2.1.2 Micropiles

An alternative pile foundation support system would be to install micropiles which, depending on the wind loads from the shade structures, may be capable to resist the lateral loads due to the grout filled steel casing.

Micropiles are small-diameter deep foundation elements that bypass poor bearing soils and transfer loads into a competent underlying bearing stratum. Micropiles derive their capacity entirely by friction or adhesion along the interface between the grout and the surrounding soil. The tip capacity is negligible due to the relatively small cross-sectional area of the pile tip. The bond strength along the micropile depends on the characteristics of the soils that surround it, the material characteristics of the micropile, and the micropile installation process.

The Micropiles would be advanced through the fill and soft Boston Blue Clay to the underlying glacial till at depths of around 55 to 60 feet, followed by the advancement of a minimum 10-foot bond length into the glacial till and/or bedrock.

A micropile design with steel casing from the pile top to the bearing materials and a full-length core steel reinforcing bar is recommended. Consistent with structure loadings, the micropiles should be a nominal 8- inches in diameter. These piles are typically constructed with casing having a wall thickness of about 1/2 inch, using API-N80 pipe manufactured from steel with a yield stress of 80 kips per square inch.

Installation utilizing 7-5/8-inch diameter micropile casing outfitted with teeth on the leading edge an 8-inch diameter bond zone would be constructed beyond the casing in the glacial till deposit or underlying argillite bedrock. A single#8 thread bar (Grade 75 ksi) would be inserted full length into the cementitious grout as the core steel to transfer the load into the bond zone. The micropiles should be designed to be cased through the soft Boston Blue Clay and bonded into the glacial till.

9.2.2 Option 1 -Partial Depth Excavation to Water Table, Screen, and Reuse

Remove all material to El 2(10 feet deep), Screen material to remove wood, Stockpile soil, Reinstall as an engineered fill. Pile support Shade Structures and Light Poles. Splash Pad to be located over Dredge Disposal Area 2 where no excavation other than regrading is necessary.

The settlement along the sidewalk along the west riprap seawall shore protection at the park are based upon apparent placement of the riprap seawall above organic silt that was beneath the shoreline as shown in the 1982 drawings that was not removed during the dredging. In addition, charred wood debris/backfill used to raise the grade that was recovered in the borings has undergone decomposition and resulted in settlement/subsidence within the tidal zone. Dredge Disposal Area 2 was constructed as an engineered fill and would be the preferred location of the splash pad. This area was highlighted in yellow on the boring location plan.

The possible construction sequence involves the following:

- Remove asphalt pavement for 300 feet along the seawall and dispose.
- Strip off topsoil and clean fill in the upper 3 feet of the park area and stockpile for reuse.
- Install one row of temporary steel sheet piling along the top of the riprap slope for 360 feet to a depth of 25 feet.
- Excavate and remove the uncontrolled fill within the park to a depth of 10 feet along the top of slope of the riprap seawall to remove wood/demolition debris.
- Screen the excavated material to remove brick and wood debris from the fill. Reuse the soil generated from the screening process.
- Dispose of demolition material (wood/brick, etc.)at an approved disposal area.
- Backfill and compact the park to El 12 utilizing stockpiled excavated material and clean granular backfill from an approved off-site source to attain the required grading. Install two layers of biaxial geogrid to reinforce the soil and bridge over any localized areas where future decomposition of the underlying wood debris may occur.
- Replace failed drainage system that outlets into the harbor.
- Regrade splash pad area per design concept located over Dredge Disposal Area 2.

- In areas where shade structures and light poles are proposed, support the facilities on helical piles bearing within the stiff Boston Blue Clay Crust layer at a depth of 25 feet or micropiles end bearing in glacial till at a depth of 60 feet.
- Revegetate disturbed areas.

9.2.3 Option 2 - Surficial Excavation/ Pile Support Structures

Remove all material to a depth of 3 feet, screen material to remove wood and demolition debris, Stockpile soil, Install geogrid, Reinstall stockpiled material as an engineered fill. Pile support Shade Structures and Light Poles. Splash Pad to be located over Dredge Disposal Area 2. Periodically regrade park as needed as part of park yearly maintenance activities.

In this option, the upper 3 feet of soil will be removed and stockpiled for reuse. Two layers of biaxial geogrid would be installed on the subgrade to stabilize the park area for passive recreation. The excavated soil would be placed in 12-inch loose lifts and compacted. The park would be regraded to eliminate areas where decomposition and surficial subsidence has occurred. The proposed shade structures and light poles would be pile supported. Dredge Disposal Area 2 was constructed as an engineered fill and would be the preferred location of the splash pad.

The possible construction sequence involves the following:

- Remove asphalt pavement for 300 feet along the seawall and dispose.
- Replace failed drainage system that outlets into the harbor
- Strip off topsoil and fill within the upper 3 feet of the park area and stockpile for reuse.
- Screen the excavated material to remove brick and wood debris from the fill. Reuse the soil generated from the screening process.
- Dispose of demolition material (wood/brick, etc.)
- Backfill and compact the park to El 12 utilizing stockpiled excavated material and with clean granular backfill from an approved off-site source to attain the required grading. Install two layers of geogrid to reinforce the soil and bridge over any localized areas where future decomposition of the underlying wood debris may occur.
- Regrade splash pad area per design concept located over Dredge Disposal Area 2.
- In areas where shade structures and light poles are proposed, support the facilities on helical piles bearing within the stiff Boston Blue Clay Crust layer at a depth of 25 feet or micropiles end bearing in glacial till at a depth of 60 feet.
- Revegetate disturbed area.

9.2.4 Option 3 - Surficial Site Excavation and Stabilization, No Off-Site Disposal of Excavated Material / Pile Support Structures

Stabilize portion of site closest to parking lot and allow remainder of site for passive recreation to settle due to decomposition of buried building debris. Regrade park with imported granular fill, Pile

support Shade Structures and Light Poles. Splash Pad to be located over Dredge Disposal Area 2. Periodically regrade site as needed as part of park yearly maintenance activities.

In this option the only area where excavation will occur is within the proposed parking lot expansion and underground stormwater detention basin beneath the pavement. Regrade depressed areas within the park where wood decomposition and subsidence has resulted in depressions at the ground surface with imported structural fill. The proposed shade structures and light poles would be pile supported. Dredge Disposal Area 2 was constructed as an engineered fill and would be the preferred location of the splash pad.

The possible construction sequence involves the following:

- Remove asphalt pavement for 300 feet along the seawall and dispose.
- Replace failed drainage system that outlets into the harbor.
- Fill in depressed areas along the riprap seawall between Sta 16+05 and Sta 19+61.
- Install geogrid within localized depressed areas
- Backfill and compact the filled depressed areas utilizing clean granular backfill from an approved off-site source to attain the required grading. Install two layers of biaxial geogrid over the subgrade prior to regrading the site to reinforce the soil and bridge over any localized areas where future decomposition of the underlying wood debris may occur.
- Regrade splash pad area per design concept located over Dredge Disposal Area 2.
- In areas where shade structures and light poles are proposed, support the facilities on helical piles bearing within the stiff Boston Blue Clay Crust layer at a depth of 25 feet or micropiles end bearing in glacial till at a depth of 60 feet.
- Revegetate disturbed area.

10.0 PARKING AREA PAVEMENT DESIGN RECOMMENDATIONS

The long-term performance of the pavement is generally proportional to the quality of the subgrade soils. The results of the borings indicate that the pavement subgrade will consist of miscellaneous fill. The Geotechnical Engineer's evaluation of the soil subgrade during construction may warrant over-excavation or stabilization. The Construction Contract should contain provisions for removal of unsuitable existing fill (in addition to that recommended herein), that may be identified during proof-rolling, grading, and testing. Vehicular traffic is expected to consist of automobiles and light trucks. Large heavily loaded trucks are not expected.

The following table indicates the recommended thickness for new asphaltic concrete pavement with aggregate base course for a design life of 20 years, along with the appropriate Massachusetts Department of Transportation, Highway Division, (MassDOT)Supplemental Specifications to the 1988 English and 1995 Metric Standard Specifications for Highways and Bridges to ensure proper materials are used.

TABLE 10-1 - PAVEMENT DESIGN RECOMMENDATIONS

Material	Minimum Asphalt Pavement Section Thickness (inches) 20 Year Service Life	MassDOT Standard Specifications for Highways and Bridges
Bituminous Concrete Top Course	1.5	Item No. M3.11.03
Bituminous Concrete Binder Course	2	Item No. M3.11.03
Dense-graded Crushed Stone for Sub-base (Base Course)	8	Item No. M2.01.7
Gravel Borrow (Subbase Course)	24	Item No. M1.03.0, Type b

All bituminous asphalt materials and construction procedures should be in accordance with the requirements of MassDOT Standard Specifications for Highway and Bridges. The asphalt materials should be compacted per Section 460, and the aggregate base and subbase courses should be compacted to a minimum of 95% of Modified Proctor maximum dry density. One Modified Proctor test and one gradation test should be performed for each source of base and sub-base course material. One in-place density test should be performed per 6-inch thick lift for each 10,000 square feet of pavement base or sub-base material placed. The percent compaction is determined in the field by ASTM D-6938 (nuclear density meter).

Pavement recommendations assume proper drainage and construction observation and testing. Flexible pavements are based on AASHTO design parameters for a 20-year design period. However, this is based on a routine pavement maintenance program, with pavement rehabilitation after about 8 to 10 years and additional maintenance to obtain the 20-year pavement service life.

11.0 BACKFILL FOR SUBSIDENCE AREAS

Areas that require fill due to wood decomposition and subsidence can be backfilled with on-site excavated soils provided they can be placed, spread in uniform lifts and adequately compacted. Imported soils should meet the requirements of Massachusetts Department of Transportation (MassDOT), Standard Specifications for Highway and Bridges, Special Borrow, M1.02.0. Special Borrow shall consist of inert material that is hard, durable stone and coarse sand, free from loam and clay, surface coatings and deleterious materials and meeting the following gradation in the table below. Criteria for fill placement and compaction testing are provided in the Construction Considerations section of this report.

TABLE 11.1 – SPECIAL BORROW GRADATION REQUIREMENTS

Particle Size	Percent Passing by Weight
6 – inch	100
2 - inch	90 – 100
No. 4	20 – 65
No. 200	0 – 12

12.0 CONSTRUCTION CONSIDERATIONS

12.1 EXCAVATION AND DEWATERING

Unbraced excavations are anticipated to cave. Accordingly, excavation slopes should be flattened or braced to maintain stability. All excavations should be performed in accordance with current OSHA requirements under the observation and responsibility of the project Contractor. Excavation slopes should be checked regularly for signs of instability and flattened as required. Temporary slopes should be protected from surface water run-off erosion by means of berms and swales located along the top of the slope.

Dewatering during removal of unsuitable material above the e water table is not anticipated to be required. However, if groundwater is encountered, then the Contractor should be prepared to install a system of trenches and sumps to control groundwater flow into the excavation. Actual groundwater levels may vary significantly over time due to seasonal changes in precipitation and temperature, snowmelt, and surrounding and on-site drainage characteristics.

Specifications should require that the Contractor divert surface water runoff away from excavations so that structures, fill, and sand are not saturated. Precipitation that results in standing water in the excavation should be removed immediately.

12.2 SUBGRADE STABILIZATION

The subgrade soils may require stabilization after exposure to construction traffic disturbance, and specifications should contain provisions for subgrade repair. The subgrade should be graded to promote positive runoff to a suitable drainage feature at all times during construction. All excavations and exposed subgrade should be maintained in a moist, but unsaturated, condition throughout construction. The degree of subgrade disturbance will be dependent on the Contractor's means and methods, such as coordinating site activities around anticipated precipitation, and protecting exposed subgrade due to disturbance from excess moisture and construction equipment traffic. Subgrade repair can include one or more of the following:

- Scarification, moisture conditioning, and re-compaction (sand/gravel soils only);
- Over excavation to a stable subgrade;
- Partial over-excavation and stabilization with coarse graded aggregate and/or geotextile.

12.3 SUBGRADE PROOF-ROLL AND COMPACTION

Once rough graded and immediately prior to placing backfill or base course, the subgrade should be proof-rolled under the direction of the Geotechnical Engineer to detect any weak or unstable areas that should be repaired prior to subsequent placement of fill material. Methods of repair of low strength, excessively dry or wet, frozen, and/or variable materials are discussed under "Subgrade Stabilization".

Proof-rolling should be performed with a minimum of four passes using a steel drum roller with a minimum static weight of 10 tons. In excavations within 2 feet of the groundwater table, proof-rolling should be performed without the use of vibratory action. The proof-rolling is intended to detect evidence of pumping, rutting or weaving, which is indicative of unstable and unsuitable materials, and should be completed under the Geotechnical Engineer's observation. Subsequently, all soil subgrade should be moisture conditioned to within ±3% of optimum moisture and compacted to 95% of the maximum dry density per ASTM D 1557 (Modified Proctor) with adequately sized vibratory compaction equipment. The percent compaction is determined in the field by ASTM D-6938 (nuclear density meter). One in-place density test should be performed for each 10,000 square feet of pavement subgrade area.

12.4 PLACEMENT OF BACKFILL

One gradation test should be performed for each source of imported backfill. The soil moisture content range should be ±3 percent of its optimum moisture content as determined by Modified Proctor Test and compacted Structural Fill should be placed in uniform lifts not exceeding 12 inches loose thickness. One Modified Proctor Test should be performed for each source of imported backfill. In areas below structures compaction should be at least 95% of the maximum dry density per ASTM D1557 (Modified Proctor). In areas outside the limits of a structure (e.g. landscaped area) compaction should be at least 92% of the maximum dry density per ASTM D1557 (Modified Proctor). The percent compaction is determined in the field by ASTM D-6938 (nuclear density meter). A minimum of two in place density tests should be performed for each lift of fill placed.

It is anticipated that the on-site materials will not be suitable for reuse as backfill. If the on-site materials are not determined to not be suitable, then the specifications should include provisions for offsite disposal of unsuitable materials at an approved disposal facility.

It is recommended that a Geotechnical Engineer be retained to provide construction observation services. The Geotechnical Engineer should be retained to observe and make accurate records regarding proof-rolling operations of the subgrade prior to backfill placement, types of materials used, thickness of lifts, densities, percent compaction, type of compaction equipment and number of passes, etc. Backfill compaction should be in accordance with the requirements of these recommendations, which should be incorporated into the project specifications.

12.5 PROTECTION OF UTILITIES

Utilities within the area of the proposed excavations should be properly braced, temporarily re-routed and/or protected from construction activities/disturbance.

If the underlying fill material within the park remains without removal of decomposing wood demolition debris in the upper 12 feet of finished grade, then replacement stormwater drainage pipelines should be supported on helical piles installed into the crust layer to minimize settlement and reversed drainage pipeline slope.

Electrical wiring to light poles should be installed within Schedule 40 PVC conduit encased within cast in place reinforced concrete conduit.

13.0 LIMITATIONS

13.1 USE OF REPORT

This report has been prepared for the exclusive use of the Brown, Richardson & Rowe, Inc. their client, and their respective assigns and designees. This report is not intended for the use or reliance of other (third) parties, without the express consent of Stantec. Any use, which a third party makes of this report, or any reliance on decisions made based on this report, is the responsibility of such third parties. Further, the findings of this study apply only to the specific Site and project described herein. The findings herein are inapplicable to other Sites, and to developments of different grading, layout, loading, and performance requirements. Stantec accepts no responsibility for damages, real or perceived, suffered by parties as a result of decisions made or actions based on the unintended and/or inappropriate use of this report.

This Geotechnical Report provides recommendations, and is intended for informational use, requiring interpretation by the owner, design team, and contractor for the design and construction of the project, and interpretation of final quantities and construction costs. The Geotechnical Report is not intended, or suitable, by itself, for use as a technical specification or to determine quantities. Anticipated quantities and/or costs may be provided in the Geotechnical Report; such information is an Engineer's interpretation, and may vary dramatically from contractor bids, which are based on potentially differing interpretations, and several other variables not available or considered by the Engineer.

13.2 SUBSEQUENT INVOLVEMENT

The geotechnical process incorporates initial exploration and recommendations as summarized herein and is followed by continuous involvement during key design and construction benchmarks. The recommendations provided herein are based on preliminary information and assumptions regarding proposed site grading, structural loading and performance requirements. It is recommended that Stantec review final foundation, grading, and other applicable plans to assess whether or not these recommendations require modification.

During construction, additional soil samples should be analyzed in the laboratory for moisture content, gradation, and moisture density relationship tests to evaluate the reuse of onsite soils (existing fill and natural sand strata) as backfill material.

Stantec should be retained to observe excavations and subgrade preparation to assess whether the intent of these recommendations is followed during construction, and whether or not other appropriate and/or cost-effective solutions may be warranted based on the actual conditions encountered. Further, a soil exploration is a random sampling of a Site. Should any conditions at the Site at any point during the project be encountered that differ from those summarized in the report, Stantec should be notified immediately in order to permit reassessment of these conditions and the recommendations contained in the report.

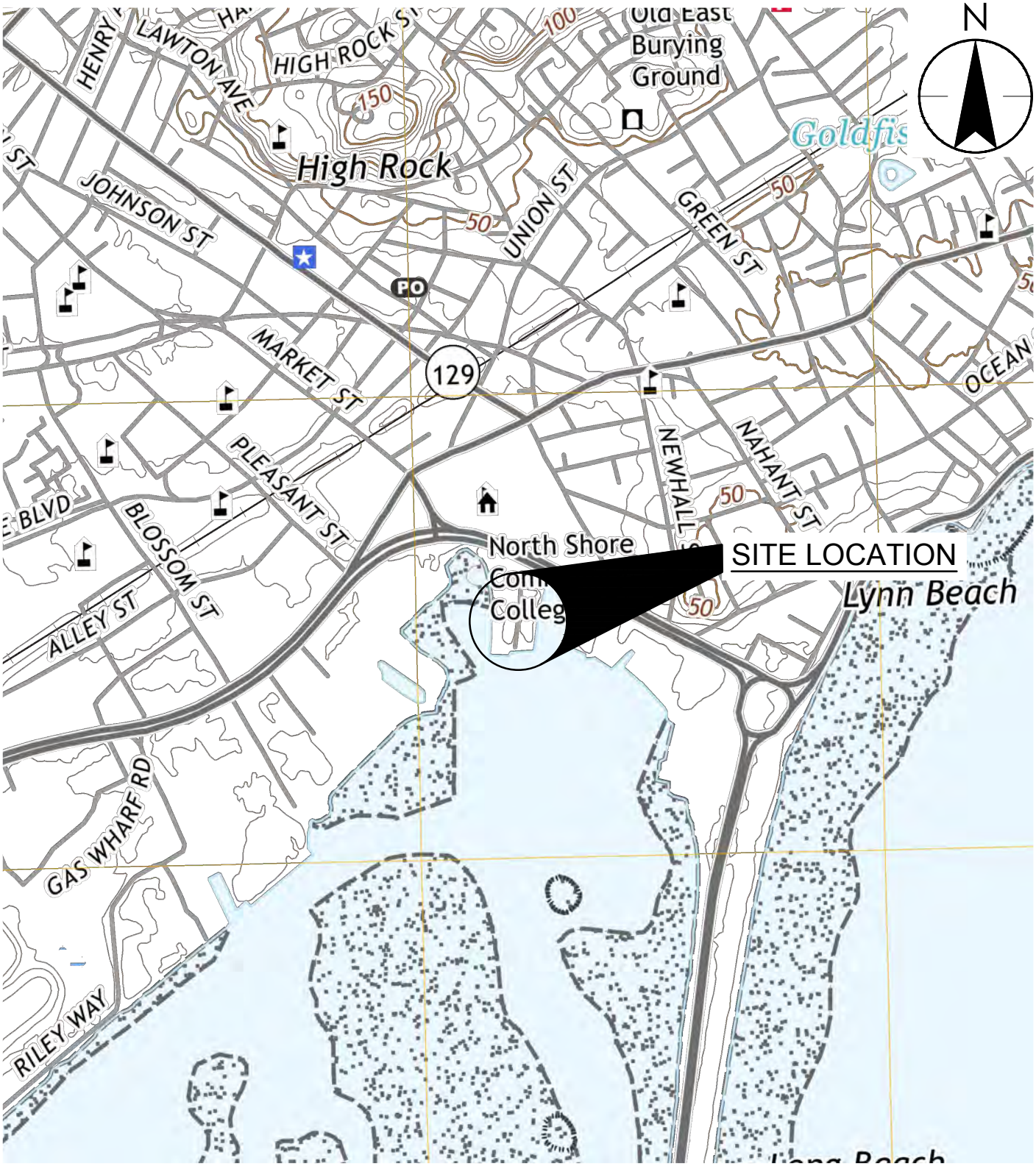
13.3 REPRESENTATION AND INTERPRETATION OF DATA

Surficial and subsurface information presented herein is based on field measurements obtained during the course of the exploration and site reconnaissance. The precision and accuracy of surficial data is a function of the references, benchmarks, methods and instruments employed, as summarized in the report. Subsurface data is based on measurements within the borehole or test pit using the sampling methods described on the exploration logs. The completeness, precision, and accuracy of such data are a function of the frequency and type of exploration and sampling employed, as well as the precision and accuracy of the surface location and elevation of the borehole and may vary from actual conditions encountered during excavations. Subsurface conditions between, beyond and below explorations, may vary dramatically from the nearest exploration, due to natural geologic action, deposition and weathering, or man-made activities.

Groundwater levels were recorded during the time periods and frequencies noted on the explorations. It is important to note that groundwater levels are disrupted by the exploration, and require equilibration periods to determine actual hydrostatic levels, which exceed the duration of the measurement period. Multiple hydrostatic groundwater levels may exist, including perched or trapped water, which may not necessarily be accurately represented by one water level reading. Groundwater levels fluctuate due to seasonal variations, adjacent surface water bodies, precipitation, and on-Site and nearby land use.

FIGURES

Figure 1 - Site Location Plan
Figure 2 - Boring Location Plan
Figure 3 - Typical Boardwalk Section
Figure 4 - Boring Locations plotted on 1982 Site Conditions
Figure 5 - Subsurface Profile Section A-A
Figure 6 - Subsurface Profile Section B-B
Figure 7 - Subsurface Profile Section C-C



Stantec

Stantec Consulting Services Inc.
5 Dartmouth Drive, Suite 101
Auburn NH 03032-3984
Tel: 603.669.8672
www.stantec.com

Client/Project
Brown, Richardson and Rowe

Lynn Heritage State Park

Project No.
179410750

Title
SITE LOCATION PLAN

Revision	Date
#0	2018.10.29
Reference Sheet	Figure No.
-	1

u:\179410750\design\geotechnical\cad\179410750_site_location_plan

2018.10.31 11:44:13 AM

Notes

1) Test borings were drilled by New England Boring of Derry, New Hampshire on July 5, 2017 through August 1, 2017 and September 17, 2018 through October 12, 2018 under supervision of Stantec personnel.

Permit-Seal

HP-1 Location and designation of test boring

TP-1 Location and designation of test pit

Consultants

Stantec
5 Burlington Woods Drive
Burlington, MA
www.stantec.com

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay.
The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Client/Project
BROWN, RICHARDSON, AND ROWE

LYNN HERITAGE STATE PARK

LYNN, MA

Title
BORING LOCATION PLAN

Revision	By	Appd.	YY.MM.DD

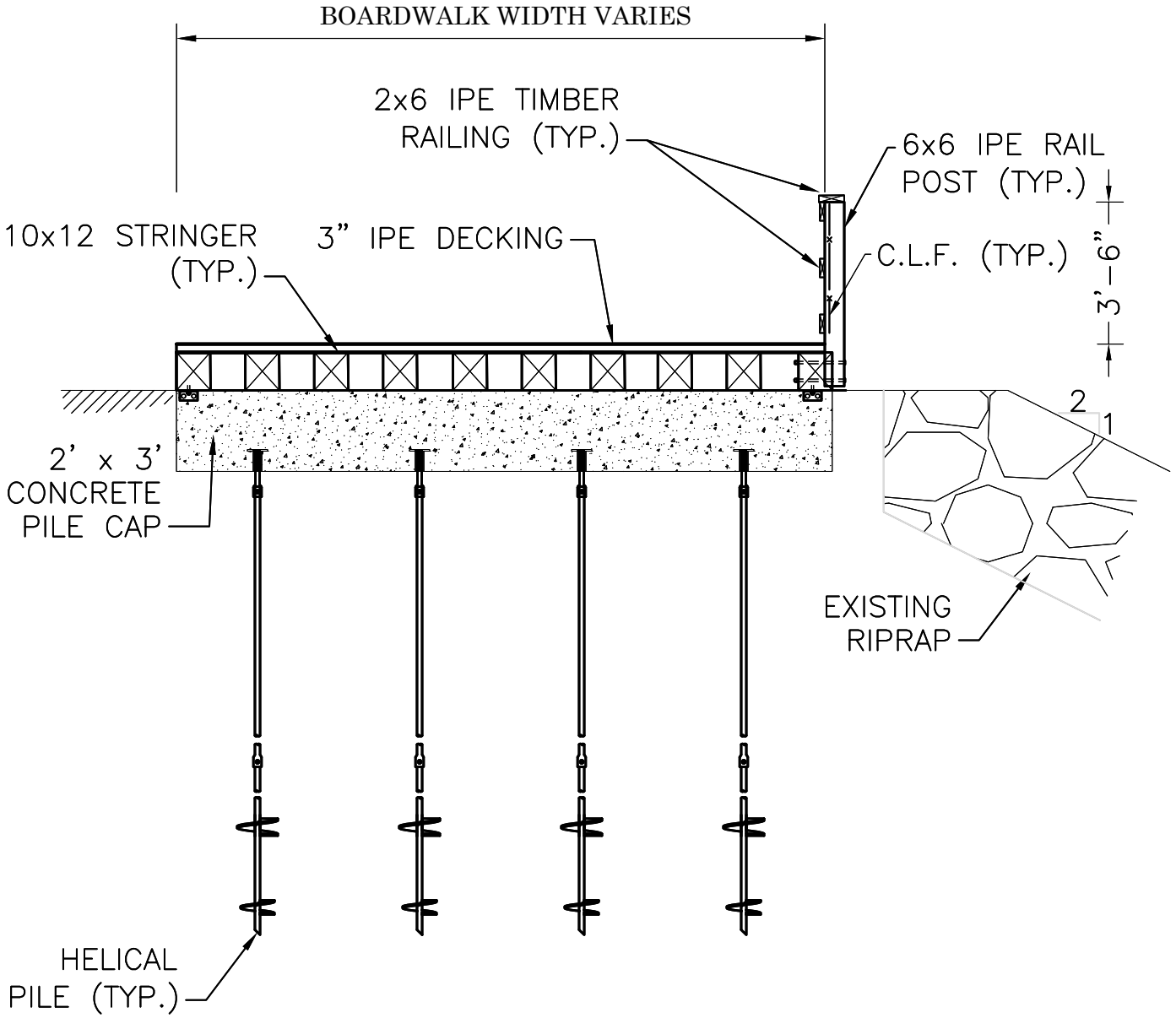
File Name: | Dwn. | Chkd. | Dsgn. | YY.MM.DD

Project No. 179410750 | Scale 1" = 50'

Drawing No. 2 | Sheet of | Revision

V:\1756\Symposium\179410750_Lynn Heritage Park\AutoCAD\Boring Location Plan1a-grav.dwg
2018/11/2 1:52 PM By: Foley, Brian

ORIGINAL SHEET - ANSI D



RECOMMENDED TYPICAL BOARDWALK SECTION

SCALE: 1/4" = 1'-0"

NOTE:

NUMBER OF HELICAL PILES WILL VARY BASED ON BOARDWALK WIDTH AND VEHICLE LOADING ALLOWED.

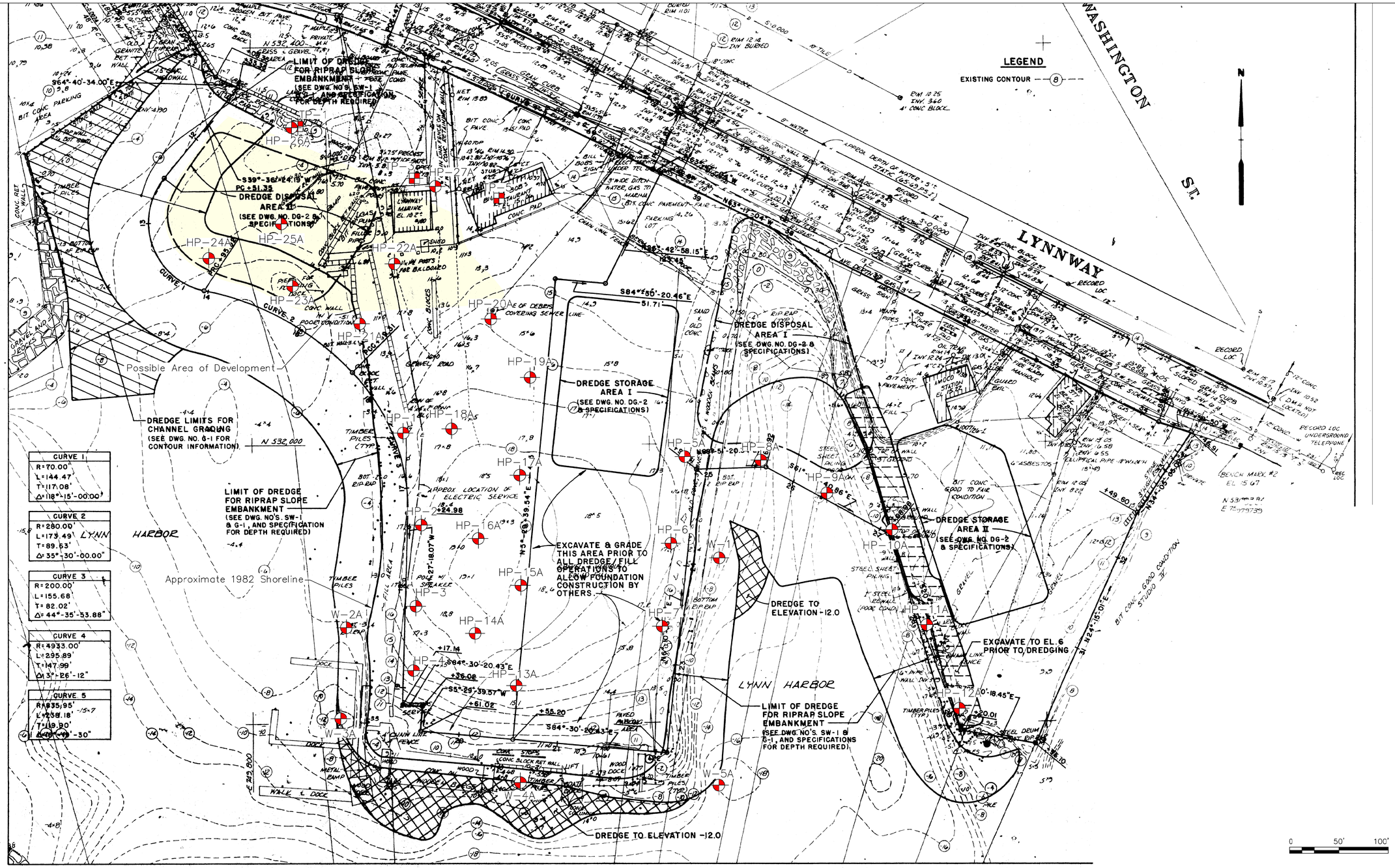
Stantec

LYNN, MA

LYNN HERITAGE STATE PARK

FIGURE 3 - TYPICAL SECTION

November 2018



Notes

1) Test borings were drilled by New England Boring of Derry, New Hampshire on July 5, 2017 through August 1, 2017 and September 17, 2018 through October 12, 2018 under supervision of Stantec personnel.

2) Reference Drawing DG-1 "Dredge/Fill Plan prepared by Hayden, Hardomg & Buchanan, Inc, Boston, MA, dated September 1982.

Permit-Seal

HP-1 Location and designation of test boring

TP-1 Location and designation of test pit

Consultants

Stantec

5 Burlington Woods Drive
Burlington, MA
www.stantec.com

The Contractor shall verify and be responsible for all dimensions. DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay. The Copyrights to all designs and drawings are the property of Stantec. Reproduction or use for any purpose other than that authorized by Stantec is forbidden.

Client/Project

BROWN, RICHARDSON, AND ROWE

LYNN HERITAGE STATE PARK

LYNN, MA

Title

BORING LOCATION PLAN

Revision	By	Appd.	YY.MM.DD

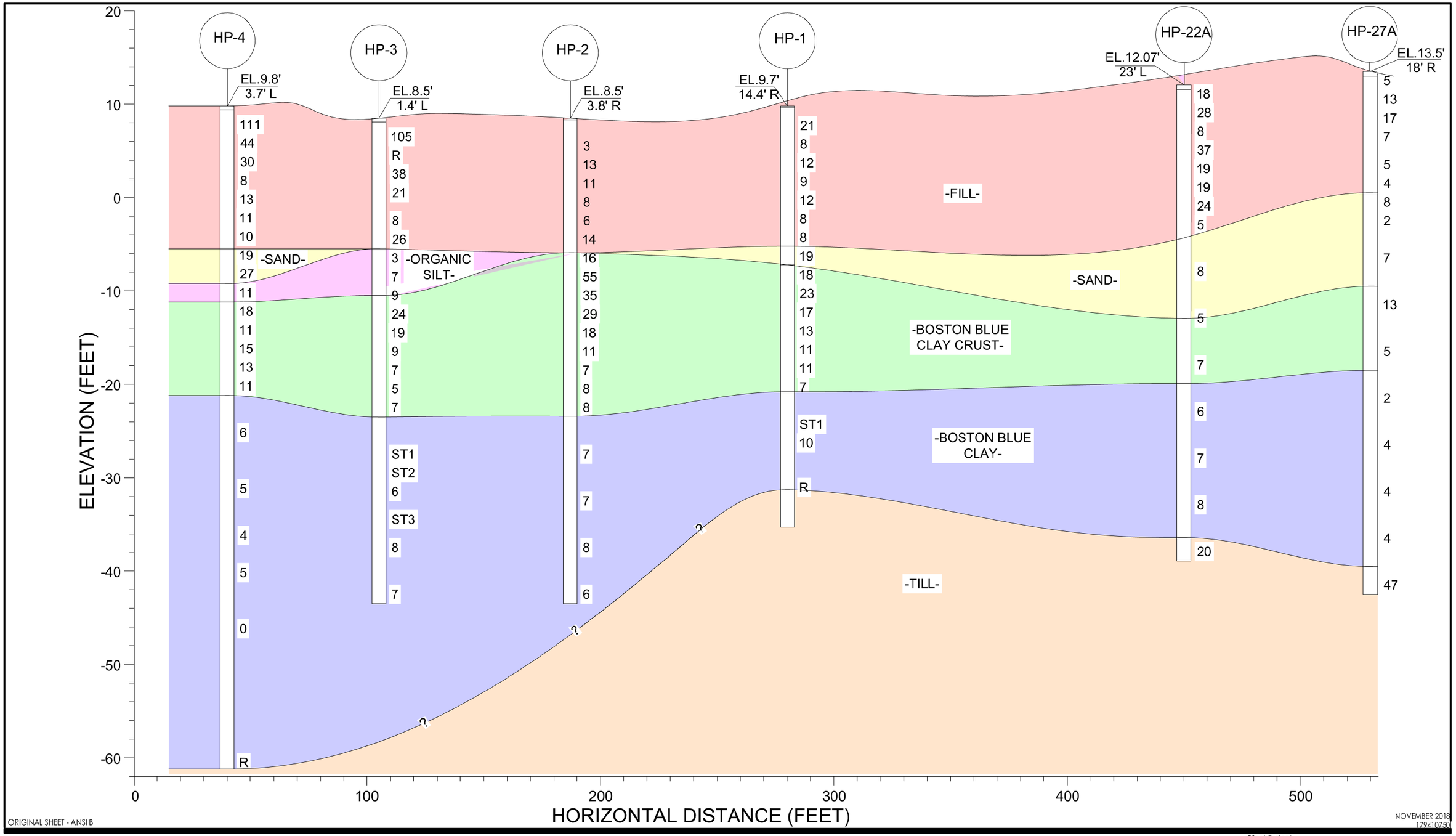
File Name: | Dwn. | Chkd. | Dsgn. | YY.MM.DD

Project No. 179410750 | Scale 1" = 50'

Drawing No. 4 | Sheet of | Revision

V:\1950\Intersystem\179410750 - Lynn Heritage Park AutoCAD\Boring Location Plan to-gray.dwg
2018/11/21 1:48 PM By: Foley, Brian

ORIGINAL SHEET - ANSI D



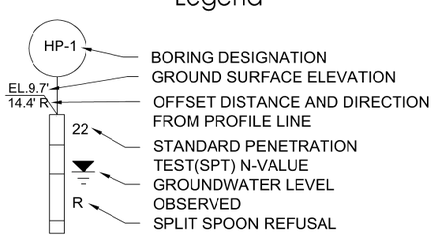
ORIGINAL SHEET - ANSI B

NOVEMBER 2018
179410750

Stantec

5 BURLINGTON WOODS DRIVE
BURLINGOTN, MA
www.stantec.com

Legend



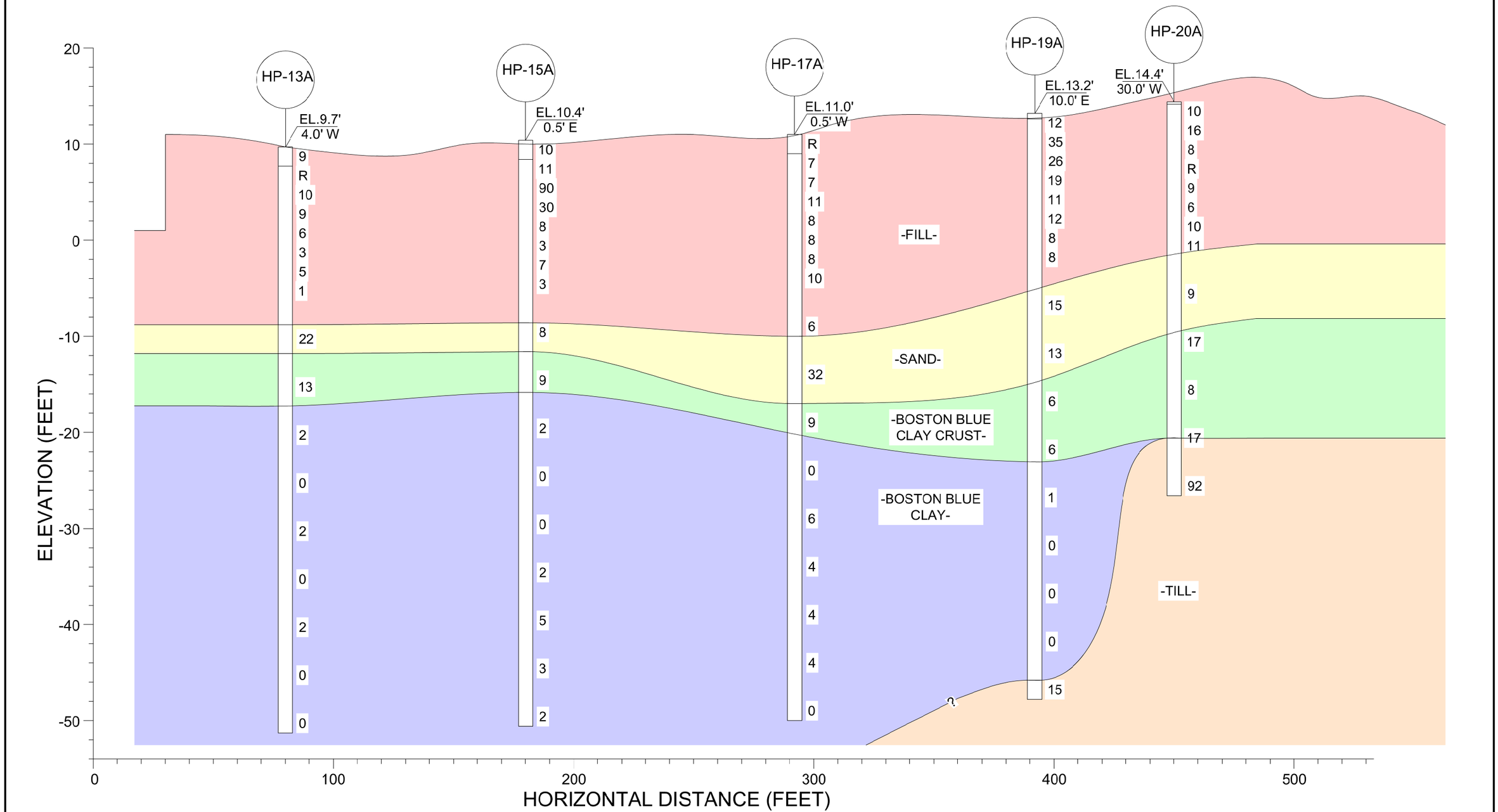
Notes

1) SUBSURFACE PROFILE WAS DEVELOPED FROM WIDELY SPACED BORINGS DRILLED BY NEW ENGLAND BORING CONTRACTORS OF DERRY, NH UNDER SUPERVISION OF STANTEC ON JULY 5, 2017 THROUGH AUGUST 1, 2017 AND SEPTEMBER 17, 2018 THROUGH OCTOBER 12, 2018.
2) ELEVATIONS SHOWN ARE IN FEET AND REFERENCED TO NAVD88.
3) TOP OF BEDROCK WAS DETERMINED BY ROLLER BIT RESISTANCE AND/OR BEDROCK CORING. ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
4) STRATA LINES ARE BASED ON LINEAR INTERPOLATION BETWEEN TEST BORING LOCATION. ACTUAL CONDITIONS WILL VARY FROM THE CONDITIONS SHOWN.
5) LOCATIONS OF TEST BORINGS WERE DETERMINED BY TAPING FROM EXISTING SITE FEATURES. GROUND SURFACE AT THE BORING LOCATIONS WAS DETERMINED BY INTERPOLATING FROM GROUND SURFACE CONTOURS.

Client/Project
BROWN, RICHARDSON, AND ROWE
LYNN HERITAGE STATE PARK
LYNN, MA

Figure No.
5

Title
SUBSURFACE PROFILE
SECTION A-A



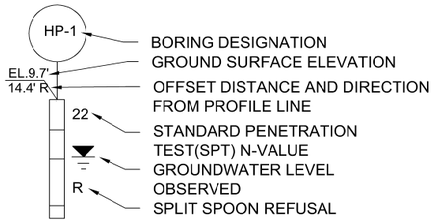
ORIGINAL SHEET - ANSI B

NOVEMBER 2018
179410750

Stantec

5 BURLINGTON WOODS DRIVE
BURLINGOTN, MA
www.stantec.com

Legend



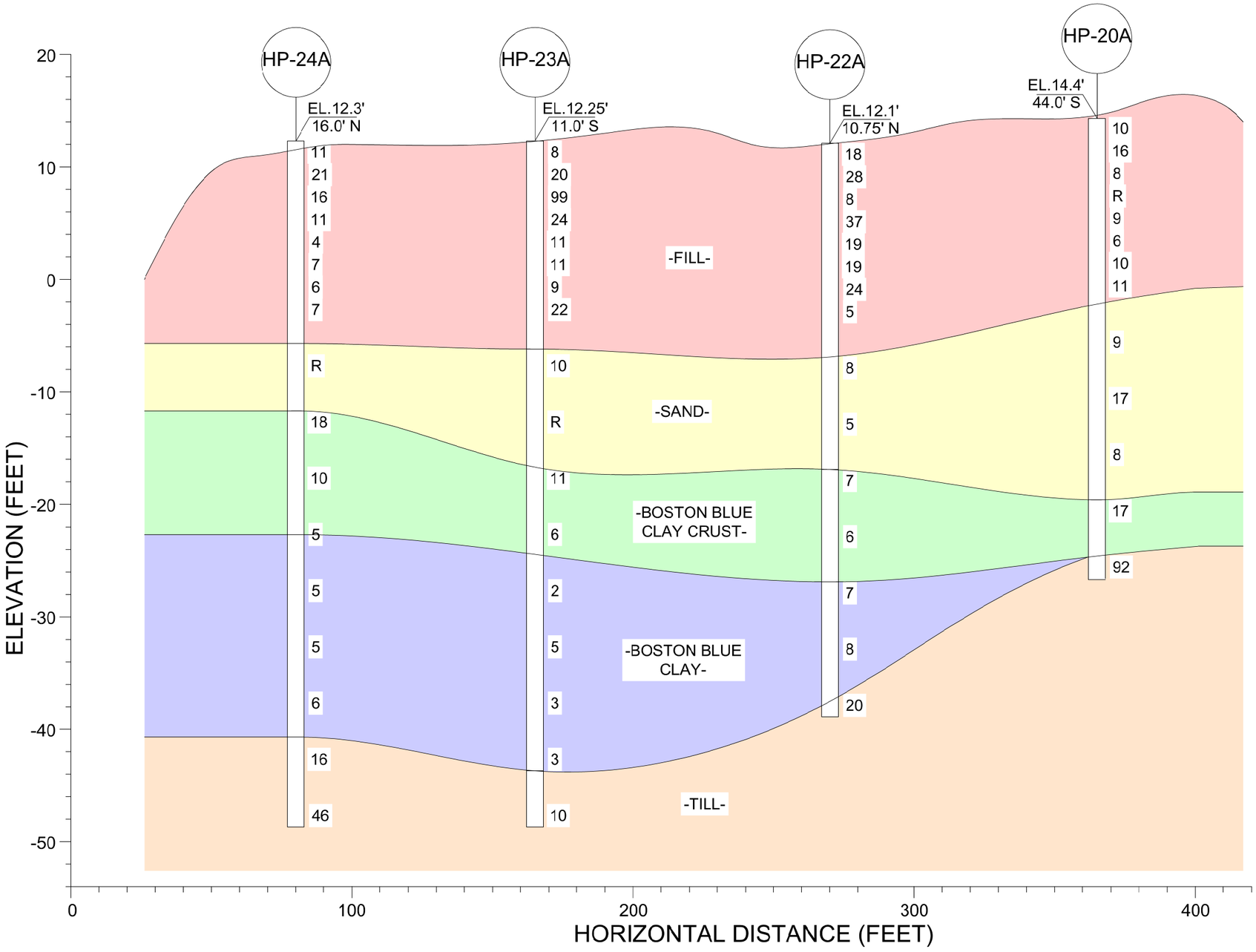
Notes

1) SUBSURFACE PROFILE WAS DEVELOPED FROM WIDELY SPACED BORINGS DRILLED BY NEW ENGLAND BORING CONTRACTORS OF DERRY, NH UNDER SUPERVISION OF STANTEC ON JULY 5, 2017 THROUGH AUGUST 1, 2017 AND SEPTEMBER 17, 2018 THROUGH OCTOBER 12, 2018.
2) ELEVATIONS SHOWN ARE IN FEET AND REFERENCED TO NAVD88.
3) TOP OF BEDROCK WAS DETERMINED BY ROLLER BIT RESISTANCE AND/OR BEDROCK CORING. ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
4) STRATA LINES ARE BASED ON LINEAR INTERPOLATION BETWEEN TEST BORING LOCATION. ACTUAL CONDITIONS WILL VARY FROM THE CONDITIONS SHOWN.
5) LOCATIONS OF TEST BORINGS WERE DETERMINED BY TAPING FROM EXISTING SITE FEATURES. GROUND SURFACE AT THE BORING LOCATIONS WAS DETERMINED BY INTERPOLATING FROM GROUND SURFACE CONTOURS.

Client/Project
BROWN, RICHARDSON, AND ROWE
LYNN HERITAGE STATE PARK
LYNN, MA

Figure No.
6

Title
SUBSURFACE PROFILE
SECTION B-B



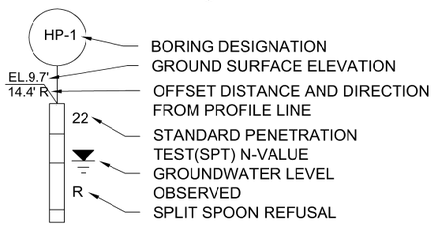
ORIGINAL SHEET - ANSI B

NOVEMBER 2018
179410750

Stantec

5 BURLINGTON WOODS DRIVE
BURLINGOTN, MA
www.stantec.com

Legend



Notes

1) SUBSURFACE PROFILE WAS DEVELOPED FROM WIDELY SPACED BORINGS DRILLED BY NEW ENGLAND BORING CONTRACTORS OF DERRY, NH UNDER SUPERVISION OF STANTEC ON JULY 5, 2017 THROUGH AUGUST 1, 2017 AND SEPTEMBER 17, 2018 THROUGH OCTOBER 12, 2018.
2) ELEVATIONS SHOWN ARE IN FEET AND REFERENCED TO NAVD88.
3) TOP OF BEDROCK WAS DETERMINED BY ROLLER BIT RESISTANCE AND/OR BEDROCK CORING. ELEVATIONS SHOULD BE CONSIDERED APPROXIMATE.
4) STRATA LINES ARE BASED ON LINEAR INTERPOLATION BETWEEN TEST BORING LOCATION. ACTUAL CONDITIONS WILL VARY FROM THE CONDITIONS SHOWN.
5) LOCATIONS OF TEST BORINGS WERE DETERMINED BY TAPING FROM EXISTING SITE FEATURES. GROUND SURFACE AT THE BORING LOCATIONS WAS DETERMINED BY INTERPOLATING FROM GROUND SURFACE CONTOURS.

Client/Project
BROWN, RICHARDSON, AND ROWE
LYNN HERITAGE STATE PARK
LYNN, MA

Figure No.
7

Title
SUBSURFACE PROFILE
SECTION C-C

Appendix A

1982 Design Drawings

Areas of settlement

Areas of settlement

WASHINGTON ST.

LYNNWAY

LYNN HARBOR

LYNN HARBOR

ALL WORK IN THIS AREA SHALL NOT PROCEED UNLESS DIRECTED BY THE ENGINEER

ALL WORK IN THIS AREA SHALL NOT PROCEED UNLESS DIRECTED BY THE ENGINEER

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- SPOT ELEVATION
- BASE LINE LAYOUT
- PROPOSED DRAINAGE (SIZE & TYPE)
- PROPOSED DECKING
- CONTRACT LIMIT LINE
- LIMITS OF RESTRICTED WORK

NOTE:
FOR DREDGE/FILL SEQUENCE OF OPERATIONS SEE DWG. NO. DG-1.

⚠ NOTE:
ALL AREAS WITHIN THE "LIMIT OF WORK" LINE ARE PROVIDED TO THE CONTRACTOR FOR THE PURPOSES OF THE PROPOSED CONSTRUCTION WITHOUT ENCUMBRANCE.

CURVE 1
R=70.00'
L=144.47'
T=117.08'
Δ=118°-15'-00.00"

CURVE 2
R=280.00'
L=173.49'
T=89.63'
Δ=35°-30'-00.00"

CURVE 3
R=200.00'
L=155.68'
T=82.02'
Δ=44°-35'-53.88"

CURVE 4
R=4933.00'
L=295.89'
T=147.99'
Δ=3°-26'-12"

CURVE 5
R=635.95'
L=258.18'
T=119.90'
Δ=46°-33'-30"

REVISIONS:
⚠ NOV. 1982 ADDED NOTE.

COMMONWEALTH OF MASSACHUSETTS — JAMES N. OSTER No. 8128 — REGISTERED PROFESSIONAL ENGINEER

THE CITY OF LYNN, MASSACHUSETTS

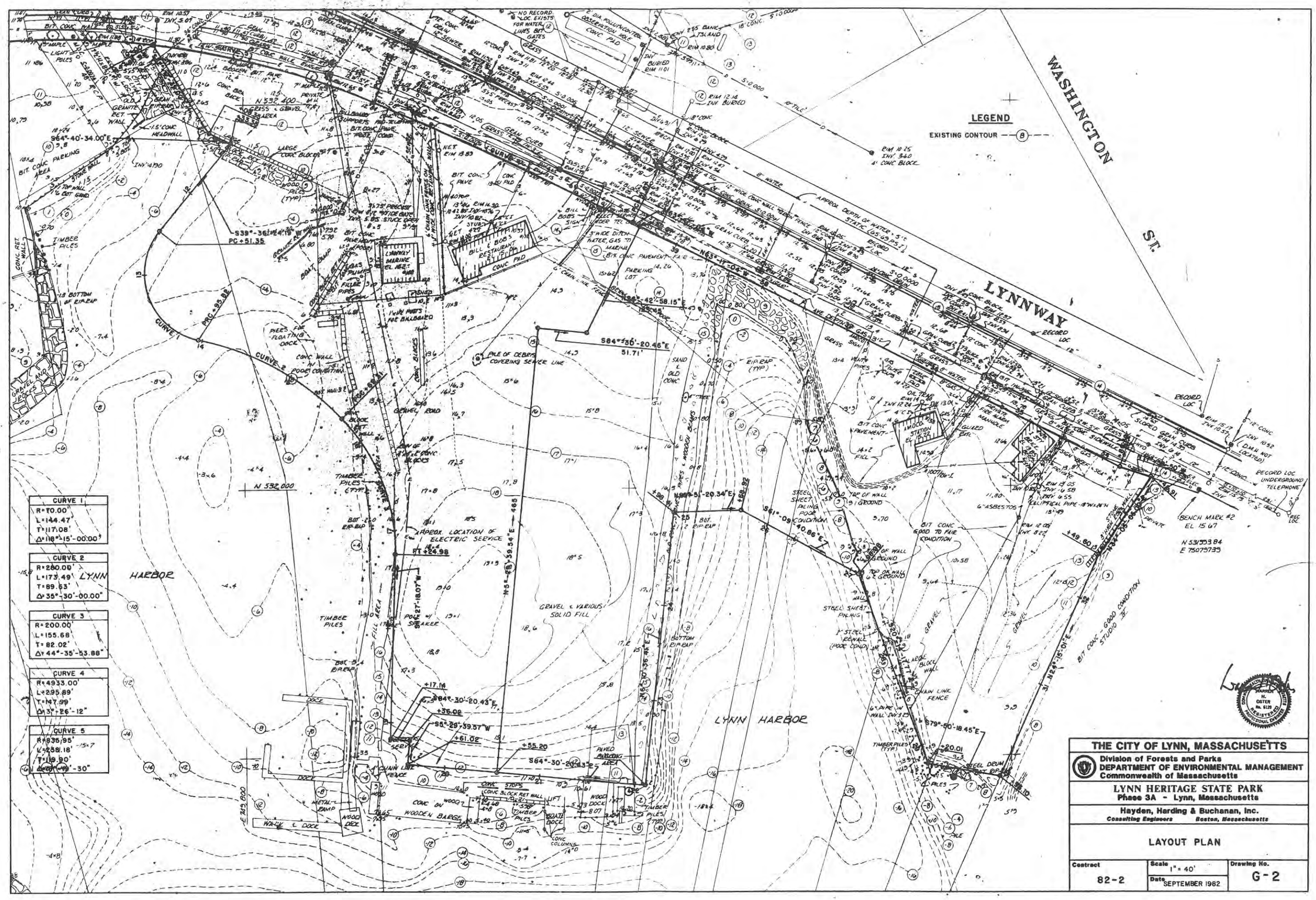
Division of Forests and Parks
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Commonwealth of Massachusetts

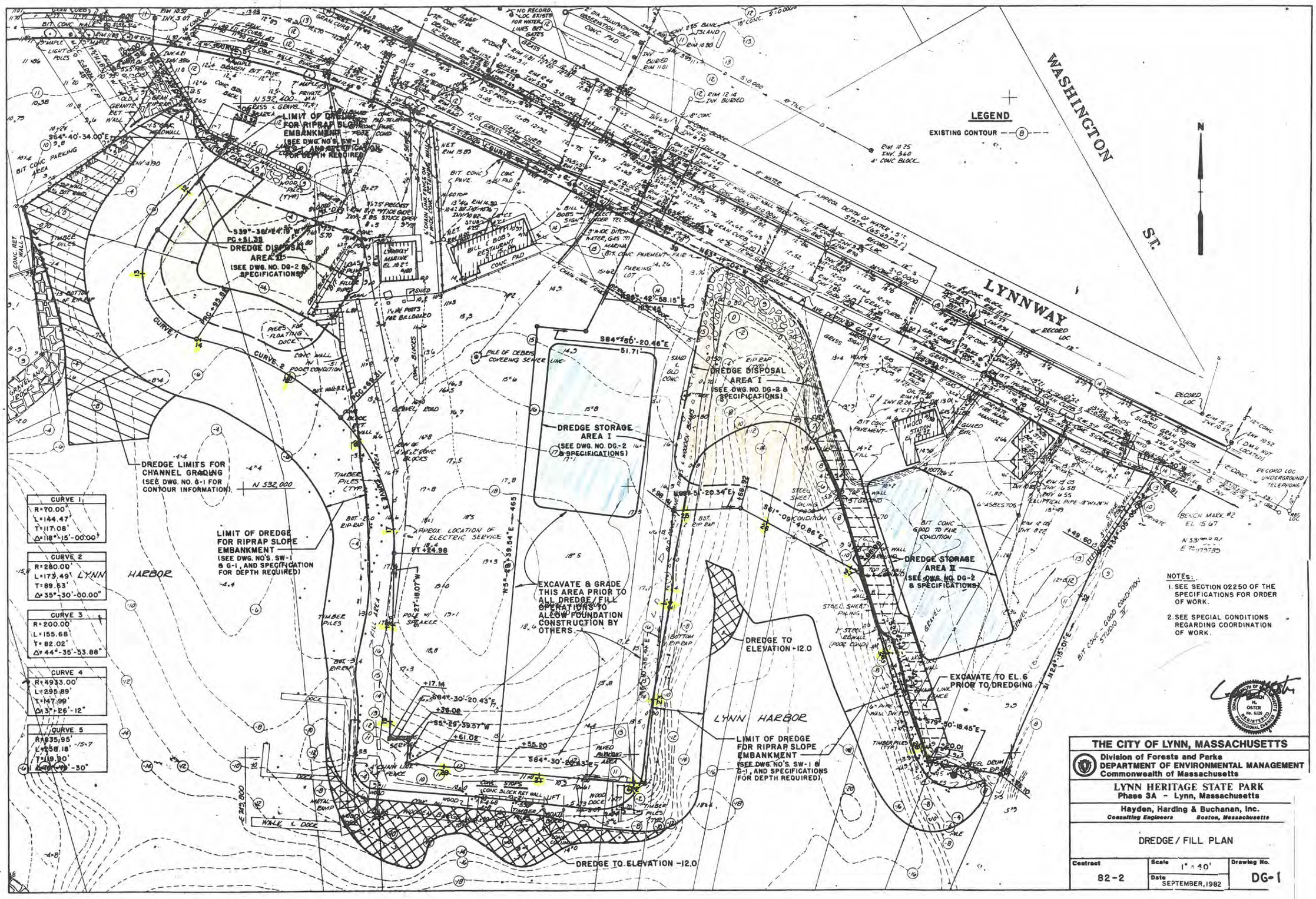
LYNN HERITAGE STATE PARK
Phase 3A - Lynn, Massachusetts

Hayden, Harding & Buchanan, Inc.
Consulting Engineers — Boston, Massachusetts

PLOT PLAN

Contract	Scale	Drawing No.
82-2	1" = 40'	G-1
	Date SEPTEMBER 1982	


LEGEND
EXISTING CONTOUR
WASHINGTON ST.
LYNNWAY
LYNN HARBOR
CURVE 1
R=70.00'
L=144.47'
T=117.08'
Δ=118°-15'-00.00"
CURVE 2
R=280.00'
L=173.49'
T=89.53'
Δ=35°-30'-00.00"
CURVE 3
R=200.00'
L=155.68'
T=82.02'
Δ=44°-35'-53.88"
CURVE 4
R=4933.00'
L=295.89'
T=147.99'
Δ=3°-26'-12"
CURVE 5
R=835.95'
L=258.18'
T=119.90'
Δ=17°-42'-30"
S64°-40'-34.00"E
S39°-36'-41.19"
PC=51.35
PCC=35.82
S84°-36'-20.46"E
51.71'
N63°-11'-04"E
S64°-42'-58.15"E
S64°-30'-20.43"E
S61°-09'-20.34"E
S64°-30'-20.43"E
S55°-29'-59.57"W
S79°-50'-18.45"E
N 532,400
E 335,335
N 532,000
E 335,000
BENCH MARK #2
EL 15.67
N 533,353.84
E 750,757.35
THE CITY OF LYNN, MASSACHUSETTS
Division of Forests and Parks
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Commonwealth of Massachusetts
LYNN HERITAGE STATE PARK
Phase 3A - Lynn, Massachusetts
Hayden, Herding & Buchanan, Inc.
Consulting Engineers Boston, Massachusetts
LAYOUT PLAN
Contract 82-2
Scale 1" = 40'
Date SEPTEMBER 1982
Drawing No. G-2



THE CITY OF LYNN, MASSACHUSETTS

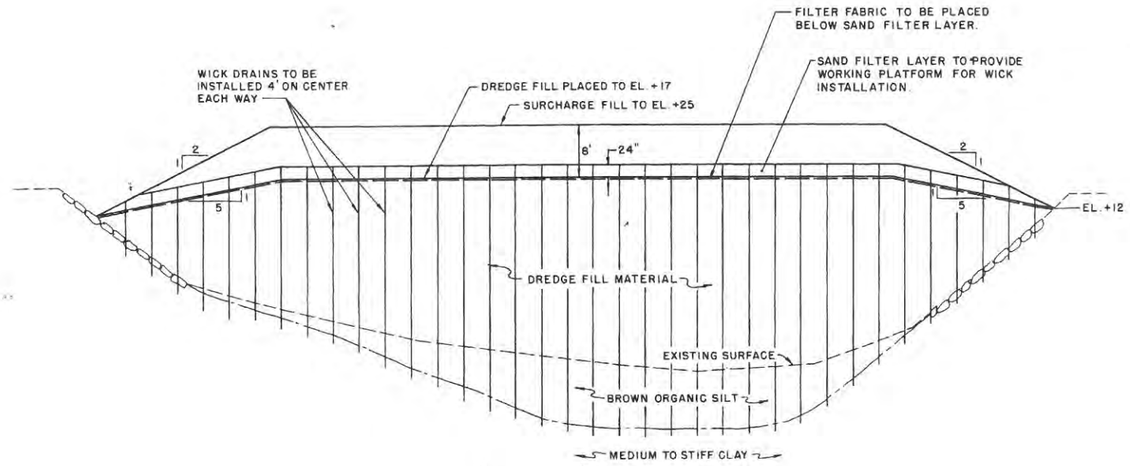
Division of Forests and Parks
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Commonwealth of Massachusetts

LYNN HERITAGE STATE PARK
Phase 3A - Lynn, Massachusetts

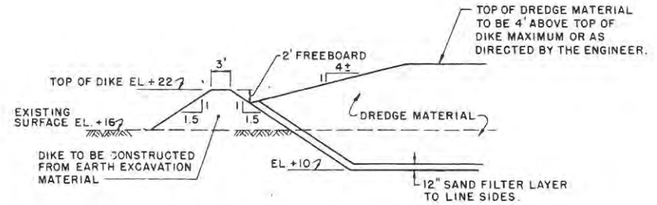
Hayden, Harding & Buchanan, Inc.
Consulting Engineers — Boston, Massachusetts

DREDGE / FILL PLAN

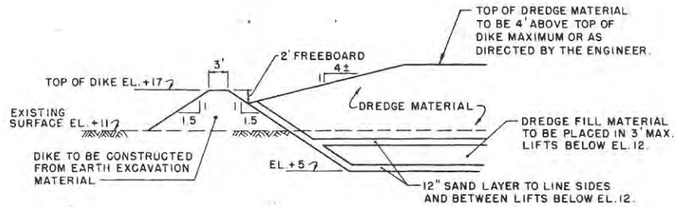
Contract	Scale	Drawing No.
82-2	1" = 40'	DG-1
	Date SEPTEMBER, 1982	



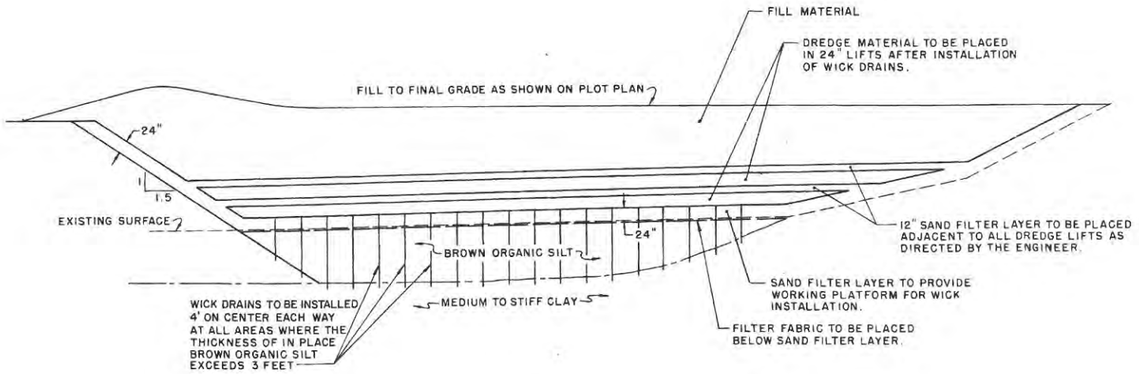
TYPICAL SECTION
DREDGE DISPOSAL AREA I



DREDGE STORAGE AREA I



DREDGE STORAGE AREA II



TYPICAL SECTION
DREDGE DISPOSAL AREA II

COMMONWEALTH OF MASSACHUSETTS
WARREN H. OSTER
No. 6125
REGISTERED PROFESSIONAL ENGINEER

THE CITY OF LYNN, MASSACHUSETTS

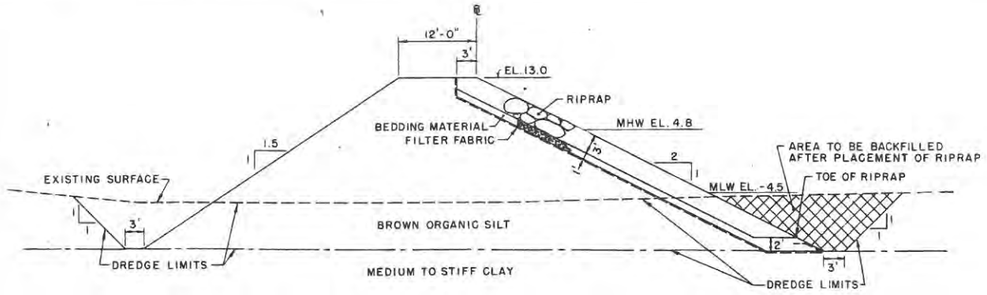
Division of Forests and Parks
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Commonwealth of Massachusetts

LYNN HERITAGE STATE PARK
Phase 3A - Lynn, Massachusetts

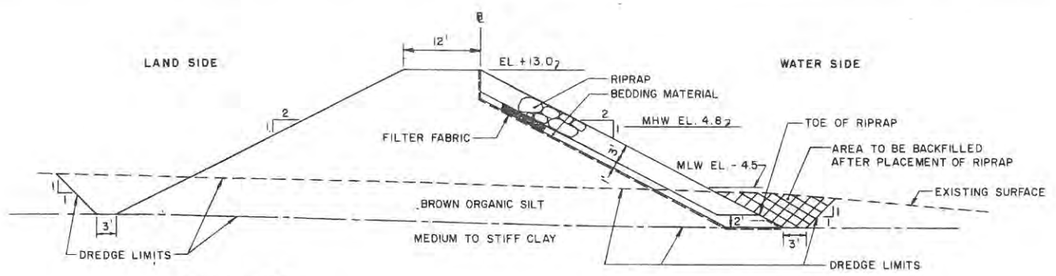
Hayden, Harding & Buchanan, Inc.
Consulting Engineers *Boston, Massachusetts*

DREDGE DISPOSAL & STORAGE DETAILS

Contract	Scale	Drawing No.
82-2	1" = 10'	DG-2
	Date SEPTEMBER 1982	

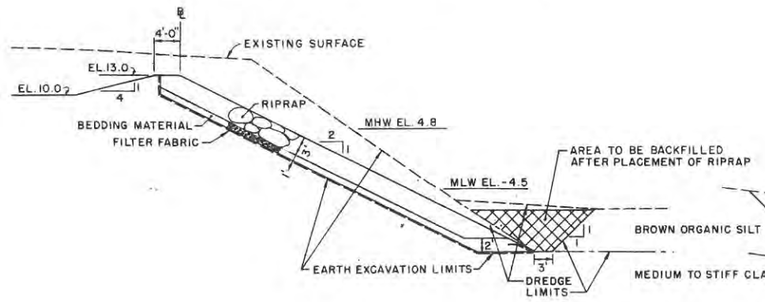


STATION 11 + 33 TO STATION 16 + 05

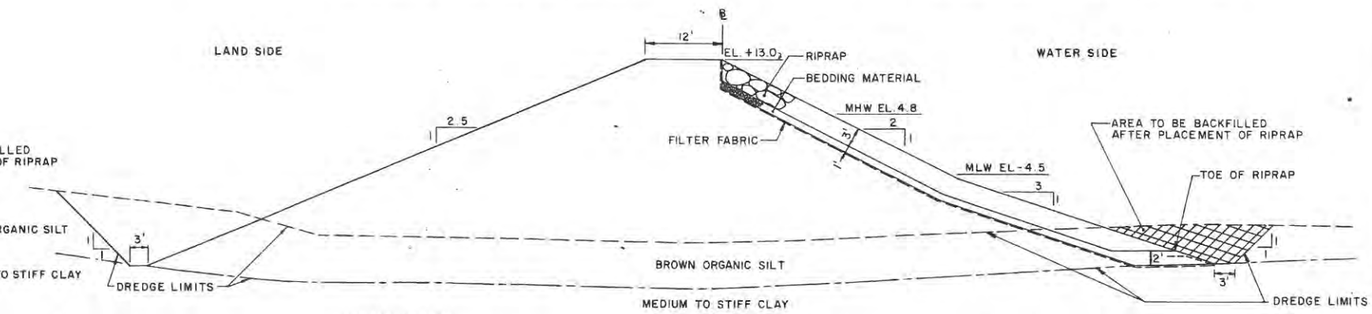


LAND SIDE
STATION 24 + 98 TO STATION 25 + 69
STATION 26 + 50 TO STATION 27 + 09

WATER SIDE
STATION 24 + 98 TO STATION 26 + 00
STATION 26 + 50 TO STATION 27 + 09

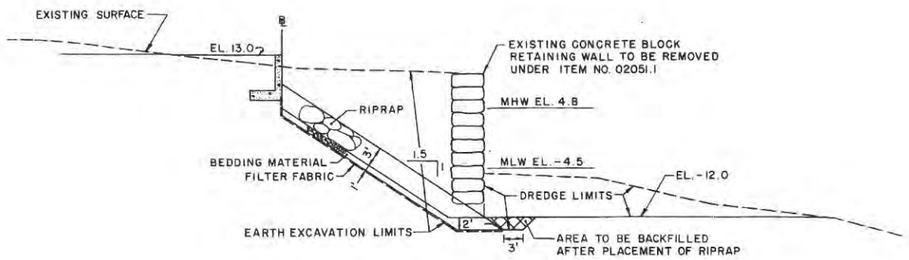


STATION 16 + 05 TO STATION 19 + 61

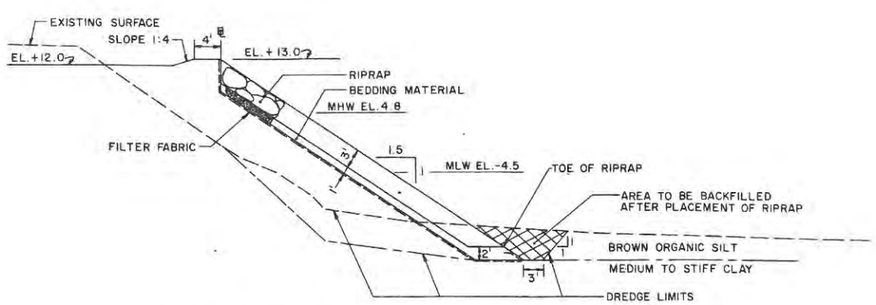


LAND SIDE
STATION 25 + 69 TO STATION 26 + 50

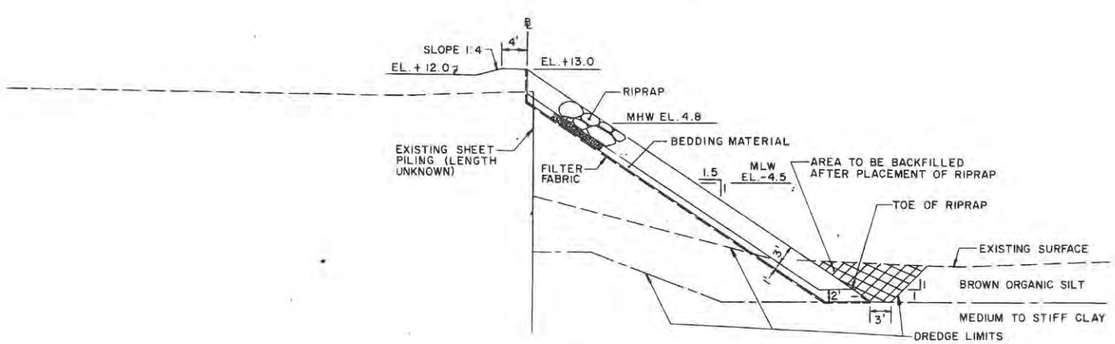
WATER SIDE
STATION 26 + 00 TO STATION 26 + 50



STATION 19 + 61 TO STATION 22 + 11



STATION 22 + 11 TO STATION 24 + 98



STATION 27 + 09 TO STATION 29 + 96

NOTES:
1. ELEVATIONS REFER TO N. G. V. D. DATUM
2. FOR STATION 10+35.35 TO STATION 11+33 SEE DWG. NO. SW-9 RETAINING WALL NO. 2

COMMONWEALTH OF MASSACHUSETTS — KARSTEN M. OSTER No. 6129 — REGISTERED PROFESSIONAL ENGINEER

THE CITY OF LYNN, MASSACHUSETTS

Division of Forests and Parks
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Commonwealth of Massachusetts

LYNN HERITAGE STATE PARK
Phase 3A - Lynn, Massachusetts

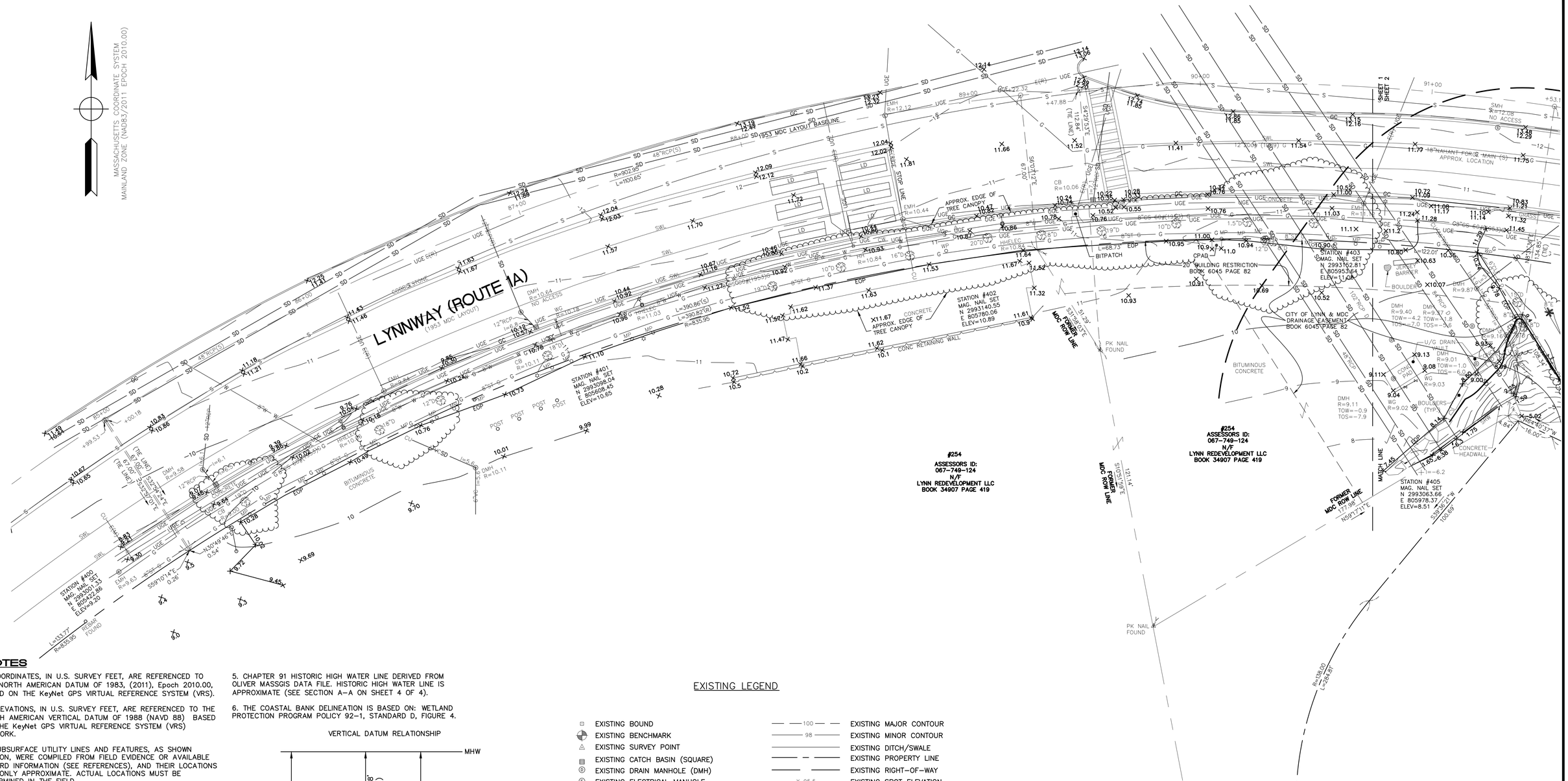
Hayden, Harding & Buchanan, Inc.
Consulting Engineers *Boston, Massachusetts*

TYPICAL SECTIONS
RIPRAP SLOPED EMBANKMENT

Contract	Scale	Drawing No.
82-2	1" = 10'	SW-1
	Date SEPTEMBER 1982	

Appendix B

TOPOGRAPHIC SURVEY – EXISING CONDITIONS 2018



NOTES

1. COORDINATES, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983, (2011), Epoch 2010.00, BASED ON THE KeyNet GPS VIRTUAL REFERENCE SYSTEM (VRS).

2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) BASED ON THE KeyNet GPS VIRTUAL REFERENCE SYSTEM (VRS) NETWORK.

3. SUBSURFACE UTILITY LINES AND FEATURES, AS SHOWN HEREON, WERE COMPILED FROM FIELD EVIDENCE OR AVAILABLE RECORD INFORMATION (SEE REFERENCES), AND THEIR LOCATIONS ARE ONLY APPROXIMATE. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.

SMC ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.

BEFORE DESIGNING FUTURE CONNECTIONS, THE APPROPRIATE UTILITIES MUST BE CONSULTED.

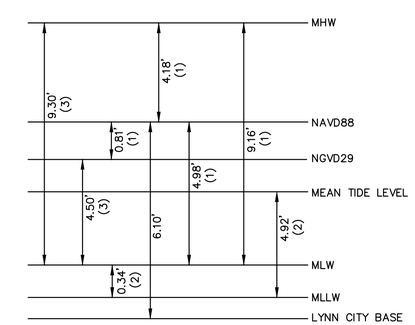
BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED (SEE MASSACHUSETTS GENERAL LAWS, CHAPTER 82 SECTION 40).
CALL "DIG SAFE" 1-888-DIG-SAFE. (888-344-7233).

4. COASTAL BANK LINE PROVIDED BY LEC ENVIRONMENTAL CONSULTANTS, INC. ON OCTOBER 25, 2018.

5. CHAPTER 91 HISTORIC HIGH WATER LINE DERIVED FROM OLIVER MASSGIS DATA FILE. HISTORIC HIGH WATER LINE IS APPROXIMATE (SEE SECTION A-A ON SHEET 4 OF 4).

6. THE COASTAL BANK DELINEATION IS BASED ON: WETLAND PROTECTION PROGRAM POLICY 92-1, STANDARD D, FIGURE 4.

VERTICAL DATUM RELATIONSHIP



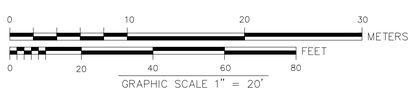
SOURCES: (1) NOAA ONLINE VERTICAL DATUM TRANSFORMATION

(2) NOAA TIDAL STATION I.D. NO. 8443187 (TIDAL EPOCH 1983-2001)

(3) D.E.Q.E. LICENSE NO. 959

EXISTING LEGEND

EXISTING BOUND	EXISTING MAJOR CONTOUR
EXISTING BENCHMARK	EXISTING MINOR CONTOUR
EXISTING SURVEY POINT	EXISTING DITCH/SWALE
EXISTING CATCH BASIN (SQUARE)	EXISTING PROPERTY LINE
EXISTING DRAIN MANHOLE (DMH)	EXISTING RIGHT-OF-WAY
EXISTING ELECTRICAL MANHOLE	EXISTING SPOT ELEVATION
EXISTING HYDRANT	EXISTING NATURAL GAS
EXISTING IRON PIN	EXISTING OVERHEAD POWER
EXISTING SEWER MANHOLE (SMH)	EXISTING UNDERGROUND POWER
EXISTING SINGLE POLE SIGN	EXISTING SANITARY SEWER
EXISTING DOUBLE POLE SIGN	EXISTING STORM DRAIN
EXISTING LIGHT POST	EXISTING WATER MAIN
EXISTING DRAINAGE FLOW	EXISTING CABLE TV
EXISTING STUMP	EXISTING FENCE
EXISTING CONIFEROUS TREE	EXISTING CHAINLINK FENCE
EXISTING DECIDUOUS TREE	EXISTING WOODEN FENCE
EXISTING TELEPHONE MANHOLE	EXISTING RETAINING WALL
EXISTING GATE VALVE	EXISTING TREE CANOPY/SHRUB LINE



Date:	OCTOBER 29, 2018
Job No.:	2018138.00
Drawn By:	MC/CQ
Checked By:	KH
Calc'd By:	NP
Drawing No.:	201813800WS.DWG
Sheet:	1 OF 4

KEVIN HANLEY, PLS
MASSACHUSETTS REG. No. 31313

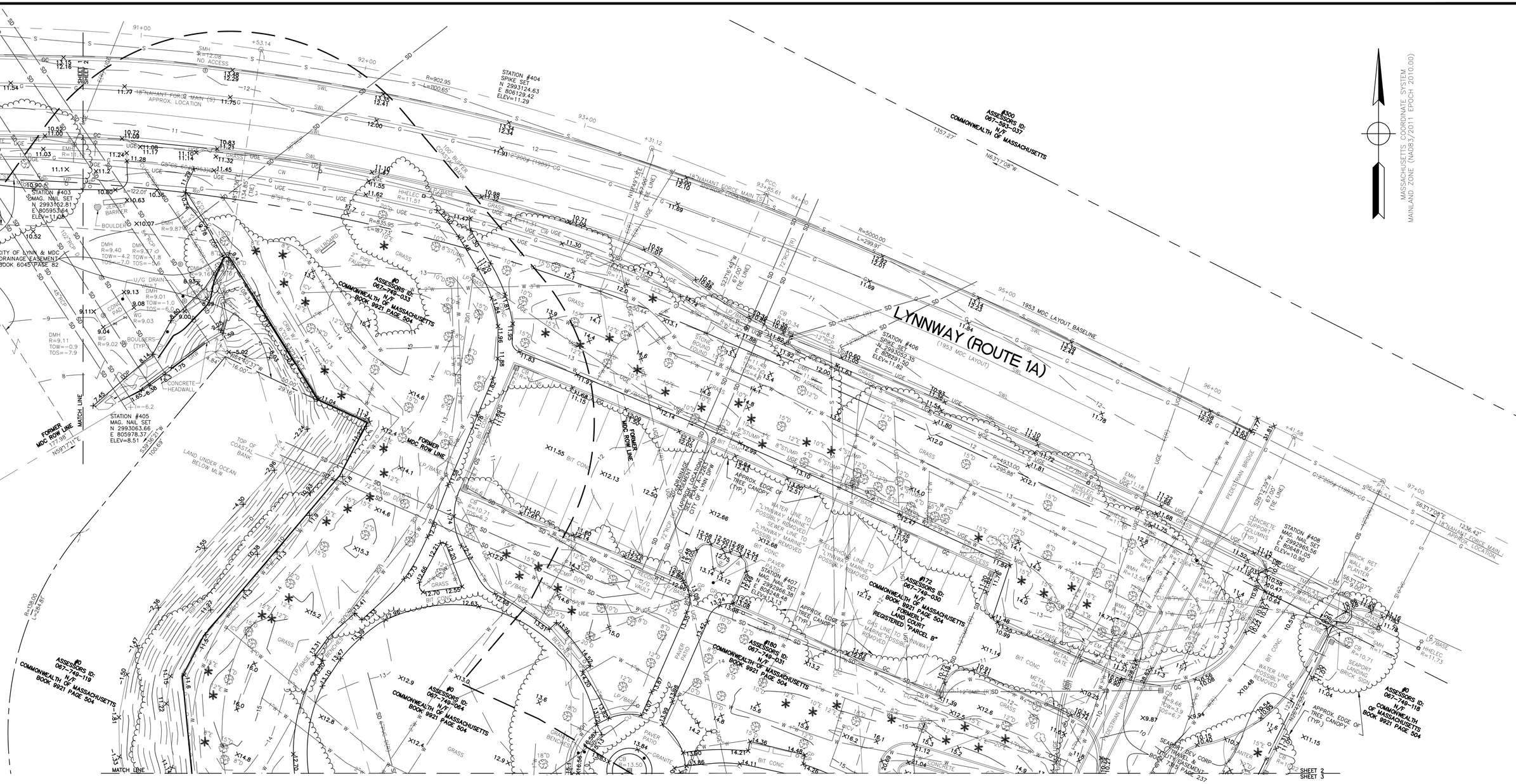
325 WOOD ROAD
SUITE 109
BRAINTREE MA 02184
(781)380-7766
FAX (781)380-7757
SMC SURVEYING AND MAPPING CONSULTANTS

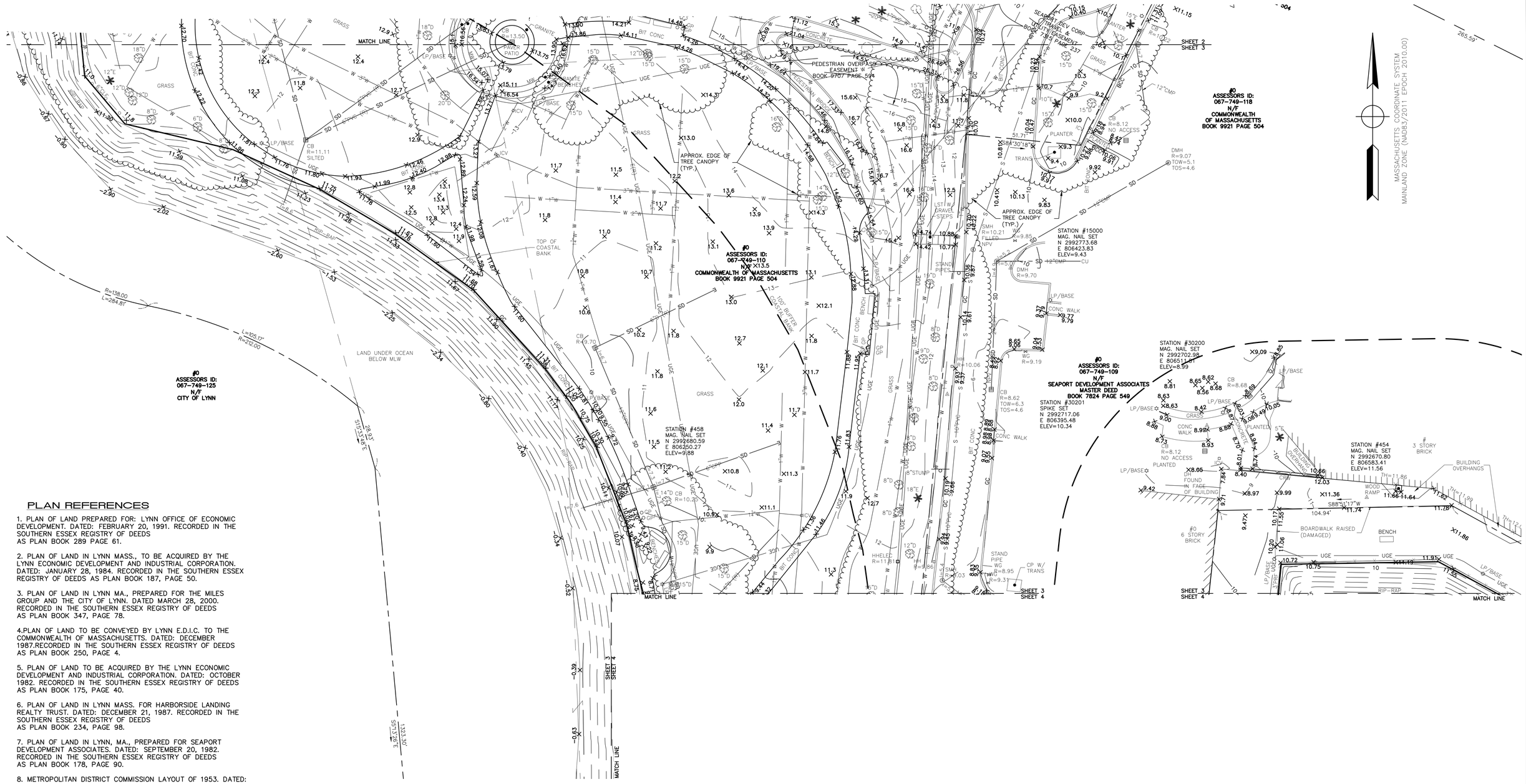
TOPOGRAPHIC SURVEY
LYNN HERITAGE STATE PARK
590 WASHINGTON STREET
LYNN, MA

PREPARED FOR: STANTEC CONSULTING SERVICES, INC.

SCALE: 1"=20' DATE: OCTOBER 29, 2018

SMC DWG. NO. 201813800WS.DWG SHEET 1 OF 4


LYNNWAY (ROUTE 1A)
1953 MDC LAYOUT BASELINE
STATION #403
MAG. NAIL SET
N 2993162.81
E 805955.64
ELEV=11.08
STATION #404
SPIKE SET
N 2993124.63
E 806129.42
ELEV=11.29
STATION #405
MAG. NAIL SET
N 2993063.66
E 805978.37
ELEV=8.51
STATION #406
SPIKE SET
N 2993052.35
E 806291.50
ELEV=11.82
STATION #407
MAG. NAIL SET
N 2992966.58
E 806248.48
ELEV=13.13
STATION #408
MAG. NAIL SET
N 2992985.56
E 806481.06
ELEV=10.90
#302
ASSESSORS ID:
087-749-037
COMMONWEALTH OF MASSACHUSETTS
N/F
#0
ASSESSORS ID:
087-749-003
COMMONWEALTH OF MASSACHUSETTS
BOOK 9921 PAGE 504
#172
ASSESSORS ID:
087-749-030
COMMONWEALTH OF MASSACHUSETTS
BOOK 9921 PAGE 504
FORMERLY
LAND COURT
REGISTERED
CERTIFICATE
CERTIFICATE
CERTIFICATE



PLAN REFERENCES

1. PLAN OF LAND PREPARED FOR: LYNN OFFICE OF ECONOMIC DEVELOPMENT. DATED: FEBRUARY 20, 1991. RECORDED IN THE SOUTHERN ESSEX REGISTRY OF DEEDS AS PLAN BOOK 289 PAGE 61.

2. PLAN OF LAND IN LYNN MASS., TO BE ACQUIRED BY THE LYNN ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION. DATED: JANUARY 28, 1984. RECORDED IN THE SOUTHERN ESSEX REGISTRY OF DEEDS AS PLAN BOOK 187, PAGE 50.

3. PLAN OF LAND IN LYNN MA., PREPARED FOR THE MILES GROUP AND THE CITY OF LYNN. DATED MARCH 28, 2000. RECORDED IN THE SOUTHERN ESSEX REGISTRY OF DEEDS AS PLAN BOOK 347, PAGE 78.

4.PLAN OF LAND TO BE CONVEYED BY LYNN E.D.I.C. TO THE COMMONWEALTH OF MASSACHUSETTS. DATED: DECEMBER 1987.RECORDED IN THE SOUTHERN ESSEX REGISTRY OF DEEDS AS PLAN BOOK 250, PAGE 4.

5. PLAN OF LAND TO BE ACQUIRED BY THE LYNN ECONOMIC DEVELOPMENT AND INDUSTRIAL CORPORATION. DATED: OCTOBER 1982. RECORDED IN THE SOUTHERN ESSEX REGISTRY OF DEEDS AS PLAN BOOK 175, PAGE 40.

6. PLAN OF LAND IN LYNN MASS. FOR HARBORSIDE LANDING REALTY TRUST. DATED: DECEMBER 21, 1987. RECORDED IN THE SOUTHERN ESSEX REGISTRY OF DEEDS AS PLAN BOOK 234, PAGE 98.

7. PLAN OF LAND IN LYNN, MA., PREPARED FOR SEAPORT DEVELOPMENT ASSOCIATES. DATED: SEPTEMBER 20, 1982. RECORDED IN THE SOUTHERN ESSEX REGISTRY OF DEEDS AS PLAN BOOK 178, PAGE 90.

8. METROPOLITAN DISTRICT COMMISSION LAYOUT OF 1953. DATED: NOVEMBER 2, 1953.

9. METROPOLITAN DISTRICT COMMISSION PARKS DIVISION LYNNWAY. PLAN TO BE CONVEYED TO LYNNWAY MARINE INC. DATED: JULY 1968. RECORDED IN THE SOUTHERN ESSEX REGISTRY OF DEEDS AS PLAN BOOK 112, PAGE 43.

10. EASEMENT PLAN IN LYNN MA., FOR E.D.I.C. DATED: DECEMBER 1983. RECORDED IN THE SOUTHERN ESSEX REGISTRY OF DEEDS PLAN 9 OF 1984.

11. PLAN FOR SALE OF LAND LYNNWAY. DATE: JULY 30, 1956. FILED IN THE CITY ENGINEERS DEPARTMENT.

12. METROPOLITAN DISTRICT COMMISSION LYNNWAY PLAN OF TAKING. DATED: MAY 1988. RECORDED IN THE SOUTHERN ESSEX REGISTRY OF DEEDS AS PLAN BOOK 244, PAGE 45.

Date:	OCTOBER 29, 2018
Job No.:	201813.00
Drawn By:	MC/CQ/JF
Checked By:	JF/KH
Calc'd By:	NP/JF
Drawing No.:	201813800WS.DWG
Sheet:	3 OF 4

0 10 20 30 METERS
0 20 40 60 80 FEET
GRAPHIC SCALE 1" = 20'

PRELIMINARY

KEVIN HANLEY, PLS
MASSACHUSETTS REG. No. 31313

325 WOOD ROAD
SUITE 109
BRAINTREE MA 02184
(781)380-7766
FAX (781)380-7757
SMC SURVEYING AND MAPPING CONSULTANTS

TOPOGRAPHIC SURVEY
LYNN HERITAGE STATE PARK
590 WASHINGTON STREET
LYNN, MA

PREPARED FOR: STANTEC CONSULTING SERVICES, INC.

SCALE: 1"=20' DATE: OCTOBER 29, 2018

LYNN HARBOR

LAND UNDER OCEAN BELOW MLW

MASSACHUSETTS COORDINATE SYSTEM
MAINLAND ZONE (NAD83/2011 EPOCH 2010.00)

LAND SUBJECT TO COASTAL STORM FLOWAGE
ZONE VE (ELEV. 18)

100' BUFFER COASTAL BANK

#0
ASSESSORS ID:
067-749-109
N/F
SEAPORT DEVELOPMENT ASSOCIATES
MASTER DEED
BOOK 7824 PAGE 549

#0
ASSESSORS ID:
067-749-113
N/F
CITY OF LYNN
BOOK 12557 PAGE 227

#0
ASSESSORS ID:
067-749-117
N/F
COMMONWEALTH OF MASSACHUSETTS
BOOK 9921 PAGE 504

#0
ASSESSORS ID:
067-749-122
N/F
COMMONWEALTH OF MASSACHUSETTS
BOOK 9921 PAGE 504

LOW WATER LINE ALONG RIP RAP
SEE PLAN BOOK 299 PAGE 61

BENCHMARK #411
NOAA DISK #3187A
1992 FOUND
ELEV=11.42

STATION #30202
SPIKE SET
N 2992394.12
E 806365.01
ELEV=10.71

STATION #455
MAG. NAIL SET
N 2992507.51
E 806523.37
ELEV=11.01

STATION #456
MAG. NAIL SET
N 2992329.12
E 806473.98
ELEV=11.97

STATION #454
MAG. NAIL SET
N 2992670.80
E 806583.41
ELEV=11.56

STATION #453
MAG. NAIL SET
N 2992572.08
E 806755.75
ELEV=11.82

STATION #452
MAG. NAIL SET
N 2992360.06
E 806814.10
ELEV=11.78

MATCH LINE

SHEET 3
SHEET 4

SHEET A–A
SHEET 4

SHEET A–A
SHEET 4

TOP OF COASTAL BANK

BOARDWALK

BENCH

WOODEN PLATFORM

WOODEN RAMP

WOODEN DECK W/STEPS

CONCRETE PLATFORM

CONCRETE SEAWALL

CONCRETE WALL

CONC STAIRS SUBMERGED IN PEASTONE

CONC WALK

PEASTONE

PAVER PATIO

CONCRETE STAIRS

BIKE RACKS (TYP.)

BOAT PLANTER

U/G VAULT

RIP-RAP

GRASS

BIT CONC

CONC WALK

UNDERGROUND CONC TANK

BUILDING OVERHANG

BUILDING OVERHANGS

3 STORY BRICK

6 STORY BRICK

© STORY BRICK

CHAPTER 91 HISTORIC HIGH WATER APPROXIMATE LOCATION (OLIVER GIS)

RESTRICTED ACCESS

FLAGPOLE

BOARDWALK RAISED (DAMAGED)

APPROX. LOCATION CONCRETE WALL UNDER BOARDWALK

APPROX. EDGE OF TREE CANOPY (TYP.)

EDGE OF BOARDWALK W/ 3' PRF

FK NAIL FOUND

PK NAIL FOUND

Date:	OCTOBER 29, 2018
Job No.:	201813.00
Drawn By:	MC/CQ/JF
Checked By:	JF/KH
Calc'd By:	NP/JF
Drawing No.:	201813800WS.DWG
Sheet:	3 OF 4

0 10 20 30 METERS
0 20 40 60 80 FEET
GRAPHIC SCALE 1" = 20'

PRELIMINARY

KEVIN HANLEY, PLS
MASSACHUSETTS REG. No. 31313

325 WOOD ROAD
SUITE 109
BRAINTREE MA 02184
(781)380-7766
FAX (781)380-7757
SMC SURVEYING AND MAPPING CONSULTANTS

TOPOGRAPHIC SURVEY
LYNN HERITAGE STATE PARK
590 WASHINGTON STREET
LYNN, MA

PREPARED FOR: STANTEC CONSULTING SERVICES, INC.

SCALE: 1"=20' DATE: SEPTEMBER 12, 2018

SMC DWG. NO. 201813800WS.DWG

Appendix C

Boring Logs

SYMBOLS AND TERMS USED ON BOREHOLE AND TEST PIT RECORDS

SOIL DESCRIPTION

Terminology describing common soil genesis:

Topsoil	mixture of soil and humus capable of supporting vegetative growth
Peat	mixture of visible and invisible fragments of decayed organic matter
Till	unstratified glacial deposit which may range from clay to boulders
Fill	material below the surface identified as placed by humans (excluding buried services)

Terminology describing soil structure:

Desiccated	having visible signs of weathering by oxidization of clay minerals, shrinkage cracks, etc.
Fissured	having cracks, and hence a blocky structure
Varved	composed of regular alternating layers of silt and clay
Stratified	composed of alternating successions of different soil types, e.g. silt and sand
Layer	3 inches in thickness
Seam	1/16 inch to 3 inches in thickness
Parting	< 1/16 inch in thickness

Terminology describing soil types:

The classification of soil types are made on the basis of grain size and plasticity in accordance with the Unified Soil Classified System (USCS) (ASTM D 2487 or D 2488). The classification excludes particles larger than 3 inches. The USCS provides a group symbol (e.g. SM) and group name (e.g. silty sand) for identification.

Terminology describing cobbles, boulders, and non-matrix materials (organic matter or debris):

Terminology describing materials outside the USCS, (e.g. particles larger than 3 inches, visible organic matter, construction debris) is based upon the proportion of these materials present:

Trace, or occasional	Less than 10%
Some	10-20%
Frequent	>20%

Terminology describing compactness of cohesionless soils:

The standard terminology to describe cohesionless soils includes relative density, as determined by the Standard Penetration Test N-Value. A relationship between compactness condition and N-Value is shown in the following table.

Relative Density	**SPT N-Value**
Very Loose	<4
Loose	4-10
Medium Dense	10-30
Dense	30-50
Very Dense	>50

Terminology describing consistency of cohesive soils:

The standard terminology to describe cohesive soils includes the consistency, which is based on undrained shear strength as measured by *in situ* vane tests, penetrometer tests, or unconfined compression tests.

Consistency	**Undrained Shear Strength**
	Kips/sq.ft.
Very Soft	<0.25
Soft	<0.25 – 0.5
Firm	0.5 – 1.0
Stiff	1.0 – 2.0
Very Stiff	2.0 – 4.0
Hard	>4.0

ROCK DESCRIPTION

Terminology describing rock quality:

RQD	Rock Mass Quality
0-25	Very Poor
25-50	Poor
50-75	Fair
75-90	Good
90-100	Excellent

Rock quality classification is based on a modified core recovery percentage (RQD) in which all pieces of sound core over 4 inches long are counted as recovery. The smaller pieces are considered to be due to close shearing, jointing, faulting, or weathering in the rock mass and are not counted. RQD was originally intended to be done on NW core; however, it can be used on different core sizes if the bulk of the fractures caused by drilling stresses are easily distinguishable from *in situ* fractures. The terminology describing rock mass quality based on RQD is subjective and is underlain by the presumption that sound strong rock is of higher engineering value than fractured weak rock.

Terminology describing rock mass:

Spacing (inches)	Joint Classification	Bedding, Laminations, Bands
>240	Extremely Wide	-
80-240	Very Wide	Very Thick
24-80	Wide	Thick
8-24	Moderate	Medium
2½-8	Close	Thin
¾-2½	Very Close	Very Thin
<¾	Extremely Close	Laminated
<¼		Thinly Laminated

Terminology describing rock strength:

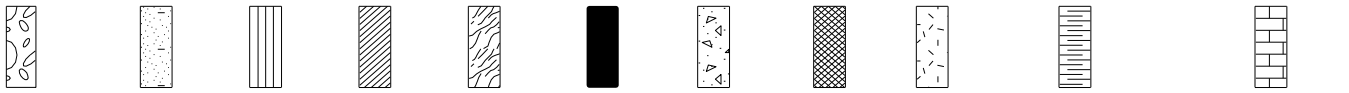
Strength Classification	Unconfined Compressive Strength (Kips/sq.ft.)
Extremely Weak	<20
Very Weak	20-100
Weak	100-520
Medium Strong	520-1040
Strong	1040-2090
Very Strong	2090-5200
Extremely Strong	>5200

Terminology describing rock weathering:

Term	Description
Fresh	No visible signs of rock weathering. Slight discoloration along major discontinuities
Slightly Weathered	Discoloration indicates weathering of rock on discontinuity surfaces. All the rock material may be discolored.
Moderately Weathered	Less than half the rock is decomposed and/or disintegrated into soil.
Highly Weathered	More than half the rock is decomposed and/or disintegrated into soil.
Completely Weathered	All the rock material is decomposed and/or disintegrated into soil. The original mass structure is still largely intact.

STRATA PLOT

Strata plots symbolize the soil or bedrock description. They are combinations of the following basic symbols. The dimensions within the strata symbols are not indicative of the particle size, layer thickness, etc.



Boulders, Cobbles, Gravel | Sand | Silt | Clay | Organics | Asphalt | Concrete | Fill | Igneous Bedrock | Metamorphic Bedrock | Sedimentary Bedrock

SAMPLE TYPE

SS	Split spoon sample (obtained by performing the Standard Penetration Test)
ST	Shelby tube or thin wall tube
DP	Direct-Push sample (small diameter tube sampler hydraulically advanced)
PS	Piston sample
BS	Bulk sample
WS	Wash sample
HQ, NQ, BQ, etc.	Rock core samples obtained with the use of standard size diamond coring bits.

WATER LEVEL MEASUREMENT

Measured in standpipe, piezometer or well

Inferred

RECOVERY

For soil samples, the recovery is recorded as the length of the soil sample recovered. For rock core, recovery is defined as the total cumulative length of all core recovered in the core barrel divided by the length drilled and is recorded as a percentage on a per run basis.

N-VALUE

Numbers in this column are the field results of the Standard Penetration Test: the number of blows of a 140 pound hammer falling 30 inches, required to drive a 2 inch O.D. split spoon sampler one foot into the soil. For split spoon samples where insufficient penetration was achieved and N-values cannot be presented, the number of blows are reported over sampler penetration in inches (e.g. 50/3). Some design methods make use of N value corrected for various factors such as overburden pressure, energy ratio, borehole diameter, etc. No corrections have been applied to the N-values presented on the log.

OTHER TESTS

S	Sieve analysis
H	Hydrometer analysis
k	Laboratory permeability
y	Unit weight
	Specific gravity of soil particles
CD	Consolidated drained triaxial
CU	Consolidated undrained triaxial with pore pressure measurements
UU	Unconsolidated undrained triaxial
DS	Direct Shear
C	Consolidation
	Unconfined compression
	Point Load Index (I_p on Borehole Record equals I_p (50) in which the index is corrected to a reference diameter of 50 mm)

	Single packer permeability test; test ` of borehole
	Double packer permeability test; test interval as indicated
	Falling head permeability test using casing
	Falling head permeability test using well point or piezometer

BOARDWALK BORINGS

HP-6, HP-7 (2017)

HP-5A, HP-8A through HP-12A (2018)

BOREHOLE LOG

HP-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/19/2018 to 9/19/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	10.0				in.			
0	9.7	4" Boardwalk						
	7.5	Very loose, brown SILT, some medium to fine SAND, trace Brick, trace Gravel. Black ash in tip.	SS	1	12	3 1 2 3	3	
5	5.0	Casing bouncing through wood.						
	1.0	Loose, brown SILT, some medium to fine SAND, trace Brick. Wood in tip.	SS	2	8	3 2 3 10	5	
10	-1.0							
	-5.0	Wood, trace brown Silt.	SS	3	10	18 100/4"	R	
15	-7.0							
	-9.0							
	-9.3	Medium dense, gray medium to fine SAND, little Silt, trace Wood.	SS	4	6	5 9 5 9	14	
20	-11.0	Stiff, gray SILTY CLAY.						

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/19/2018 to 9/19/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
25	-14.0	Stiff, olive gray SILTY CLAY.			SS	5	24	4 8 7 13	15	
	-16.0									
	-19.0	Medium stiff, olive gray SILTY CLAY.			SS	6	24	2 3 3 4	6	
30	-21.0									
	-24.0	Medium stiff, olive gray SILTY CLAY.			SS	7	24	WOH 2 3 5	5	
35	-26.0									
	-29.0	Medium stiff, olive gray SILTY CLAY.			SS	8	24	WOH 2 3 4	5	
40	-31.0									
	-34.0	Medium stiff, olive gray SILTY CLAY, trace Gravel.			SS	9	24	1 2 4 3	6	
45	-36.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/19/2018 to 9/19/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-39.0	Medium stiff, olive gray SILTY CLAY, trace Gravel.			SS	10	24	WOH 3 4 5	7	
50	-41.0	Stiff, olive gray SILTY CLAY, trace Gravel.			SS	11	24	5 7 8 9	15	
	-43.0	Boring terminated at 53 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-6

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/12/2017 to 7/13/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-6**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	9.5				in.			
0		Very loose, brown m/f SAND, some Silt	SS	1	5	WOH WOH 1 1	1	
	7.5	Very loose, brown to dark brown c/m/f SAND, some Silt, brick in tip	SS	2	13	1 2 2 11	3	
	5.5 5.3	Dark brown/black SILT, and fine Sand, trace Clay, trace Ash.	SS	3	8	20 17 7 5	24	
5	3.5	Medium dense, red BRICK						
		No recovery. Wood stuck in tip	SS	4	0	4 4 3 3	7	
	1.5	No recovery. Wood stuck in tip	SS	5	0	1 1 1 2	2	
10	-0.5	Hard, gray/brown SILT, and Clay, trace fine Sand, trace Wood. Wood stuck in tip	SS	6	1	2 11 34 7	45	
	-2.5	Dense, c/m/f SAND, come fine Gravel, some Silt (sm) Wood	SS	7	12	30 9 26 25	35	
	-4.5	transition from Very stiff gray clayey SILT with trace fine Sand to Medium dense black m/f SAND, some Silt, trace Clay. Organic odor	SS	8	5	15 14 14 14	28	
15	-6.5	Stiff, gray SILTY CLAY, trace Gravel, some silty seams. Organic odor (CL) PP= 2.25 tsf	SS	9	18	3 4 7 10	11	
	-8.5 -9.3	Medium dense, coarse to fine gray SAND, some Silt						
		Stiff, olive gray CLAY, one Sand lense, no odor PP= 2.5 to 2.75 tsf	SS	10	20	11 13 14 17	27	
20	-10.5	Stiff, olive gray CLAY, little fine Sand PP= 1.25 tsf	SS	11	17	11 12 11 14	23	
	-12.5	Stiff, olive gray CLAY PP= .75 tsf				3 4		

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Mobile Scout Rig; Hammer: Donut Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-6

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/12/2017 to 7/13/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-6**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-14.5	Medium stiff, olive gray SILTY CLAY, very plastic PP= 0 tsf			SS	12	18	5 6	9	
25	-16.5				SS	13	18	4 5 3 4	8	
	-17.5	Olive gray SILTY CLAY (CL) Shelby tube sample taken from 27' to 29' below GS Overfilled tube. 4" of soft gray clay wash taken off top.			ST	1				
	-19.5	Medium stiff, olive gray SILTY CLAY, trace Gravel, one fine sand lense (CL) PP= .25 tsf			SS	14	20	2 3 4 4	7	
30	-21.5	Stiff, olive gray SILTY CLAY, very plastic PP= 0 tsf			SS	15	20	6 6 5 5	11	
	-23.5									
35										
	-27.5	Medium stiff, olive gray SILTY CLAY (CL) PP= 0			SS	16	24	WOH 2 3 3	5	
	-29.5									
40										
	-32.5	Medium stiff, olive gray SILTY CLAY, very plastic PP= 0			SS	17	24	1 2 2 3	4	
	-34.5									
45										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Mobile Scout Rig; Hammer: Donut Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-6

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/12/2017 to 7/13/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-6**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-37.5	Medium stiff, olive gray CLAY, trace Gravel, one Sand lense, very plastic PP= .25	SS	18	24	WOR 2 3 4	5	
50	-39.5							
	-42.5	Very soft, olive gray SILTY CLAY, trace Gravel PP= 0 tsf	SS	19	24	WOR WOH 1 4	1	
	-44.5	Auger though clay until 58.5 feet where rock was hit and sample taken.						
55								
	-49.0		SS	20	0	60/0"	R	
	-49.1	Spoon bouncing on probable bedrock End of boring at 58.5 feet. Roller bit and sampler refusal. Inclinometer installed from 3 feet above ground surface to 59.5 feet below ground surface.						
60								
65								

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Mobile Scout Rig; Hammer: Donut Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 1.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-7

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/31/2017 to 8/1/2017**

WATER LEVEL **Tidal- 6.4' at 9:45 on 8/1/17**

PROJECT No. **179410469**

EXPLORATION No. **HP-7**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	NUMBER	RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
0	11.0							
		Very dense, gray/brown m/f SAND, little Silt, trace Clay	SS	1	4	3 40 20 6	60	
	9.0	Medium dense, gray/brown SAND, little Silt, trace Clay, trace Brick, trace Wood, moist	SS	2	3	3 4 7 11	11	
	7.0	Loose, gray SILT, some fine Sand, trace Wood, trace Brick, little Gravel, wet	SS	3	3	50 7 1/12"	8	
5	5.0	Very soft, gray CLAY, some Silt, little Gravel, trace fine Sand, wet	SS	4	2	1/18" 1	1	
	3.0	Very loose, brown c/m/f SAND, and Silt, trace Brick, trace Wood, strong organic odor Black in tip	SS	5	6	WOR WOH WOH 1	WOH	
	1.0	Casing does not have enough friction to stay in place during wash						
10		WOOD, some black Silt, trace Sand, trace Gravel, trace Brick, trace Ash	SS	6	6	WOR/12" 9/12"	8	
	-1.0	Hit hard wood at 11' and one blow after getting through sent sampler one foot						
		Loose, black WOOD, little Silt, trace Brick, little Ash, organic odor, trace fine Sand	SS	7	7	WOH 6 2 4	8	126
	-3.0	-BOTTOM OF FILL-						
	-3.3	Medium dense, black/dark gray SILT, some Clay						
15		Medium dense, black/dark gray CLAY, and Silt, organic odor	SS	8	6	7 8 3 4	11	
	-5.0	Looks natural						
		Very stiff, olive gray SILTY CLAY (CL) PP= 2.25 tsf	SS	9	18	6 6 10 16	16	
	-7.0	Very stiff, olive gray SILTY CLAY PP= 1.5 tsf	SS	10	15	7 11 11 11	22	
20	-9.0	Stiff, olive gray SILTY CLAY, trace Silt PP= 1.5 tsf	SS	11	17	4 5 6 7	11	
	-11.0	Very stiff, olive gray SILTY CLAY, trace Silt, trace Gravel. Silty clay lenses				9 11		

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Mobile Scout Rig; Hammer: Donut Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-7

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/31/2017 to 8/1/2017**

WATER LEVEL **Tidal- 6.4' at 9:45 on 8/1/17**

PROJECT No. **179410469**

EXPLORATION No. **HP-7**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
		PP= .8 tsf			SS	12	20	9 10	20	
	-13.0	No recovery			SS	13	0	3 4 5 5	9	
25	-15.0	Stiff, olive gray SILTY CLAY, very plastic, trace Gravel, trace Organics PP= 0			SS	14	20	6 4 5 5	9	
	-17.0									
	-19.0									
30		Medium stiff, olive gray SILTY CLAY, trace Gravel No recovery. Sample from tip			SS	15	0	2 3 3 4	6	
	-21.0									
	-24.0									
35		Medium stiff, olive gray SILTY CLAY No recovery. Sample from tip			SS	16	0	2 3 4 4	7	
	-26.0									
	-29.0									
40		Medium stiff, olive gray SILTY CLAY, trace Silt, plastic. Silty clay lense PP= 0 tsf			SS	17	24	2 3 3 4	6	
	-31.0									
45	-35.0							1 3		

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Mobile Scout Rig; Hammer: Donut Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-7

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/31/2017 to 8/1/2017**

WATER LEVEL **Tidal- 6.4' at 9:45 on 8/1/17**

PROJECT No. **179410469**

EXPLORATION No. **HP-7**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
		Medium stiff, olive gray SILTY CLAY, trace Silt, trace fine Gravel, plastic PP= 0 tsf			SS	18	12	3 5	6	
	-37.0									
50	-40.0	Soft, olive gray SILTY CLAY, trace Silt, trace fine Gravel, plastic PP= 0 tsf			SS	19	19	2 2 2 4	4	
	-42.0									
55	-46.0									
	-47.0	Roller bit hit TILL at 57'								
		End of boring at 58' Roller bit refusal								
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Mobile Scout Rig; Hammer: Donut Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 1.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-8A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-8A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.9						in.			
0	11.6	4" Boardwalk								
	9.4	Very loose, brown medium to fine SAND and SILT, trace Brick, trace Wood. Brick in tip.			SS	1	3	1 2 1 100/3"	3	
	7.4	Roller bit through brick and concrete from 4.5 feet to 6 feet.								
5	2.9	Dense, brown medium to fine SAND, some Silt, some Gravel, trace Brick.			SS	2	7	20 22 15 30	37	
10	0.9									
	-2.1	Dense, brown medium to fine SAND and SILT, little Gravel, little coarse Sand.			SS	3	8	23 25 21 24	46	
15	-4.1									
	-7.1	Dense, brown medium to fine SAND and SILT, little Gravel, little coarse Sand.			SS	4	8	10 8 7 12	15	
20	-9.1	Very stiff, gray SILTY CLAY.								
	-11.1									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-8A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-8A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
		Layer change at 23 feet.								
	-12.1									
25		Very stiff, gray SILTY CLAY, trace fine Sand varves. PP= 1.75tsf			SS	5	12	6 6 7 13	13	
	-14.1									
	-17.1									
30		Very stiff, olive gray SILTY CLAY. PP= 0.75tsf			SS	6	24	3 4 5 7	9	
	-19.1									
	-22.1									
35		Very stiff, olive gray SILTY CLAY.			SS	7	5	3 7 8 9	15	
	-24.1									
	-27.1									
40		Very stiff, olive gray SILTY CLAY, trace Gravel PP= 0.0 tsf			SS	8	8	4 4 6 7	10	
	-29.1									
	-32.1									
45		Stiff, olive gray SILTY CLAY. PP=0 tsf			SS	9	24	WOH 2 3 5	5	
	-34.1									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-8A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-8A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-37.1	Medium stiff, olive gray SILTY CLAY. PP=0.0 tsf			SS	10	24	WOH/12" 6 7	6	
50	-39.1	Stiff, olive gray SILTY CLAY. PP=0.25 tsf			SS	11	24	6 6 6 6	12	
	-41.1	Boring terminated at 53 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-9A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/18/2018 to 9/18/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-9A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	11.9						in.			
0	11.6	4" Boardwalk								
	8.9	Very loose, brown SILT and medium to fine SAND, trace Brick, trace Wood, trace Ash.			SS	1	6	1 1 1 2	2	
5	6.9									
	2.9	Medium dense, brown medium to fine SAND, some Silt, some coarse to fine Gravel.			SS	2	9	8 10 12 6	22	
10	0.9									
	-2.1	Loose, brown medium to fine SAND and SILT, trace Gravel, trace burnt Wood, little Ash.			SS	3	3	4 2 3 4	5	
15	-4.1									
	-7.1	Medium dense, brown medium to fine SAND, some Silt, little Gravel. Sample from tip.			SS	4	0	15 8 5 9	13	
20	-9.1									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-9A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/18/2018 to 9/18/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-9A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-12.1									
25		Medium dense, brown medium to fine SAND and SILT, trace fine Gravel.			SS	5	8	8 9 12 9	21	
	-14.1	Fine gravel in wash.								
	-17.1									
30		Medium dense, black SILT, little fine Sand. No odor.			SS	6	2	2 11 3 11	14	
	-19.1									
	-22.1									
35		Stiff, olive gray SILTY CLAY, some Gravel at tip. Recovery with 3-inch sampler.			SS	7	4	3 4 5 5	9	
	-24.1									
	-27.1									
40		No recovery. Olive gray silty clay on spoon.			SS	8	0	2 3 3 5	6	
	-29.1									
	-32.1									
45		Medium stiff, olive gray SILTY CLAY. PP= 0.25 tsf			SS	9	24	WOH 2 2 3	4	
	-34.1									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-9A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/18/2018 to 9/18/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-9A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
							in.			
		Medium stiff, olive gray SILTY CLAY, trace fine Gravel. PP= 0.25 tsf								
	-37.1									
50		Stiff, olive gray SILTY CLAY. PP= 0.25 tsf			SS	10	24	WOH/12" 4 5	4	
	-39.1									
		Boring terminated at 51 feet. No refusal.			SS	11	24	3 4 5 7	9	
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Stantec

BOREHOLE LOG

W-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
70	-66.2	Medium dense, coarse SAND and GRAVEL.			SS	17	11	16 9 10 12	19	
	-68.2									
75	-71.2	Very dense, coarse SAND and GRAVEL, trace Silt, trace fine Sand.			SS	18	8	21 24 31 38	55	
	-73.2	Boring terminated at 77 feet below the water. No refusal.								
80										
85										
90										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-10A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/18/2018 to 9/18/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-10A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.8						in.			
0	11.5	4" Boardwalk								
	8.8	Loose, dark brown medium to fine SAND and SILT, trace Gravel.			SS	1	2	1 1 5 3	6	
5	6.8									
	2.8	Medium dense, brown coarse to fine SAND and GRAVEL. Gray Silt in tip.			SS	2	6	18 11 5 2	16	
10	0.8									
	-2.2	Soft, gray CLAY and SILT. trace fine Gravel. PP= 0.0tsf			SS	3	16	3 2 1 2	3	
15	-4.2									
	-7.2	Medium stiff, gray/black SILTY CLAY, little Wood, trace Ash.			SS	4	4	4 4 2 2	6	
20	-9.2									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-10A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/18/2018 to 9/18/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-10A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-12.2									
25		Medium dense, grayish brown medium to fine SAND, some Silt.			SS	5	4	4 8 5 4	13	
	-14.2									
	-16.2									
	-17.2	Layer change at 28 feet.								
30		Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	6	13	3 4 4 5	8	
	-19.2									
	-22.2									
35		Medium stiff, olive gray SILTY CLAY. PP= 0.5tsf			SS	7	24	1 2 4 6	6	
	-24.2									
	-27.2									
40		Medium stiff, olive gray SILTY CLAY. PP= 0.25tsf			SS	8	24	3 4 3 4	7	
	-29.2									
	-32.2									
45		Medium stiff, olive gray SILTY CLAY. PP= 0.25tsf			SS	9	24	1 3 5 6	8	
	-34.2									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-10A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/18/2018 to 9/18/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-10A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-37.2									
		Stiff, olive gray SILTY CLAY. PP= 0.25tsf								
50	-38.5				SS	10	24	1 4 5 7	9	
	-39.2	Stiff, olive gray SILTY CLAY. PP= 1.0tsf								
		Hard, olive gray SILTY CLAY. PP= 0.75tsf			SS	11	24	7 9 26 100/4"	35	
	-40.9									
	-41.2	Dense, brown SANDY GRAVEL, little Silt. Roll through gravel to 55 feet.								
55	-43.2									
		Boring terminated at 55 feet. No refusal.								
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-11A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/21/2018 to 9/21/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-11A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.9						in.			
0	11.6	4" Boardwalk								
	9.4	Soft, black/brown CLAYEY SILT, little medium to fine Sand, trace Ash. Trace brick in tip.			SS	1	1	5 3 2 3	5	
	7.4	Black wood and ash in wash from 6 to 7 feet. Casing or roller bit refusal on rock at 8 feet at 3 locations. Possible sea wall. Resume location 4 at 9 feet.								
5	2.9	Loose, brown coarse to medium SAND, trace Silt, trace Brick. Wood in tip.			SS	2	7	3 3 4 6	7	
10	0.9									
	-2.1	No recovery. Gravel stuck in tip.			SS	3	0	15 15 11 11	26	
15	-4.1									
	-7.1	Dense, gray medium to fine SAND, some Silt.			SS	4	9	14 14 17 22	31	
20	-9.1									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-11A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/21/2018 to 9/21/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-11A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-12.1									
25		Very stiff, olive gray CLAYEY SILT. Sand seam at bottom of sample.			SS	5	19	9 13 12 16	25	
	-14.1									
	-17.1									
30		Very stiff, olive gray SILTY CLAY. PP=1.5tsf			SS	6	24	4 10 11 13	21	
	-19.1									
	-22.1									
35		Stiff, olive gray SILTY CLAY. PP=0.75tsf			SS	7	22	5 7 9 12	16	
	-24.1									
	-27.1									
40		Stiff, olive gray SILTY CLAY. One medium sand seam. PP=0.75tsf			SS	8	24	3 4 5 7	9	
	-29.1	Water coming up in pipe from possible swelling clays.								
	-32.1									
45		Stiff, olive gray SILTY CLAY, trace fine Gravel. PP=0.5tsf			SS	9	24	5 6 7 7	13	
	-34.1									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-11A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/21/2018 to 9/21/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-11A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-37.1									
50		Medium stiff, olive gray SILTY CLAY, trace fine Gravel. PP=0.25tsf - 0.5tsf			SS	10	24	2 3 4 6	7	
	-39.1									
	-42.1									
55		Medium stiff, olive gray SILTY CLAY, trace fine Gravel. PP=1.25tsf			SS	11	XX	XX	XX	
	-44.1									
		Boring terminated at 56 feet. No refusal.								
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-12A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/22/2018 to 9/22/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-12A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.8						in.			
0	11.5	4" Boardwalk								
	9.3									
		Loose, brown medium to fine SAND and SILT, trace Gravel, trace Brick, trace Ash.			SS	1	2	1 2 2 3	4	
5	7.3									
	2.8	Medium dense, brown/orange/gray medium to fine SAND and SILT, trace Gravel, trace Brick, trace Ash.			SS	2	14	3 4 6 12	10	
10	0.8									
	-2.2	Medium dense, orangish brown coarse to medium SAND, trace Silt. Gravel stuck in tip.			SS	3	5	6 7 7 7	14	
15	-4.2									
	-7.2	Medium stiff, gray SILTY CLAY, trace fine Gravel, trace medium Sand. PP= 0.1tsf			SS	4	7	5 3 4 2	7	
20	-9.2									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-12A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/22/2018 to 9/22/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-12A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-12.2									
25		Stiff, olive gray SILTY CLAY, trace organics. Few sand seams. PP= 2.0tsf			SS	5	12	3 4 6 12	10	
	-14.2									
	-17.2									
30		Stiff, olive gray SILTY CLAY. PP= 0.25tsf			SS	6	20	5 6 7 5	13	
	-19.2									
	-22.2									
35		Stiff, olive gray SILTY CLAY. PP= 0.0tsf			SS	7	10	5 4 4 6	8	
	-24.2									
	-27.2									
40		Stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	8	24	4 4 5 7	9	
	-29.2									
	-32.2									
45		Stiff, olive gray SILTY CLAY. PP= 0.25 - 0.5tsf			SS	9	24	1 8 6 4	14	
	-34.2									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-12A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/22/2018 to 9/22/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-12A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-37.2	Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	10	24	WOR 3 4 4	7	
50	-39.2	Stiff, olive gray SILTY CLAY. PP= 0.5tsf			SS	11	24	5 7 7 8	14	
	-41.2	Boring terminated at 53 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

LYNN HERITAGE STATE PARK BORINGS

HP-1 through HP-4 (2017)

HP-13A through HP-27A (2018)

Stantec

BOREHOLE LOG

HP-1

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/5/2017 to 7/5/2017**

WATER LEVEL **Tidal- 11' at 8:30 on 7/5/17**

PROJECT No. **179410469**

EXPLORATION No. **HP-1**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
		Stiff, brown/tan/gray SILTY CLAY PP=1.75tsf			SS	12	22	6 5 8 9	13	
25	-15.3	Stiff, olive gray SILTY CLAY, trace fine angular Gravel PP=.25tsf			SS	13	24	5 5 6 6	11	
	-17.3	Stiff, olive gray SILTY CLAY, more plastic PP=.25tsf			SS	14	9	4 5 6 6	11	
	-19.3	Stiff, olive gray SILTY CLAY PP=.1tsf			SS	15	24	2 3 4 4	7	
30	-21.3									
	-23.3	Shelby tube sample collected from 33'-35' Overfilled tube. 4" of soft gray clay wash taken off top.			ST	1	24			
35	-25.3	Stiff, olive gray SILTY CLAY, plastic PP=.25 - .4tsf			SS	16	24	3 5 5 6	10	
	-27.3									
40	-30.3									
	-31.3	Fine angular GRAVEL, some gray c/m Sand, trace Clay, trace Silt			SS	17	6	21 63 100/5"	R	
	-35.3	Sampler refusal at 41 feet. Roller bit to 45 feet. Roller bit hit rock at 41 feet.								
45		End of boring at 45 feet. Sampler Refusal at 41 feet.								

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Truck Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 1.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-2

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/6/2017 to 7/6/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-2**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	8.5				in.			
0	8.3	2" Aspahlt						
	6.5	Loose, brown fine SAND, and Silt, little Clay, trace Gravel, trace Brick	SS	1	13	13 1 2 1	3	
	4.5	Medium dense, brown/red m/f SAND, and Silt, trace Clay	SS	2	8	1 10 3 6	13	
5	2.5	Medium dense, brown/red m/f SAND, and Silt, some Wood, trace Clay	SS	3	6	1 4 7 7	11	
	0.5	Medium dense, brown/red m/f SAND, and Silt, trace Wood, trace Clay	SS	4	8	4 2 6 9	8	
10	-1.5	Loose, brown/red m/f SAND, and Silt, trace Wood, trace Clay	SS	5	15	6 4 2 10	6	
	-2.3	Loose, dark gray fine SAND, some Silt. Wood stuck in tip						
	-3.5	Wood fibers, trace red brick	SS	6	5	12 8 6 4	14	
	-5.5							
	-5.8	-BOTTOM OF FILL-						
15	-7.5	Stiff, gray SILTY CLAY PP= 2.75tsf	SS	7	17	17 7 9 9	16	
	-9.5	Hard, gray/brown SILTY CLAY. Wood in tip. Trace red brick at top PP= 4.75tsf	SS	8	24	16 23 32 49	55	
	-11.5	Hard, tan CLAY PP= 3tsf	SS	9	24	16 16 19 19	35	
20	-13.5	Very stiff, tan CLAY, trace gray Silt PP=3.5 - 4 tsf	SS	10	24	12 13 16 16	29	
		Stiff, tan CLAY, little gray Silt. Dark brown spots PP=2.5 tsf				6 7		

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

4.75

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Truck Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-2

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/6/2017 to 7/6/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-2**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
					SS	11	24	9 10	18	
	-15.5									
		Stiff, olive gray CLAY PP=.5 - 1 tsf			SS	12	24	5 4 7 6	11	
25	-17.5									
		Medium stiff, olive gray CLAY PP=.5 - .75 tsf			SS	13	24	4 3 4 4	7	
	-19.5									
		Medium stiff, olive gray CLAY PP=.25 tsf			SS	14	24	WOR 4 4 4	8	
30	-21.5									
		Medium stiff, olive gray CLAY PP=.5 - .75 tsf			SS	15	24	4 3 5 5	8	
	-23.5									
	-26.5									
35		Medium stiff, olive gray CLAY, trace fine gravel in middle 1" of sample PP < .1 tsf			SS	16	24	WOR 4 3 5	7	
	-28.5									
	-31.5									
40		Medium stiff, olive gray CLAY, very soft PP= 0 tsf			SS	17	24	3 3 4 4	7	
	-33.5									
	-36.5									
45		Medium stiff, olive gray CLAY, very soft PP= 0 tsf						3 3		

Undrained Shear Strength - tsf

1 2 3 4

W_P W W_L

Water Content & Atterberg Limits

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Truck Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-2

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/6/2017 to 7/6/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-2**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
					SS	18	24	5 5	8	
	-38.5									
50	-41.5	Medium stiff, olive gray CLAY, very soft PP= 0 tsf			SS	19	24	WOR 3 3 5	6	
	-43.5	End of boring at 52 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Truck Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 1.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-3

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/6/2017 to 7/7/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-3**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	8.5						in.			
0	8.1	5" Asphalt								
	7.5									
	6.9	Very dense, brown/red m/f SAND, some Silt								
		Gray crushed rock, some brick. Wood in tip			SS	1	13	25 40 65 20	105	
	5.5									
	5.0	Wood, natural color. Wood in tip. Horizontal fibers			SS	2	2	100/6"	R	
	3.5									
5		Wood, natural color			SS	3	9	10 9 29 6	38	
	1.5									
	1.3	Wood, some Gravel, trace fine Sand, trace Silt			SS	4	9	17 9 12 13	21	
	-0.5									
	-1.5									
10		No recovery. Wood in tip, little gray Silt.			SS	5	0	10 6 2 1	8	
	-3.5									
		Wood, some dk brown/black Silt, trace Ash. Rock in tip. Wash almost black			SS	6	4	2 20 6 2	26	
	-5.5									
		Soft, gray/green SILT, and Clay, organic odor. Red brick at top 2" of sample			SS	7	8	10 2 1 2	3	
15	-7.5									
		Medium stiff, gray/green SILT, and Clay, little Wood, trace fine Gravel, trace fine Sand, organic odor. Trace brick in top 2" of sample			SS	8	8	3 4 3 3	7	
	-9.5									
		-BOTTOM OF FILL-								
		Medium stiff, gray SILTY CLAY, organic odor PP= 2 - 2.5 tsf			SS	9	12	4 3 6 9	9	
	-11.5									
20	-12.3	Very stiff, gray/black SILTY CLAY, organic odor								
		Very stiff, tan/gray SILTY CLAY, no odor PP= 4.25 tsf			SS	10	21	10 10 14 12	24	
	-13.5									
	-14.3	Very stiff, gray SILTY CLAY, no odor						4 8		

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Truck Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG — HP-3

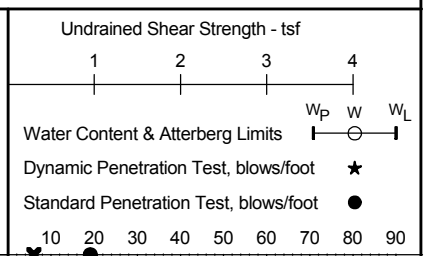
Stantec

CLIENT: Brown, Richardson, and Rowe
LOCATION: Heritage State Park, Lynn, MA
EXPLORATION DATE: 7/6/2017 to 7/7/2017
WATER LEVEL: Tidal

PROJECT No.: 179410469
EXPLORATION No.: HP-3
DATUM: NAVD88

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	RECOVERY (in.)	SPT blows / 6"	SPT N-Value
	-15.5	Very stiff, tan/gray SILTY CLAY PP= .3 tsf	SS	11	24	11 12	19
25	-17.5	Stiff, olive gray SILTY CLAY, little tan clay at top PP= 1 tsf	SS	12	24	6 4 5 6	9
	-19.5	Stiff, olive gray SILTY CLAY (CL) PP= 1 tsf	SS	13	24	4 3 4 6	7
	-21.5	Medium stiff, olive gray SILTY CLAY (CL) PP= .75 tsf	SS	14	15	WOR 3 2 3	5
30	-23.5	Medium stiff, olive gray SILTY CLAY (CL) PP= 0 tsf	SS	15	11	4 3 4 4	7
	-26.5	Shelby tube sample from 35' to 37'. No recovery. Olive gray SILTY CLAY (CL)	ST	1	0		
35	-28.5	Shelby tube sample from 37' to 39'. Tube dented at bottom. Large gravel piece seen at top of sample. Olive gray clay	ST	2	24		
	-30.5	Stiff, olive gray CLAY PP=.25 tsf	SS	16	24	WOR 2 4 5	6
40	-32.5						
	-33.5	Shelby tube sample from 42' to 44'. No recovery.	ST	3	0		
	-35.5						
45	-36.5	Stiff, olive gray CLAY PP=.25 tsf				2 4	

PID Reading (PPM)



Driller: New England Boring- Derry, NH; Supervisor: Brian Foley
Rig Type: Acker Truck Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-3

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/6/2017 to 7/7/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-3**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
					SS	17	24	4 4	8	
	-38.5									
	-41.5	Medium stiff, olive gray SILTY CLAY PP=.30 tsf			SS	18	24	WOR 3 4 4	7	
50	-43.5	End of boring at 52 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Truck Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 1.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-4

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/10/2017 to 7/10/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-4**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	9.8							
0	9.5	4" Asphalt						
	8.8							
	8.4	Very dense, brown m/f SAND, little Silt, trace Gravel	SS	1	11	17 45 66 31	111	
		Very dense, light gray rock						
	6.8							
	6.4	Dense, dark brown/black, little Silt, trace Gravel, trace Ash	SS	2	13	40 19 25 36	44	
		Hard, greenish gray CLAY, trace Sand, trace Gravel						
5	4.8							
	4.7	Medium dense, brown/orange/red m/f SAND, some Clay, trace Gravel	SS	3	7	22 18 12 16	30	
	2.8							
		No recovery	SS	4	0	13 4 4 3	8	
	0.8							
		Medium dense, brown SAND, and Silt, some Gravel, little Wood.	SS	5	6	9 7 6 9	13	
10		Wood stuck in sampler tip						
	-1.2							
		Medium dense, WOOD, little brown/black Silt. Sample from tip	SS	6	0	4 3 8 4	11	
	-3.2							
		No recovery, Brick and glass in wash	SS	7	0	4 4 6 7	10	
	-5.2							
15		Medium dense, WOOD, little brown/black Silt. Sample from tip	SS	8	0	11 9 10 14	19	
	-7.2							
		Medium dense, dark gray coarse to fine SAND, some Silt, trace Brick, trace Shells. Wood in tip	SS	9	4	1 14 13 12	27	
	-9.2	-BOTTOM OF FILL-						
		Stiff, SILT, and Clay, organic odor.	SS	10	14	7 5 6 6	11	
20	-11.2							
	-11.5	Medium dense, tan coarse to fine SAND, little Silt	SS	11	19	11 12 6 7	18	
	-12.5							
		Very stiff, tan CLAY						
	-13.2							

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Truck Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-4

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/10/2017 to 7/10/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-4**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
		PP = 2 tsf								
	-14.0	Medium dense, tan m/f SAND, some Clay spots			SS	12	19	7 5 6 8	11	
		Stiff, tan CLAY, trace Sand								
25	-15.2	PP= 2 tsf								
		Stiff, tan CLAY			SS	13	16	6 6 9 9	15	
		PP= 1 tsf								
	-17.2									
		Stiff, olive gray CLAY			SS	14	22	4 6 7 8	13	
		PP= 2 tsf								
	-19.2									
		Stiff, olive gray CLAY			SS	15	16	4 5 6 6	11	
30		PP= .75 tsf								
	-21.2									
	-22.2									
		Shelby tube taken from 32'-34'			ST	1	24			
		Overfilled tube. 4" of soft gray clay wash taken off top.								
	-24.2									
		Medium stiff, olive gray CLAY, very plastic			SS	16	24	2 3 3 4	6	
35		PP= .1 tsf								
	-26.2									
	-30.2									
		Medium stiff, olive gray CLAY, very plastic			SS	17	24	WOR 2 3 4	5	
40		PP= 0 tsf								
	-32.2									
	-35.2									
		Medium stiff, olive gray CLAY, very plastic						WOR WOR		
45		PP= 0 tsf								

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Truck Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-4

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/10/2017 to 7/10/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-4**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
					SS	18	24	4 4	4	
	-37.2									
50	-40.2	Medium stiff, olive gray CLAY, very plastic Not enough sample for pocket penetrometer, but very soft			SS	19	4	WOR 3 2 4	5	
	-42.2									
55	-45.2	Very soft, olive gray CLAY, very plastic PP= 0 tsf			SS	20	24	WOR WOR WOR 4	WOR	
	-47.2	Roller bit to 70 feet. Plastic clay in wash consistently to 70 feet.								
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Truck Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-4

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **7/10/2017 to 7/10/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **HP-4**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
70	-60.2									
	-60.7	Olive gray CLAY, trace fine Gravel			SS	21	8	41	R	
	-61.2	PP= .1 tsf						100/5"		
		GRAVEL/Weathered rock, trace c/m Sand, trace Clay								
		End of boring at 71 feet.								
		Sampler refusal.								
75										
80										
85										
90										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Truck Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 1.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-13A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/8/2018 to 10/9/2018**

WATER LEVEL **9.5**

PROJECT No. **179410750**

EXPLORATION No. **HP-13A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	10.0						in.			
0		Loose, dark brown medium to fine SAND and SILT, trace Organics.			SS	1	3	1 3 6 6	9	0.0
	8.0	Very dense, borwn medium to fine SAND, some Silt, little Gravel, trace Glass.			SS	2	2	13 50/1"	R	NR
	6.0	Medium dense, tan/gray/black medium to fine SAND, some Wood, little Silt, trace Gravel, trace Ash.			SS	3	7	6 5 5 2	10	16.3
5	4.0	Stiff, gray SILTY CLAY.			SS	4	8	3 4 5 2	9	1.8
	2.0	Loose, WOOD, some gray Silt.		▽	SS	5	1	3 2 4 3	6	5.5
10	0.0	No recovery.			SS	6	0	3 1 2 1	3	NR
	-2.0	No recovery. Wood trace brick in tip.			SS	7	0	1 2 3 1	5	NR
	-4.0	Very loose, blackish brown SILT, little medium to fine Sand, little Gravel, trace Wood, trace Ash. Wood in tip.			SS	8	8	WOR /16" 1 5	1	0.0
15	-6.0	Casing driven through large piece of wood at 18.5 feet.								
	-9.0	Very stiff, gray SILT, some fine Sand, trace Clay. Organic odor.			SS	9	17	10 10 12 11	22	0.4
20	-11.0									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-13A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/8/2018 to 10/9/2018**

WATER LEVEL **9.5**

PROJECT No. **179410750**

EXPLORATION No. **HP-13A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-14.0									
25		Stiff, brownish gray SILTY CLAY. PP= 2.75tsf			SS	10	16	3 6 7 8	13	0.0
	-16.0									
	-19.0									
30		Soft, olive gray SILTY CLAY. PP= 0.0tsf			SS	11	24	WOH/12" 2 2	2	0.0
	-21.0									
	-24.0									
35		Very soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	12	24	WOH/18" 1	0	0.0
	-26.0									
	-29.0									
40		Very soft, olive gray SILTY CLAY. PP= 0.1-0.5tsf			SS	13	24	WOH/12" 2 2	2	0.0
	-31.0									
	-34.0									
45		Very soft, olive gray SILTY CLAY. PP= 0.1-0.5tsf			SS	14	24	WOH/18" 3	0	0.0
	-36.0									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-13A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/8/2018 to 10/9/2018**

WATER LEVEL **9.5**

PROJECT No. **179410750**

EXPLORATION No. **HP-13A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-39.0	Very soft, olive gray SILTY CLAY. PP= 0.0-0.1tsf			SS	15	18	WOH/12" 2 3	2	0.0
50	-41.0									
	-44.0	Very soft, olive gray SILTY CLAY. One fine sand lense. PP= 0.1tsf			SS	16	24	WOH/18" 1	0	0.0
55	-46.0									
	-49.0	Very soft, olive gray SILTY CLAY. PP= 0.0-0.1tsf			SS	17	24	WOH/18" 4	0	0.0
60	-51.0									
		Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG — HP-14A

CLIENT: Brown, Richardson, and Rowe
LOCATION: Heritage State Park, Lynn, MA
EXPLORATION DATE: 10/9/2018 to 10/10/2018
WATER LEVEL: 9.1

PROJECT No.: 179410750
EXPLORATION No.: HP-14A
DATUM: NAVD 88

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
0	11.0							
	10.4	Loose, brown medium to fine SAND, some Silt, trace Organics.	SS	1	15	1 2 4 3	6	0.0
	9.0	Medium dense, tan medium to fine SAND, little Silt, trace Gravel.						
		Loose, tan medium to fine SAND, little Silt, trace Organics, trace Brick. Brick in tip.	SS	2	13	3 3 6 8	9	0.4
	7.0	Loose, brown/tan medium to fine SAND, some Silt. Wood in tip.	SS	3	8	4 6 2 6	8	44
5	5.0	Medium dense, brown SANDY SILT, trace Wood, trace Brick.	SS	4	10	5 7 3 4	10	1.1
	3.0	Medium dense, WOOD, trace Gravel.	SS	5	4	31 3 14 2	17	NR
	1.0	Loose, black SANDY SILT, some Wood, trace Gravel, little Ash.	SS	6	5	2 3 3 3	6	18.4
10	-1.0	Loose, brown/black SILTY SAND, trace Wood, trace Brick, little Ash.	SS	7	9	2 2 3 2	5	1.338
	-3.0	Loose, tan/black WOOD, trace Glass, trace Ash.	SS	8	5	7 4 2 2	6	71
15	-5.0							
	-8.0	Medium dense, black/tan WOOD, little Ash.						
	-9.0	Medium dense, black SANDY SILT, trace Glass. trace ash.	SS	9	18	12 16 12 23	28	50
20	-10.0							

Undrained Shear Strength - tsf: 1 2 3 4
Water Content & Atterberg Limits: W_P W W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley
Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-14A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/9/2018 to 10/10/2018**

WATER LEVEL **9.1**

PROJECT No. **179410750**

EXPLORATION No. **HP-14A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-13.0									
25		Very stiff, brownish gray SILTY CLAY, trace coarse Sand. PP= 3.25tsf			SS	10	19	4 7 9 11	16	0.0
	-15.0									
	-18.0									
30		Medium stiff, olive gray, SILTY CLAY. Couple fine sand lenses. PP= 0.1-0.25tsf			SS	11	24	1 1 2 3	3	0.0
	-20.0									
	-23.0									
35		Very soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	12	24	WOH/18" 2	0	0.0
	-25.0									
	-28.0									
40		Very soft, olive gray SILTY CLAY. PP= 0.0-0.25tsf			SS	13	24	WOH/18" 1	0	0.0
	-30.0									
	-33.0									
45		Soft, olive gray SILTY CLAY, trace fine Gravel. PP= 0.25tsf			SS	14	24	WOH/12" 3 2	3	0.0
	-35.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-14A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/9/2018 to 10/10/2018** WATER LEVEL **9.1**

PROJECT No. **179410750**

EXPLORATION No. **HP-14A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-38.0	Very soft, olive gray SILTY CLAY. One sand lense. PP= 0.0tsf			SS	15	24	WOH/18" 3	0	0.0
50	-40.0									
	-43.0	Very soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	16	24	WOH/18" 3	0	0.0
55	-45.0									
	-48.0	Very soft, olive gray SILTY CLAY. One sand lense. PP= 0.1tsf			SS	17	24	WOH/18" 1	0	0.0
60	-50.0									
		Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-15A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/8/2018 to 10/8/2018**

WATER LEVEL **9.5**

PROJECT No. **179410750**

EXPLORATION No. **HP-15A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	0.0						in.			
0		Medium dense, brown meidum to fine SAND, some Silt, trace Gravel, trace Organics.			SS	1	7	1 4 6 7	10	0.0
	-2.0									
	-2.5	Medium dense, tan fine SAND and SILT.								
		Medium dense, brown medium to fine SAND, little Gravel, trace Wood. Brick in tip.			SS	2	13	9 5 6 10	11	0.0
	-4.0									
	-4.6	Very dense, brown/black SILT, little medium to fine Sand, trace Gravel, some Wood, trace Plastic, trace Ash.			SS	3	13	5 15 75 19	90	20.5
5	-6.0	Very dense, WOOD, trace Ash.								
		Dense, brown SILTY WOOD, trace Ash.			SS	4	1	13 13 17 16	30	NR
	-8.0									
		No recovery. Wood stuck in tip.			SS	5	0	4 3 5 3	8	NR
	-10.0									
10		Loose, reddish brown WOOD, some Silt, little Sand, trace Gravel.			SS	6	4	3 2 1 2	3	7.0
	-12.0									
		Loose, orangish brown/black coarse GRAVEL, some Wood, trace Sand, trace Silt, trace Ash.			SS	7	13	1 2 5 12	7	2.4
	-14.0									
		No recovery. Wood and gray silt in wash.			SS	8	0	6 2 1 4	3	NR
15	-16.0									
	-19.0									
	-20.0	Loose, gray coarse to fine SAND, trace Silt.			SS	9	18	2 4 4 5	8	0.0
20	-21.0	Stiff, gray SILTY CLAY, trace fine Sand.								

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-15A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/8/2018 to 10/8/2018**

WATER LEVEL **9.5**

PROJECT No. **179410750**

EXPLORATION No. **HP-15A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-24.0									
25		Stiff, gray SILTY CLAY. One sand lense. PP= 2.25tsf			SS	10	22	2 4 5 7	9	0.0
	-26.0									
	-29.0									
30		Soft, olive gray SILTY CLAY. PP= 0.25-0.5tsf			SS	11	24	WOH 1 1 2	2	0.0
	-31.0									
	-34.0									
35		Soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	12	24	WOH/18" 1	0	0.0
	-36.0									
	-39.0									
40		Soft, olive gray SILTY CLAY. PP= 0.0tsf			SS	13	24	WOH/24"	0	0.0
	-41.0									
	-44.0									
45		Soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	14	24	WOH/12" 2 2	2	0.0
	-46.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-15A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/8/2018 to 10/8/2018**

WATER LEVEL **9.5**

PROJECT No. **179410750**

EXPLORATION No. **HP-15A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-49.0									
50		Medium stiff, olive gray SILTY CLAY, trace fine Gravel. PP= 0.25tsf			SS	15	24	WOH 12" 5 3	5	0.0
	-51.0	Roller bit through gravel layer at 51 feet.								
	-54.0									
55		Soft, olive gray SILTY CLAY, trace fine Gravel. PP= 0.25tsf			SS	16	24	1 1 2 2	3	0.0
	-56.0									
	-59.0									
60		Soft, olive gray SILTY CLAY. PP= 0.1-0.25tsf.			SS	17	24	1 1 1 2	2	0.0
	-61.0	Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-16A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/10/2018 to 10/10/2018**

WATER LEVEL **11.5**

PROJECT No. **179410750**

EXPLORATION No. **HP-16A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	0.0				in.			
0	-0.3	Medium dense, dark brown medium to fine SAND, some Silt, trace Organics.	SS	1	18	1 2 8 8	10	0.4
	-2.0	Medium dense, brown medium to fine SAND, some Silt, little fine Gravel, trace Organics.						
		Dense, tan fine SAND and SILT, trace Gravel.	SS	2	6	7 15 33 36	48	0.0
	-4.0							
	-4.5	Loose, tan fine SAND and SILT, trace Gravel.						
5		Loose, black WOOD, trace Brick, little Ash. Wood in tip.	SS	3	10	5 4 5 4	9	0.1
	-6.0							
		Loose, grayish brown SANDY SILT, some Wood, trace Brick.	SS	4	7	4 3 5 3	8	0.0
	-8.0							
		No recovery. Wood stuck in tip.	SS	5	0	1 2 2 8	4	NR
10	-10.0							
		Loose, brown SILTY SAND, little Brick, little Wood, little Gravel.	SS	6	3	4 4 5 5	9	0.1
	-12.0							
		Loose, brown SANDY SILT, trace Brick, trace Wood. Wood stuck in tip.	SS	7	5	4 4 3 4	7	0.0
	-14.0							
		Dense, black/brown WOOD, trace Sand, trace Silt, trace Ash. Wood in tip.	SS	8	5	8 25 11 4	36	0.0
15	-16.0							
	-19.0							
		Very stiff, brownish gray SILTY CLAY, trace Gravel. PP= 3.5tsf	SS	9	24	4 7 10 13	17	NR
20	-21.0							

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-16A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/10/2018 to 10/10/2018**

WATER LEVEL **11.5**

PROJECT No. **179410750**

EXPLORATION No. **HP-16A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-24.0	Stiff, olive gray SILTY CLAY. Few sand lenses. PP= 2.25tsf			SS	10	24	2 4 5 7	9	0.0
25	-26.0									
	-29.0	Medium stiff, brownish gray SILTY CLAY. PP= 0.5tsf			SS	11	12	2 2 3 3	5	0.0
30	-31.0									
	-34.0	Very soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	12	24	WOH/18" 3	0	0.0
35	-36.0									
	-39.0	Soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	13	24	WOH 1 2 3	3	0.0
40	-41.0									
	-44.0	Very soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	14	24	WOH/12" 2 3	2	0.0
45	-46.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-16A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/10/2018 to 10/10/2018** WATER LEVEL **11.5**

PROJECT No. **179410750**

EXPLORATION No. **HP-16A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-49.0	Very soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	15	24	WOH 16" 1 3	1	0.0
50	-51.0									
	-54.0	Very soft, olive gray SILTY CLAY. PP= 0.0tsf			SS	16	24	WOH/16" 1 2	1	0.0
55	-56.0									
	-59.0	Very soft, olive gray SILTY CLAY, trace fine Gravel. PP= 0.75tsf			SS	17	24	WOH/12" 2 5	2	0.0
60	-61.0									
		Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-17A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/5/2018 to 10/5/2018**

WATER LEVEL **12.6**

PROJECT No. **179410750**

EXPLORATION No. **HP-17A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.0						in.			
0		Very dense, dark brown medium to fine SAND and SILT, trace Organics, trace Gravel.			SS	1	8	2 4 50/1"	R	0.6
	9.0									
		Very dense, dark brown medium to fine SAND, some Silt, trave Wood, trace Gravel.			SS	2	7	5 4 3 2	7	0.6
	7.0									
		Loose, tan fine SAND, little Silt.			SS	3	9	4 3 4 4	7	0.9
5	5.0									
	4.7	Red Brick.								
		Medium dense, dark gray SILT, little Clay.			SS	4	11	5 7 4 3	11	0.0
	3.0									
		Loose, WOOD and BRICK, trace Ash. Wood stuck in tip.			SS	5	1	3 4 4 6	8	NR
	1.0									
10		Loose, brown medium to fine SAND and SILT, some Brick, trace Wood, trace Gravel, trace Glass.			SS	6	6	2 4 4 5	8	0.0
	-1.0									
		Loose, WOOD and BRICK, trace brown Silt, trace Glass, trace Ash.		▽	SS	7	4	7 4 4 25	8	1.0
	-3.0									
		Medium dense, WOOD and BRICK, trace Ash. Wood stuck in tip.			SS	8	1	6 3 7 4	10	5.0
15	-5.0									
		Wood in wash. Creosote odor.								
	-8.0									
	-8.4	Red brick.								
		Medium stiff, dark gray SILTY CLAY, little medium Sand.			SS	9	12	9 4 2 3	6	0.8
20	-10.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-17A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/5/2018 to 10/5/2018**

WATER LEVEL **12.6**

PROJECT No. **179410750**

EXPLORATION No. **HP-17A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-13.0									
25		Hard, gray medium to fine SAND and SILT. Organic odor.			SS	10	16	19 16 16 10	32	10.5
	-15.0									
	-18.0									
		Stiff, olive gray SILTY CLAY. PP= 1.5tsf			SS	11	24	4 4 5 4	9	0.0
30	-20.0									
	-23.0									
		Very soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	12	24	WOH/18" 1	0	0.0
35	-25.0									
	-28.0									
		Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	13	12	WOH 3 3 4	6	0.0
40	-30.0									
	-33.0									
		Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	14	24	1 2 2 3	4	0.0
45	-35.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-17A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/5/2018 to 10/5/2018**

WATER LEVEL **12.6**

PROJECT No. **179410750**

EXPLORATION No. **HP-17A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
50	-38.0	Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	15	8	3 1 3 3	4	0.0
	-40.0									
	-43.0	Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	16	13	1 2 2 3	4	0.0
55	-45.0									
	-48.0	Very soft, olive gray SILTY CLAY. PP= 0.0-0.25tsf			SS	17	24	WOH/18" 4	0	0.0
60	-50.0	Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-18A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/12/2018 to 10/12/2018**

WATER LEVEL **Not observed**

PROJECT No. **179410750**

EXPLORATION No. **HP-18A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	10.8						in.			
0	10.1	Medium dense, brown medium to fine SAND, sone Silt, trace fine Gravel.			SS	1	13	1 3 2 12	5	0.2
	8.8	Medium dense, tan fine SAND, some Silt.								
	8.6	Stiff, gray/black SILT, trace Brick, trace Shells, trace Ash.			SS	2	18	8 6 9 12	15	5.0
	6.8	Medium dense, black medium to fine SAND, some Silt, little Ash, trace Wood, trace Brick.			SS	3	15	12 12 12 6	24	7.5
5	4.8	Loose, brown medium to fine SAND and SILT, trace Wood, trace Brick, trace fine Gravel, trace Ash.			SS	4	8	3 2 6 3	8	64.0
	2.8	Loose, brown medium to fine SAND and SILT, trace Wood, trace Brick, trace fine Gravel, trace Ash.			SS	5	6	3 3 2 1	5	73.0
	0.8	Loose, brown medium to fine SAND, little Silt, trace Brick, trace Wood. Black ash at bottom of sample. Spoon bouncing on wood.			SS	6	12	4 1 3 100/5"	4	37.0
10	-1.2	Loose, brown coarse to fine SAND, little Silt, little Wood, trace scrap Metal, trace Brick, trace Ash.			SS	7	12	6 3 3 11	6	2.2
	-3.2	Medium dense, brown coarse to fine SAND, little Silt, little Wood, trace Glass, trace Brick, trace Ash.			SS	8	8	20 7 6 15	13	17.2
15	-5.2									
	-8.2	Medium dense, gray medium to fine SAND, little to some Silt.			SS	9	18	8 12 11 11	23	0.2
20	-10.2									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-18A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/12/2018 to 10/12/2018**

WATER LEVEL **Not observed**

PROJECT No. **179410750**

EXPLORATION No. **HP-18A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-13.2									
	-13.5	Medium dense, gray medium to fine SAND, little to some Silt.			SS	10	24	2 5 5 6	10	0.0
25		Stiff, gray SILTY CLAY.								
	-15.2	PP= 1.5tsf								
	-18.2									
		Stiff, olive gray SILTY CLAY.			SS	11	24	1 4 4 5	8	0.0
30		PP= 1.0tsf								
	-20.2									
	-23.2									
		Medium stiff, olive gray SILTY CLAY.			SS	12	24	WOH 2 3 4	5	0.0
35		PP= 0.5tsf								
	-25.2									
	-28.2									
		Very soft, olive gray SILTY CLAY.			SS	13	24	WOH/16" 1 3	1	0.0
40		PP= 0.5tsf								
	-30.2									
	-33.2									
		Very soft, olive gray SILTY CLAY.			SS	14	24	WOH/12" 3 4	3	0.0
45		PP= 0.5tsf								
	-35.2									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-18A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/12/2018 to 10/12/2018**

WATER LEVEL **Not observed**

PROJECT No. **179410750**

EXPLORATION No. **HP-18A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
							in.			
		Boring terminated at 46 feet. No refusal.								

Undrained Shear Strength - tsf
1 2 3 4
Water Content & Atterberg Limits W_P W W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley
Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-19A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/4/2018 to 10/4/2018**

WATER LEVEL **11**

PROJECT No. **179410750**

EXPLORATION No. **HP-19A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	13.0						in.			
0	12.3	Medium dense, dark brown medium to fine SAND, some Silt, trace Organics.			SS	1	12	2 5 7 18	12	0.0
	11.0	Medium dense, tan fine SAND, little Silt.								
		Dense, tan fine SAND, little Silt, trace fine Gravel.			SS	2	14	24 18 15 18	35	0.0
	9.0									
	8.8	Medium dense, brown medium to fine SAND, little Silt, little fine Gravel.			SS	3	12	12 15 11 6	26	0.3
5	7.0									
	6.6	Medium dense, tan medium to fine SAND, trace Silt. Burnt wood and ash in tip.			SS	4	12	9 9 10 7	19	0.9
	5.0	Medium dense, black SILT, some Wood, trace Brick, trace medium Sand, little Ash.			SS	5	9	3 1 10 9	11	33.5
	3.0	Medium dense, black SILT, some Wood, trace Brick, little Ash, trace medium Sand.		▽	SS	6	10	7 6 6 7	12	7.5
10	1.0	No recovery. Black wood and ash in tip.			SS	7	0	6 5 3 2	8	NR
	-1.0	WOOD. Wood stuck in tip.			SS	8	1	9 3 5 4	8	NR
	-3.0	Wood in wash.								
15	-6.0	WOOD. Brick stuck in tip.			SS	9	2	12 10 5 5	15	2.0
	-8.0									
20										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-19A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/4/2018 to 10/4/2018**

WATER LEVEL **11**

PROJECT No. **179410750**

EXPLORATION No. **HP-19A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-11.0	No recovery. Wood in tip.			SS	10	0	10 9 4 6	13	1.7
25	-13.0									
	-16.0	No recovery.			SS	11	0	1 3 3 3	6	NR
30	-18.0									
	-21.0	Medium stiff, olive gray SILTY CLAY, trace Wood. PP= 0.1tsf			SS	12	8	2 3 3 4	6	0.0
35	-23.0									
	-26.0	Very soft, olive gray SILTY CLAY. PP= 0.5tsf			SS	13	24	WOH/12" 1 3	1	0.0
40	-28.0									
	-31.0	Very soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	14	24	WOH/18" 3	0	0.0
45	-33.0									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-19A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/4/2018 to 10/4/2018**

WATER LEVEL **11**

PROJECT No. **179410750**

EXPLORATION No. **HP-19A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-36.0									
50		Very soft, olive gray SILTY CLAY. PP= 0.5tsf			SS	15	24	WOH/18" 1	0	0.0
	-38.0									
	-41.0									
55		Very soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	16	24	WOH/24"	0	0.0
	-43.0	Layer change at 59 feet.								
	-46.0									
60		Medium dense, coarse to fine GRAVEL, little coarse to fine Sand, trace Silt, trace Clay.			SS	17	5	20 8 7 6	15	0.0
	-48.0									
		Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG — HP-20A

CLIENT: Brown, Richardson, and Rowe
LOCATION: Heritage State Park, Lynn, MA
EXPLORATION DATE: 10/4/2018 to 10/4/2018
WATER LEVEL: Not observed
PROJECT No.: 179410750
EXPLORATION No.: HP-20A
DATUM: NAVD 88

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	TYPE	NUMBER	RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
0	14.0							
	13.7	Medium dense, dark brown medium to fine SAND and SILT, trace Oranics.	SS	1	9	1 4 6 10	10	0.4
	12.0	Medium dense, brown coarse to fine SAND, little Silt, trace fine Gravel.						
		Medium dense, grayish brown SILT, some fine Sand, trace Organics.	SS	2	14	11 7 9 9	16	0.9
	10.0							
	9.5	Loose, brown coarse to fine SAND, some Silt, trace fine Gravel.						
5	9.0	Stiff, black CLAY and SILT, trace Shells. Organic odor.	SS	3	17	4 5 3 5	8	7.3
	8.0							
	7.3	Loose, gray medium to fine SAND, some Silt.						
		Brown medium to fine SAND, some Silt.	SS	4	15	8 55 10/2"	R	6.7
	6.0	Gray fine SAND, some Silt, some burnt Wood, , little Ash, trace Brick.						
		No recovery. Wood and brick in wash above sample.	SS	5	0	4 3 6 3	9	NR
10	4.0							
		No recovery. Brick stuck in tip.	SS	6	0	2 3 3 4	6	NR
	2.0							
		Red brick.	SS	7	2	1 4 6 5	10	NR
	0.0							
15		Medium dense, brown coarse to fine SAND, some Gravel, little Silt.	SS	8	8	8 4 7 6	11	1.1
	-2.0							
	-5.0							
	-5.3	Stiff, black/gray CLAYEY SILT, trace Brick, trace Shells.						
20		Stiff, brownish gray SILTY CLAY.	SS	9	18	1 3 6 6	9	0.0
	-7.0	PP= 3-3.5tsf						

Undrained Shear Strength - tsf: 1 2 3 4
Water Content & Atterberg Limits: W_P W W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley
Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-20A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/4/2018 to 10/4/2018**

WATER LEVEL **Not observed**

PROJECT No. **179410750**

EXPLORATION No. **HP-20A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
25	-10.0	Very Stiff, brownish gray SILTY CLAY, trace fine Gravel.			SS	10	17	7 9 8 10	17	0.0
	-12.0									
	-15.0	Stiff, olive gray SILTY CLAY/ PP= 0.5tsf			SS	11	24	4 3 5 5	8	0.0
30	-17.0									
	-20.0									
	-20.5	Very stiff, olive gray SILTY CLAY. PP= 0.25- 1.0tsf								
35	-22.0	Medium dense, olive gray coarse to fine GRAVEL, little coarse to fine Sand, trace Silt, trace Clay.			SS	12	20	1 3 14 37	17	0.0
	-25.0									
		Very dense, olive gray coarse to fine GRAVEL, little coarse to fine Sand, trace Silt, trace Clay.			SS	13	24	94 55 37 37	92	0.0
40	-27.0									
		Boring terminated at 41 feet. No refusal.								
45										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-21A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/1/2018 to 10/2/2018**

WATER LEVEL **8**

PROJECT No. **179410750**

EXPLORATION No. **HP-21A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.8				in.			
0	11.4	Loose, dark brown fine SAND, some Silt, trace Organics.	SS	1	12	1 4 4 6	8	4.2
	9.8	Loose, tan medium to fine SAND, little Silt.						
	9.1	Medium dense, tan/brown fine SAND and SILT. Brick in tip.	SS	2	16	5 4 6 8	10	1.2
	7.8							
	7.1	Medium dense, brown medium to fine SAND, some SILT, trace Brick.	SS	3	16	2 7 6 7	13	1.5
5		Very stiff, olive gray SILTY CLAY.						
	5.8							
	5.4	Stiff, gray/black SILTY CLAY, little Wood, trace Ash, trace Brick.	SS	4	10	9 11 12 13	23	3.1
	3.8							
		No recovery. Sample from tip. Gravel and brick.	SS	5	0	7 12 14 16	26	NR
10	1.8	Medium dense, black coarse to fine SAND, little to some Gravel, little Wood, little Ash.	SS	6	11	14 10 24 14	34	225.0
	-0.2							
	-0.7	Loose, black coarse to fine SAND and SILT, little Wood, little Ash, trace Brick.	SS	7	6	100/6"	R	200.0
		Rolling through boulder from 12.5 to 14 feet.						
	-3.2							
15		Loose, dark gray SILT, trace Brick in tip.	SS	8	5	30 18 4 7	22	49.0
	-5.2							
		Rolled through boulders from 17 to 22 feet. Possible burried seawall.						
20								

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-21A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/1/2018 to 10/2/2018**

WATER LEVEL **8**

PROJECT No. **179410750**

EXPLORATION No. **HP-21A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-12.2									
25	-13.5	Very stiff, dark gray SILT, little Clay, trace Organics.			SS	9	20	3 2 3 4	5	3.3
	-14.2	Very stiff, black SILT and CLAY. Organic odor.								
	-17.2									
30		Stiff, olive gray SILTY CLAY. PP= 0.75tsf			SS	10	24	4 4 5 6	9	0.0
	-19.2									
		Boring terminated at 31 feet. No refusal.								
35										
40										
45										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-22A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/2/2018 to 10/3/2018**

WATER LEVEL **11**

PROJECT No. **179410750**

EXPLORATION No. **HP-22A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	12.5						in.			
0	11.9	Medium dense, dark brown medium to fine SAND, some Silt, trace Oranics (topsoil).			SS	1	16	1 8 10 14	18	5.5
	10.5	Medium dense, brown/tan medium to fine SAND, some Silt, trace coarse Sand, trace Clay.			SS	2	11	11 22 16 16	28	10.8
	8.5	Dense, brown/black medium to fine SAND, some Silt, some fine Sand, trace Wood, trace Brick, trace Ash. Brick in tip.			SS	3	15	3 4 4 16	8	1000
5	6.5	Loose, black/brown medium to fine SAND, some Silt, some fine Sand, trace Wood, trace Brick, trace Ash.			SS	4	20	15 23 14 10	37	29.1
	6.1	Dense, brown medium to fine SAND and SILT, trace Brick.			SS	5	12	4 6 13 8	19	5.5
	4.5	Dense, black/gray medium to fine SAND and SILT, trace Brick, trace Gravel, trace Ash.			SS	6	1	7 10 9 7	19	NR
	2.5	Medium dense, dark gray SILT, some fine Sand, little Clay, trace Brick, trace Wood, trace Glass, trace Ash.			SS	7	10	14 13 11 10	24	25.1
10	0.5	Very stiff, gray CLAYEY SILT, trace Wood, trace Brick.		▽	SS	8	0	2 2 3 4	5	0.0
	-1.5	Medium dense, gray coarse to fine SAND and SILT, trace Clay, trace Brick, trace Wood, trace Ash.								
	-3.5	No recovery. Wood stuck in tip.								
15	-6.5	Wood in wash.			SS	9	1	8 2 6 6	8	0.0
	-8.5	Brown WOOD, trace Ash.								
20										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-22A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/2/2018 to 10/3/2018**

WATER LEVEL **11**

PROJECT No. **179410750**

EXPLORATION No. **HP-22A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
25	-11.5	No recovery.			SS	10	0	7 3 2 2	5	7.0
	-13.5	Black wash.								
	-16.5									
30		Medium stiff, olive gray SILTY CLAY, trace shells. PP= 0.8tsf			SS	11	22	2 3 4 4	7	0.2
	-18.5									
	-21.5	Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	12	24	WOH 3 3 4	6	0.0
35	-23.5									
	-26.5	Medium stiff, olive gray SILTY CLAY. PP= 0.75tsf			SS	13	24	1 3 4 4	7	0.0
40	-28.5									
	-31.5	Stiff, olive gray SILTY CLAY. PP= 0.0tsf			SS	14	9	3 4 4 4	8	0.0
45	-33.5									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-22A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/2/2018 to 10/3/2018**

WATER LEVEL **11**

PROJECT No. **179410750**

EXPLORATION No. **HP-22A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-35.5	Roller but on gravel at 48 feet.								
	-36.5	Very stiff, olive gray SILTY CLAY and GRAVEL.								
50					SS	15	3	6 5 15 21	20	0.0
	-38.5	Boring terminated at 51 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG — HP-23A

Stantec

CLIENT: Brown, Richardson, and Rowe
LOCATION: Heritage State Park, Lynn, MA
EXPLORATION DATE: 10/3/2018 to 10/3/2018
WATER LEVEL: 12.1

PROJECT No.: 179410750
EXPLORATION No.: HP-23A
DATUM: NAVD 88

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	12.2						in.			
0		Loose, brown medium to fine SAND, some Silt, trace Organics.			SS	1	9	WOH 3 5 4	8	13.1
	10.2									
		Medium dense, grayish brown/black medium to fine SAND, some Silt, little Brick, little Wood, trace Ash.			SS	2	13	5 10 10 8	20	5.3
	8.2									
	7.6	Very dense, brown/gray SILTY medium to fine SAND.			SS	3	12	25 14 85 28	99	10.5
5		Very dense, coarse to fine GRAVEL, little Brick, little Silt, little Sand.								
	6.2									
		Medium dense, gray/black medium to fine SAND and SILT, little Wood, little Brick, little Ash.			SS	4	15	10 11 13 11	24	7.4
	4.2									
		No recovery. Wood stuck in tip.			SS	5	0	6 6 5 4	11	NR
10	2.2									
		Medium dense, black WOOD and GRAVEL, some Silt, little Ash. Sample from tip.			SS	6	0	3 5 6 6	11	NR
	0.2			▽						
		Medium dense, black WOOD and GRAVEL, some Silt, little Ash. Sample from tip.			SS	7	0	4 4 5 3	9	NR
	-1.8									
		Medium dense, black WOOD, little Brick, little Gravel, little Ash, trace Silt. Gravel in tip.			SS	8	5	6 9 13 13	22	20.0
15	-3.8									
	-6.8									
		No recovery.			SS	9	0	6 4 6 3	10	NR
20	-8.8									
		Boulder from 20 to 24 feet.								

Undrained Shear Strength - tsf: 1 2 3 4
Water Content & Atterberg Limits: W_P W W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley
Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-23A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/3/2018 to 10/3/2018**

WATER LEVEL **12.1**

PROJECT No. **179410750**

EXPLORATION No. **HP-23A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-11.8	Gray/tan GRAVELY SAND.								
25					SS	10	8	36 9 100/5"	R	10.8
	-13.8									
	-16.8	Stiff, olive gray SILTY CLAY. PP= 0.1tsf								
30					SS	11	15	4 5 6 10	11	17.6
	-18.8									
	-21.8	Medium stiff, olive gray SILTY CLAY. PP= 0.25tsf								
35					SS	12	24	2 3 3 4	6	9.4
	-23.8									
	-26.8	Soft, olive gray SILTY CLAY. PP= 0.0tsf								
40					SS	13	24	WOH/12" 2 2	2	8.3
	-28.8									
	-31.8	Soft, olive gray SILTY CLAY. PP= 0.1tsf								
45					SS	14	24	WOH 2 3 4	5	13.7
	-33.8									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-23A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/3/2018 to 10/3/2018**

WATER LEVEL **12.1**

PROJECT No. **179410750**

EXPLORATION No. **HP-23A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-36.8									
50		Soft, olive gray SILTY CLAY, trace fine Gravel. PP= 0.1tsf			SS	15	24	WOH/12" 3 4	3	0.0
	-38.8									
	-41.8									
55		Soft, olive gray SILTY CLAY, trace fine Gravel. Couple sand varves. PP= 0.25tsf			SS	16	24	WOH/12" 3 3	3	0.0
	-43.8									
	-46.8									
	-47.3	Stiff, olive gray SILTY CLAY.								
60		Medium dense, SILT and medium to fine SAND, some Clay, little fine Gravel.			SS	17	17	7 4 6 8	10	0.0
	-48.8									
		Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-24A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/27/2018 to 9/27/2018**

WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-24A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	12.2				in.			
0	11.8	Medium dense, brown ORGANIC SILT and SAND.						
		Medium dense, brown fine to medium SAND.	SS	1	8	4 5 6 6	11	
	10.2							
		Medium dense, brown SILTY fine to medium SAND, little Concrete, little Wood.	SS	2	9	9 10 11 8	21	
	8.2							
5		Medium dense, dark brown SILTY fine SAND, little Wood, little Clay, little Silt.	SS	3	11	4 9 7 7	16	
	6.2							
		Medium dense, dark brown SILTY fine SAND, little Gravel, little Wood.	SS	4	5	6 6 5 3	11	
	4.2							
		Loose, dark brown SILTY fine SAND, and Wood.	SS	5	3	2 2 2 3	4	
10	2.2							
		Loose, dark brown SILTY fine SAND, and Wood.	SS	6	6	4 3 4 19	7	
	0.2							
		Loose, WOOD, some Silt, some fine Sand, little Gravel.	SS	7	2	3 3 3 3	6	
	-1.8							
15		Loose, WOOD, some Silt, some fine Sand.	SS	8	5	6 3 4 2	7	
	-3.8							
	-6.8							
	-7.0	No recovery. Gravel in tip.						
20			SS	9	0	100/2"	R	

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-24A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/27/2018 to 9/27/2018**

WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-24A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-11.8									
25		Very stiff, gray SILTY CLAY, some fine Gravel.			SS	10	6	4 8 10 15	18	
	-13.8									
	-16.8	Stiff, gray SILTY CLAY.								
30					SS	11	24	4 5 5 7	10	
	-18.8									
	-21.8	Medium stiff, gray SILTY CLAY.								
35					SS	12	20	2 2 3 3	5	
	-23.8									
	-26.8	Medium stiff, gray SILTY CLAY.								
40					SS	13	24	WOH 2 3 4	5	
	-28.8									
	-31.8	Medium stiff, gray SILTY CLAY. Few fine sand seams.								
45					SS	14	24	2 3 2 4	5	
	-33.8									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-24A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/27/2018 to 9/27/2018**

WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-24A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-36.8	Medium stiff, gray SILTY CLAY.								
50					SS	15	24	1 3 3 5	6	
	-38.8									
	-40.8									
		Roller bit bouncing on gravel at 53 feet.								
	-41.8	Medium dense, SILTY fine SAND, and Gravel, trace Silt, trace Silt.								
55					SS	16	7	5 6 10 12	16	
	-43.8									
	-46.8	Dense, SILTY fine SAND, and Gravel, trace Silt, trace Silt.								
60					SS	17	5	26 31 15 14	46	
	-48.8	Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-25A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/27/2018 to 9/27/2018**

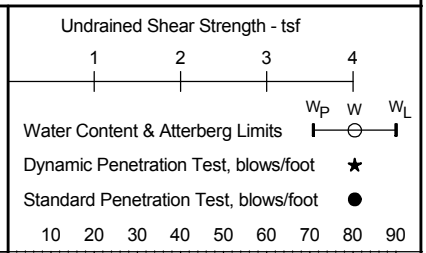
WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-25A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	13.0				in.			
0		Loose, dark brown SILTY fine SAND. Wood in tip.	SS	1	7	1 4 4 10	8	
	11.0							
		No recovery. Wood in tip.	SS	2	0	5 9 17 13	26	
	9.0							
	8.5	Loose, light brown medium to fine SAND, trace Silt.						
5		Loose, dark brown SILTY fine SAND, some Silt, some Clay.	SS	3	12	5 3 3 2	6	
	7.0							
		Medium stiff, dark black, fine SANDY SILT, some Clay, little Ash.	SS	4	11	4 4 3 2	7	
	5.0							
		Loose, dark black fine SANDY SILT, some Brick, some Wood, little Ash.	SS	5	10	1 2 5 4	7	
10	3.0							
		Medium dense, dark brown fine SANDY SILT, some Wood, trace Ash. Creosote odor.	SS	6	7	8 9 15 19	24	
	1.0							
		Dense, dark brown fine SANDY SILT, some Wood. Creosote odor, trace Ash.	SS	7	10	16 10 35 10	45	
	-1.0							
15		Dense, dark brown fine SANDY SILT, some Wood, some Brick, trace Ash.	SS	8	6	42 27 6 6	33	
	-3.0							
	-6.0							
		Medium dense, dark brown fine SANDY SILT, some Wood, some Brick, trace Ash.	SS	9	4	5 5 5 7	10	
20	-8.0							



Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-25A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/27/2018 to 9/27/2018**

WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-25A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-11.0									
25		Medium stiff, dark gray/black CLAYEY SILT.			SS	10	12	3 2 2 3	4	
	-13.0									
	-16.0	Medium stiff, tan/gray SILTY CLAY.			SS	11	7	3 3 4 5	7	
30	-18.0									
	-21.0	Medium stiff, tan/gray SILTY CLAY.			SS	12	7	1 2 2 3	4	
35	-23.0									
	-26.0	Medium stiff, gray SILTY CLAY.			SS	13	15	WOH 3 3 3	6	
40	-28.0									
	-31.0	Medium stiff, gray SILTY CLAY.			SS	14	13	WOH 3 3 4	6	
45	-33.0									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-25A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/27/2018 to 9/27/2018**

WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-25A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
50	-36.0	Medium stiff, gray SILTY CLAY.			SS	15	24	WOH/12" 4 4	4	
	-38.0									
	-41.0	Medium stiff, tan/gray SILTY CLAY.			SS	16	24	WOH 3 4 8	7	
55	-43.0	Roller bit chattering at 56 feet.								
	-46.0	Dense, gray SILTY fine SAND, and Gravel.			SS	17	5	13 16 25 15	41	
60	-48.0									
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-26A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/11/2018 to 10/12/2018**

WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-26A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	13.0				in.			
0	12.4	Medium dense, brown fine SAND, some Silt, trace Organics.	SS	1	14	2 5 7 6	12	0.0
	11.0	Medium dense, light brown fine SAND, some Silt, some Gravel.						
		Medium dense, tan fine SAND, little Silt.	SS	2	16	10 13 10 9	23	0.0
	9.0	Medium dense, black SILT, little Ash, trace Clay, trace Coal Ash crystals, trace Shells, trace Brick.						
5			SS	3	18	7 9 7 6	16	1.0
	7.0							
	6.7	Stiff, greenish gray SILTY CLAY, little medium Sand in bottom inch of sample.	SS	4	15	5 5 4 4	9	44.4
	5.0	Stiff, gray SILT, some Clay, trace Brick.	SS	5	9	2 2 6 9	8	1.1
10	3.0	Medium stiff, gray SILT, some Clay. Some fine gravel in bottom 3 inches.	SS	6	12	4 3 4 10	7	1.2
	1.0							
	0.4	Medium dense, dark brown/black SILTY coarse to fine SAND, little Gravel, trace Ash.	SS	7	13	15 12 8 16	20	0.3
	-1.0	Medium dense, black GRAVEL, little Silt, little Sand.						
15	-1.8	Medium dense, gray coarse to fine SAND, some fine Gravel, little Silt.	SS	8	15	5 12 15 12	27	NR
	-3.0							
	-6.0	No recovery. No clay on rods or spoon.						
20			SS	9	0	3 1 2 2	3	NR
	-8.0							

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-26A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/11/2018 to 10/12/2018** WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-26A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-11.0									
25		Medium stiff, black CLAYEY SILT, trace Shells.			SS	10	10	1 2 2 3	4	0.0
	-13.0									
	-16.0									
30		Medium stiff, brownish gray SILTY CLAY. PP= 0.5tsf			SS	11	24	1 2 4 4	6	0.0
	-18.0									
	-21.0									
35		Medium stiff, olive gray SILTY CLAY. PP= 0.75tsf			SS	12	24	1 3 4 4	7	0.0
	-23.0									
	-26.0									
40		Medium stiff, olive gray SILTY CLAY. PP= 0.75tsf			SS	13	24	1 2 2 4	4	0.0
	-28.0									
	-31.0									
45		Soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	14	24	WOH/12" 2	0	0.0
	-33.0									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-26A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/11/2018 to 10/12/2018**

WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-26A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
50	-36.0	Hard, olive gray SILTY CLAY.			SS	15	24	2 8 22 18	30	0.0
	-37.5									
	-38.0	Dense, olive gray SILTY GRAVEL.								
		Boring terminated at 51 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG — HP-27A

Stantec

CLIENT: Brown, Richardson, and Rowe
LOCATION: Heritage State Park, Lynn, MA
EXPLORATION DATE: 10/11/2018 to 10/12/2018
WATER LEVEL: 6

PROJECT No.: 179410750
EXPLORATION No.: HP-27A
DATUM: NAVD 88

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	11.0						in.			
0	10.4	Loose, brown fine SAND and SILT, trace Organics.								
		Loose, dark gray SILTY SAND, trace Shells, trace Wood, trace Ash.			SS	1	17	1 1 4 6	5	0.3
	9.0	Medium dense, grayish brown SILTY SAND, little Wood, trace Brick, trace Plastic, trace Ash.			SS	2	18	5 7 6 8	13	2.5
	7.0									
	6.6	Medium dense, gray/black SILT, some Wood, trace Plastic, trace Ash.			SS	3	13	6 7 10 6	17	0.9
5	5.0	Medium dense, grayish brown SILT, little medium to fine Sand, trace Wood, trace Organics, trace Ash.		▽						
		Medium stiff, blackish gray CLAYEY SILT, trace Ash. Gravel and brick in tip.			SS	4	12	4 3 4 10	7	3.9
	3.0									
	2.0									
		Medium stiff, black medium to fine SAND and SILT, little Ash. Wood in tip.			SS	5	6	1 2 3 1	5	1.6
10	0.0									
		Loose, blackish brown SILT and medium to fine SAND, little Wood, little Gravel, trace Brick, trace Ash.			SS	6	5	2 2 2 1	4	0.7
	-2.0									
		Stiff, dark gray CLAYEY SILT.			SS	7	8	3 5 3 1	8	0.3
15	-4.0									
		No recovery with 2-inch split spoon. Sample collected with 3-inch split spoon. Soft, grayish brown CLAYEY SILT, trace Shells. Organic odor.			SS	8	0	3 1 1 1	2	NR
	-6.0									
	-8.0									
		Loose, gray medium to fine SAND, little Silt, little Clay.			SS	9	20	WOH 2 5 4	7	NR
20	-9.7									
	-10.0	Medium stiff, grayish brown CLAYEY SILT, trace Shells. Organic odor.								

Undrained Shear Strength - tsf: 1 2 3 4
Water Content & Atterberg Limits: W_P W W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley
Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-27A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/11/2018 to 10/12/2018** WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-27A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SAMPLES SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-13.0									
25		Stiff, grayish brown SILTY CLAY. PP= 2.0tsf			SS	10	20	4 6 7 8	13	0.0
	-15.0									
	-18.0									
30		Medium stiff, olive gray SILTY CLAY. PP= 0.5tsf			SS	11	24	1 3 2 3	5	0.0
	-20.0									
	-23.0									
35		Soft, olive gray SILTY CLAY. PP= 0.5tsf			SS	12	24	WOH/12" 2 3	2	0.0
	-25.0									
	-28.0									
40		Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	13	24	WOH 2 2 3	4	0.0
	-30.0									
	-33.0									
45		Medium stiff, olive gray SILTY CLAY. PP= 0.5tsf			SS	14	24	WOH 2 2 2	4	0.0
	-35.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-27A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/11/2018 to 10/12/2018** WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-27A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-38.0									
50		Medium stiff, olive gray SILTY CLAY. Couple sand lenses. PP= 0.1tsf			SS	15	24	WOH 2 2 3	4	0.0
	-40.0									
	-43.0									
	-43.3	Hard, olive gray SILTY CLAY.								
55		Dense, SILTY CLAY, some Gravel.			SS	16	12	5 25 22 50	47	0.0
	-45.0									
		Boring terminated at 56 feet. No refusal.								
60										
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

WATER BORINGS

W-1, W-2 (2017)

W-3A through W-5A (2018)

Stantec

BOREHOLE LOG

W-1

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/5/2017 to 9/5/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **W-1**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	2.0						in.			
0		14 feet of water.								
	-12.0									
15	-14.5									
		Black fine SILT, and Sand			SS	1	10	18 50/4"	R	
	-15.5									
		Boulder from 17' - 19'								
20	-19.0									
		Stiff, gray SILT, and Clay, some coarse Sand and Gravel			SS	2	7	3 5 5 6	10	
	-21.0									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type:Skid Mounted barge CME-45; Hammer: Safety Hammer w/ Cat Head; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 1.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

W-1

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/5/2017 to 9/5/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **W-1**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
		Stiff, gray SILT, and Clay, some coarse Sand, trace Gravel, trace Seashell			SS	3	13	5 5 6 9	11	
25	-23.0	Medium stiff, gray CLAY and Silt, trace coarse Sand			SS	4	7	2 3 4 5	7	
	-25.0	Stiff, gray CLAY, and Silt, trace coarse Sand			SS	5	24	4 4 5 6	9	
	-27.0	Stiff, gray CLAY, and Silt			SS	6	24	6 6 7 7	13	
30	-29.0	Soft gray CLAY, and Silt			SS	7	20	WH WH 3 5	3	
	-31.0	Stiff, gray CLAY, and Silt			SS	8	14	6 6 7 8	13	
35	-33.0	Gray CLAY, and Silt, some coarse Sand. Gravel in shoe Boulder/cobble from 36.5' - 37.5'			SS	9	12	8 3 3 100/5"	R	
	-35.0	Stiff, gray CLAY, and Silt			SS	10	18	- 6 5 7	11	
	-37.0	Stiff, gray CLAY, and Silt			SS	11	24	7 7 7 7	14	
40	-39.0	Stiff, gray CLAY, and Silt			SS	12	24	1 4 4 6	8	
	-41.0	Stiff, gray CLAY, and Silt. One fine sand seam			SS	13	24	6 7 7 8	14	
45	-43.0	Medium stiff, gray CLAY, and Silt. One fine sand seam						2 3		

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type:Skid Mounted barge CME-45; Hammer: Safety Hammer w/ Cat Head; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

W-1

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/5/2017 to 9/5/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **W-1**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-45.0	Stiff, gray CLAY, and Silt, trace coarse Sand			SS	14	24	4 6	7	
					SS	15	24	5 7 7 8	14	
	-47.0	Stiff, gray CLAY and Silt, wish fine Sand seams			SS	16	24	6 7 7 8	1	
50	-49.0	End of boring at 51 feet No refusal								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type:Skid Mounted barge CME-45; Hammer: Safety Hammer w/ Cat Head; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 1.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

W-2

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/1/2017 to 9/1/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **W-2**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	5.0						in.			
0		14 feet of water.								
	-9.0									
15		Very soft, dark black Organics, and SILTY fine SAND			SS	1	1	WR WR WR WR	-	
	-11.0									
		Very loose, dark black SILTY fine SAND			SS	2	12	1 WH WH WH	-	
	-13.0									
		Casing drove easy through mud								
20	-15.0									
		Out of water. recovery blowing out bottom of pipe								
	-17.0									
		Very stiff, gray SILTY CLAY						3 6		

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type:Skid Mounted barge CME-45; Hammer: Safety Hammer w/ Cat Head; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 1.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

W-2

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/1/2017 to 9/1/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **W-2**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-19.0	Stiff, gray SILTY CLAY			SS	3	18	7 10	13	
25	-21.0	Stiff/Very stiff, gray SILTY CLAY			SS	4	9	3 4 5 6	9	
	-23.0	Stiff, gray SILTY CLAY			SS	5	17	8 7 8 9	15	
30	-25.0	Stiff, gray SILTY CLAY			SS	6	19	2 4 5 5	9	
	-27.0	Medium stiff, gray SILTY CLAY			SS	7	18	5 4 4 4	8	
	-29.0	Medium stiff, gray SILTY CLAY			SS	8	20	4 3 3 3	6	
35	-31.0	Medium stiff, gray SILTY CLAY			SS	9	23	2 3 4 4	7	
	-33.0	Medium stiff/Stiff, gray SILTY CLAY			SS	10	15	3 3 3 3	6	
40	-35.0	Stiff, gray SILTY CLAY			SS	11	7	3 4 4 6	8	
	-37.0	Stiff, gray SILTY CLAY			SS	12	20	5 6 7 7	13	
	-39.0	Stiff, gray SILTY CLAY			SS	13	23	4 5 6 7	11	
45	-41.0				SS	14	13	WR WR WH WH	-	

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type:Skid Mounted barge CME-45; Hammer: Safety Hammer w/ Cat Head; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

W-2

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/1/2017 to 9/1/2017**

WATER LEVEL **Tidal**

PROJECT No. **179410469**

EXPLORATION No. **W-2**

DATUM **NAVD88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
		Medium stiff/Stiff, gray SILTY CLAY			SS	15	24	3 3 5 5	8	
	-43.0	Medium stiff, gray SILTY CLAY			SS	16	24	WH WH 4 4	4	
50	-45.0	Medium stiff, gray SILTY CLAY, one fine Sand seam			SS	17	24	2 3 3 4	6	
	-47.0	Medium stiff/Stiff, gray SILTY CLAY			SS	18	24	3 4 4 6	8	
	-49.0	End of boring at 54 feet below water surface. No refusal								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type:Skid Mounted barge CME-45; Hammer: Safety Hammer w/ Cat Head; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 1.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

W-3A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/19/2018 to 9/19/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-3A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	2.0						in.			
0		20 feet of water.								
5										
10										
15										
20	-18.0	Dense, black SILTY SAND, trace Gravel, trace Wood.			SS	1	20	40 22 11 4	33	
	-20.0	Very loose, black SILT and fine SAND, trace coarse Sand. Gray Silt and clay in shoe.						WOR WOH		

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

W-3A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/19/2018 to 9/19/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-3A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
					SS	2	17	2 3	2	
	-22.0									
	-23.0									
25		Meidum stiff, gray SILTY CLAY.			SS	3	17	WOH 3 4 4	7	
	-25.0	Meidum stiff, gray SILTY CLAY.			SS	4	20	1 3 3 4	6	
	-27.0									
	-28.0									
30		Very soft, gray SILTY CLAY.			SS	5	20	WOR/12" 1 2	1	
	-30.0	Meidum stiff, gray SILTY CLAY.			SS	6	24	2 3 3 3	6	
	-32.0									
	-33.0									
35		Very soft, gray SILTY CLAY.			SS	7	24	WOH/12" 1 2	1	
	-35.0	Meidum stiff, gray SILTY CLAY.			SS	8	24	2 2 2 2	4	
	-37.0									
	-38.0									
40		Very soft, gray SILTY CLAY.			SS	9	24	WOH/12" 1 3	1	
	-40.0	Meidum stiff, gray SILTY CLAY.			SS	10	24	WOH 2 2 2	4	
	-42.0									
	-43.0									
45		Very soft, gray SILTY CLAY.						WOR		

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

W-3A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/19/2018 to 9/19/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-3A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-45.0	Meidum stiff, gray SILTY CLAY.			SS	11	24	WOH/12" 1	0	
					SS	12	24	WOH 2 2 3	4	
	-47.0									
50	-48.0	Very soft, gray SILTY CLAY.			SS	13	24	WOH/18" 1	0	
	-50.0	Meidum stiff, gray SILTY CLAY.			SS	14	24	WOH 3 3 3	6	
	-52.0									
55	-53.0	Very soft, gray SILTY CLAY.			SS	15	24	WOH/18" 1	0	
	-55.0	Meidum stiff, gray SILTY CLAY.			SS	16	24	WOH 2 2 3	4	
	-57.0									
60	-58.0	Very soft, gray SILTY CLAY.			SS	17	24	WOH/24"	0	
	-60.0	Meidum stiff, gray SILTY CLAY.			SS	18	24	3 3 3 3	6	
	-62.0									
65	-63.0	Very soft, gray SILTY CLAY.			SS	19	24	WOH/24"	0	
	-65.0	Very soft, gray SILTY CLAY.			SS	20	24	WOH/24"	0	
	-67.0									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

W-3A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/19/2018 to 9/19/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-3A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
70	-68.0	Soft, gray SILTY CLAY.			SS	21	24	WOH/12" 3 3	3	
	-70.0	Soft, gray SILTY CLAY.			SS	22	24	1 1 2 3	3	
	-72.0									
75	-73.0	Very soft, gray SILTY CLAY.			SS	23	12	WOH/24"	0	
	-75.0									
80	-78.0	Meidum stiff, gray SILTY CLAY.			SS	24	24	WOH/12" 7 27	7	
	-79.7									
	-80.0	Meidum stiff, gray SILTY CLAY, some Sand, some Gravel.								
85		Boring terminated at 82 feet bleow water surface. No refusal.								
90										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

W-4A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/17/2018 to 9/17/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-4A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	4.2						in.			
0		19 feet of water.								
	-14.8									
20		Very loose, black SILTY fine SAND.			SS	1	15	WR WR WR WR	0	
	-16.8									
		Very soft, black/gray SILT and CLAY.			SS	2	17	WR WR WR WR	0	
	-18.8									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

W-4A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/17/2018 to 9/17/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-4A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-19.8	Medium stiff, gray CLAY and SILT.			SS	3	24	WH 3 2 5	5	
25	-21.8									
	-24.8	Soft, gray CLAY and SILT.			SS	4	24	WH 1 2 3	3	
30	-26.8									
	-29.8	Medium stiff, gray CLAY and SILT.			SS	5	6	2 3 3 4	6	
35	-31.8									
	-34.8	Soft, gray CLAY and SILT.			SS	6	24	WH 1 2 3	3	
40	-36.8									
	-39.8	Soft, gray CLAY and SILT.			SS	7	24	WH 1 2 3	3	
45	-41.8									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

W-4A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/17/2018 to 9/17/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-4A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-44.8	Medium stiff, gray CLAY and SILT.			SS	8	20	2 2 2 3	4	
50	-46.8									
	-49.8	Medium stiff, gray CLAY and SILT, trace fine Gravel.			SS	9	24	WH 2 2 3	4	
55	-51.8									
	-54.8	Soft, gray CLAY ande SILT, trace fine Gravel.			SS	10	24	WH WH 2 3	2	
60	-56.8									
	-59.8	Medium stiff, gray CLAY ande SILT, trace fine Gravel.			SS	11	24	WH WH 4 14	4	
65	-61.3									
	-61.8	Medium stiff. gray/brown CLAY and SILT, trace Gravel.								
	-64.8									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

W-4A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/17/2018 to 9/17/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-4A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
							in.			
70	-66.8	Very dense, brown fine to coarse SAND and GRAVEL, trace Silt.			SS	12	14	17 27 24 23	51	
		Boring terminated at 71 feet below water surface.. No refusal.								
75										
80										
85										
90										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

W-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	3.8						in.			
0		20 feet of water								
5										
10										
15										
20	-16.2	Very soft, black SILTY SAND, trace Clay.			SS	1	12	WOR/24"	0	
	-18.2	Very soft, black SILTY SAND, trace Clay.								

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

W-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
					SS	2	7	WOR/24"	0	
	-20.2									
	-21.2									
25		Very soft, black SILTY SAND, trace Clay.			SS	3	9	WOR/24"	0	
	-23.2									
		Very soft, black SILTY SAND, trace Clay.			SS	4	5	WOR/24"	0	
	-25.2									
	-26.2									
30		Very soft, gray/black SANDY SILT, trace Clay.			SS	5	7	WOR/24"	0	
	-28.2									
		Very soft, gray/black SANDY SILT, trace Clay.			SS	6	5	WOR/24"	0	
	-30.2									
	-31.2									
35		Very soft, gray/black SANDY SILT, trace Clay.			SS	7	10	WOR/24"	0	
	-33.2									
		Very soft, gray/black SANDY SILT, trace Clay.			SS	8	14	WOR/24"	0	
	-35.2									
	-36.2									
40		Medium dense, coarse SAND and GRAVEL.			SS	9	3	5 5 5 6	10	
	-38.2									
		Medium dense, coarse SAND and GRAVEL.			SS	10	7	7 9 8 7	17	
	-40.2									
	-41.2									
45		Medium dense, coarse SAND and GRAVEL.						23 11		

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

W-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-43.2	Dense, coarse SAND and GRAVEL.			SS	11	6	10 8	21	
					SS	12	11	17 21 20 29	41	
	-45.2									
50	-46.2	Loose, SAND and GRAVEL.			SS	13	9	9 4 5 5	9	
	-48.2									
	-51.2	Medium dense, SAND and GRAVEL.			SS	14	7	17 9 7 7	16	
55	-53.2									
	-56.2	Medium dense, SAND and GRAVEL.			SS	15	10	11 9 7 9	16	
60	-58.2									
	-61.2	Dense, tan fine SAND, trace Silt.			SS	16	11	39 23 17 13	40	
65	-62.0									
	-63.2									
		Dense, SAND and GRAVEL.								

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

W-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
70	-66.2	Medium dense, coarse SAND and GRAVEL.			SS	17	11	16 9 10 12	19	
	-68.2									
75	-71.2	Very dense, coarse SAND and GRAVEL, trace Silt, trace fine Sand.			SS	18	8	21 24 31 38	55	
	-73.2	Boring terminated at 77 feet below the water. No refusal.								
80										
85										
90										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Appendix D

Test Pit Logs

Stantec

TEST PIT LOG

TP-1

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park Lynn, MA**

DATES: DUG **10-17-2018** WATER LEVEL

PROJECT No. **179410750**

TEST PIT No. **TP-1**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	TYPE	NUMBER	REMARKS
	13.00						
0		Brown fine SAND, some silt, some pieces of brick concrete, glass, metal, and wood. -MISCELLANEOUS FILL-					
	10.0	Yellow fine SAND, little Silt.					
	9.0	-SAND FILL-					
5		Gray/black CLAYEY FILL. Some brick, metal, concrete, seashells, glass, and plastic. -CLAYEY FILL-					*Lab testing on grab sample from 7'-7.5'* Moist, dark gray Silty Clay, some c-f Sand, trace f Gravel (CL)
10	1.5	Test pit terminated at 11.5 feet.					
15							

Contractor: New England Boring- Derry, NH; Supervisor: Bruce Bline

STN13-TP-I LYNN HERITAGE PARK BORINGS- TEST PITS.GPJ JW NHP.GDT 11/5/18

Stantec

TEST PIT LOG

TP-3

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park Lynn, MA**

DATES: DUG **10-18-2018** WATER LEVEL

PROJECT No. **179410750**

TEST PIT No. **TP-3**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	TYPE	NUMBER	REMARKS
	13.00						
0		Brown SILTY SAND, some brick, wood. glass, and metal. Wood beam or log found at 5 feet. -MISCELLANEOUS FILL-					
5	5.0	Dark gray SANDY CLAY, some shells, brick, and fine gravel.					
10	3.0	Orange/dark gray coarse SAND, some fine gravel and brick.					
	1.3	Test pit terminated at 11.7 feet.					*Lab testing on grab sample at 12'* Moist dark gray Silty Clay, little c-f Sans, trace f Gravel (CL)
15		Contractor: New England Boring- Derry, NH; Supervisor: Bruce Bline					

Stantec

TEST PIT LOG

TP-5

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park Lynn, MA**

DATES: DUG **10-17-2018** WATER LEVEL **8.5**

PROJECT No. **179410750**

TEST PIT No. **TP-5**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	SOIL DESCRIPTION	STRATA PLOT	WATER LEVEL	TYPE	NUMBER	REMARKS
	12.00						
0		Brown SILTY SAND, some cobbles, boulders, wood, wire, and sheet metal. -MISCELLANEOUS FILL-					
	8.0						
5		Dark gray SANDY CLAY. Some wood and cobbles on the east end. Some wood, cobbles, and coal ash on the west end.		▽			*Lab testing on grab sample 5' to 8'* Moist, dark gray Silty Sand, little f Gravel, little Clay (SM-ML)
	3.0						
		Test pit terminated at 9 feet.					
10							
15							

Contractor: New England Boring- Derry, NH; Supervisor: Bruce Bline

APPENDIX E

Laboratory Test Results

GeoTesting EXPRESS

Technologies to manage risk for infrastructure

Boston
Atlanta
Chicago
Los Angeles
New York
www.geotesting.com

August 31, 2017

Nicholas D'Agostino
Stantec Inc.
5 Burlington Woods
Burlington, MA 01803

RE: Heritage State Park, Lynn, MA (GTX-306811)

Dear Nicholas:

Enclosed are the test results you requested for the above referenced project. GeoTesting Express, Inc. (GTX) received 15 samples from you on 8/2/2017. These samples were labeled as follows:

Boring	Sample	Depth
HP-1	S4	7-9 ft
HP-1	S10	19-21 ft
HP-1	S15	29-31 ft
HP-1	ST-1	33-35 ft
HP-3	S4	7-9 ft
HP-3	S8	16-18 ft
HP-3	S14	28-30 ft
HP-4	ST-1	32-34 ft
HP-6	S2	2-4 ft
HP-6	S7	12-14 ft
HP-6	S9	16-18 ft
HP-6	ST-1	27-29 ft
HP-6	S16	37-39 ft
HP-7	S7	12-14 ft
HP-7	S9	16-18 ft

GTX performed the following tests on these samples:

15 ASTM D2216 - Moisture Contents
6 ASTM D2974 - Moisture, Ash and Organic Matter
1 ASTM D422 - Grain Size Analysis - Sieve and Hydrometer
4 ASTM D422 - Grain Size Analyses - Sieve Only
10 ASTM D4318 - Atterberg Limits
3 ASTM D2435 - Incremental Consolidation tests

A copy of your test request is attached.

The results presented in this report apply only to the items tested. This report shall not be reproduced except in full, without written approval from GeoTesting Express. The remainder of these samples will be retained for a period of sixty (60) days and will then be discarded unless otherwise notified by you. Please call me if you have any questions or require additional information. Thank you for allowing GeoTesting Express the opportunity of providing you with testing services. We look forward to working with you again in the future.

Respectfully yours,

Joe Tomei
Laboratory Manager

GeoTesting EXPRESS

Technologies to manage risk for infrastructure

Boston
Atlanta
Chicago
Los Angeles
New York

www.geotesting.com

Geotechnical Test Report **8/31/2017**

GTX-306811

Heritage State Park

Lynn, MA

Client Project No.: 179410469

Prepared for:

Stantec Inc.

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	---	Sample Type:	---	Tested By:	jbr
Sample ID:	---	Test Date:	08/09/17	Checked By:	jdt
Depth :	---	Test Id:	419242		

Moisture Content of Soil and Rock - ASTM D2216

Boring ID	Sample ID	Depth	Description	Moisture Content, %
HP-1	S4	7-9 ft	Moist, dark gray clayey sand	28.0
HP-1	S10	19-21 ft	Moist, gray clay	25.9
HP-1	S15	29-31 ft	Moist, gray clay	34.6
HP-1	ST- 1	33-35 ft	Moist, olive clay	28.0
HP-3	S4	7-9 ft	Moist, black organic material	208.3
HP-3	S8	16-18 ft	Moist, dark gray clay with organics	75.1
HP-3	S14	28-30 ft	Moist, gray clay	31.7
HP-4	ST- 1	32-34 ft	Moist, olive clay	30.4

* Sample HP-3 S4 consisted primarily of wood pieces/fragments.

Notes: Temperature of Drying : 110° Celsius

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	---	Sample Type:	---	Tested By:	jbr
Sample ID:	---	Test Date:	08/07/17	Checked By:	jdt
Depth :	---	Test Id:	419249		

Moisture Content of Soil and Rock - ASTM D2216

Boring ID	Sample ID	Depth	Description	Moisture Content, %
HP-6	S2	2-4 ft	Moist, black silty sand with gravel and organics	34.5
HP-6	S7	12-14 ft	Moist, black silty sand with gravel and organics	87.6
HP-6	S9	16-18 ft	Moist, gray clay	30.9
HP-6	ST- 1	27-29 ft	Moist, olive clay	34.4
HP-6	S16	37-39 ft	Moist, gray clay	36.0
HP-7	S7	12-14 ft	Moist, brown organic material	126.3
HP-7	S9	16-18 ft	Moist, gray clay	29.9

* Sample HP-7 S7 consisted primarily of wood pieces/fragments.

Notes: Temperature of Drying : 110° Celsius

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	---	Sample Type:	---	Tested By:	cam
Sample ID:	---	Test Date:	08/08/17	Checked By:	jdt
Depth :	---	Test Id:	419270		

Moisture, Ash, and Organic Matter - ASTM D2974

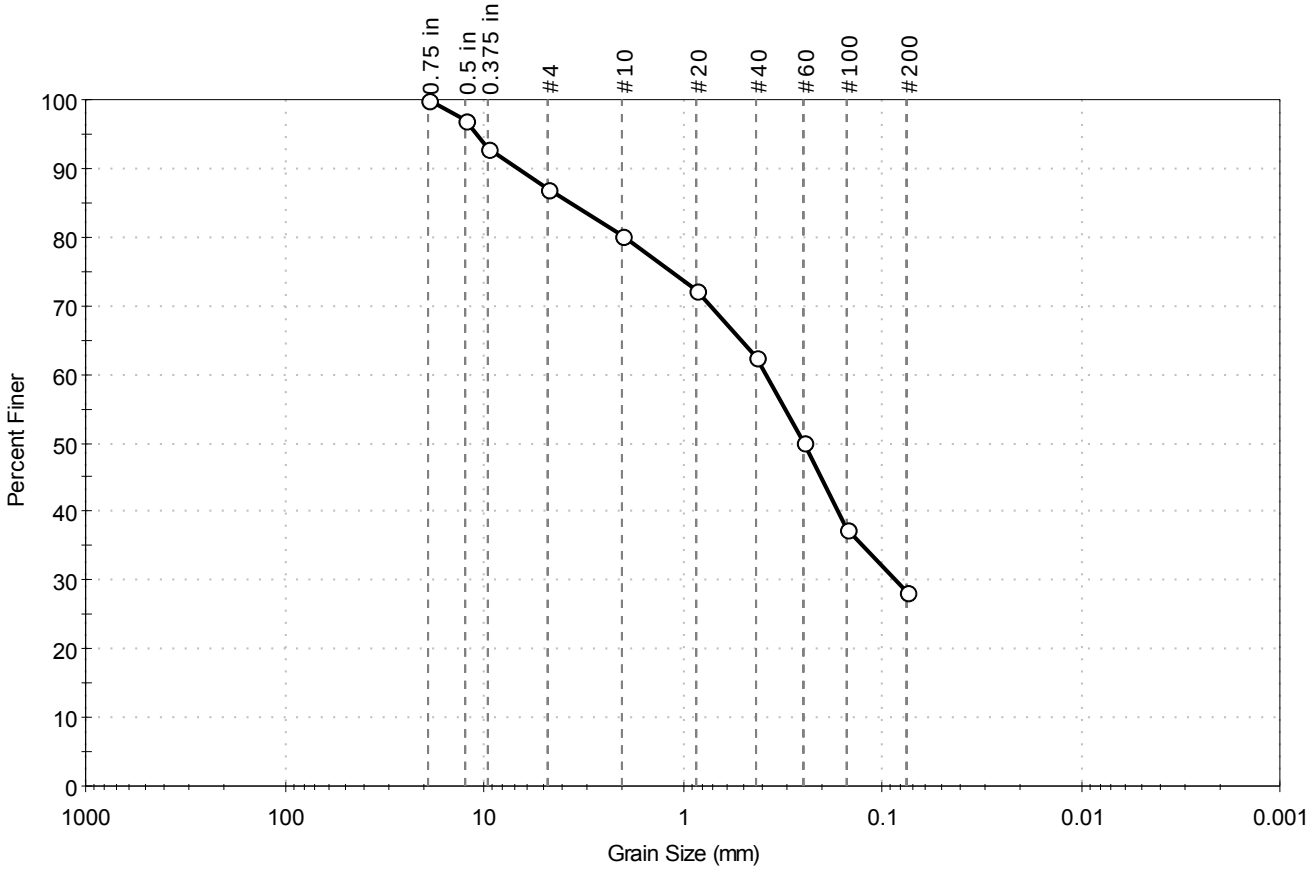
Boring ID	Sample ID	Depth	Description	Moisture Content, %	Ash Content, %	Organic Matter, %
HP-1	S4	7-9 ft	Moist, dark gray clayey sand	28	95.3	4.7
HP-3	S4	7-9 ft	Moist, black organic material	208	23.3	76.7
HP-3	S8	16-18 ft	Moist, dark gray clay with organics	79	92.6	7.4
HP-6	S2	2-4 ft	Moist, black silty sand with gravel and organics	41	89.7	10.3
HP-6	S7	12-14 ft	Moist, black silty sand with gravel and organics	65	91.6	8.4
HP-7	S7	12-14 ft	Moist, brown organic material	125	12.1	87.9

* Samples HP-3 S4 and HP-7 S7 consisted primarily of wood pieces/fragments.

Notes: Moisture content determined by Method A and reported as a percentage of oven-dried mass;
dried to a constant mass at temperature of 105º C
Ash content and organic matter determined by Method C; dried to constant mass at temperature 440º C

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-1	Sample Type:	jar	Tested By:	jbr
Sample ID:	S4	Test Date:	08/07/17	Checked By:	jdt
Depth :	7-9 ft	Test Id:	419260		
Test Comment:	---				
Visual Description:	Moist, dark gray clayey sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	13.1	58.5	28.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	97		
0.375 in	9.50	93		
#4	4.75	87		
#10	2.00	80		
#20	0.85	72		
#40	0.42	62		
#60	0.25	50		
#100	0.15	38		
#200	0.075	28		

Coefficients

D_{85} = 3.6804 mm D_{30} = 0.0844 mm

D_{60} = 0.3820 mm D_{15} = N/A

D_{50} = 0.2490 mm D_{10} = N/A

C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

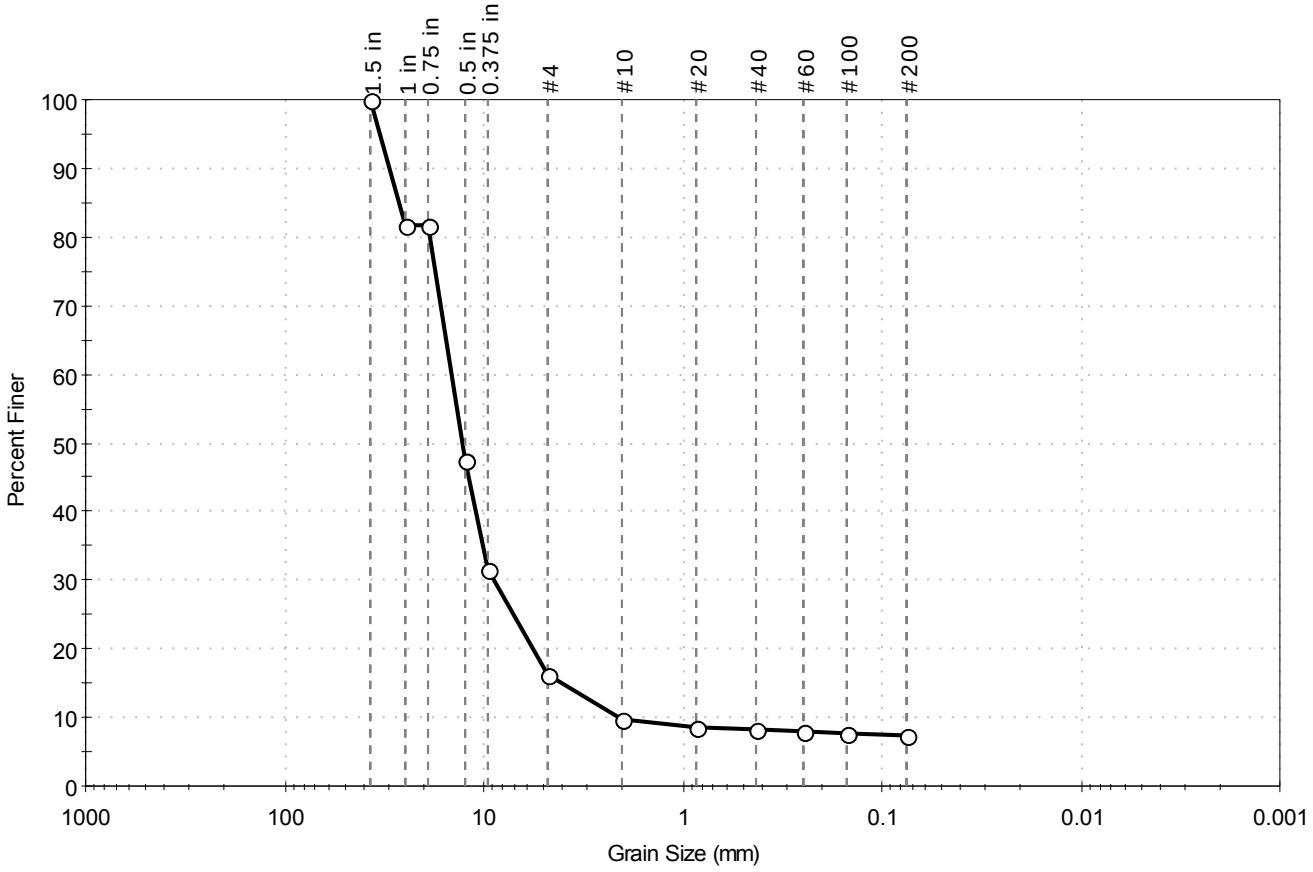
Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-3	Sample Type:	jar	Tested By:	jbr
Sample ID:	S4	Test Date:	08/08/17	Checked By:	jdt
Depth :	7-9 ft	Test Id:	419261		
Test Comment:	---				
Visual Description:	Moist, black organic material				
Sample Comment:	Sample consisted primarily of wood pieces/fragments				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	83.7	8.9	7.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.5 in	37.50	100		
1 in	25.00	82		
0.75 in	19.00	82		
0.5 in	12.50	47		
0.375 in	9.50	32		
#4	4.75	16		
#10	2.00	10		
#20	0.85	9		
#40	0.42	8		
#60	0.25	8		
#100	0.15	8		
#200	0.075	7.4		

Coefficients

D_{85} = 26.9601 mm	D_{30} = 8.8398 mm
D_{60} = 14.5765 mm	D_{15} = 4.0034 mm
D_{50} = 12.8911 mm	D_{10} = 2.0612 mm
C_u = 7.072	C_c = 2.601

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-a (1))

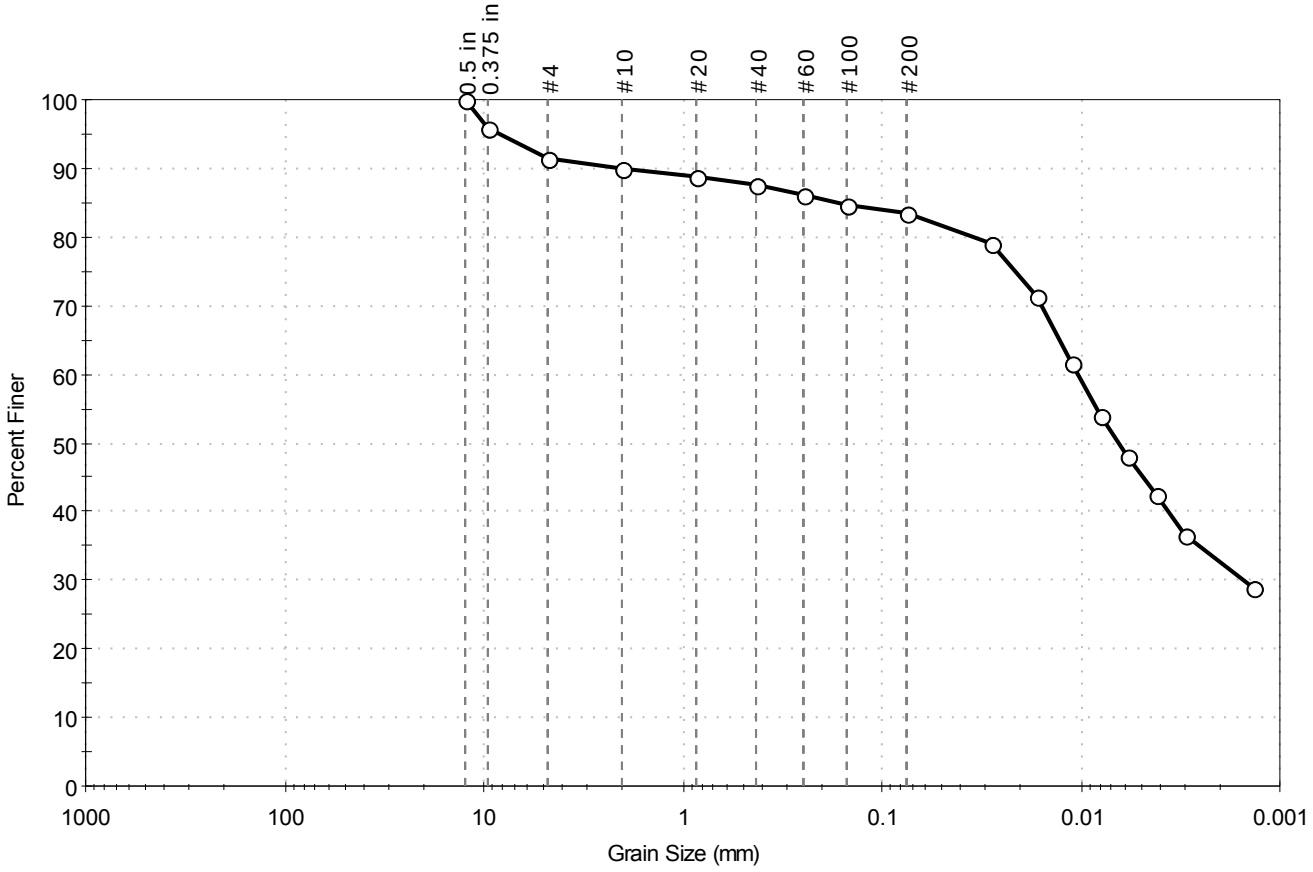
Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-3	Sample Type:	jar	Tested By:	jbr
Sample ID:	S8	Test Date:	08/08/17	Checked By:	jdt
Depth :	16-18 ft	Test Id:	419262		
Test Comment:	---				
Visual Description:	Moist, dark gray clay with organics				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	8.5	8.1	83.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	96		
#4	4.75	91		
#10	2.00	90		
#20	0.85	89		
#40	0.42	88		
#60	0.25	86		
#100	0.15	85		
#200	0.075	83		
---	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0282	79		
---	0.0167	71		
---	0.0112	62		
---	0.0080	54		
---	0.0058	48		
---	0.0042	42		
---	0.0030	37		
---	0.0014	29		

Coefficients

D_{85} = 0.1648 mm	D_{30} = 0.0015 mm
D_{60} = 0.0104 mm	D_{15} = N/A
D_{50} = 0.0064 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM N/A

AASHTO Silty Soils (A-4 (0))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

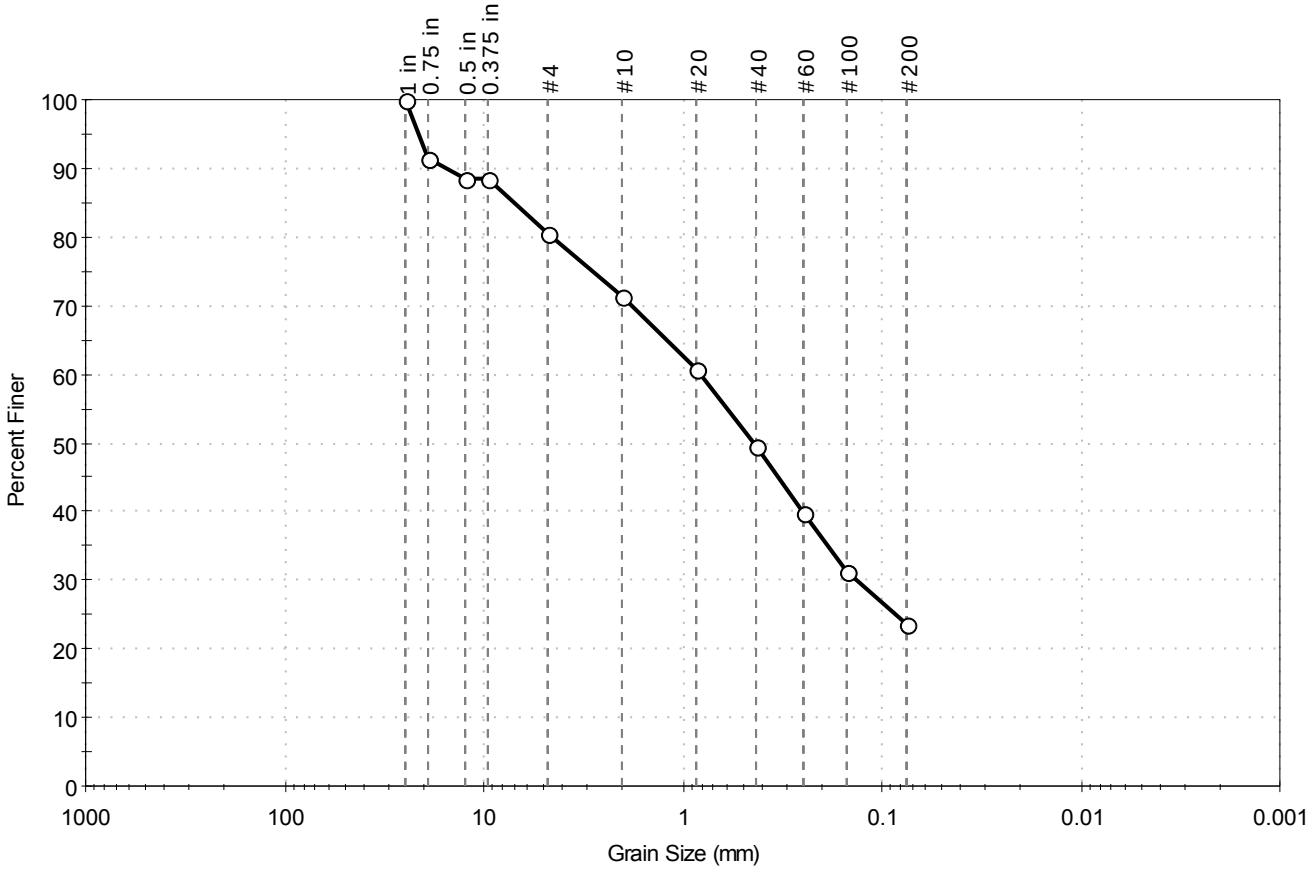
Specific Gravity : 2.65

Separation of Sample: #200 Sieve

printed 8/14/2017 1:59:15 PM

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-6	Sample Type:	jar	Tested By:	jbr
Sample ID:	S2	Test Date:	08/07/17	Checked By:	jdt
Depth :	2-4 ft	Test Id:	419263		
Test Comment:	---				
Visual Description:	Moist, black silty sand with gravel and organics				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	19.3	57.2	23.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	91		
0.5 in	12.50	89		
0.375 in	9.50	89		
#4	4.75	81		
#10	2.00	71		
#20	0.85	61		
#40	0.42	50		
#60	0.25	40		
#100	0.15	31		
#200	0.075	23		

Coefficients

D_{85} = 6.9648 mm
D_{30} = 0.1351 mm
D_{60} = 0.8110 mm
D_{15} = N/A
D_{50} = 0.4337 mm
D_{10} = N/A
C_u = N/A
C_c = N/A

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

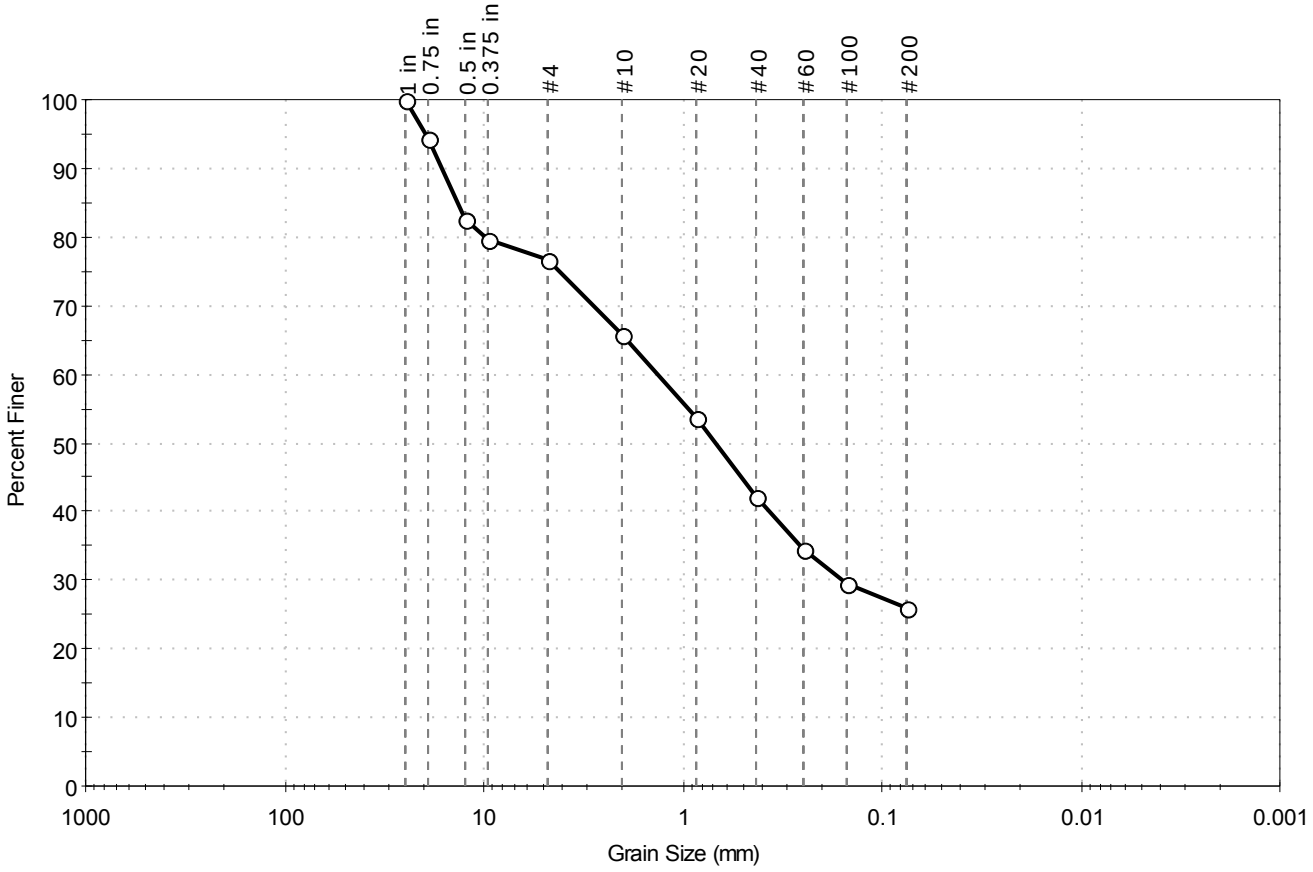
Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-6	Sample Type:	jar	Tested By:	jbr
Sample ID:	S7	Test Date:	08/09/17	Checked By:	jdt
Depth :	12-14 ft	Test Id:	419264		
Test Comment:	---				
Visual Description:	Moist, black silty sand with gravel and organics				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	23.2	50.8	26.0

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 in	25.00	100		
0.75 in	19.00	95		
0.5 in	12.50	83		
0.375 in	9.50	80		
#4	4.75	77		
#10	2.00	66		
#20	0.85	54		
#40	0.42	42		
#60	0.25	34		
#100	0.15	29		
#200	0.075	26		

Coefficients

D_{85} = 13.5934 mm D_{30} = 0.1588 mm

D_{60} = 1.3236 mm D_{15} = N/A

D_{50} = 0.6790 mm D_{10} = N/A

C_u = N/A C_c = N/A

Classification

ASTM N/A

AASHTO Silty Gravel and Sand (A-2-4 (0))

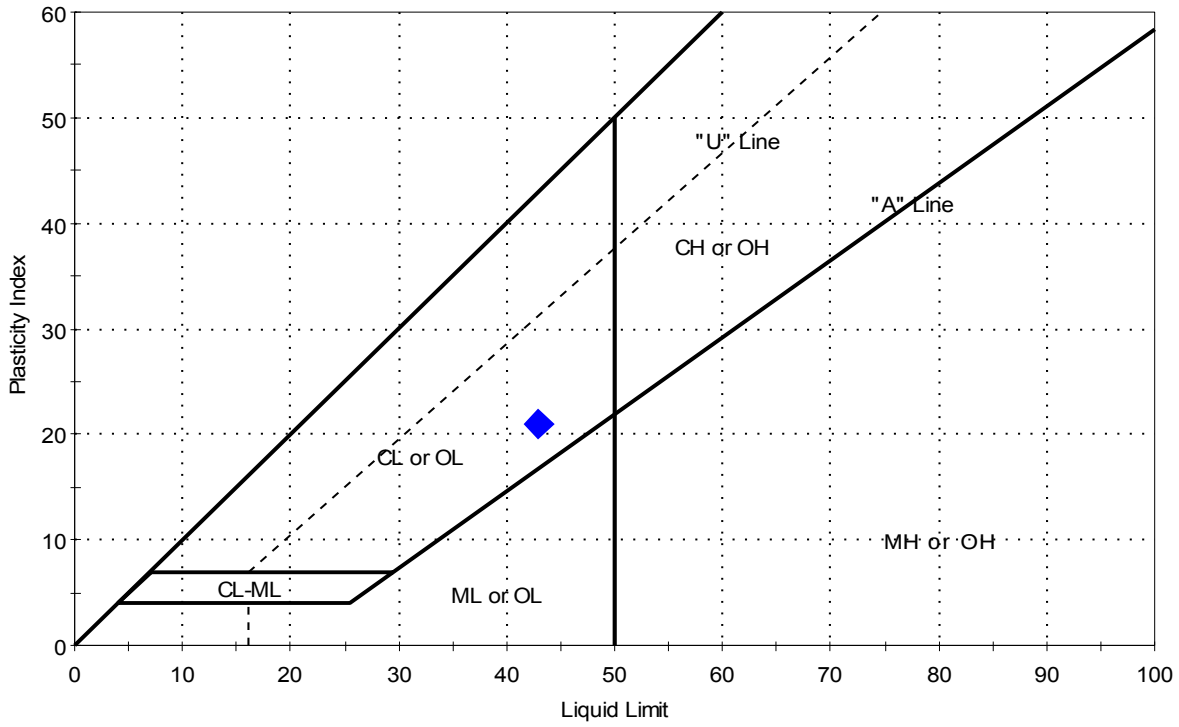
Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : SOFT

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-1	Sample Type:	jar	Tested By:	cam
Sample ID:	S10	Test Date:	08/11/17	Checked By:	jdt
Depth :	19-21 ft	Test Id:	419250		
Test Comment:	---				
Visual Description:	Moist, gray clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S10	HP-1	19-21 ft	26	43	22	21	0.2	

Sample Prepared using the WET method

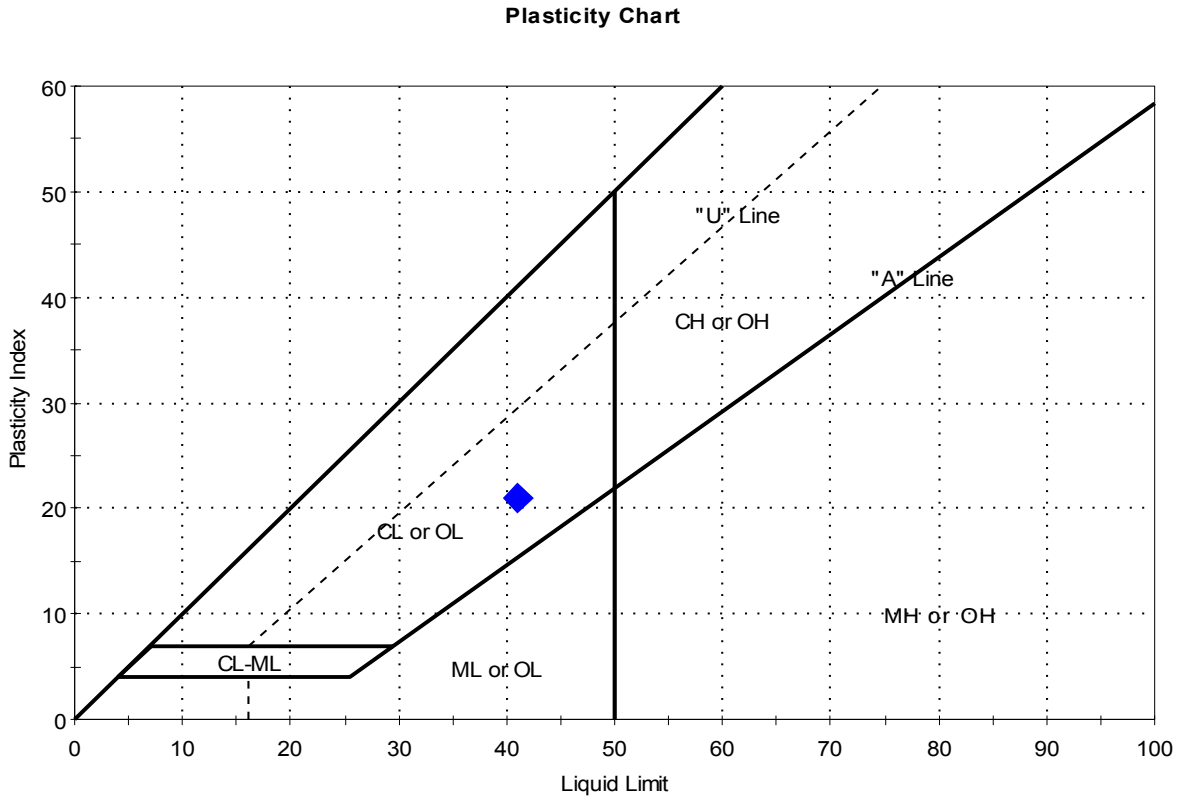
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-1	Sample Type:	jar	Tested By:	cam
Sample ID:	S15	Test Date:	08/11/17	Checked By:	jdt
Depth :	29-31 ft	Test Id:	419251		
Test Comment:	---				
Visual Description:	Moist, gray clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S15	HP-1	29-31 ft	35	41	20	21	0.7	

Sample Prepared using the WET method

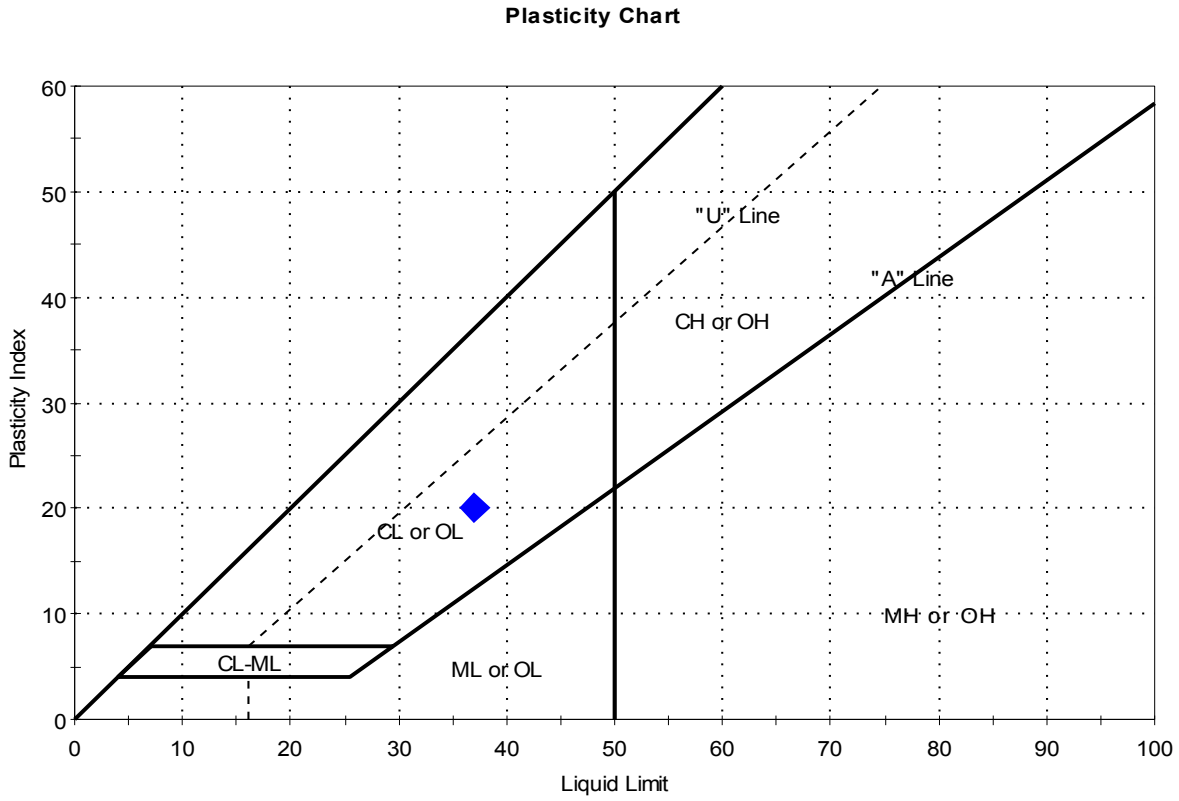
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-1	Sample Type:	tube	Tested By:	cam
Sample ID:	ST-1	Test Date:	08/10/17	Checked By:	jdt
Depth :	33-35 ft	Test Id:	419252		
Test Comment:	---				
Visual Description:	Moist, olive clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	ST-1	HP-1	33-35 ft	28	37	17	20	0.6	

Sample Prepared using the WET method

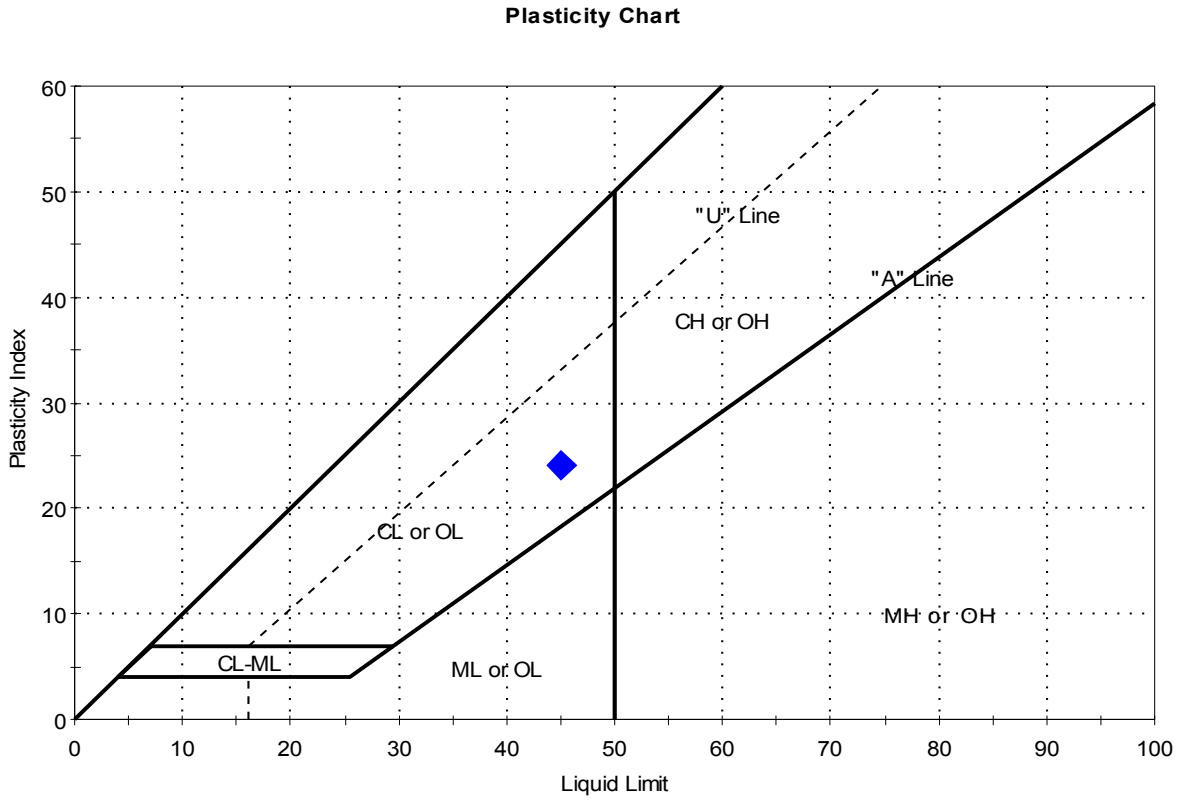
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-3	Sample Type:	jar	Tested By:	cam
Sample ID:	S14	Test Date:	08/11/17	Checked By:	jdt
Depth :	28-30 ft	Test Id:	419253		
Test Comment:	---				
Visual Description:	Moist, gray clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S14	HP-3	28-30 ft	32	45	21	24	0.4	

Sample Prepared using the WET method

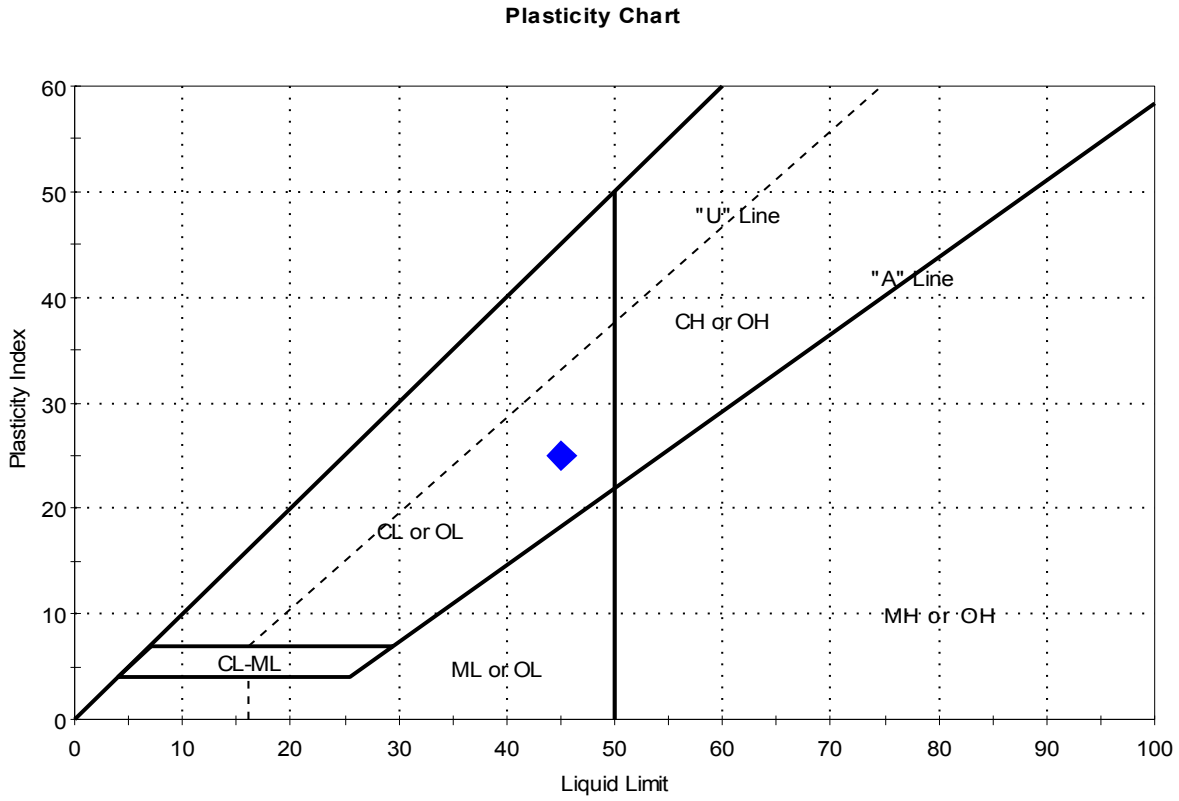
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-4	Sample Type:	tube	Tested By:	cam
Sample ID:	ST-1	Test Date:	08/10/17	Checked By:	jdt
Depth :	32-34 ft	Test Id:	419254		
Test Comment:	---				
Visual Description:	Moist, olive clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	ST-1	HP-4	32-34 ft	30	45	20	25	0.4	

Sample Prepared using the WET method

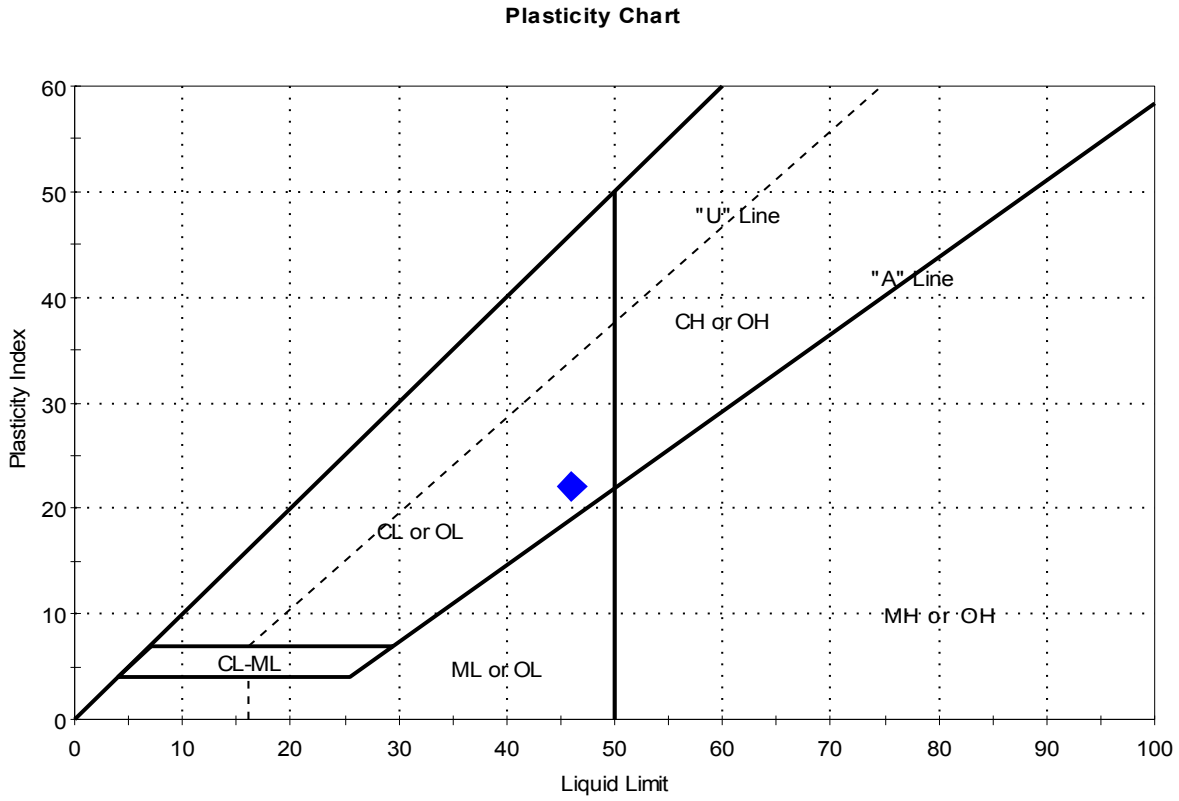
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-6	Sample Type:	jar	Tested By:	cam
Sample ID:	S9	Test Date:	08/11/17	Checked By:	jdt
Depth :	16-18 ft	Test Id:	419255		
Test Comment:	---				
Visual Description:	Moist, gray clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S9	HP-6	16-18 ft	31	46	24	22	0.3	

Sample Prepared using the WET method

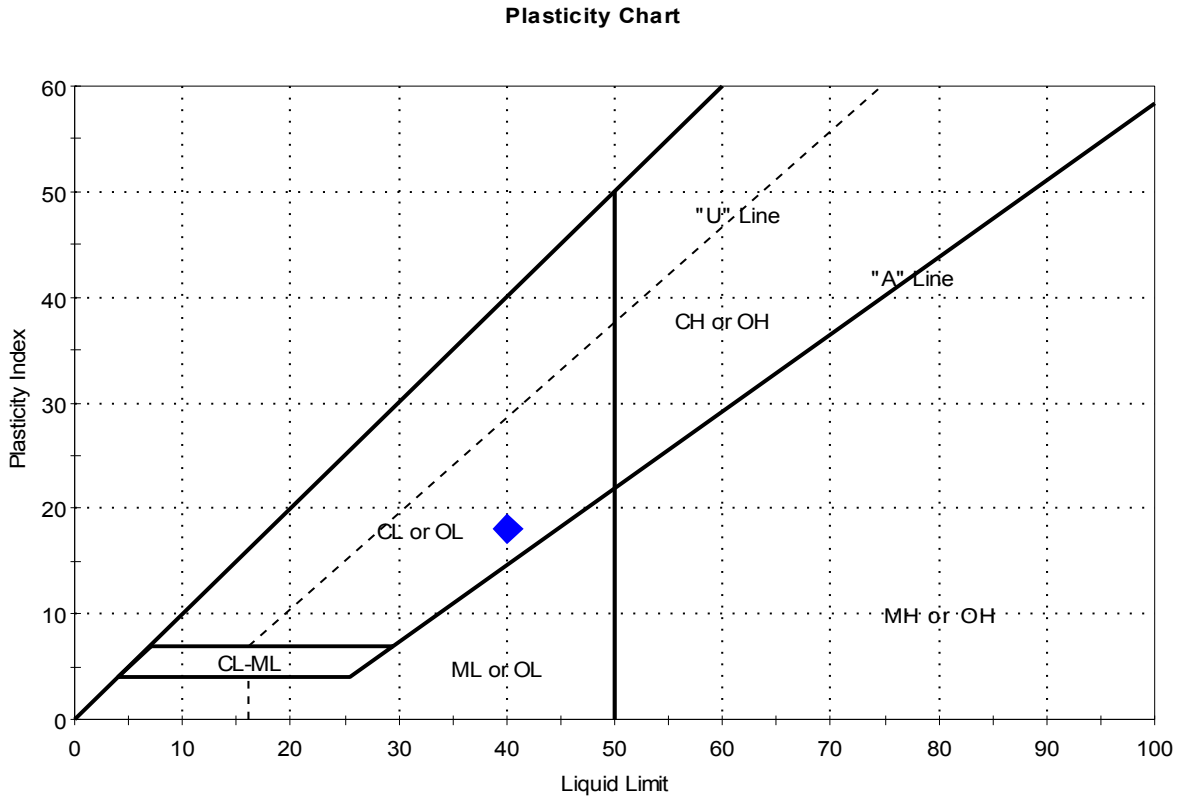
Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-6	Sample Type:	tube	Tested By:	cam
Sample ID:	ST-1	Test Date:	08/09/17	Checked By:	jdt
Depth :	27-29 ft	Test Id:	419256		
Test Comment:	---				
Visual Description:	Moist, olive clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	ST-1	HP-6	27-29 ft	34	40	22	18	0.7	

Sample Prepared using the WET method

Dry Strength: VERY HIGH

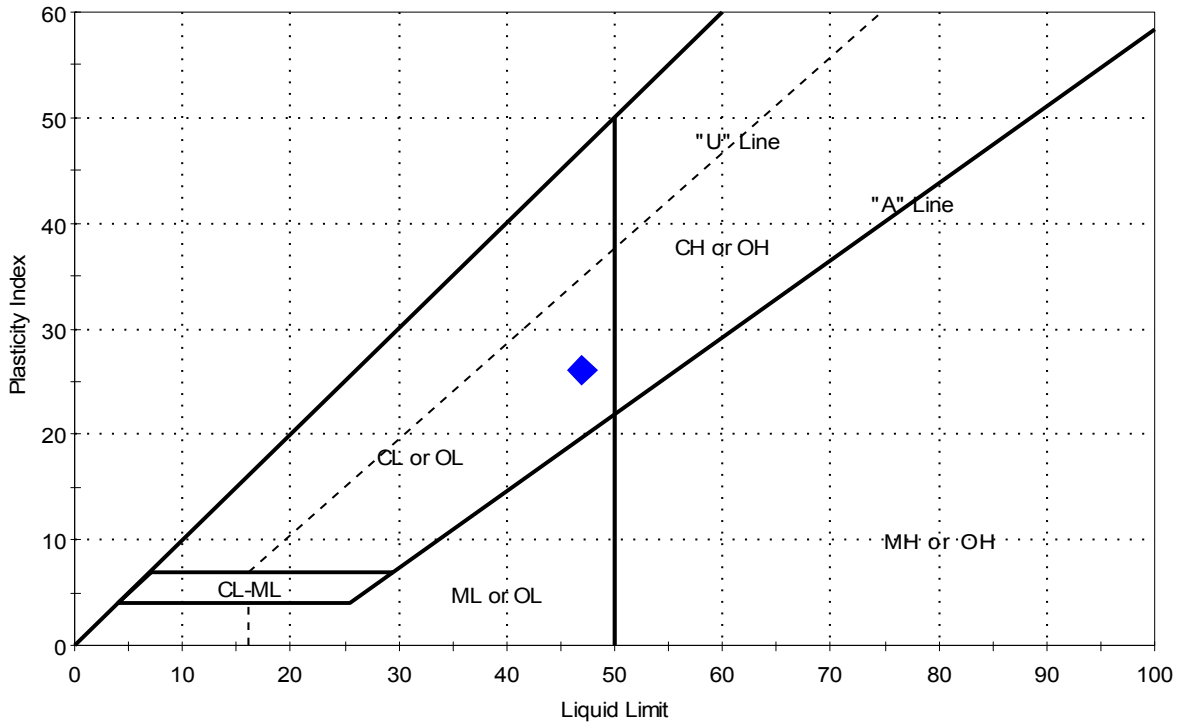
Dilatancy: SLOW

Toughness: LOW

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-6	Sample Type:	jar	Tested By:	cam
Sample ID:	S16	Test Date:	08/11/17	Checked By:	jdt
Depth :	37-39 ft	Test Id:	419257		
Test Comment:	---				
Visual Description:	Moist, gray clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318

Plasticity Chart



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S16	HP-6	37-39 ft	36	47	21	26	0.6	

Sample Prepared using the WET method

Dry Strength: VERY HIGH

Dilatancy: SLOW

Toughness: LOW

printed 8/14/2017 1:50:49 PM

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-7	Sample Type:	jar	Tested By:	cam
Sample ID:	S7	Test Date:	08/08/17	Checked By:	jdt
Depth :	12-14 ft	Test Id:	419258		
Test Comment:	---				
Visual Description:	Moist, brown organic material				
Sample Comment:	Sample consisted primarily of wood pieces/fragments				

Atterberg Limits - ASTM D4318

Sample Determined to be non-plastic

Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S7	HP-7	12-14 ft	126	n/a	n/a	n/a	n/a	

Dry Strength: NONE

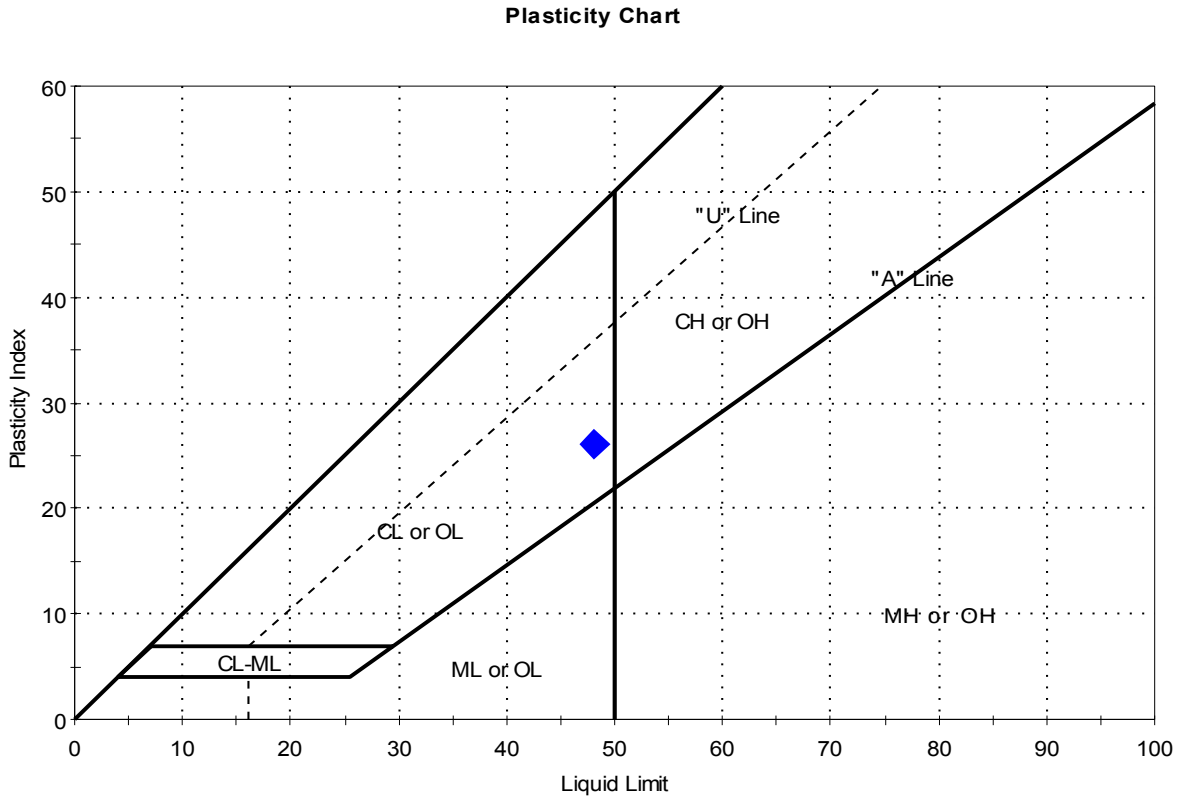
Dilatancy: RAPID

Toughness: n/a

The sample was determined to be Non-Plastic

Client:	Stantec Inc.				
Project:	Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-306811
Boring ID:	HP-7	Sample Type:	jar	Tested By:	cam
Sample ID:	S9	Test Date:	08/11/17	Checked By:	jdt
Depth :	16-18 ft	Test Id:	419259		
Test Comment:	---				
Visual Description:	Moist, gray clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S9	HP-7	16-18 ft	30	48	22	26	0.3	

Sample Prepared using the WET method

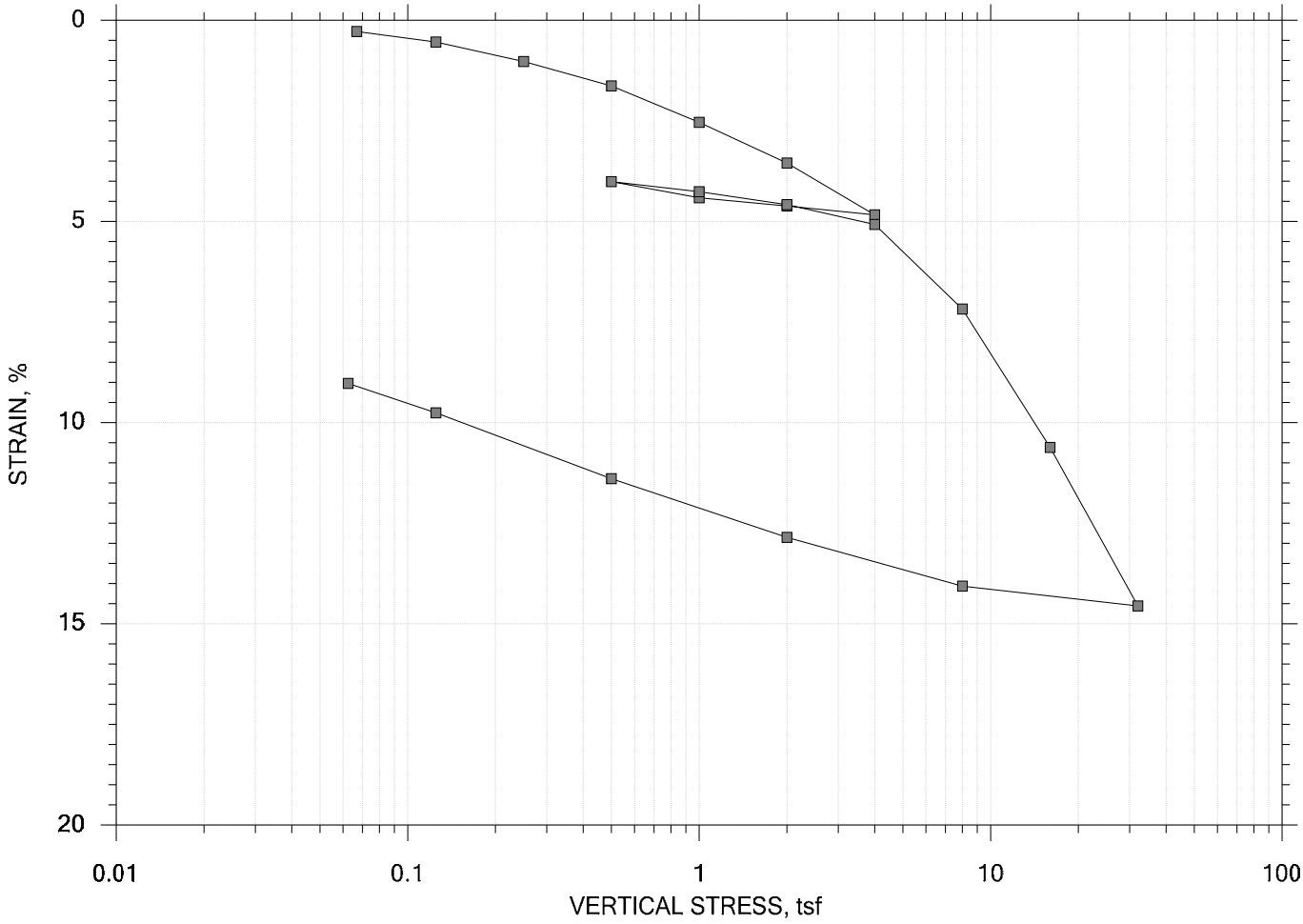
Dry Strength: VERY HIGH

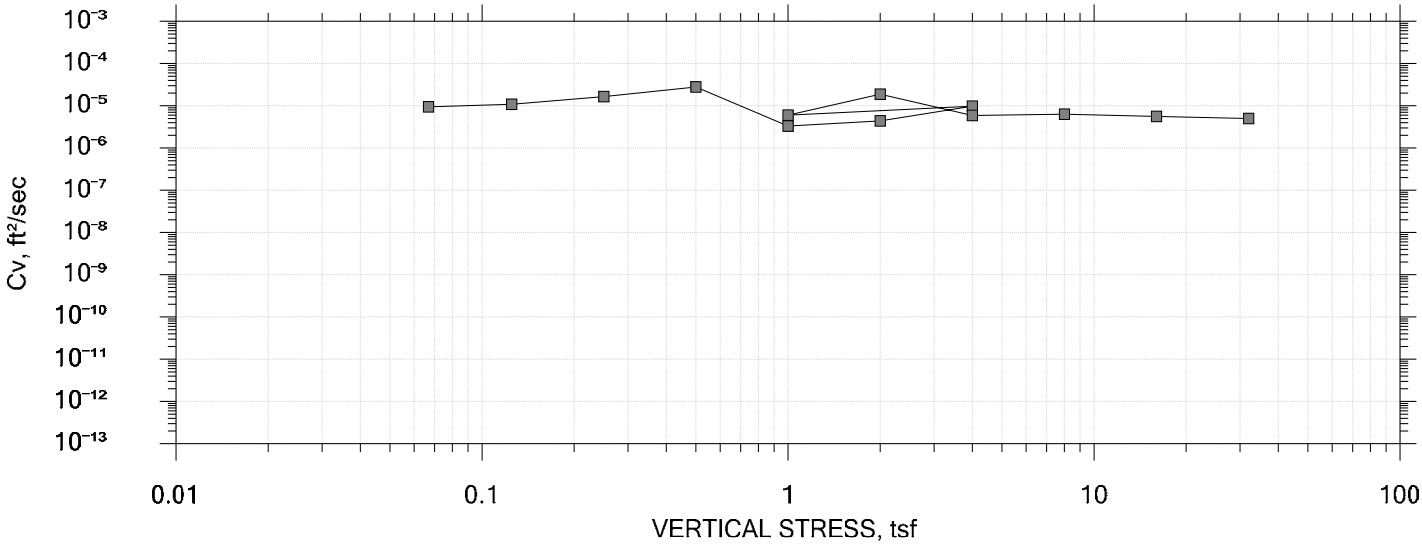
Dilatancy: SLOW

Toughness: LOW

One-Dimensional Consolidation by ASTM D2435 - Method B

SUMMARY REPORT

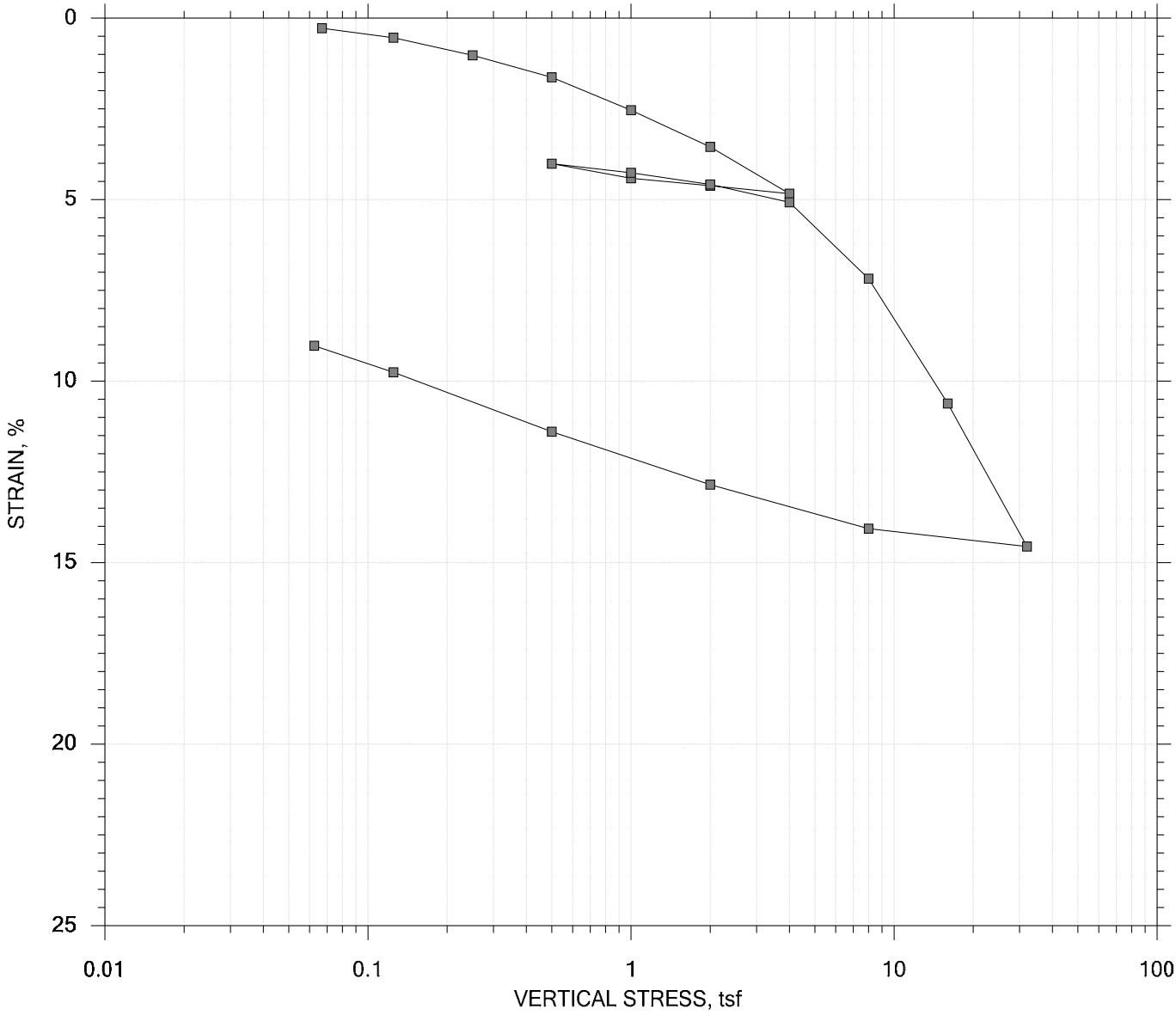




GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

SUMMARY REPORT



					Before Test	After Test
Current Vertical Effective Stress: ---				Water Content, %	26.82	22.48
Preconsolidation Stress: ---				Dry Unit Weight, pcf	98.984	106.43
Compression Ratio: ---				Saturation, %	99.74	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	0.74	0.62
LL: 37	PL: 17	PI: 20	GS: 2.76			

GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

Project: Heritage State Park | Location: Lynn, MA | Project No.: GTX-306811
Boring No.: HP-1 | Tested By: md | Checked By: mcm
Sample No.: ST-1 | Test Date: 08/08/17 | Depth: 33-35 ft
Test No.: IP-3 | Sample Type: intact | Elevation: ---

Soil Description: Moist, olive clay
Remarks: System X, Swell Pressure = 0.0668 tsf

Estimated Specific Gravity: 2.76 | Liquid Limit: 37 | Specimen Diameter: 2.50 in
Initial Void Ratio: 0.743 | Plastic Limit: 17 | Initial Height: 1.00 in
Final Void Ratio: 0.621 | Plasticity Index: 20 | Final Height: 0.93 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	C-976	RING		C-1972
Wt. Container + Wet Soil, gm	162.20	273.05	267.51	164.53
Wt. Container + Dry Soil, gm	131.87	238.84	238.84	135.89
Wt. Container, gm	8.4200	111.30	111.30	8.4700
Wt. Dry Soil, gm	123.45	127.54	127.54	127.42
Water Content, %	24.57	26.82	22.48	22.48
Void Ratio	---	0.743	0.621	---
Degree of Saturation, %	---	99.74	100.00	---
Dry Unit Weight, pcf	---	98.984	106.43	---

Note: Specific Gravity and Void Ratios are calculated assuming the degree of saturation equals 100% at the end of the test. Therefore, values may not represent actual values for the specimen.

One-Dimensional Consolidation by ASTM D2435 - Method B

Project: Heritage State Park | Location: Lynn, MA | Project No.: GTX-306811
Boring No.: HP-1 | Tested By: md | Checked By: mcm
Sample No.: ST-1 | Test Date: 08/08/17 | Depth: 33-35 ft
Test No.: IP-3 | Sample Type: intact | Elevation: ---

Soil Description: Moist, olive clay
Remarks: System X, Swell Pressure = 0.0668 tsf

Displacement at End of Increment

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Sq.Rt T90 min	Cv ft²/sec	Mv 1/tsf	k ft/day
1	0.0668	0.002801	0.738	0.280	2.737	8.94e-006	4.19e-002	1.01e-003
2	0.125	0.005396	0.734	0.540	2.964	8.21e-006	4.46e-002	9.88e-004
3	0.250	0.01023	0.725	1.02	1.646	1.47e-005	3.87e-002	1.53e-003
4	0.500	0.01631	0.715	1.63	1.032	2.32e-005	2.43e-002	1.52e-003
5	1.00	0.02534	0.699	2.53	7.915	2.97e-006	1.81e-002	1.45e-004
6	2.00	0.03548	0.681	3.55	5.880	3.92e-006	1.01e-002	1.07e-004
7	4.00	0.04837	0.659	4.84	2.057	1.09e-005	6.44e-003	1.90e-004
8	2.00	0.04614	0.663	4.61	79.625	2.80e-007	1.12e-003	8.42e-007
9	1.00	0.04410	0.666	4.41	3.769	5.94e-006	2.04e-003	3.27e-005
10	0.500	0.04010	0.673	4.01	6.454	3.49e-006	7.99e-003	7.52e-005
11	1.00	0.04260	0.669	4.26	3.782	5.96e-006	5.00e-003	8.05e-005
12	2.00	0.04581	0.663	4.58	1.127	1.99e-005	3.21e-003	1.72e-004
13	4.00	0.05074	0.655	5.07	3.834	5.80e-006	2.47e-003	3.86e-005
14	8.00	0.07177	0.618	7.18	3.750	5.77e-006	5.26e-003	8.17e-005
15	16.0	0.1061	0.558	10.6	3.976	5.12e-006	4.30e-003	5.94e-005
16	32.0	0.1455	0.490	14.6	3.969	4.72e-006	2.46e-003	3.14e-005
17	8.00	0.1406	0.498	14.1	2.272	7.93e-006	2.05e-004	4.39e-006
18	2.00	0.1285	0.519	12.9	6.114	3.01e-006	2.02e-003	1.63e-005
19	0.500	0.1139	0.545	11.4	19.931	9.51e-007	9.73e-003	2.50e-005
20	0.125	0.09755	0.573	9.76	89.566	2.19e-007	4.36e-002	2.58e-005
21	0.0625	0.09025	0.586	9.03	183.639	1.10e-007	1.17e-001	3.46e-005

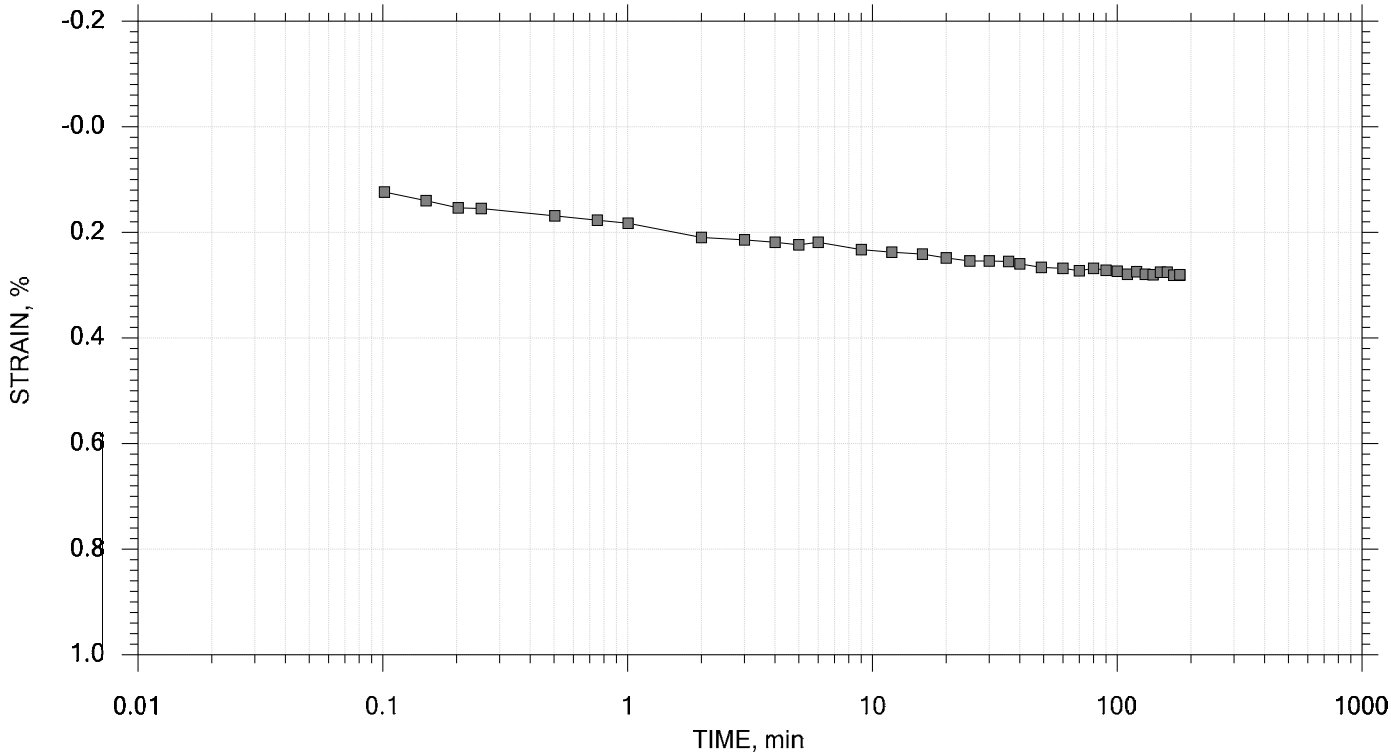
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Log T50 min	Cv ft²/sec	Mv 1/tsf	k ft/day	Ca %
1	0.0668	0.002801	0.738	0.280	0.000	0.00e+000	4.19e-002	0.00e+000	0.00e+000
2	0.125	0.005396	0.734	0.540	0.000	0.00e+000	4.46e-002	0.00e+000	0.00e+000
3	0.250	0.01023	0.725	1.02	0.000	0.00e+000	3.87e-002	0.00e+000	0.00e+000
4	0.500	0.01631	0.715	1.63	0.143	3.88e-005	2.43e-002	2.55e-003	0.00e+000
5	1.00	0.02534	0.699	2.53	0.000	0.00e+000	1.81e-002	0.00e+000	0.00e+000
6	2.00	0.03548	0.681	3.55	1.103	4.86e-006	1.01e-002	1.33e-004	0.00e+000
7	4.00	0.04837	0.659	4.84	0.595	8.80e-006	6.44e-003	1.53e-004	0.00e+000
8	2.00	0.04614	0.663	4.61	0.000	0.00e+000	1.12e-003	0.00e+000	0.00e+000
9	1.00	0.04410	0.666	4.41	0.000	0.00e+000	2.04e-003	0.00e+000	0.00e+000
10	0.500	0.04010	0.673	4.01	0.645	8.10e-006	7.99e-003	1.75e-004	0.00e+000
11	1.00	0.04260	0.669	4.26	0.000	0.00e+000	5.00e-003	0.00e+000	0.00e+000
12	2.00	0.04581	0.663	4.58	0.281	1.85e-005	3.21e-003	1.60e-004	0.00e+000
13	4.00	0.05074	0.655	5.07	0.000	0.00e+000	2.47e-003	0.00e+000	0.00e+000
14	8.00	0.07177	0.618	7.18	0.695	7.23e-006	5.26e-003	1.02e-004	0.00e+000
15	16.0	0.1061	0.558	10.6	0.833	5.68e-006	4.30e-003	6.58e-005	0.00e+000
16	32.0	0.1455	0.490	14.6	0.914	4.77e-006	2.46e-003	3.17e-005	0.00e+000
17	8.00	0.1406	0.498	14.1	0.000	0.00e+000	2.05e-004	0.00e+000	0.00e+000
18	2.00	0.1285	0.519	12.9	0.000	0.00e+000	2.02e-003	0.00e+000	0.00e+000
19	0.500	0.1139	0.545	11.4	5.118	8.60e-007	9.73e-003	2.26e-005	0.00e+000
20	0.125	0.09755	0.573	9.76	18.006	2.53e-007	4.36e-002	2.98e-005	0.00e+000
21	0.0625	0.09025	0.586	9.03	0.000	0.00e+000	1.17e-001	0.00e+000	0.00e+000

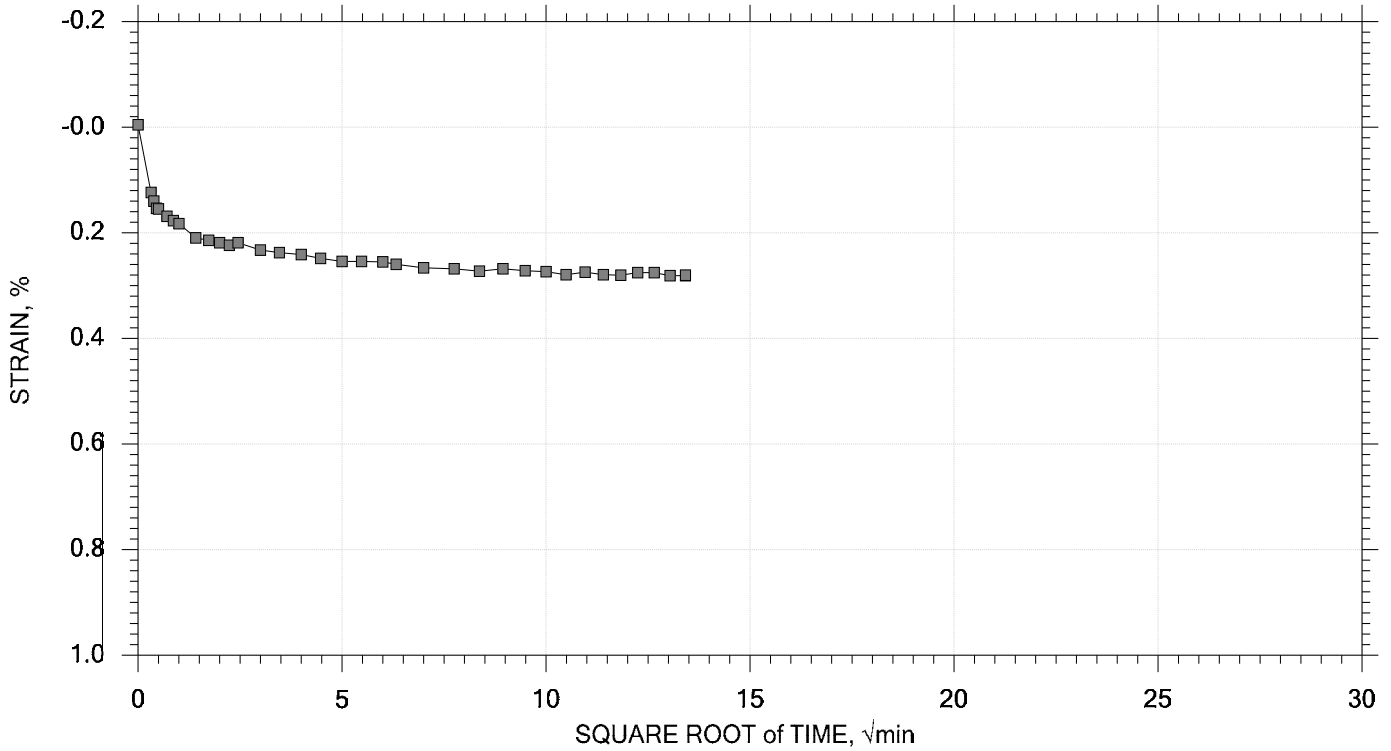
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Volume Step 1 of 21

Stress: 0.066813 tsf





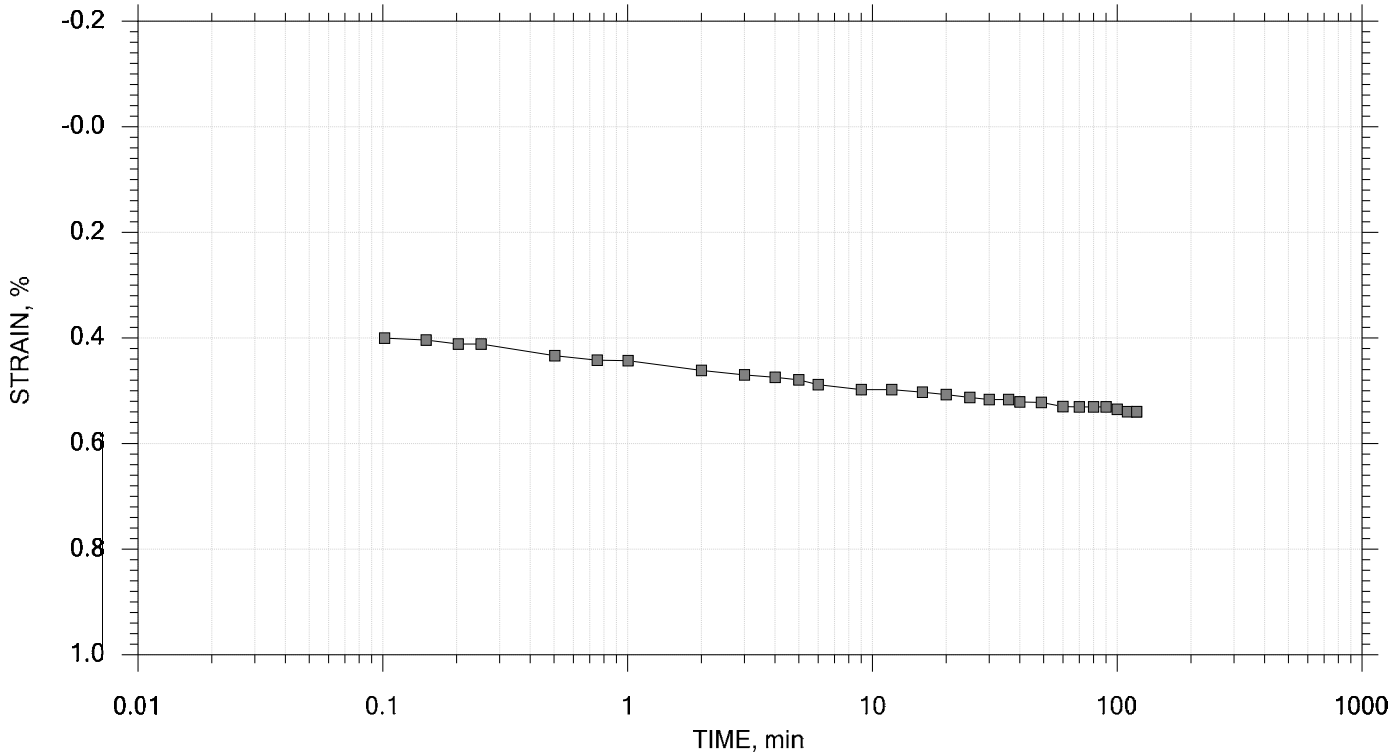
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

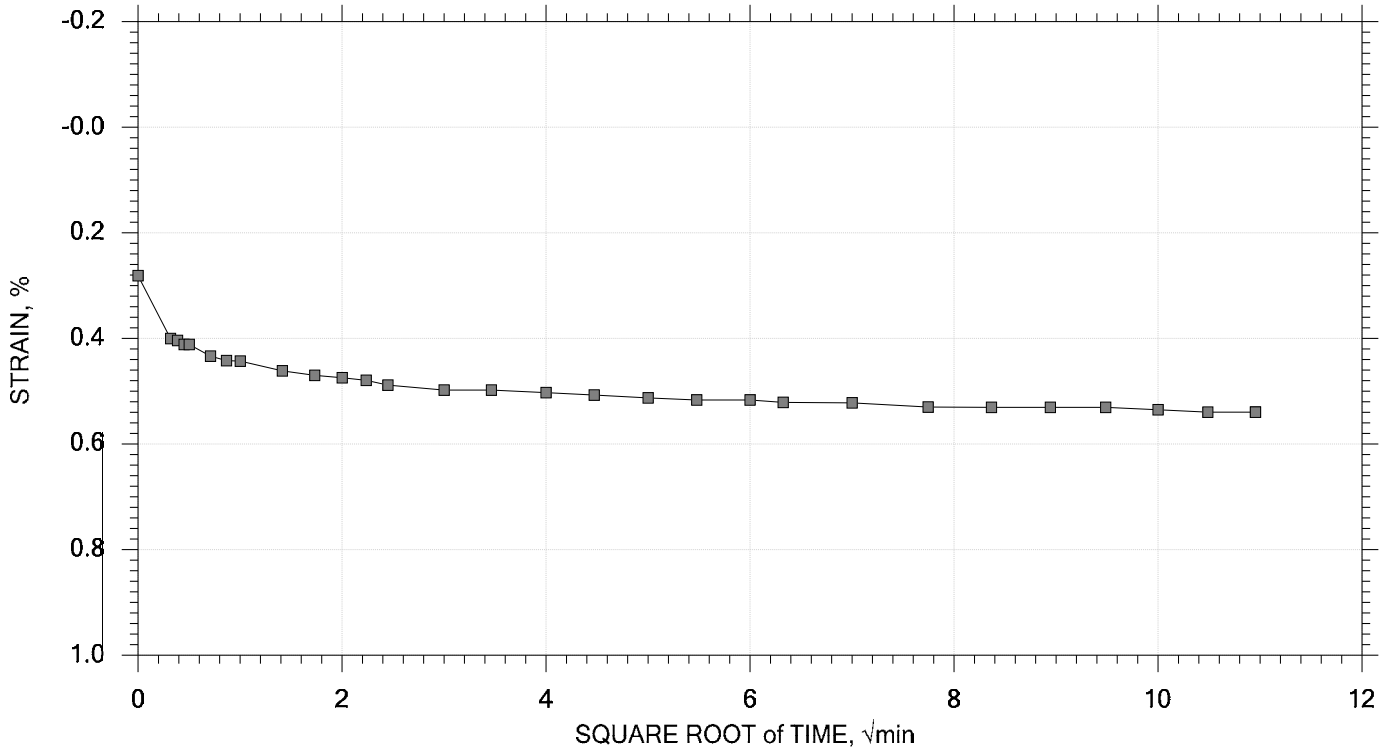
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 2 of 21

Stress: 0.125 tsf





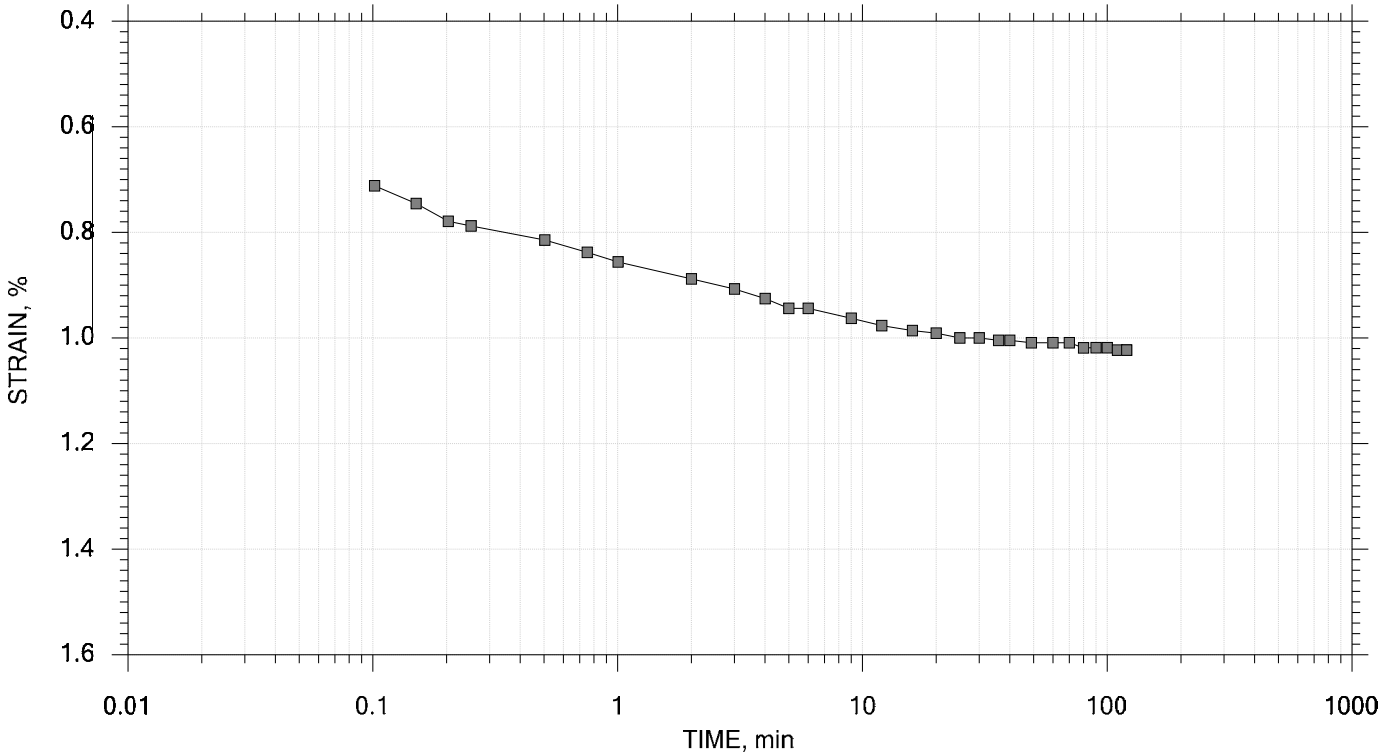
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

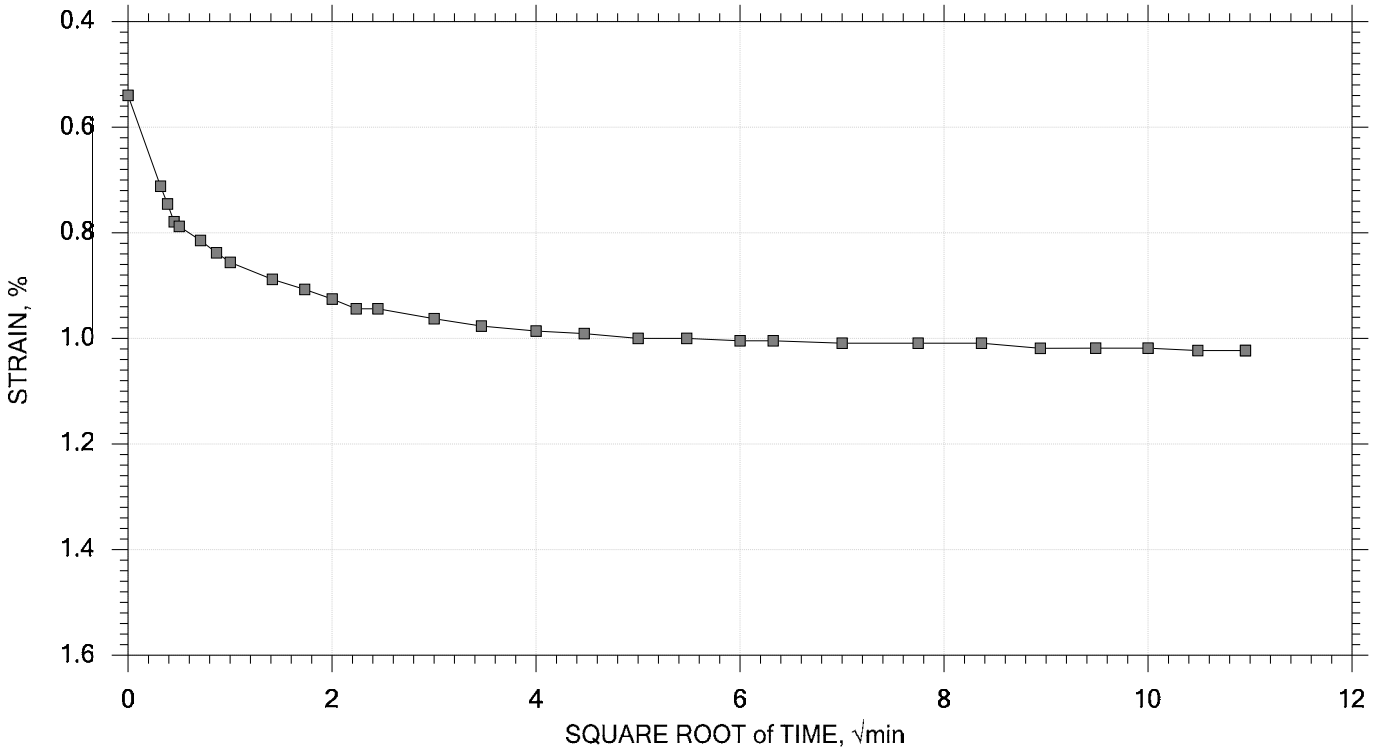
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 3 of 21

Stress: 0.25 tsf





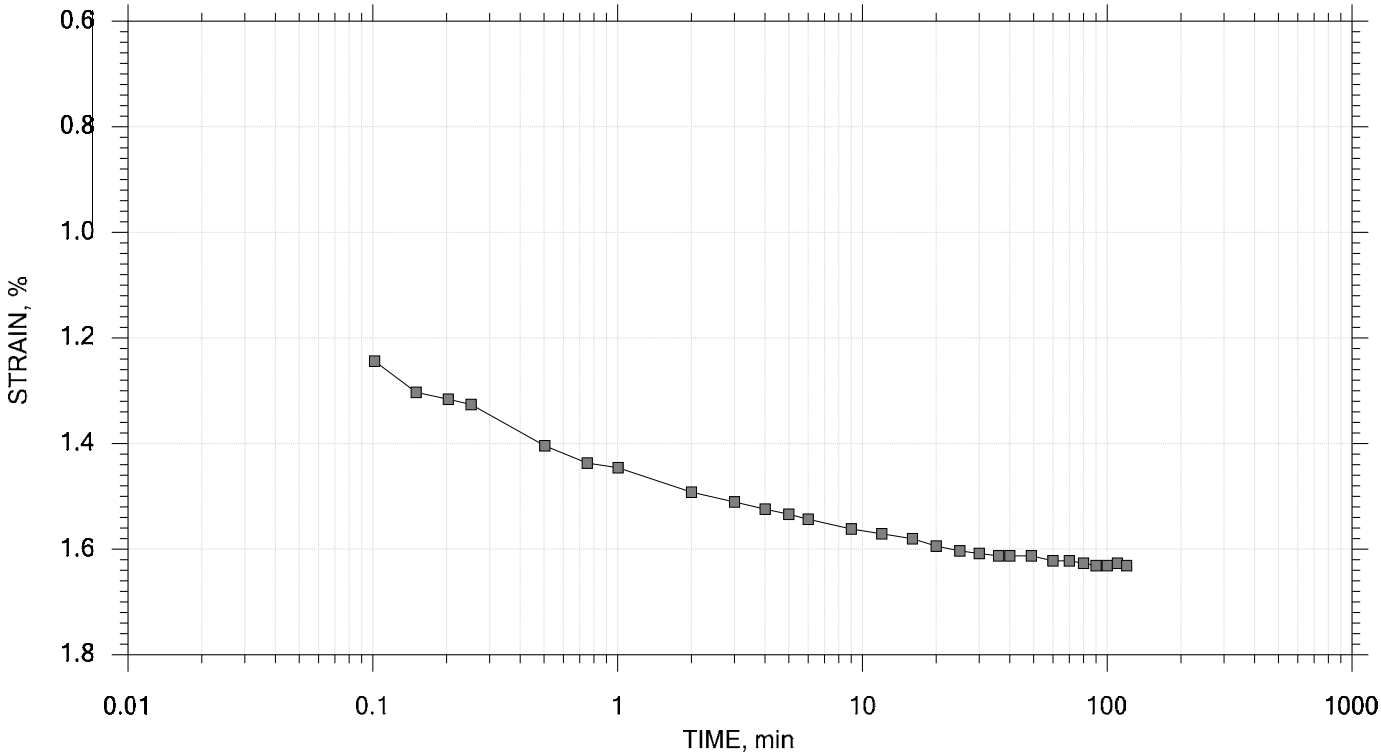
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

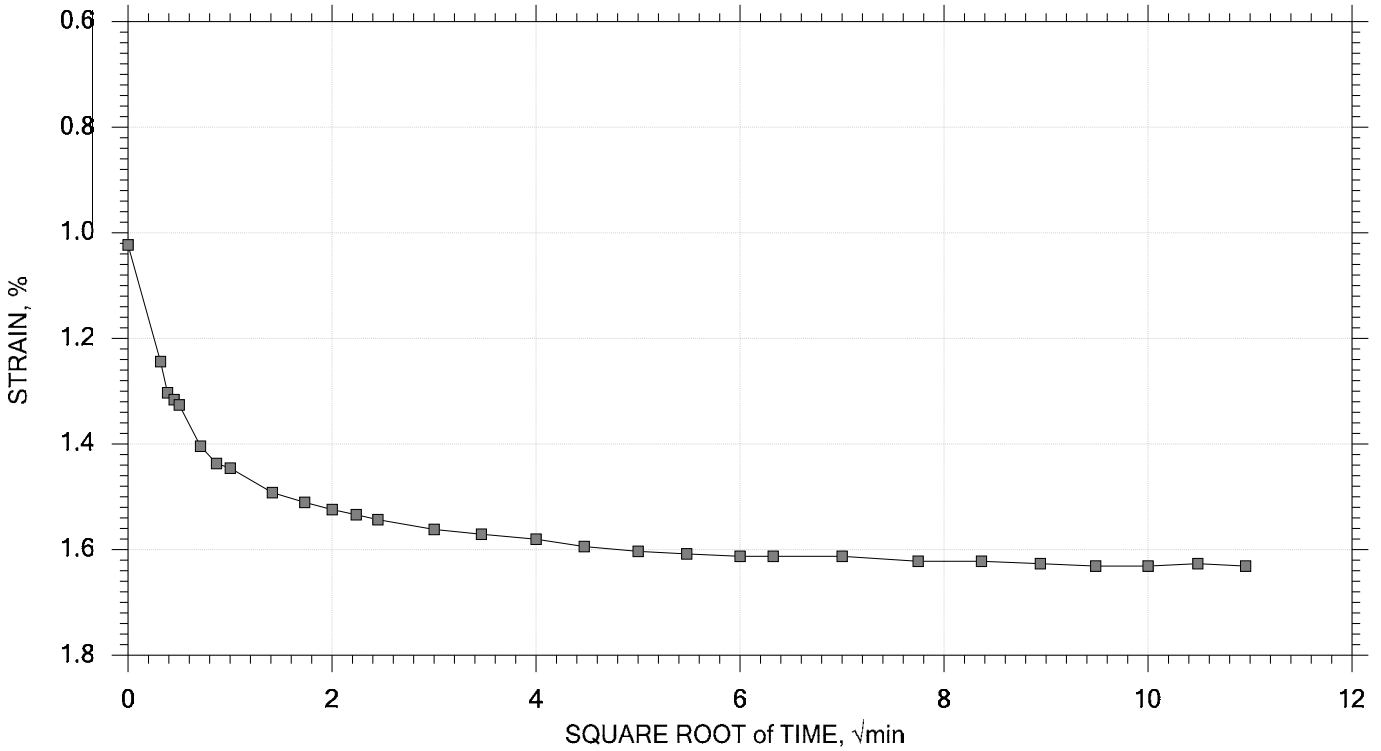
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 4 of 21

Stress: 0.5 tsf





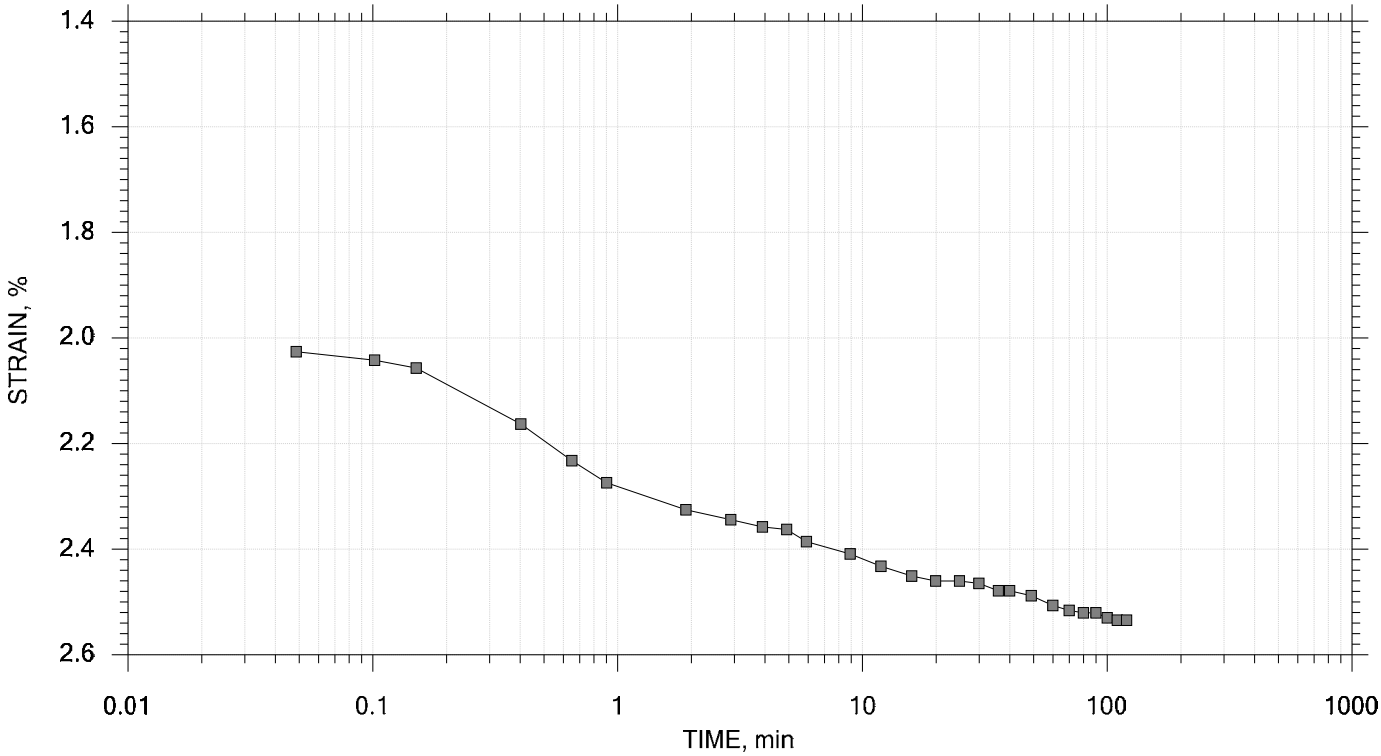
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

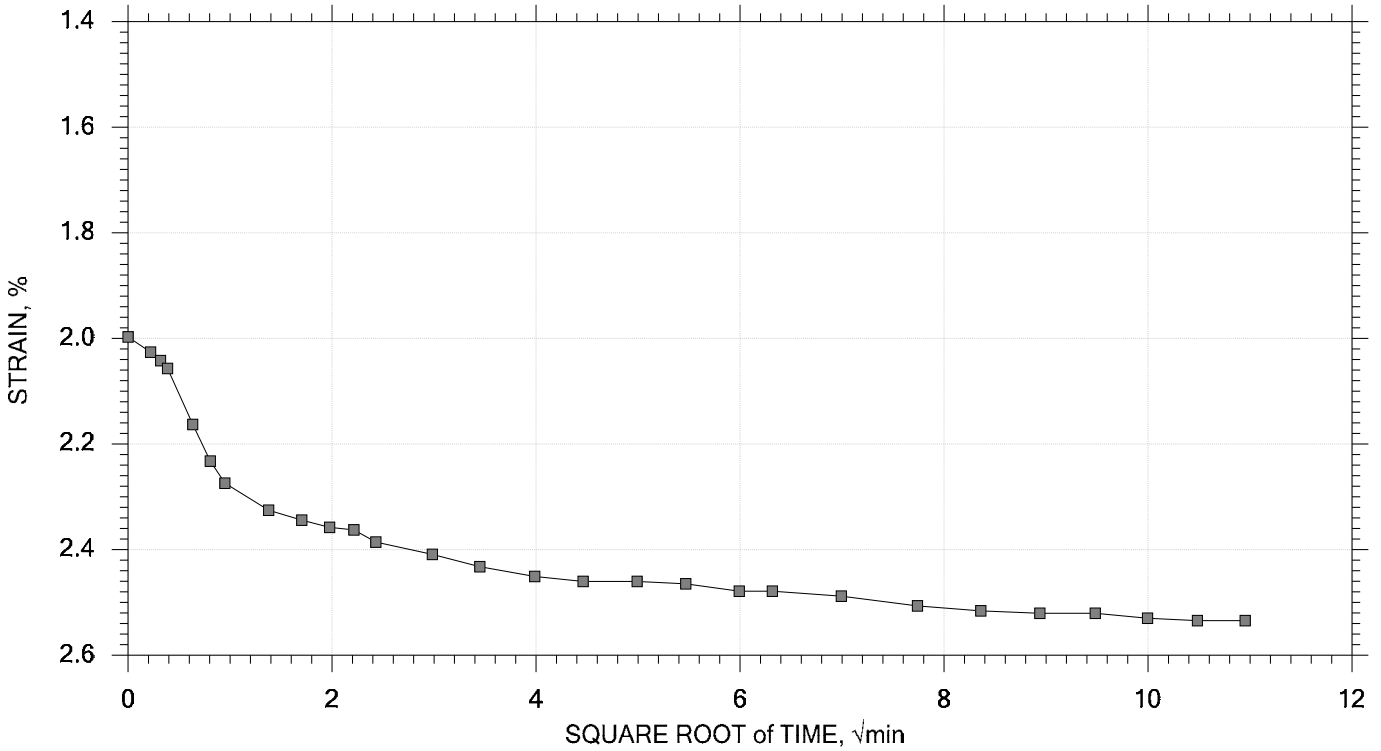
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 5 of 21

Stress: 1 tsf





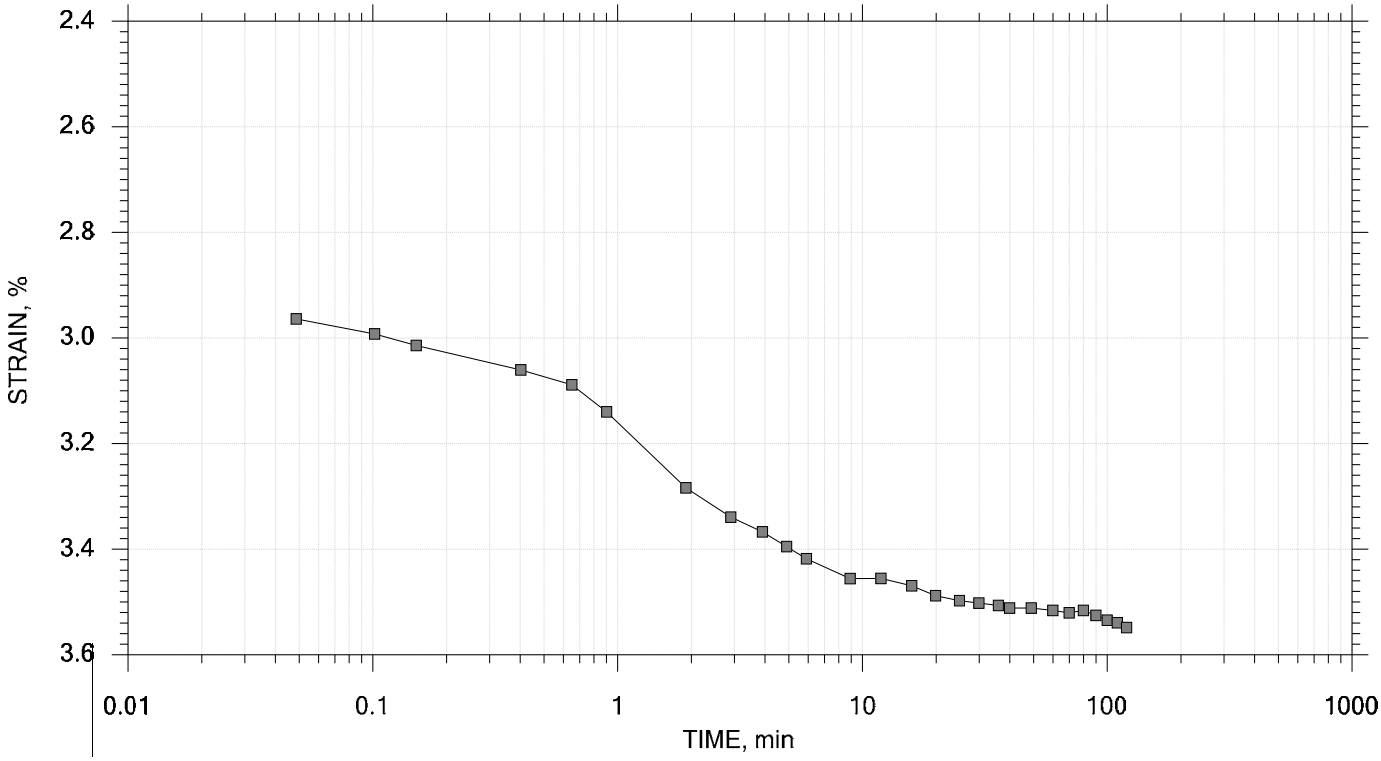
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

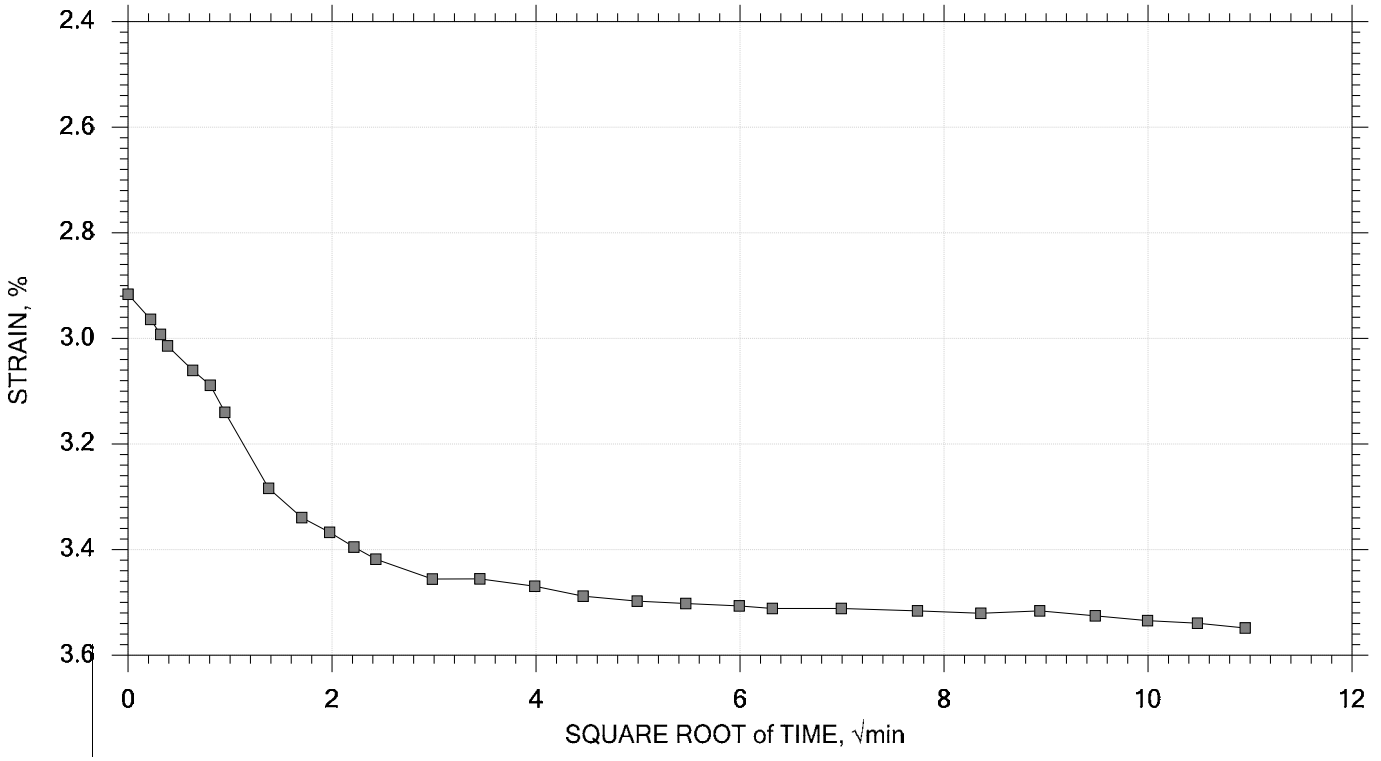
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 6 of 21

Stress: 2 tsf





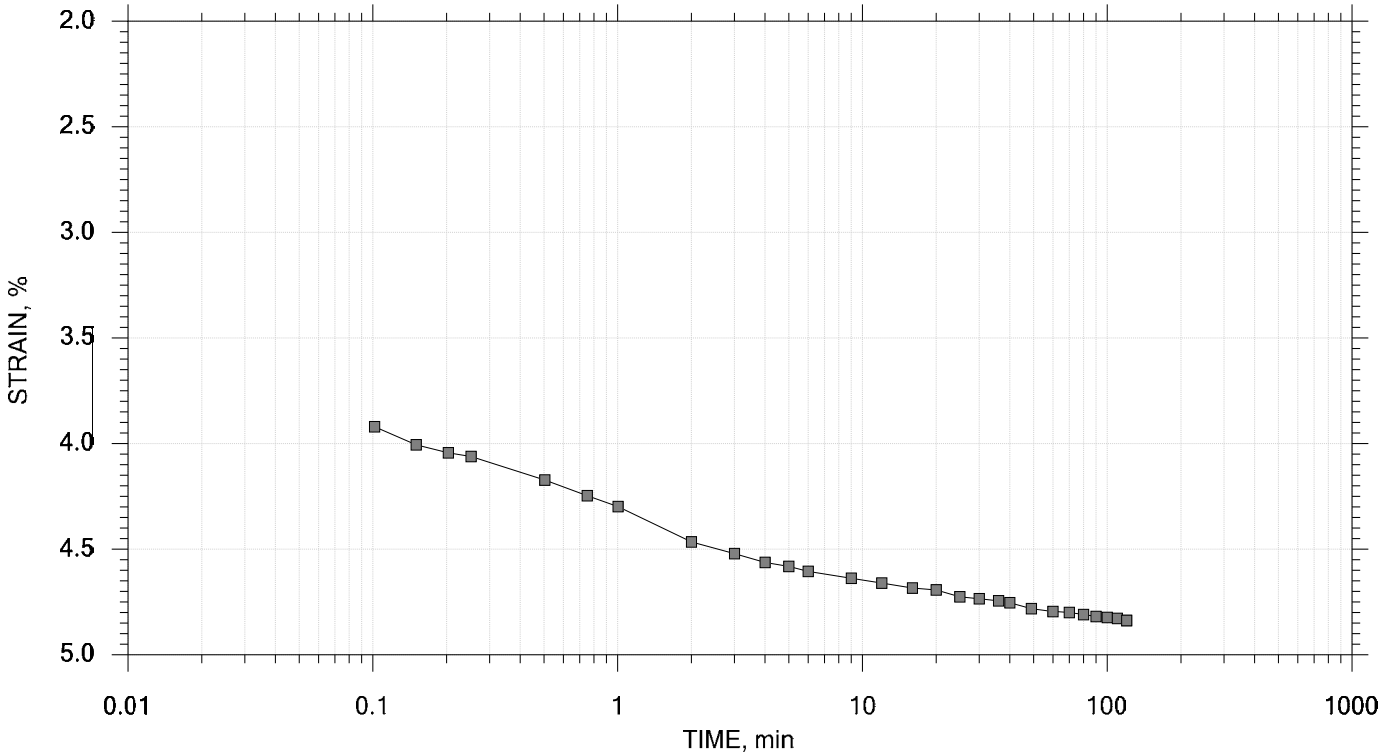
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

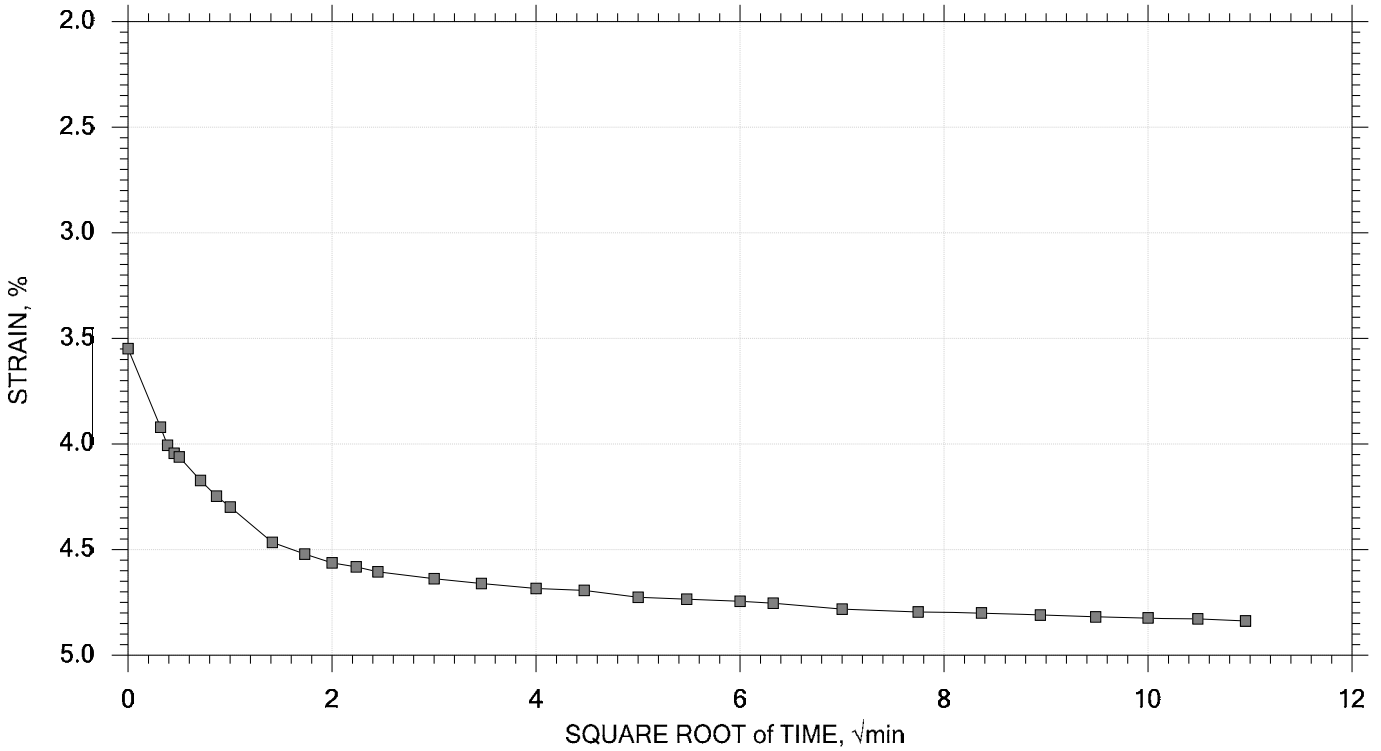
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 7 of 21

Stress: 4 tsf





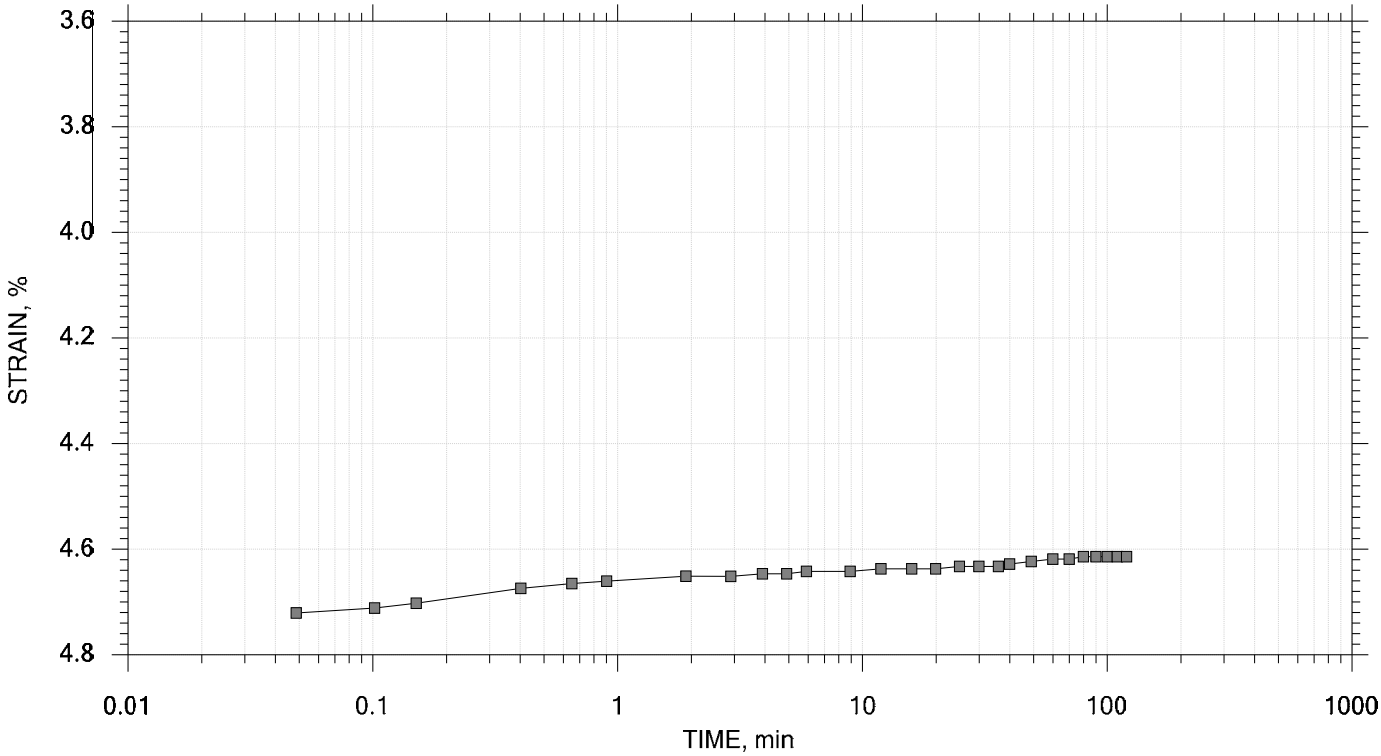
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

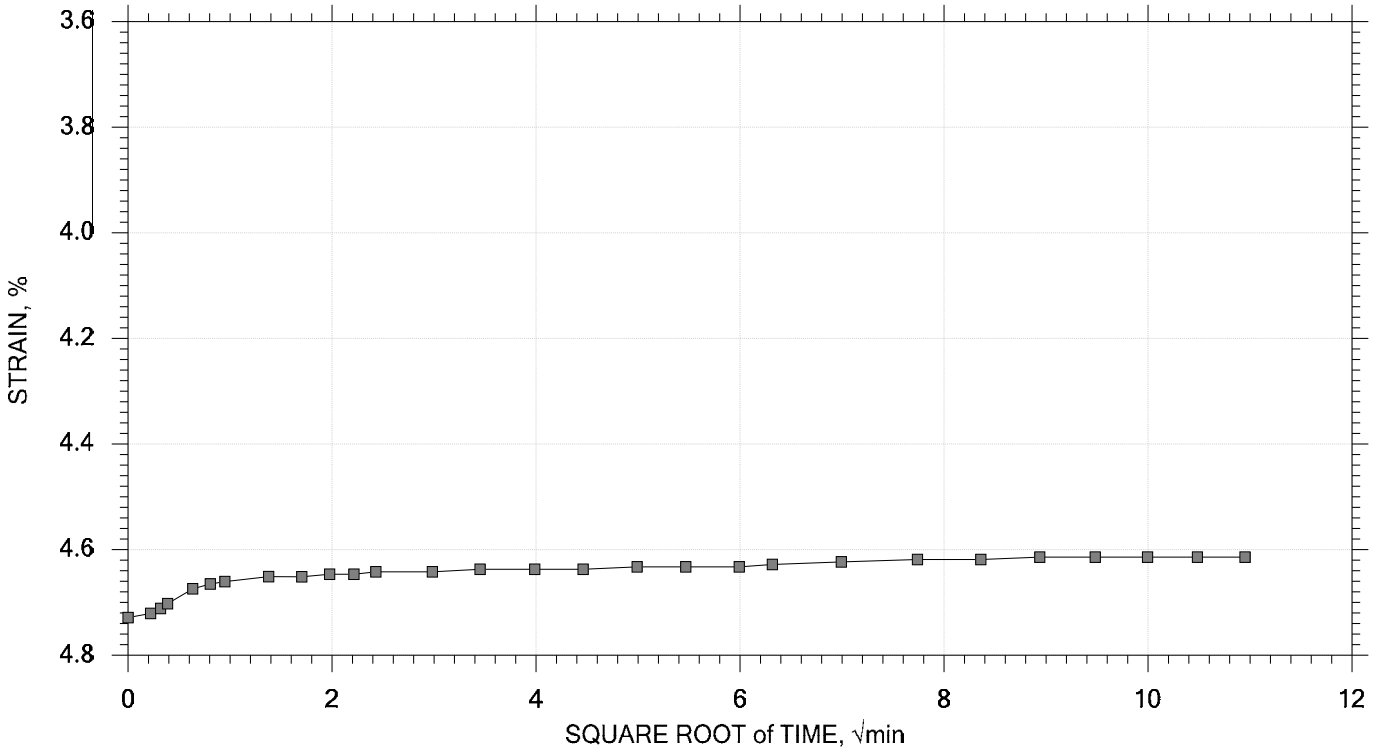
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 8 of 21

Stress: 2 tsf





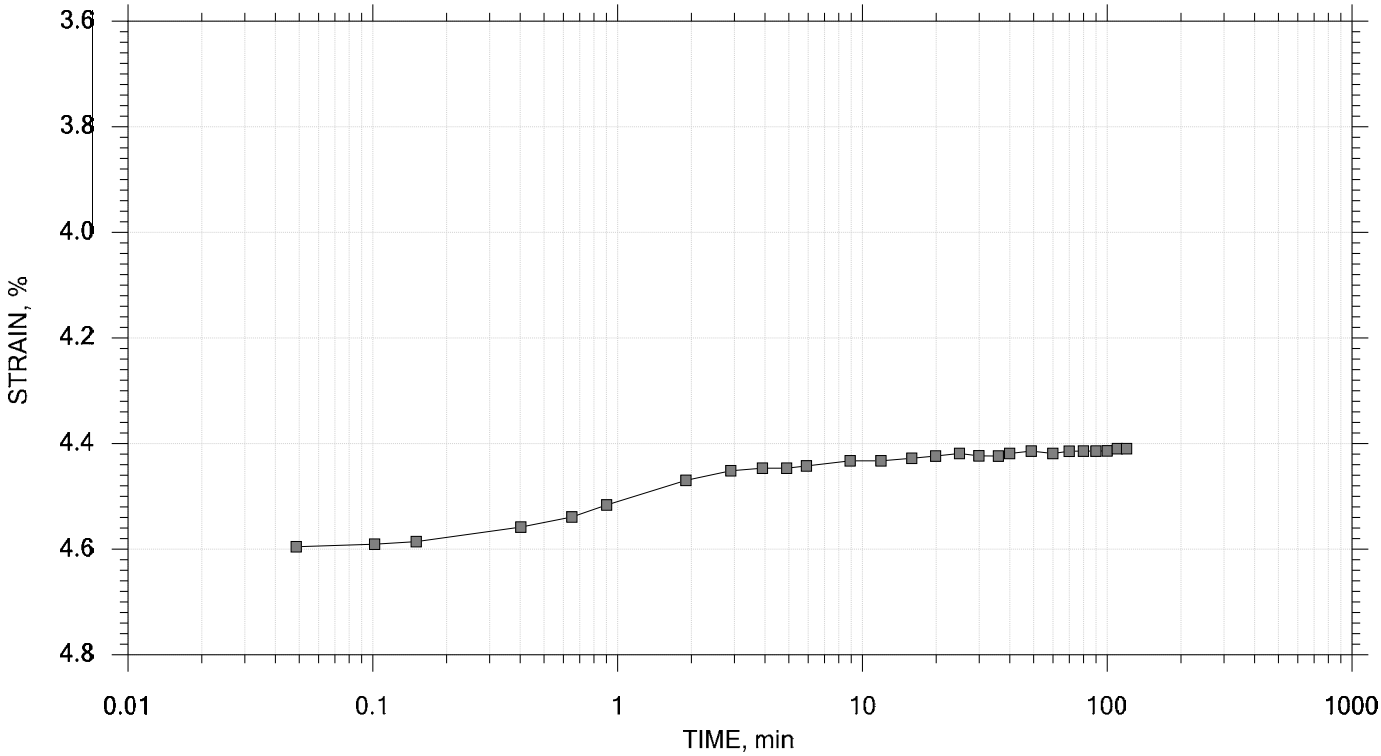
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

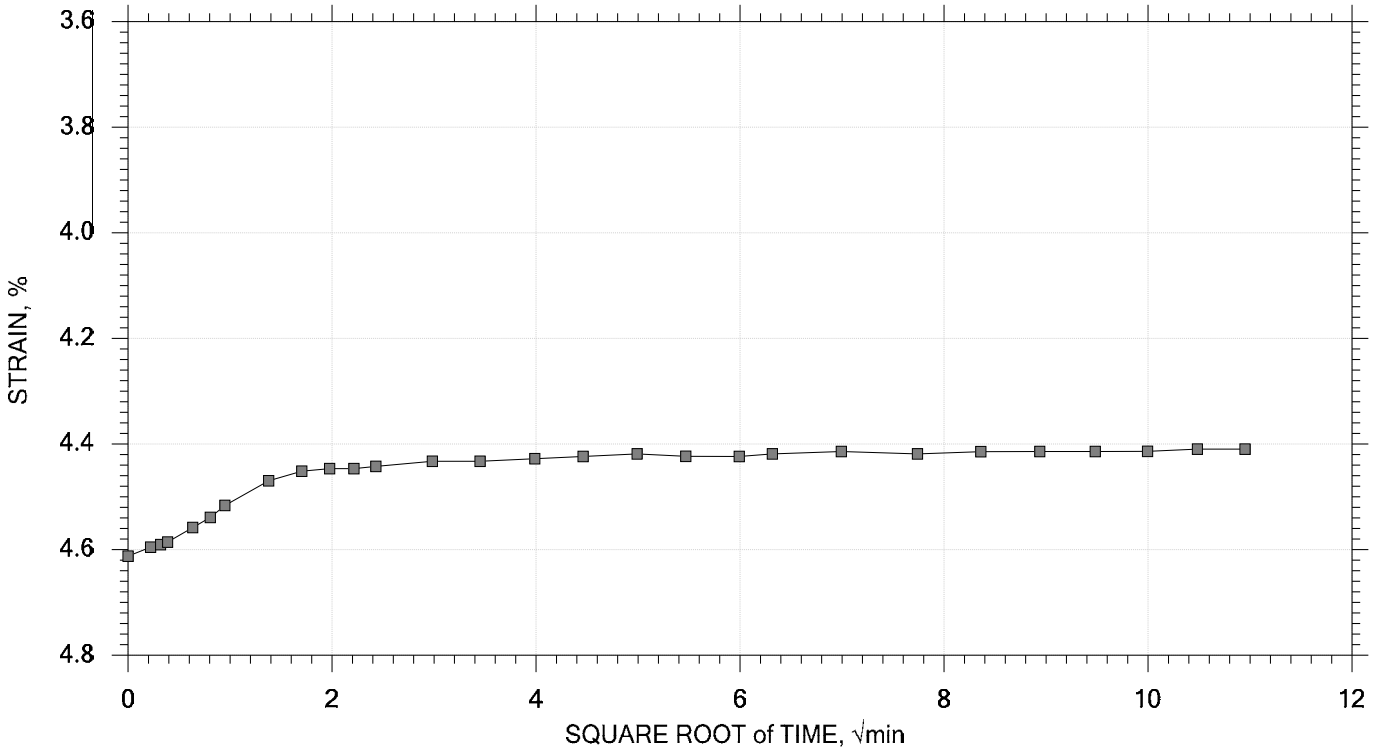
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 9 of 21

Stress: 1 tsf





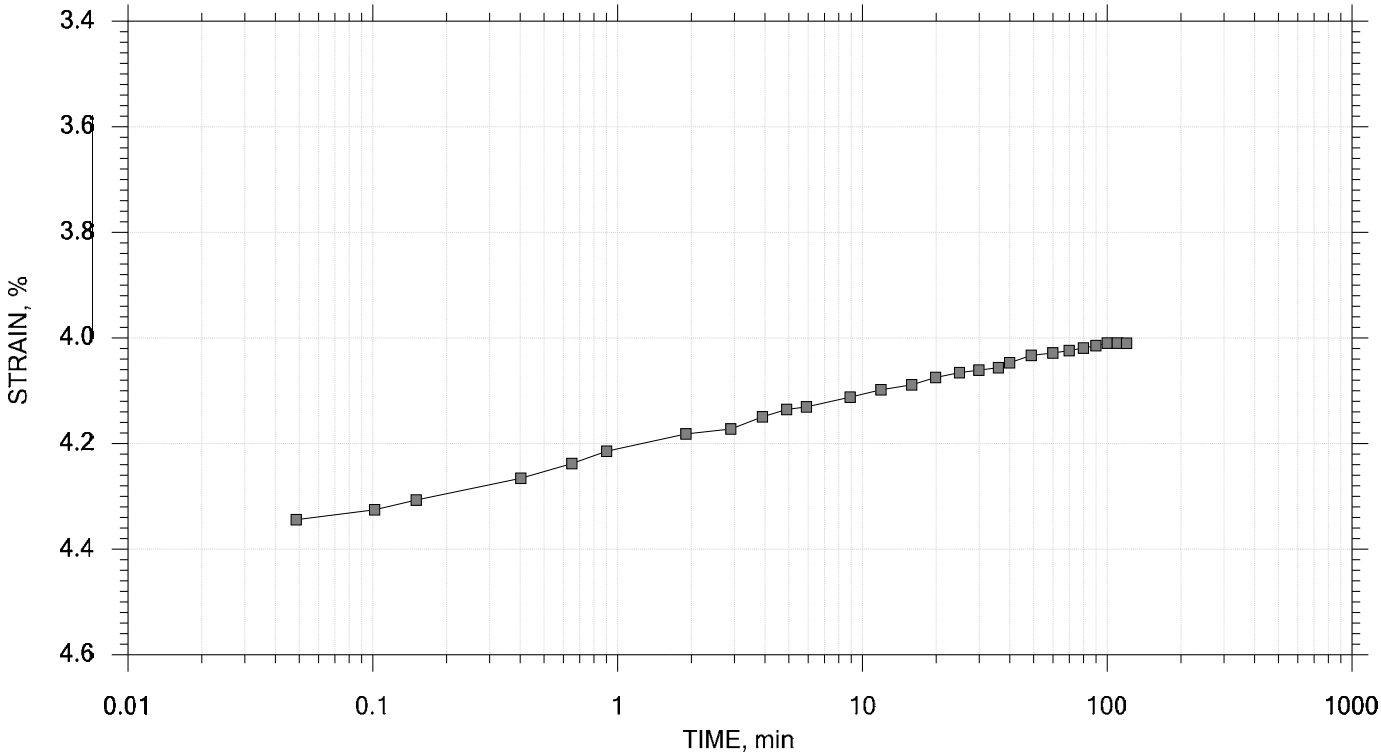
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

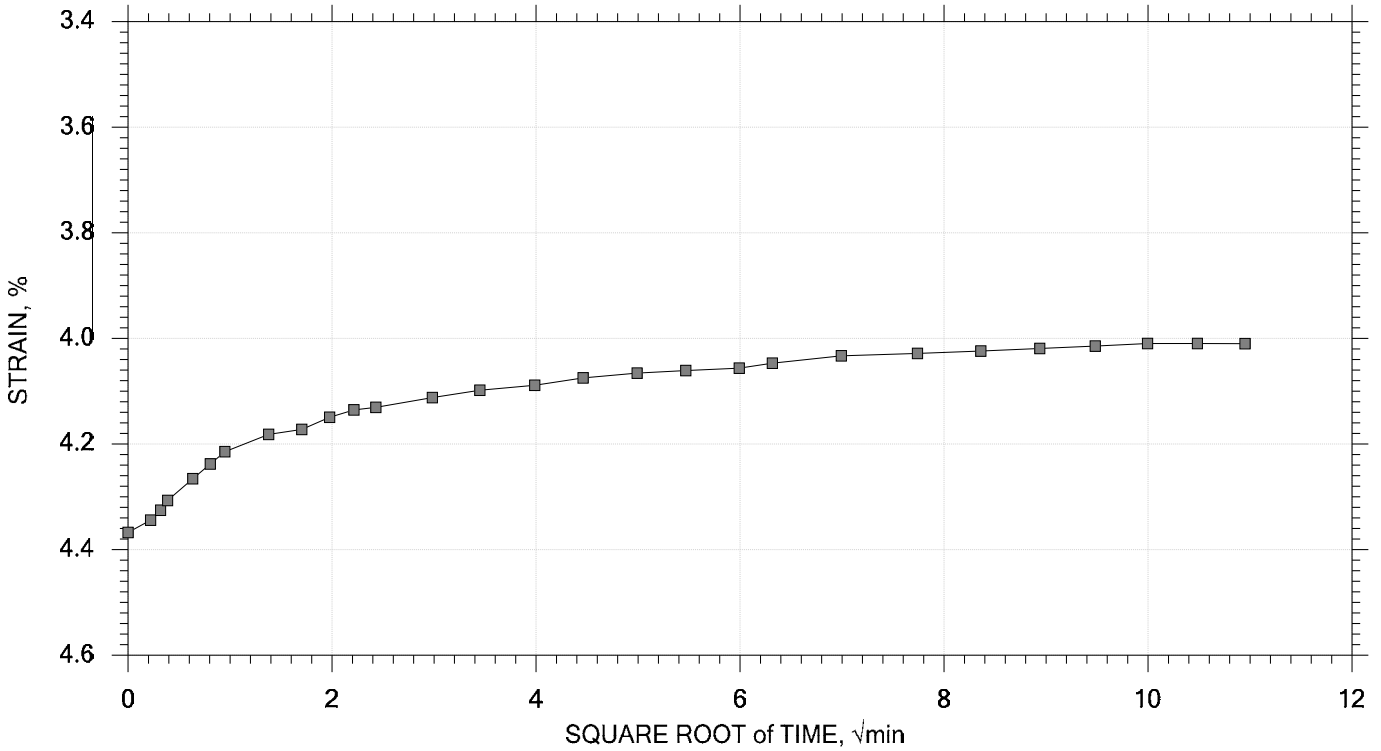
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 10 of 21

Stress: 0.5 tsf





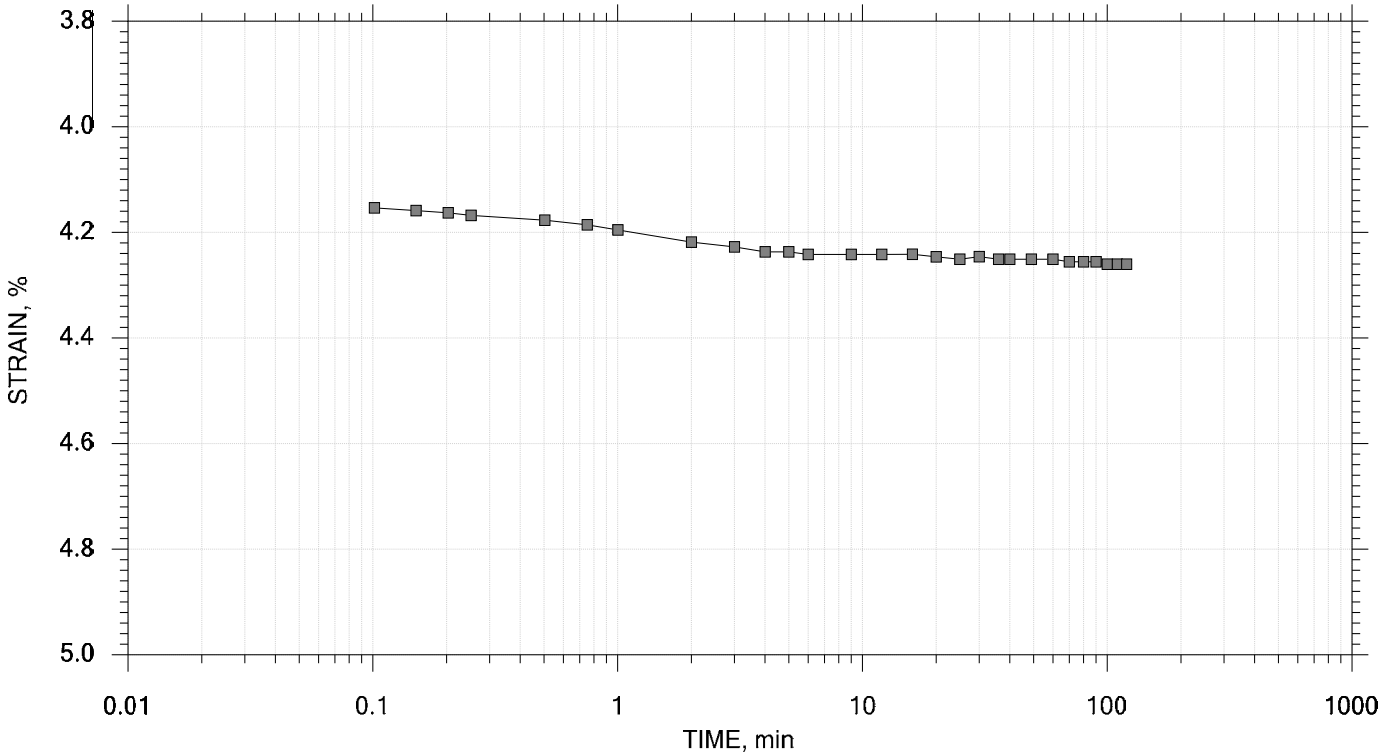
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

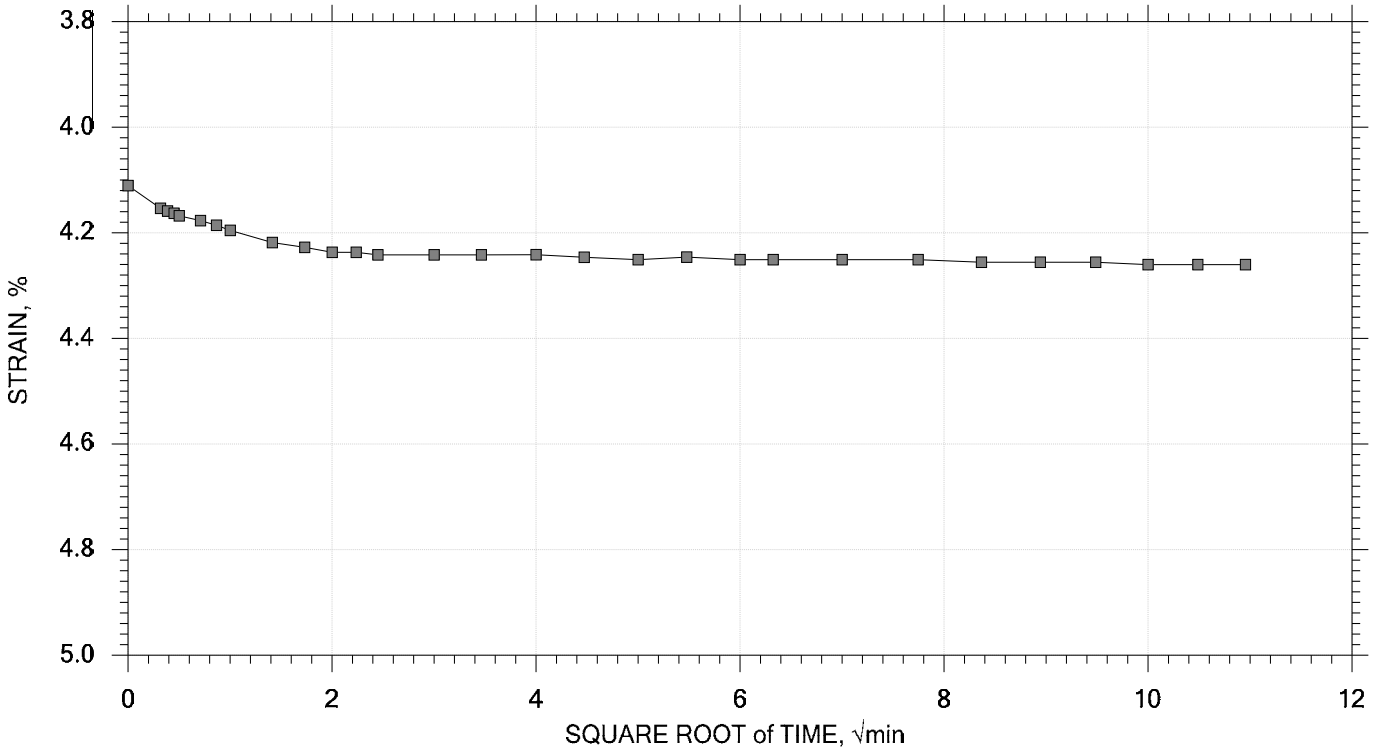
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 11 of 21

Stress: 1 tsf





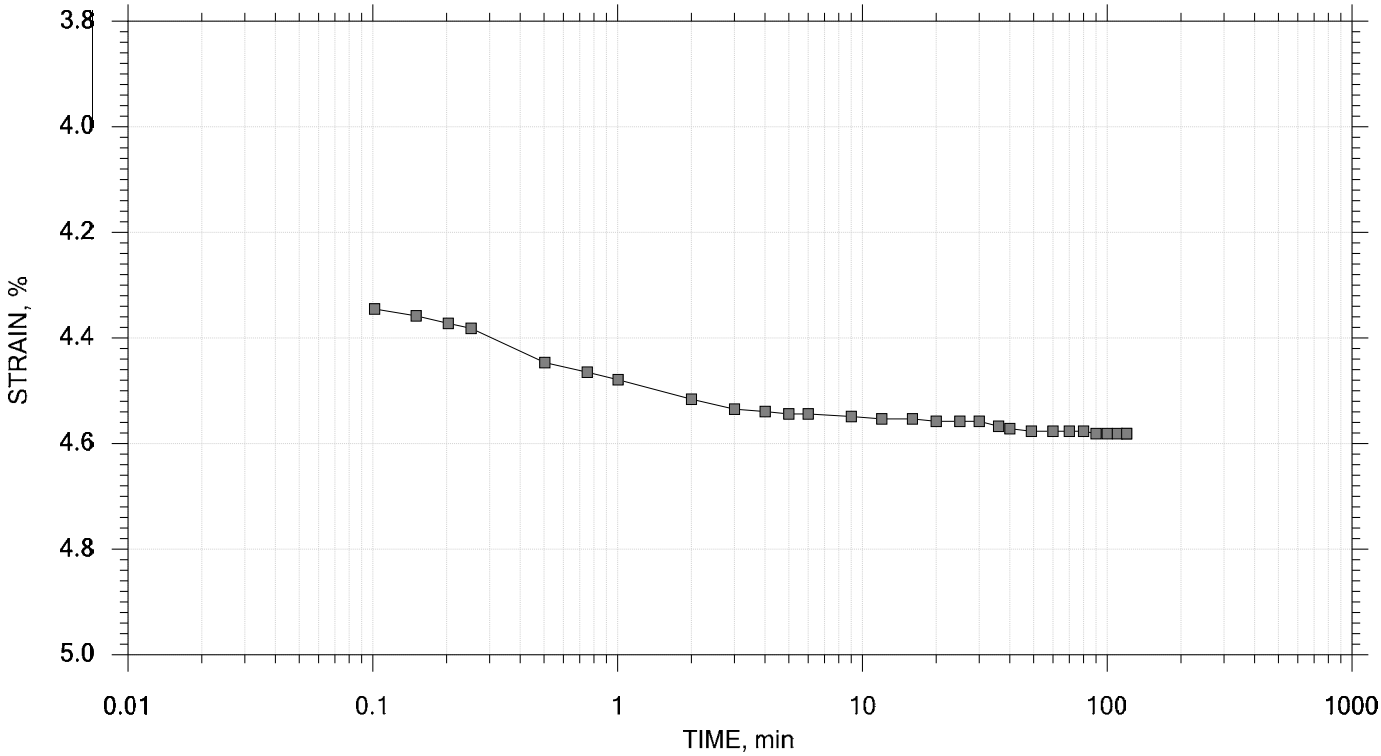
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

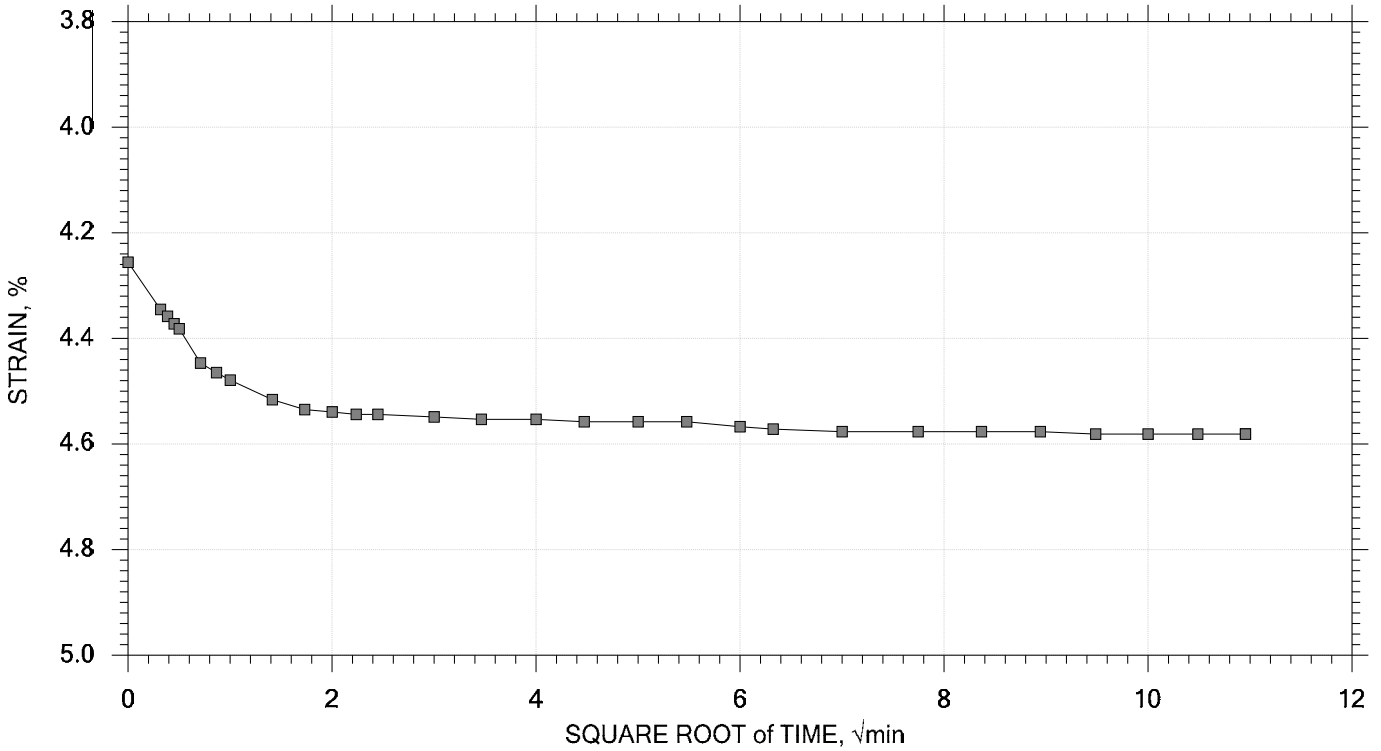
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 12 of 21

Stress: 2 tsf





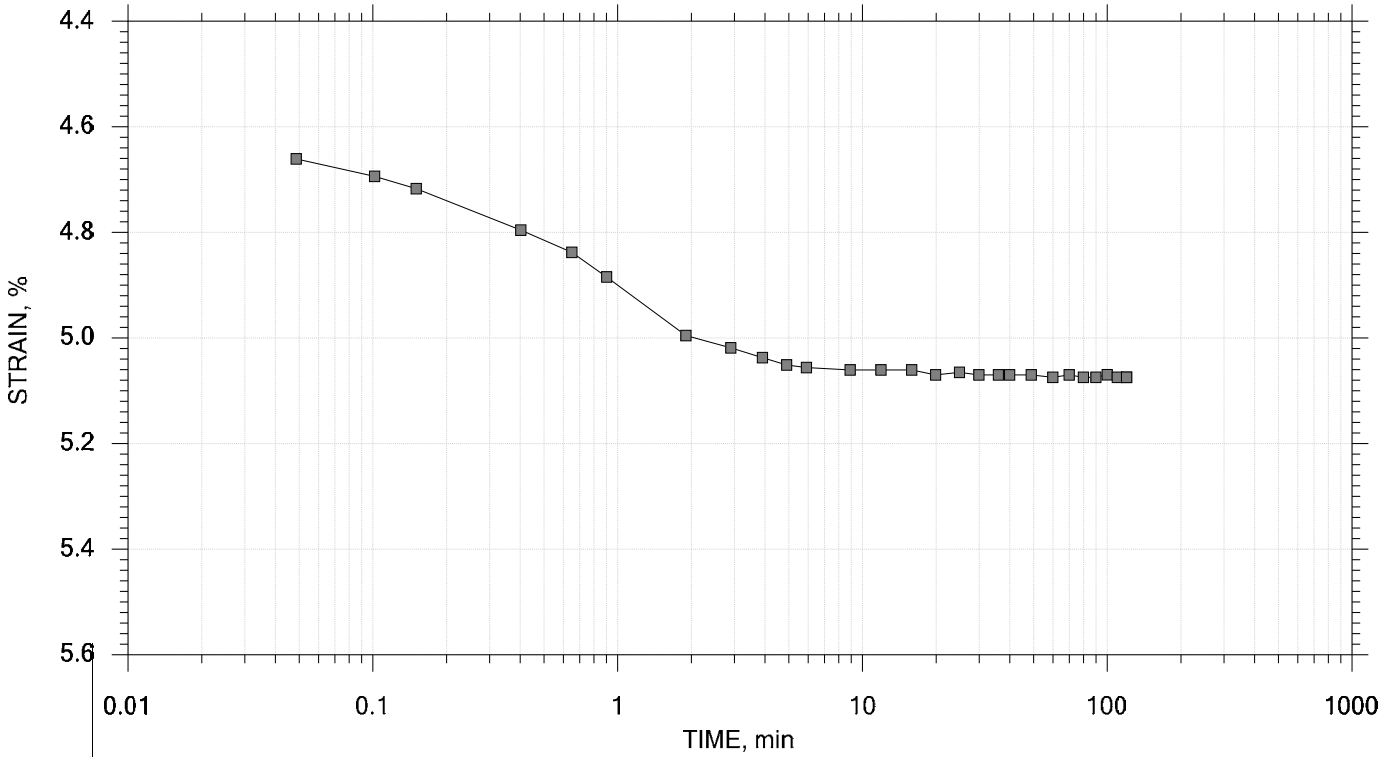
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

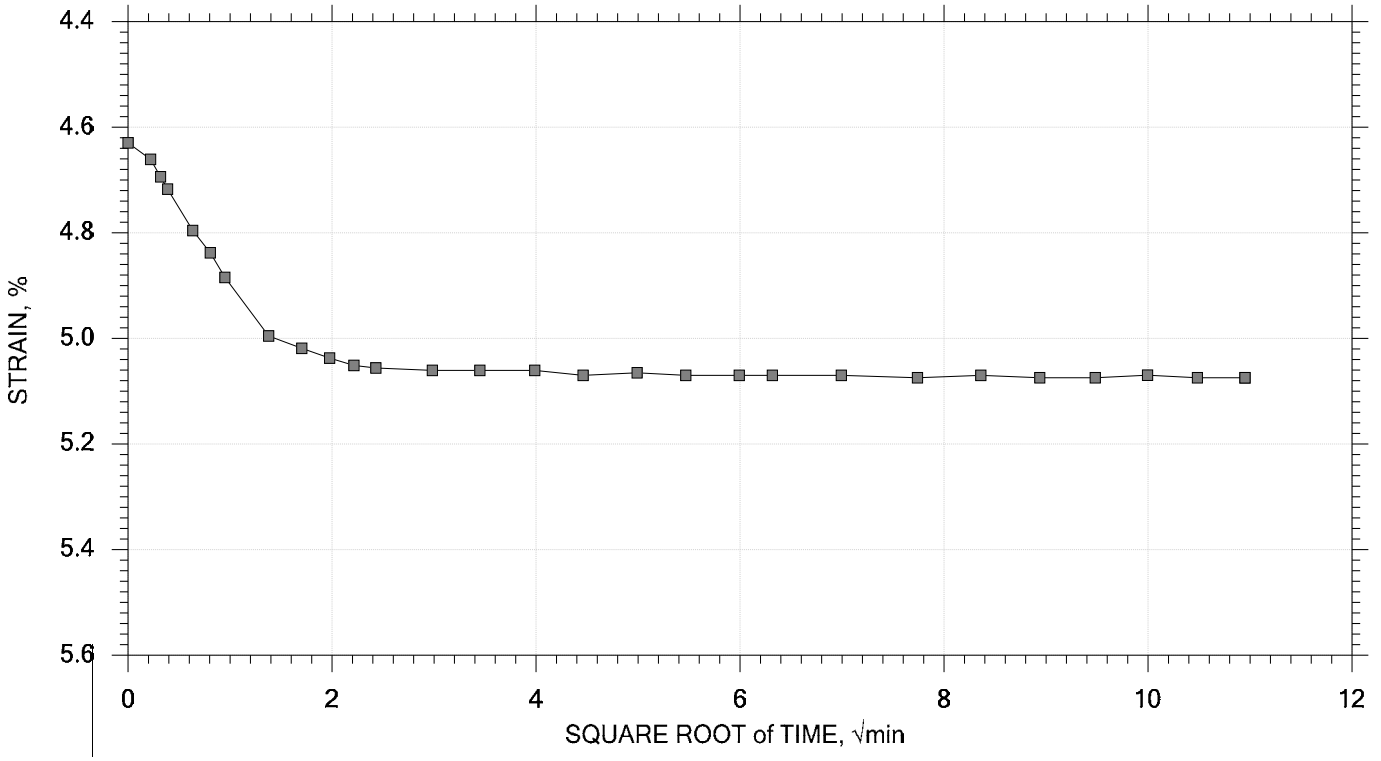
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 13 of 21

Stress: 4 tsf





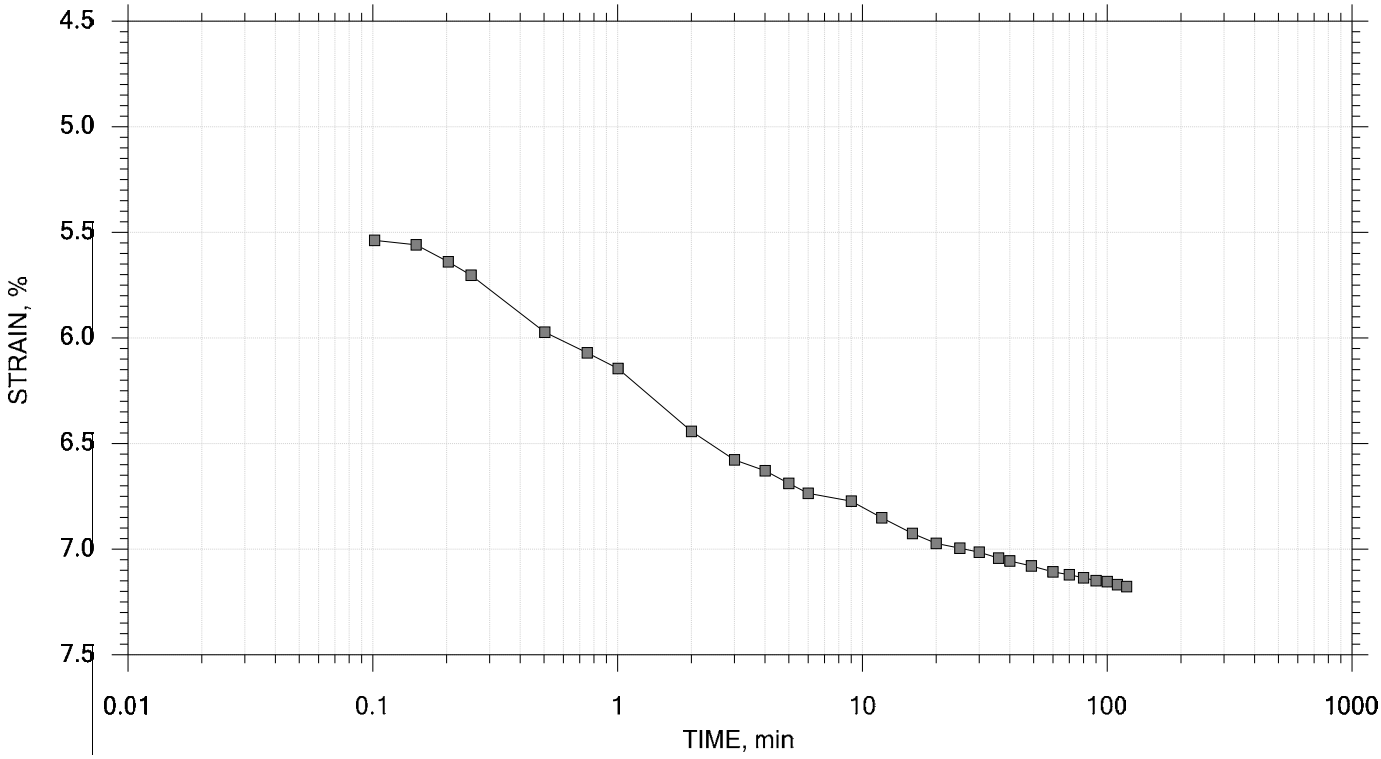
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

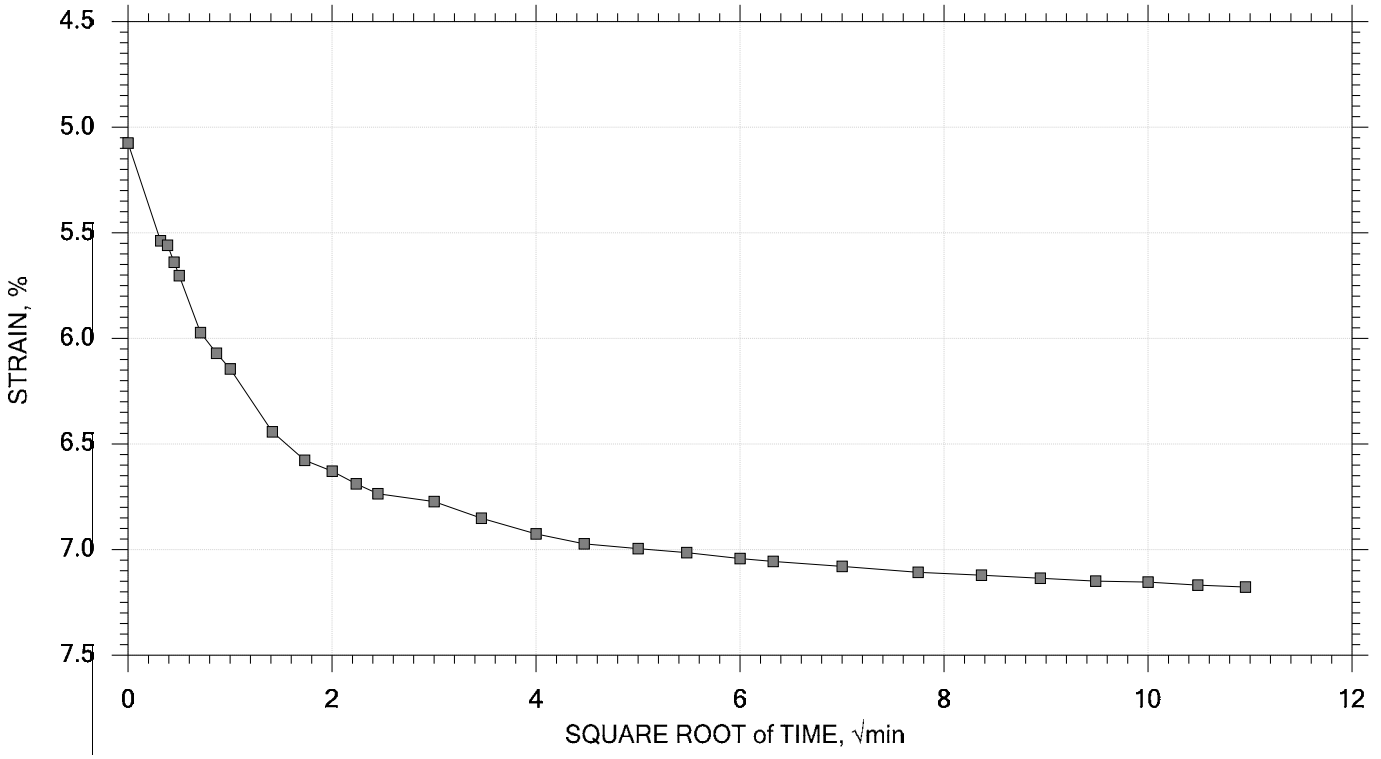
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 14 of 21

Stress: 8 tsf





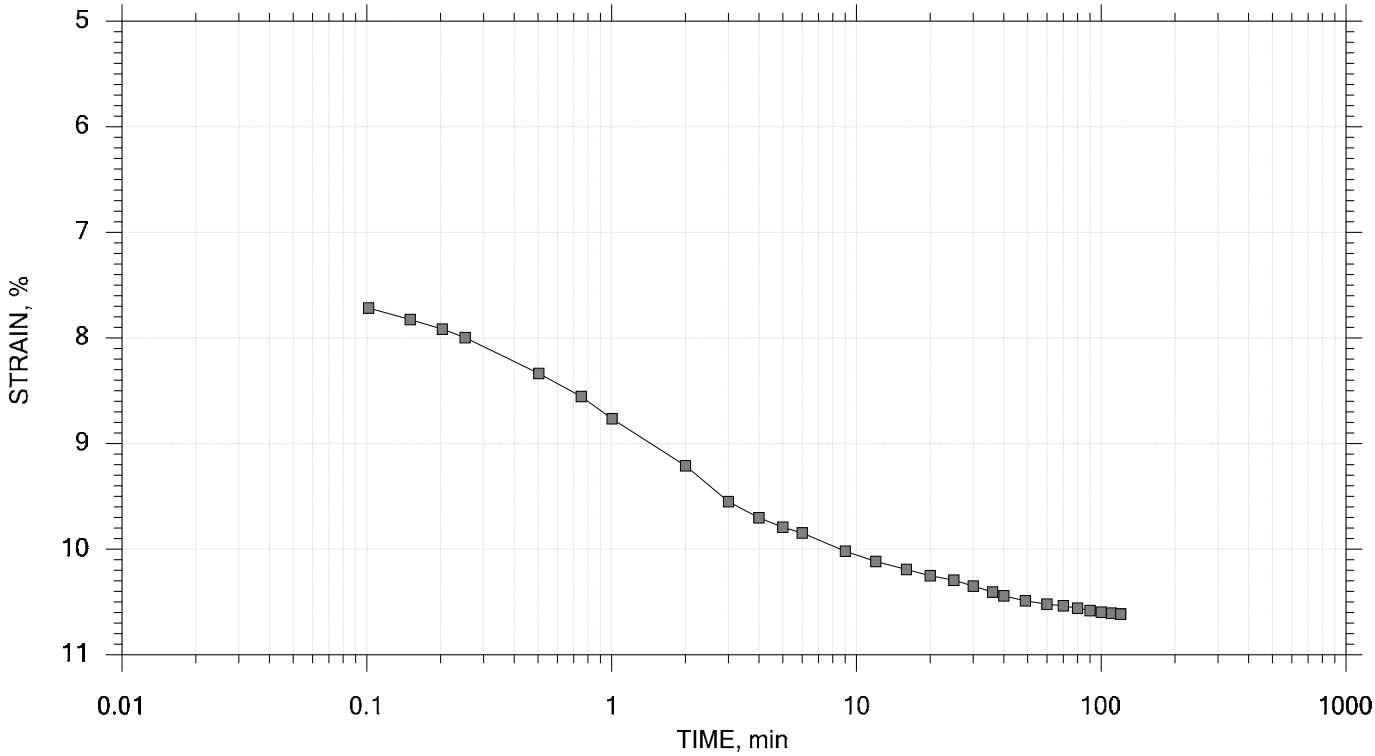
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

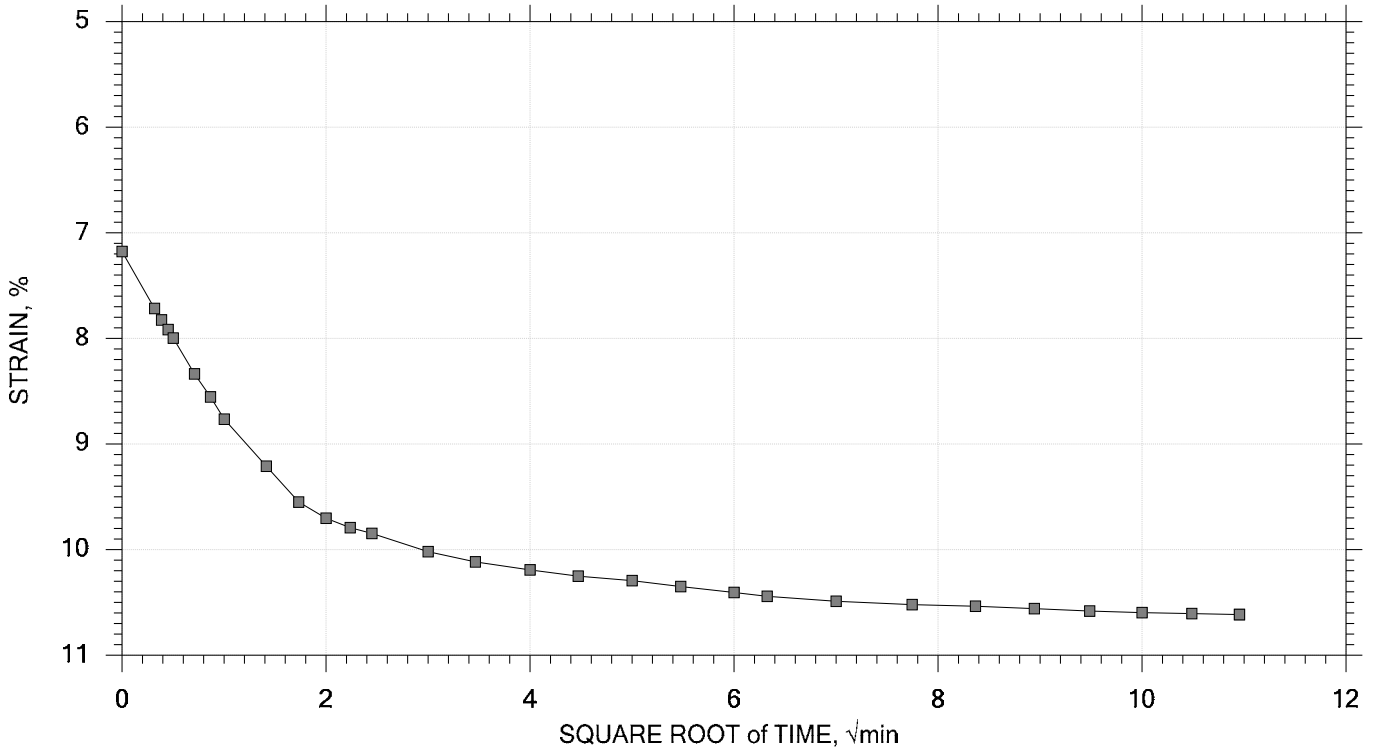
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 15 of 21

Stress: 16 tsf





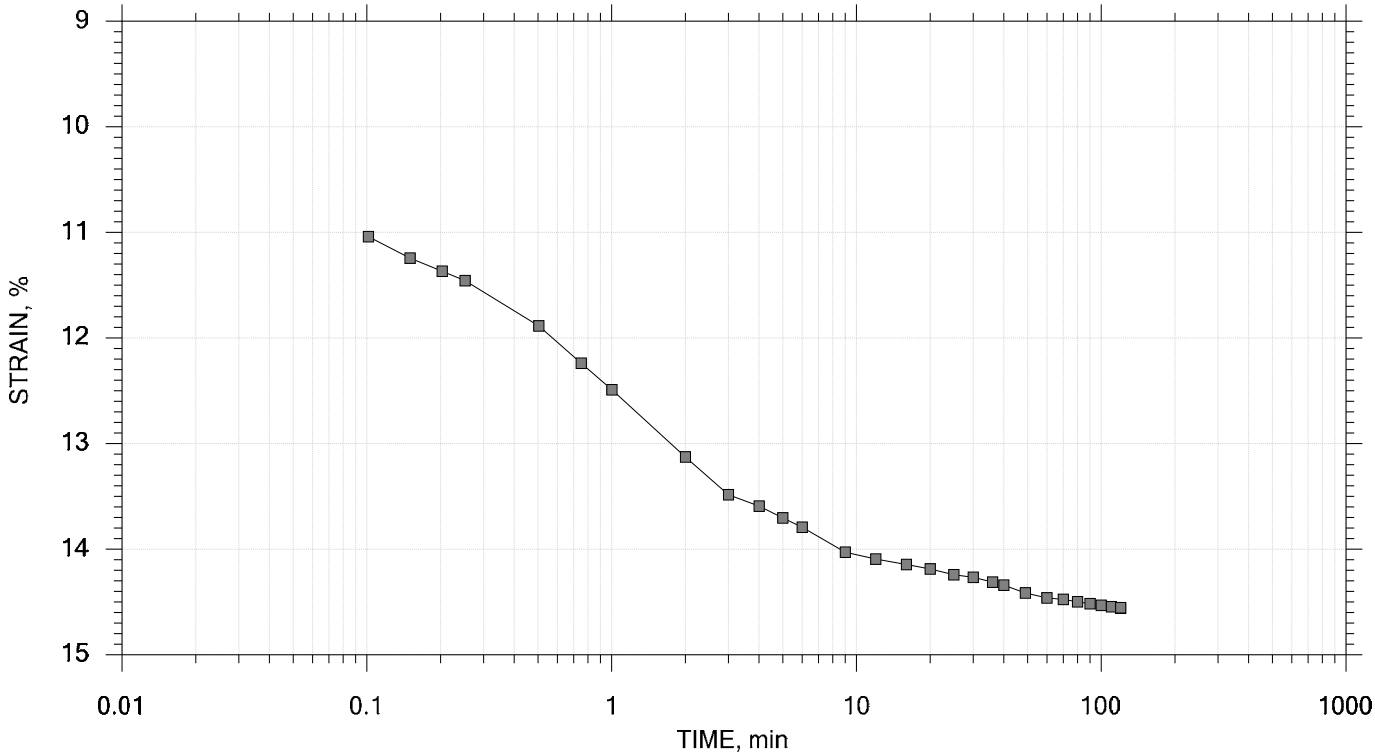
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

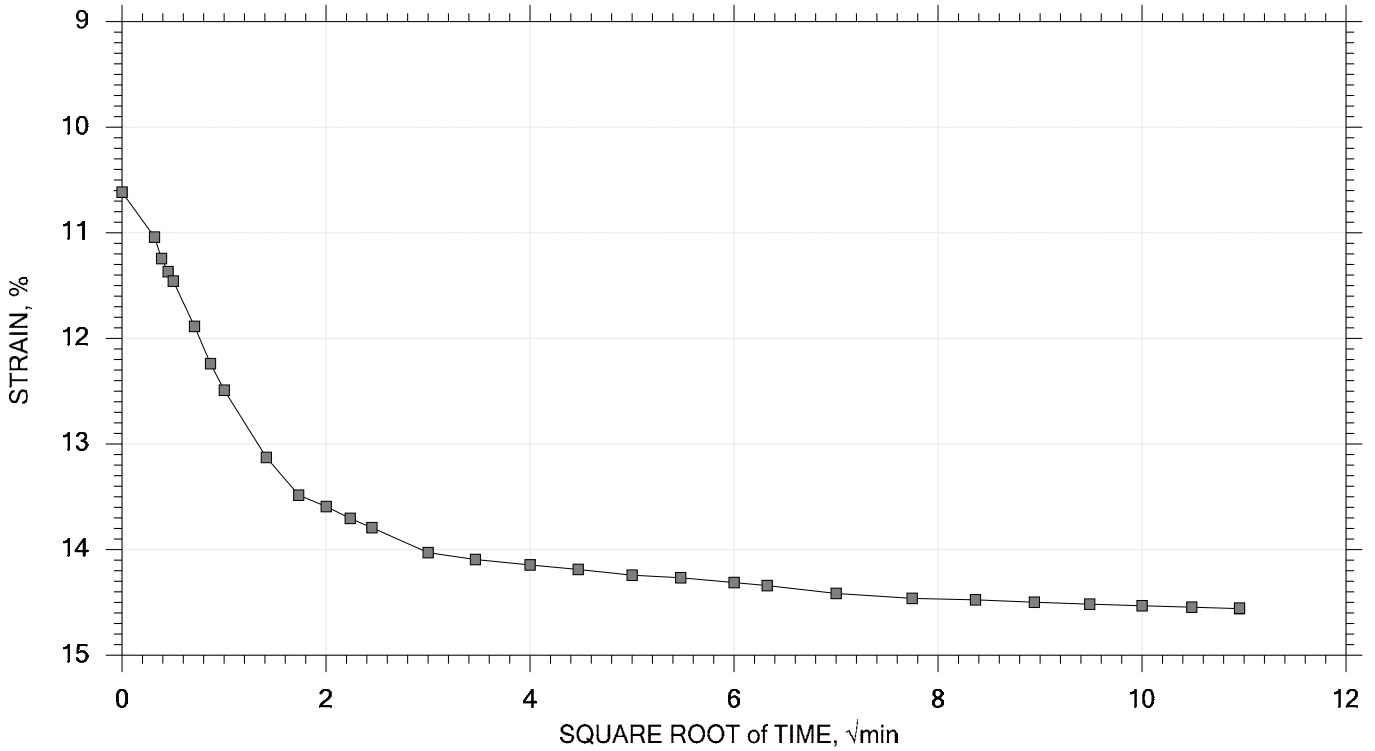
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 16 of 21

Stress: 32 tsf





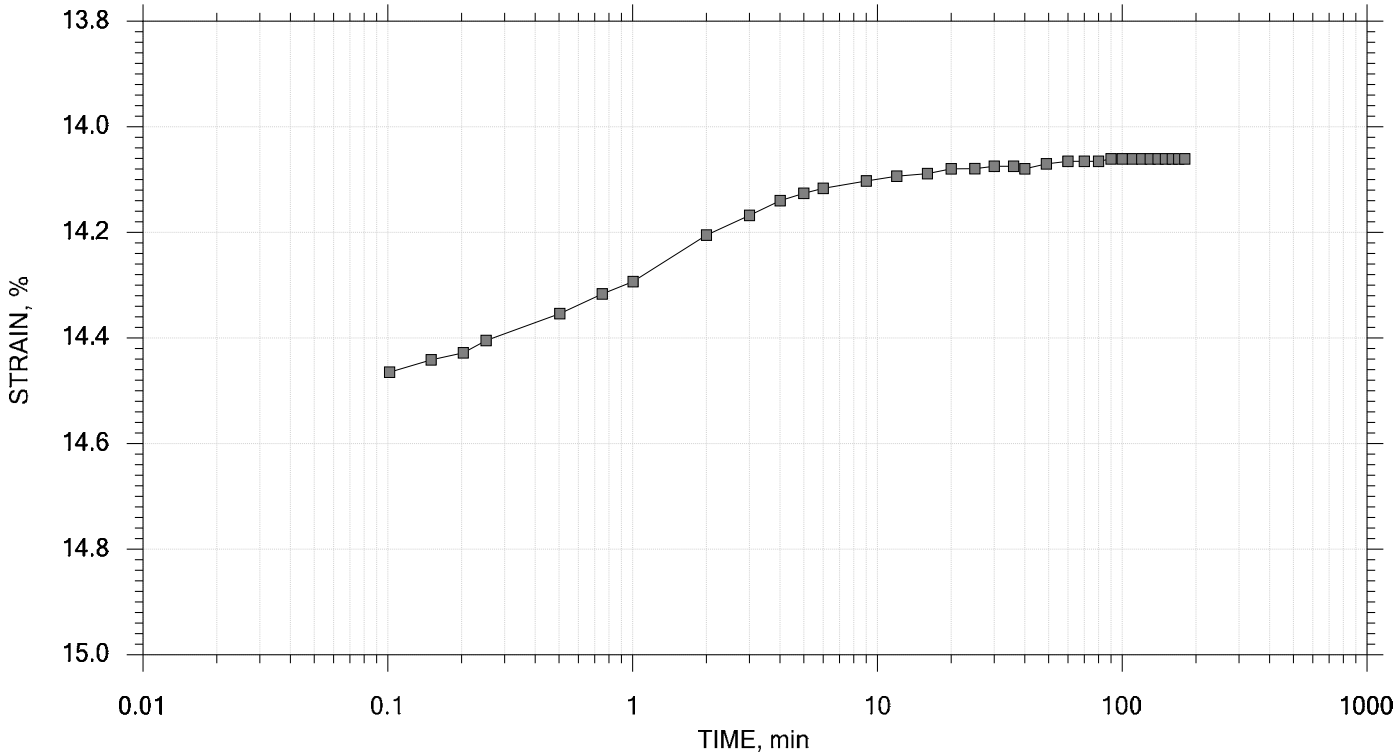
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

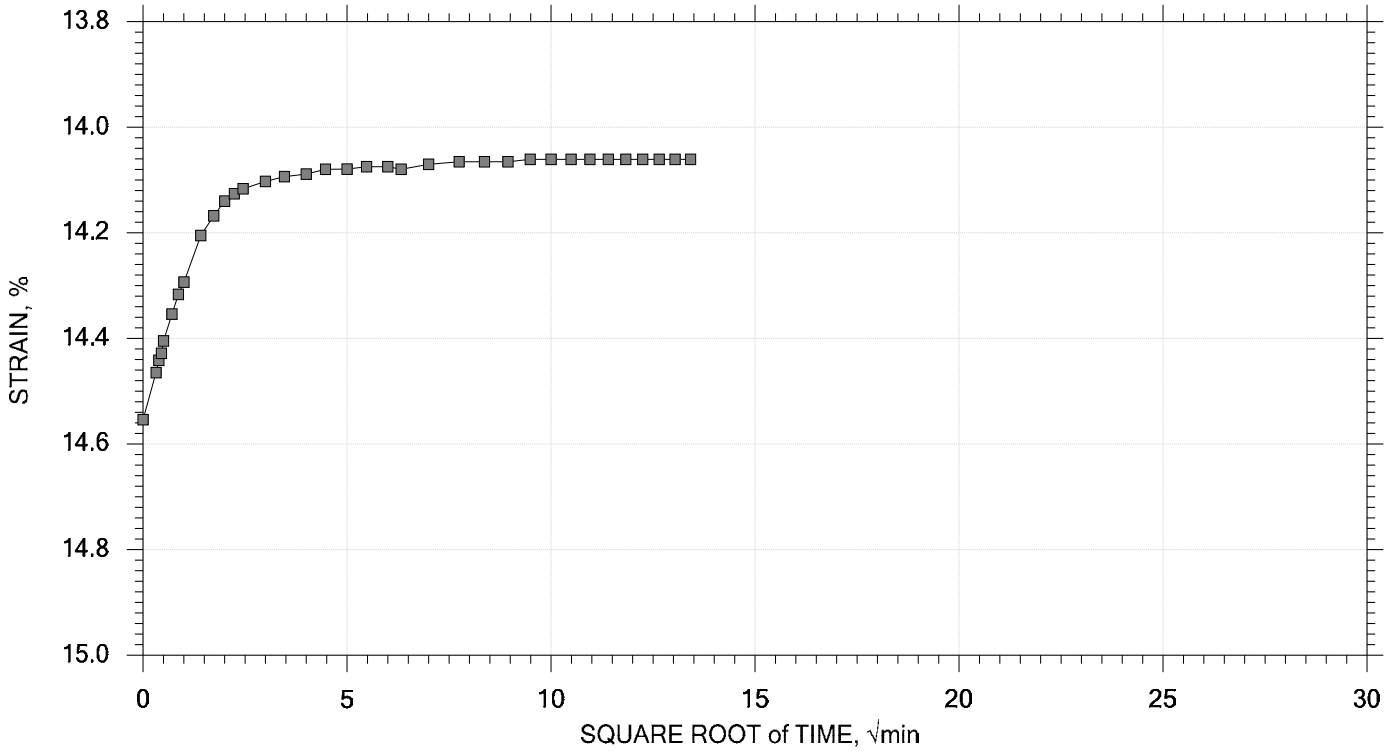
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 17 of 21

Stress: 8 tsf





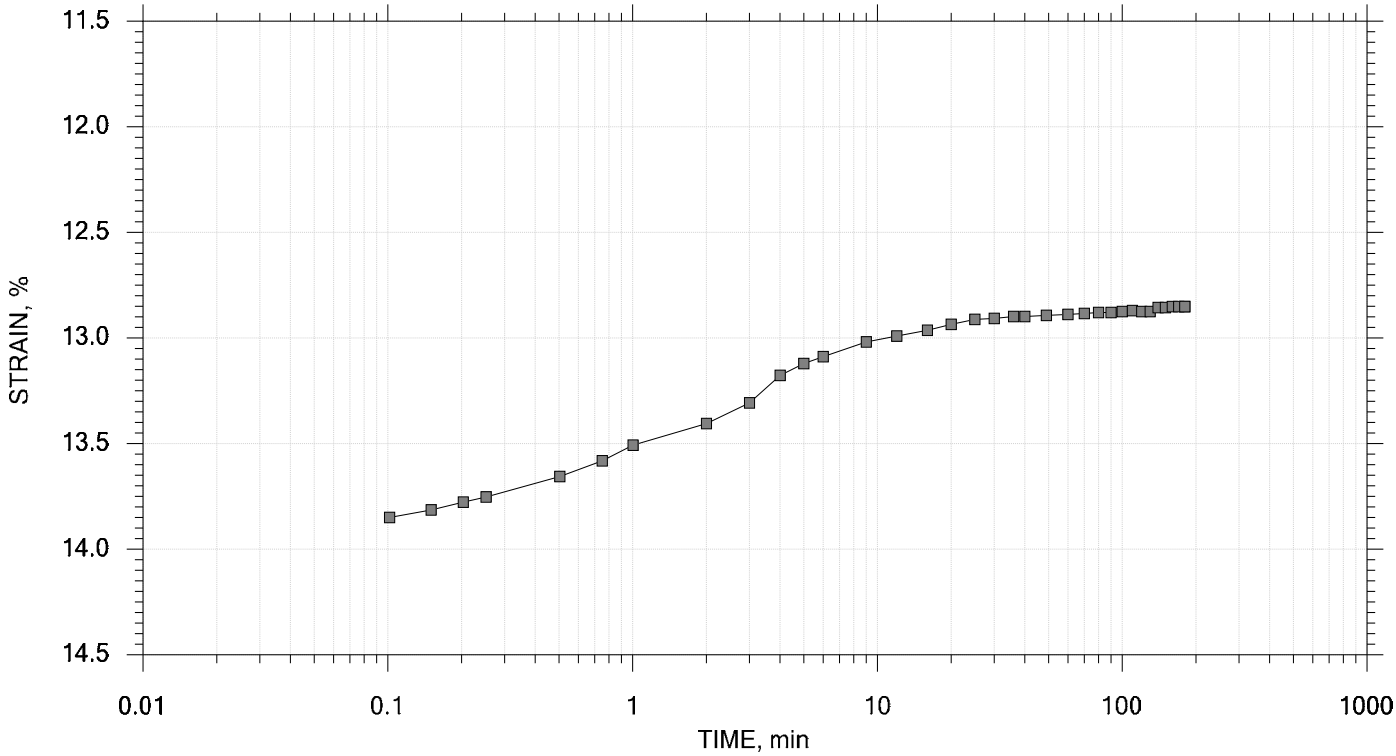
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

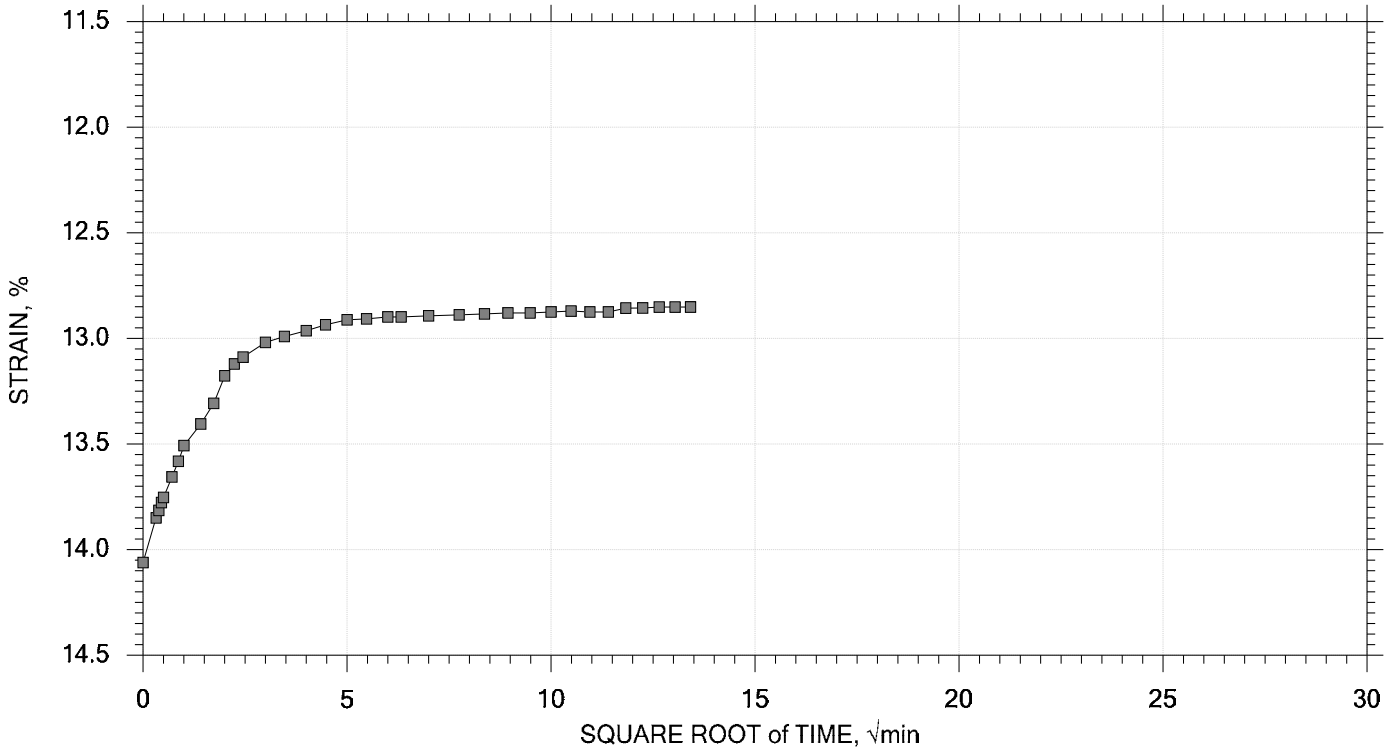
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 18 of 21

Stress: 2 tsf





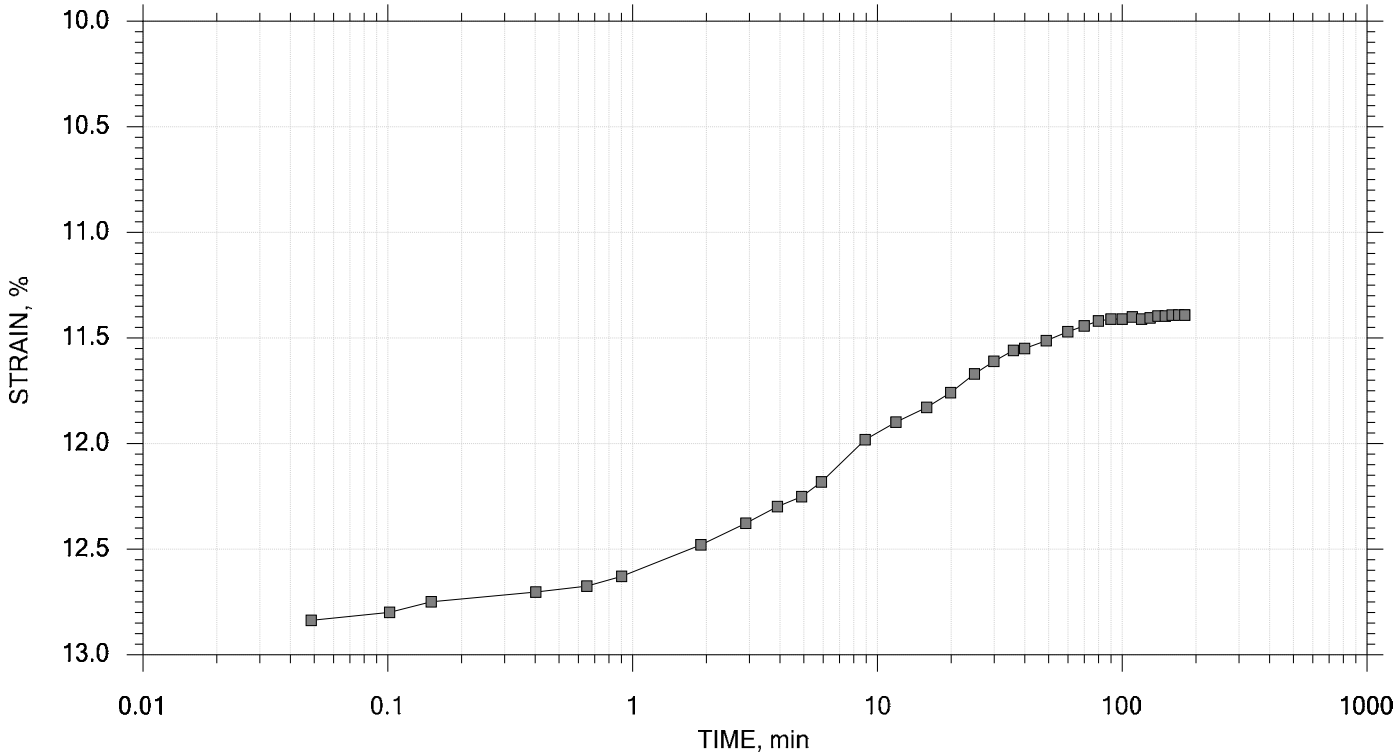
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

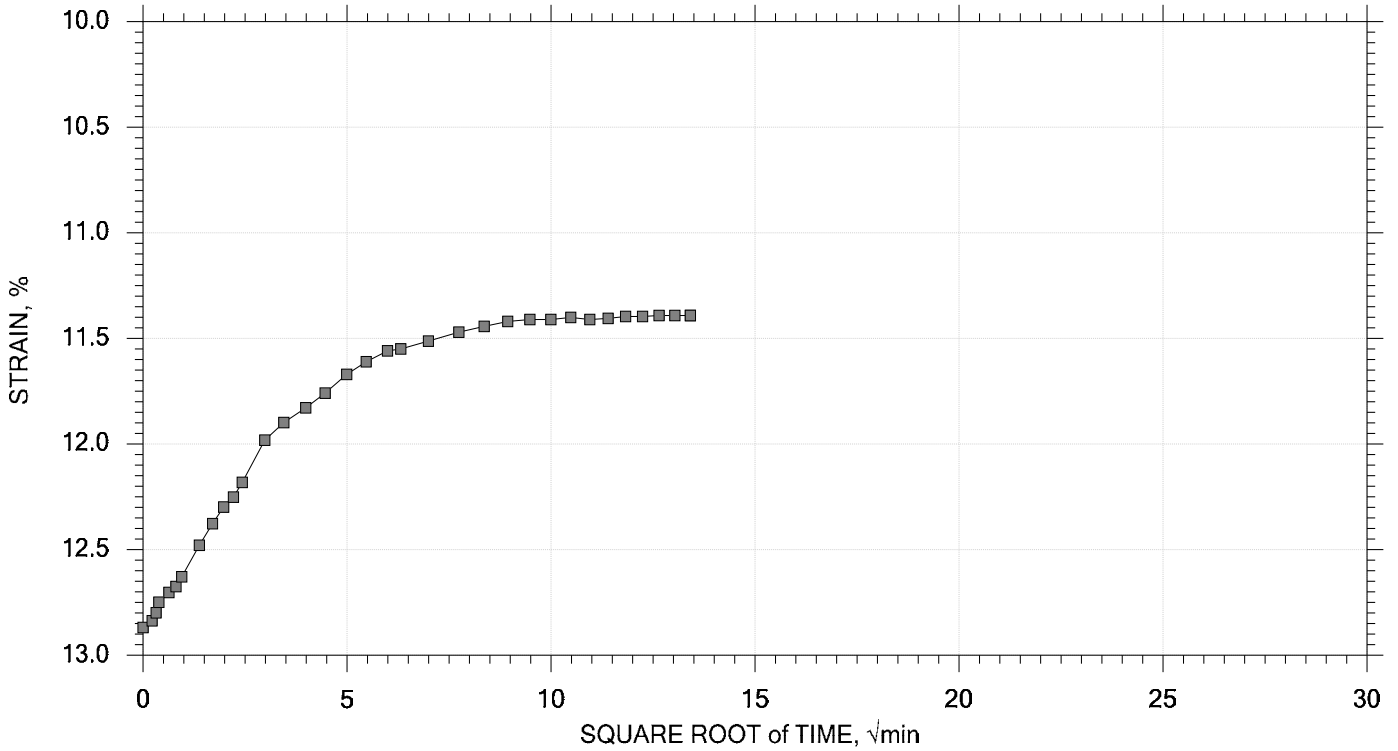
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 19 of 21

Stress: 0.5 tsf





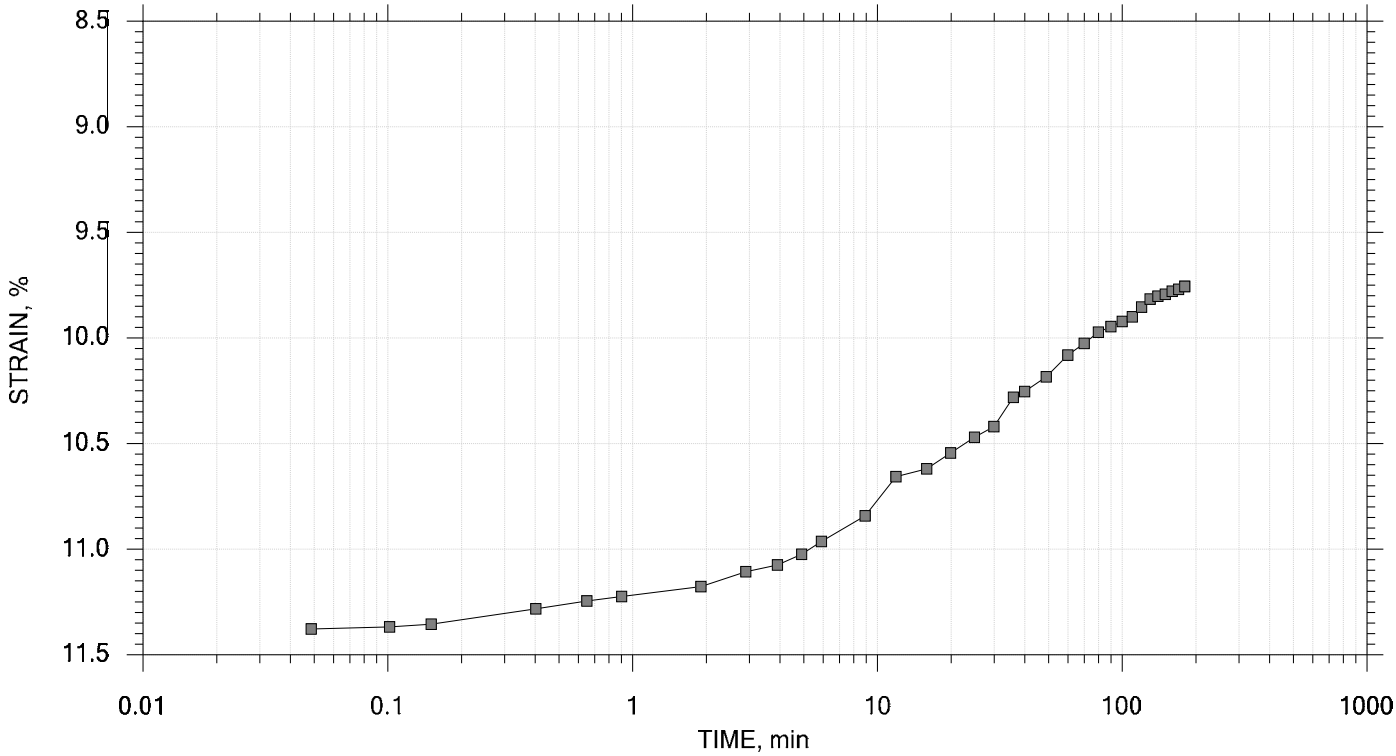
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

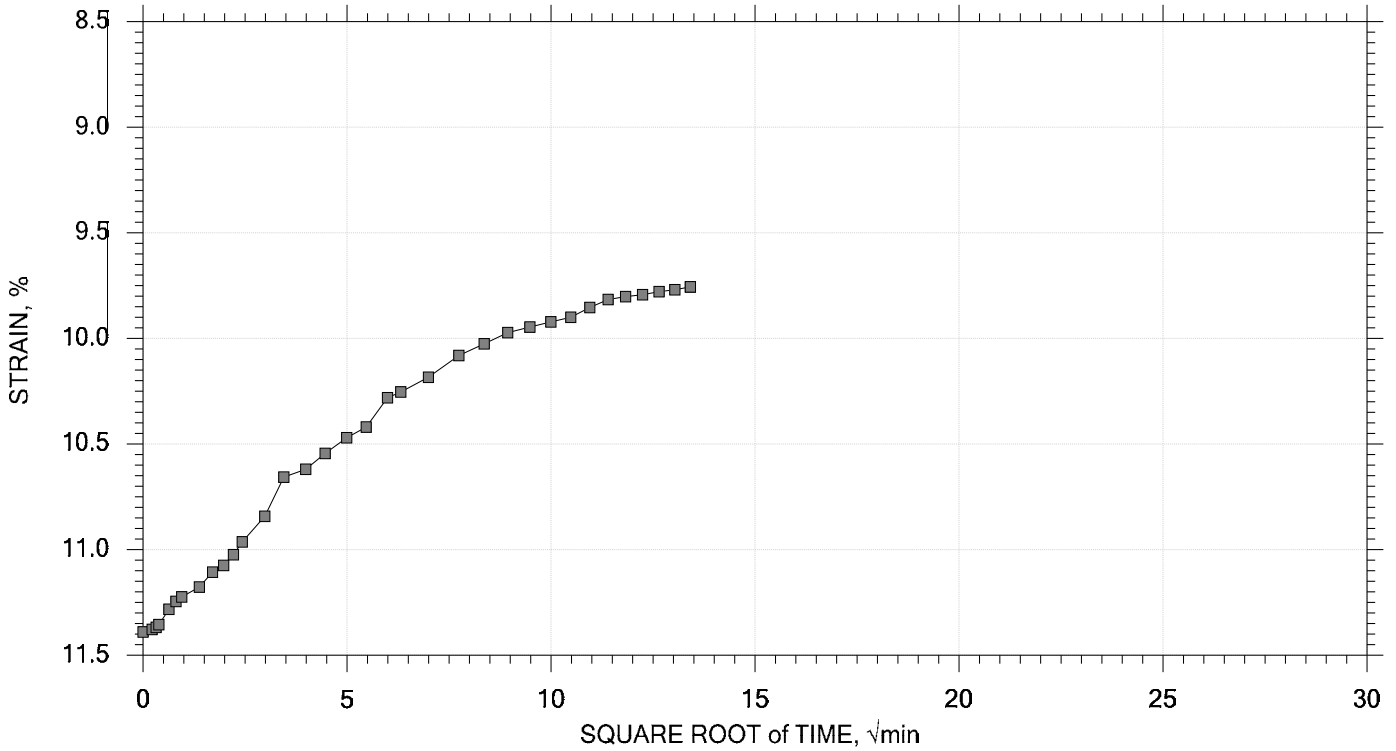
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 20 of 21

Stress: 0.125 tsf





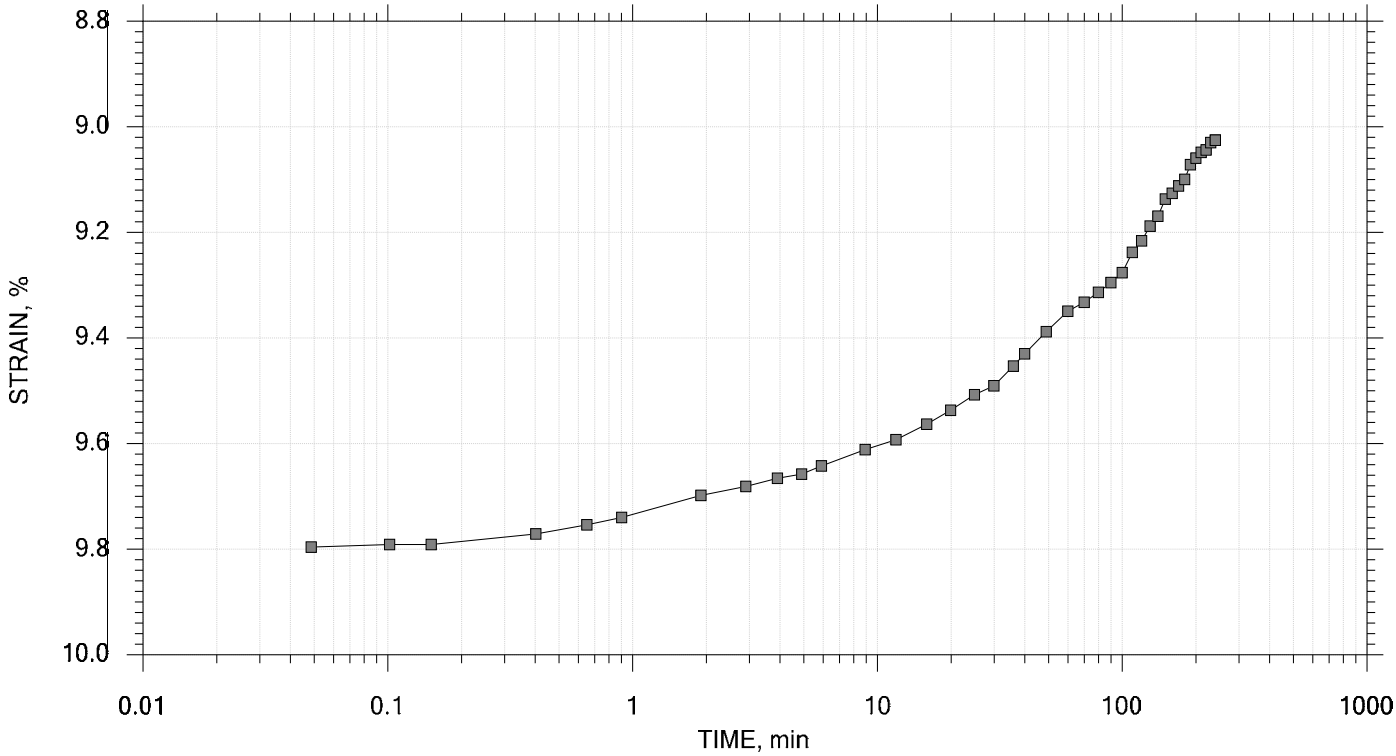
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

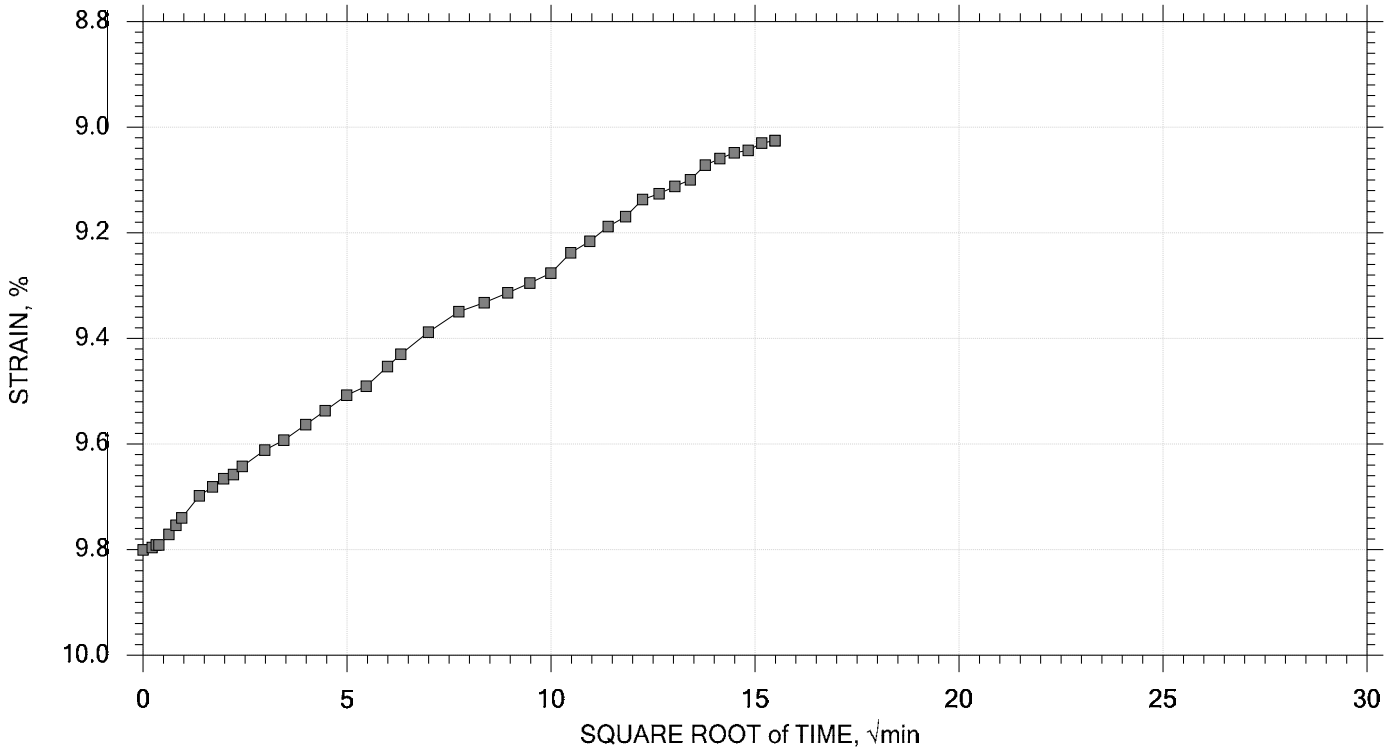
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 21 of 21

Stress: 0.0625 tsf

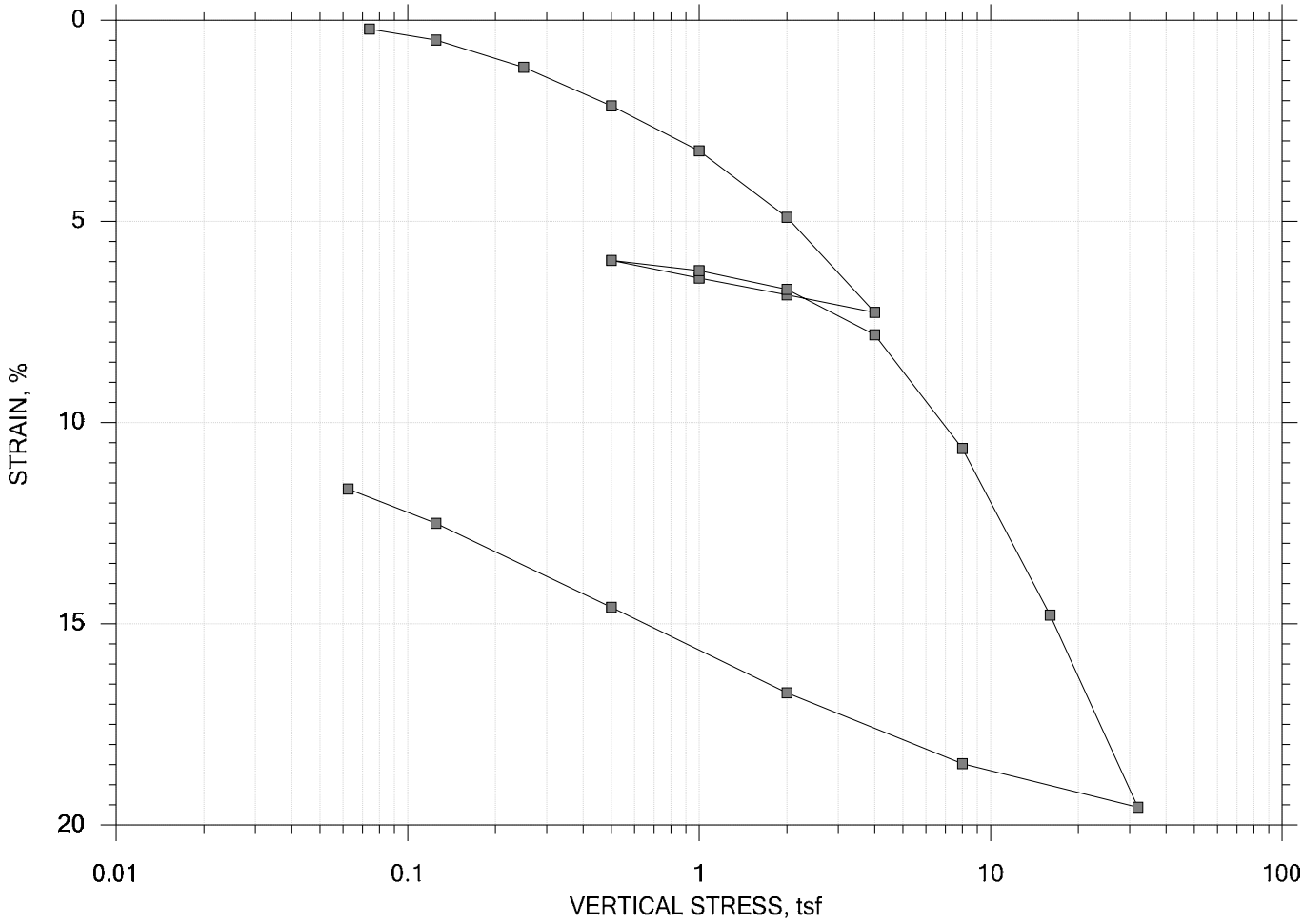


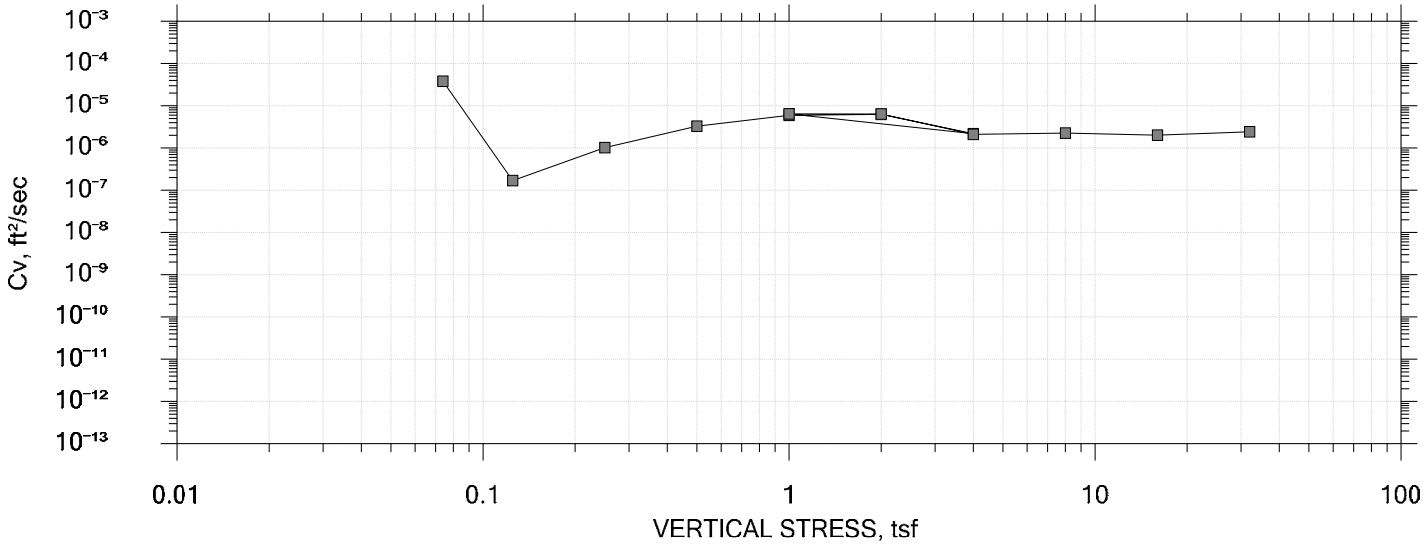


GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-1	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/08/17	Test No.: IP-3
	Depth: 33-35 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System X, Swell Pressure = 0.0668 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

SUMMARY REPORT

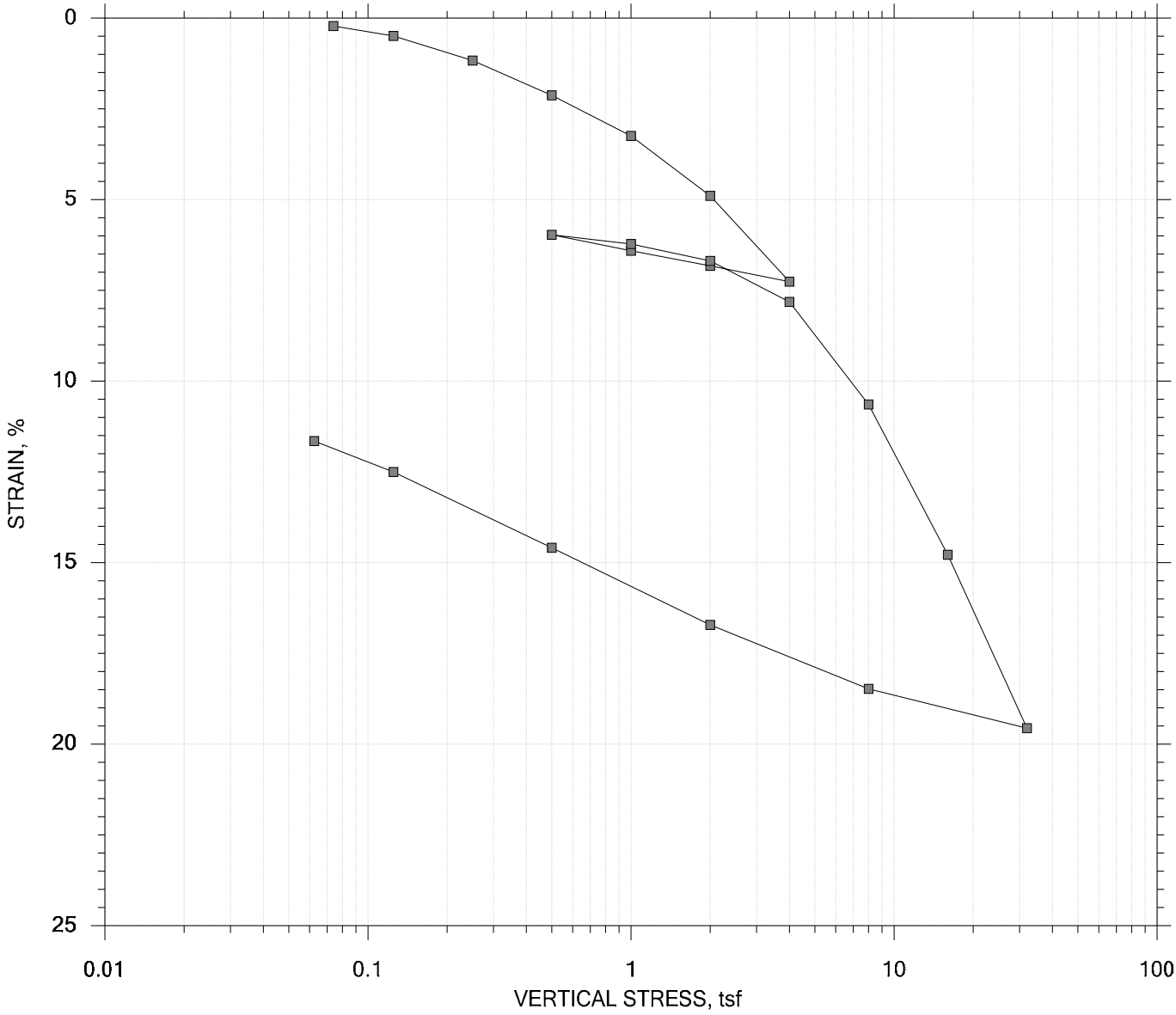




GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

SUMMARY REPORT



					Before Test	After Test
Current Vertical Effective Stress: ---				Water Content, %	34.21	27.59
Preconsolidation Stress: ---				Dry Unit Weight, pcf	87.966	97.74
Compression Ratio: ---				Saturation, %	98.62	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	0.96	0.76
LL: 45	PL: 20	PI: 25	GS: 2.76			

GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
Boring No.: HP-4	Tested By: md	Checked By: mcm
Sample No.: ST-1	Test Date: 08/07/17	Depth: 32-34 ft
Test No.: IP-2	Sample Type: intact	Elevation: ---

Soil Description: Moist, olive clay
Remarks: System S, Swell Pressure = 0.0740 tsf

Estimated Specific Gravity: 2.76	Liquid Limit: 45	Specimen Diameter: 2.50 in
Initial Void Ratio: 0.956	Plastic Limit: 20	Initial Height: 1.00 in
Final Void Ratio: 0.761	Plasticity Index: 25	Final Height: 0.90 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	B-1035	RING		C-168
Wt. Container + Wet Soil, gm	153.78	261.14	253.64	152.81
Wt. Container + Dry Soil, gm	114.54	222.37	222.37	121.56
Wt. Container, gm	8.1300	109.02	109.02	8.3000
Wt. Dry Soil, gm	106.41	113.35	113.35	113.26
Water Content, %	36.88	34.21	27.59	27.59
Void Ratio	---	0.956	0.761	---
Degree of Saturation, %	---	98.62	100.00	---
Dry Unit Weight, pcf	---	87.966	97.740	---

Note: Specific Gravity and Void Ratios are calculated assuming the degree of saturation equals 100% at the end of the test. Therefore, values may not represent actual values for the specimen.

One-Dimensional Consolidation by ASTM D2435 - Method B

Project: Heritage State Park | Location: Lynn, MA | Project No.: GTX-306811
Boring No.: HP-4 | Tested By: md | Checked By: mcm
Sample No.: ST-1 | Test Date: 08/07/17 | Depth: 32-34 ft
Test No.: IP-2 | Sample Type: intact | Elevation: ---

Soil Description: Moist, olive clay
Remarks: System S, Swell Pressure = 0.0740 tsf

Displacement at End of Increment

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Sq.Rt T90 min	Cv ft²/sec	Mv 1/tsf	k ft/day
1	0.0740	0.002196	0.952	0.220	0.977	2.51e-005	2.97e-002	2.01e-003
2	0.125	0.004925	0.946	0.492	200.940	1.21e-007	5.35e-002	1.75e-005
3	0.250	0.01169	0.933	1.17	21.306	1.13e-006	5.41e-002	1.65e-004
4	0.500	0.02127	0.915	2.13	7.141	3.32e-006	3.83e-002	3.43e-004
5	1.00	0.03244	0.893	3.24	4.280	5.43e-006	2.23e-002	3.27e-004
6	2.00	0.04897	0.860	4.90	3.184	7.09e-006	1.65e-002	3.16e-004
7	4.00	0.07258	0.814	7.26	9.625	2.25e-006	1.18e-002	7.16e-005
8	2.00	0.06824	0.823	6.82	2.963	7.16e-006	2.17e-003	4.19e-005
9	1.00	0.06406	0.831	6.41	6.702	3.19e-006	4.19e-003	3.60e-005
10	0.500	0.05966	0.839	5.97	17.815	1.21e-006	8.79e-003	2.87e-005
11	1.00	0.06220	0.834	6.22	3.525	6.14e-006	5.07e-003	8.40e-005
12	2.00	0.06688	0.825	6.69	3.649	5.88e-006	4.68e-003	7.43e-005
13	4.00	0.07817	0.803	7.82	8.653	2.44e-006	5.64e-003	3.71e-005
14	8.00	0.1064	0.748	10.6	7.863	2.57e-006	7.06e-003	4.90e-005
15	16.0	0.1478	0.667	14.8	8.810	2.12e-006	5.17e-003	2.96e-005
16	32.0	0.1956	0.574	19.6	4.958	3.40e-006	2.99e-003	2.73e-005
17	8.00	0.1847	0.595	18.5	2.955	5.45e-006	4.51e-004	6.62e-006
18	2.00	0.1671	0.629	16.7	12.705	1.31e-006	2.93e-003	1.04e-005
19	0.500	0.1459	0.671	14.6	46.395	3.76e-007	1.42e-002	1.44e-005
20	0.125	0.1250	0.712	12.5	110.970	1.65e-007	5.57e-002	2.48e-005
21	0.0625	0.1165	0.728	11.7	0.000	0.00e+000	1.36e-001	0.00e+000

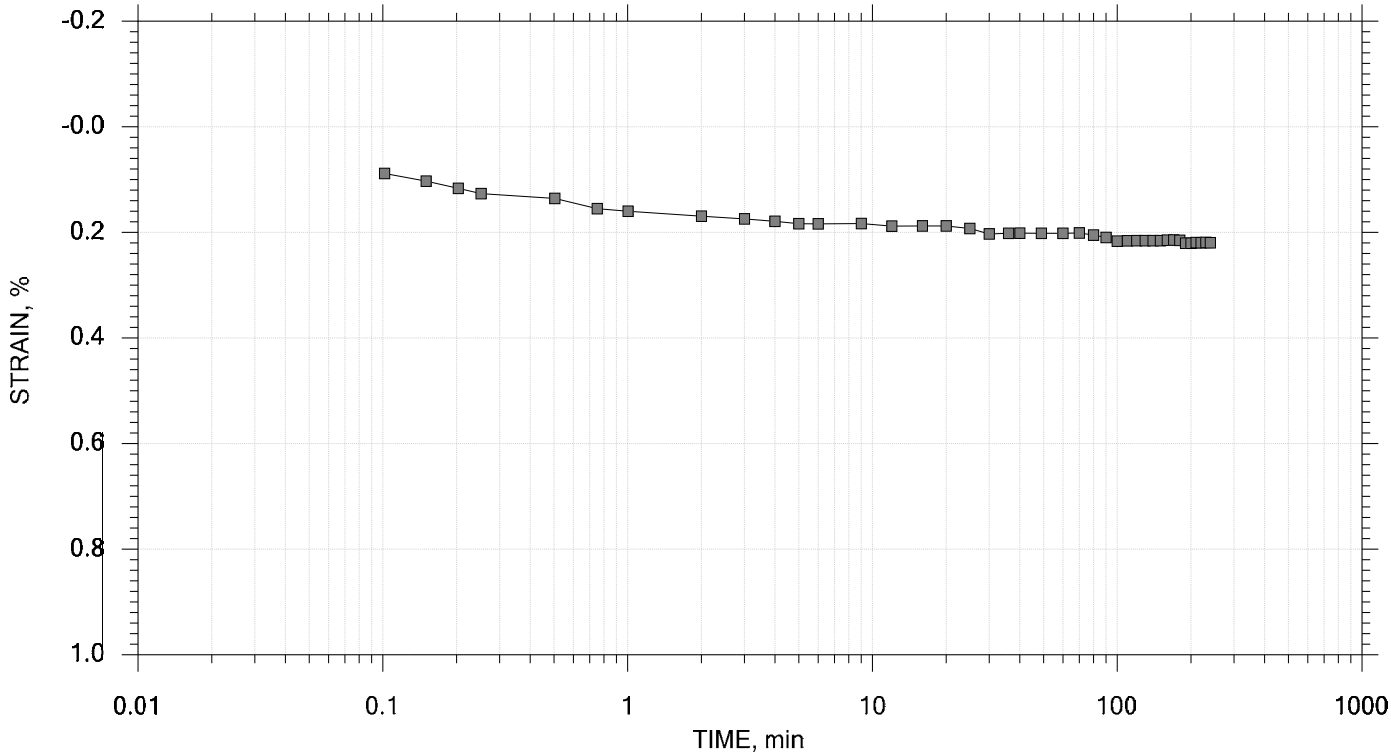
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Log T50 min	Cv ft²/sec	Mv 1/tsf	k ft/day	Ca %
1	0.0740	0.002196	0.952	0.220	0.000	0.00e+000	2.97e-002	0.00e+000	0.00e+000
2	0.125	0.004925	0.946	0.492	0.000	0.00e+000	5.35e-002	0.00e+000	0.00e+000
3	0.250	0.01169	0.933	1.17	0.000	0.00e+000	5.41e-002	0.00e+000	0.00e+000
4	0.500	0.02127	0.915	2.13	0.000	0.00e+000	3.83e-002	0.00e+000	0.00e+000
5	1.00	0.03244	0.893	3.24	0.873	6.18e-006	2.23e-002	3.73e-004	0.00e+000
6	2.00	0.04897	0.860	4.90	0.966	5.43e-006	1.65e-002	2.42e-004	0.00e+000
7	4.00	0.07258	0.814	7.26	2.464	2.04e-006	1.18e-002	6.50e-005	0.00e+000
8	2.00	0.06824	0.823	6.82	0.000	0.00e+000	2.17e-003	0.00e+000	0.00e+000
9	1.00	0.06406	0.831	6.41	1.697	2.93e-006	4.19e-003	3.31e-005	0.00e+000
10	0.500	0.05966	0.839	5.97	3.663	1.37e-006	8.79e-003	3.25e-005	0.00e+000
11	1.00	0.06220	0.834	6.22	0.000	0.00e+000	5.07e-003	0.00e+000	0.00e+000
12	2.00	0.06688	0.825	6.69	0.000	0.00e+000	4.68e-003	0.00e+000	0.00e+000
13	4.00	0.07817	0.803	7.82	2.371	2.07e-006	5.64e-003	3.15e-005	0.00e+000
14	8.00	0.1064	0.748	10.6	2.256	2.08e-006	7.06e-003	3.97e-005	0.00e+000
15	16.0	0.1478	0.667	14.8	2.344	1.85e-006	5.17e-003	2.58e-005	0.00e+000
16	32.0	0.1956	0.574	19.6	2.052	1.91e-006	2.99e-003	1.53e-005	0.00e+000
17	8.00	0.1847	0.595	18.5	0.000	0.00e+000	4.51e-004	0.00e+000	0.00e+000
18	2.00	0.1671	0.629	16.7	2.738	1.41e-006	2.93e-003	1.12e-005	0.00e+000
19	0.500	0.1459	0.671	14.6	0.000	0.00e+000	1.42e-002	0.00e+000	0.00e+000
20	0.125	0.1250	0.712	12.5	0.000	0.00e+000	5.57e-002	0.00e+000	0.00e+000
21	0.0625	0.1165	0.728	11.7	0.000	0.00e+000	1.36e-001	0.00e+000	0.00e+000

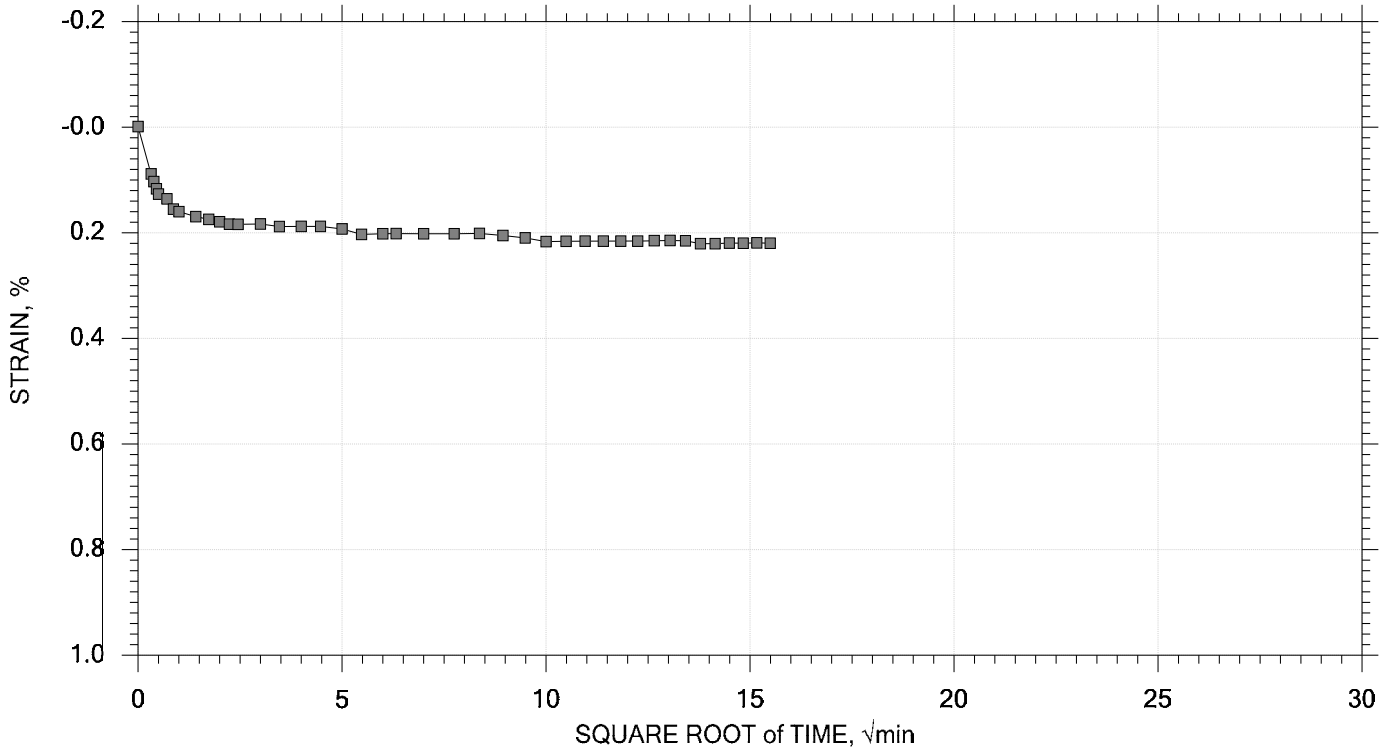
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Volume Step 1 of 21

Stress: 0.073977 tsf





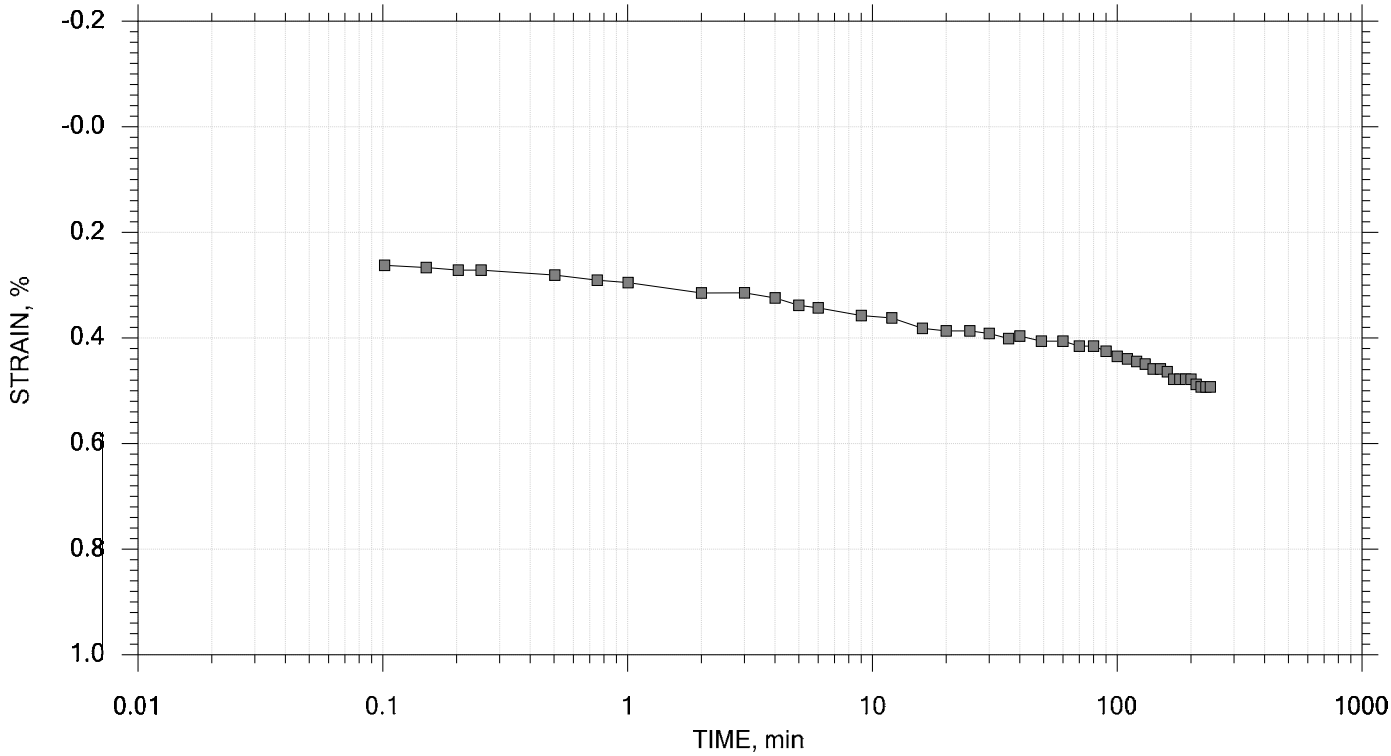
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

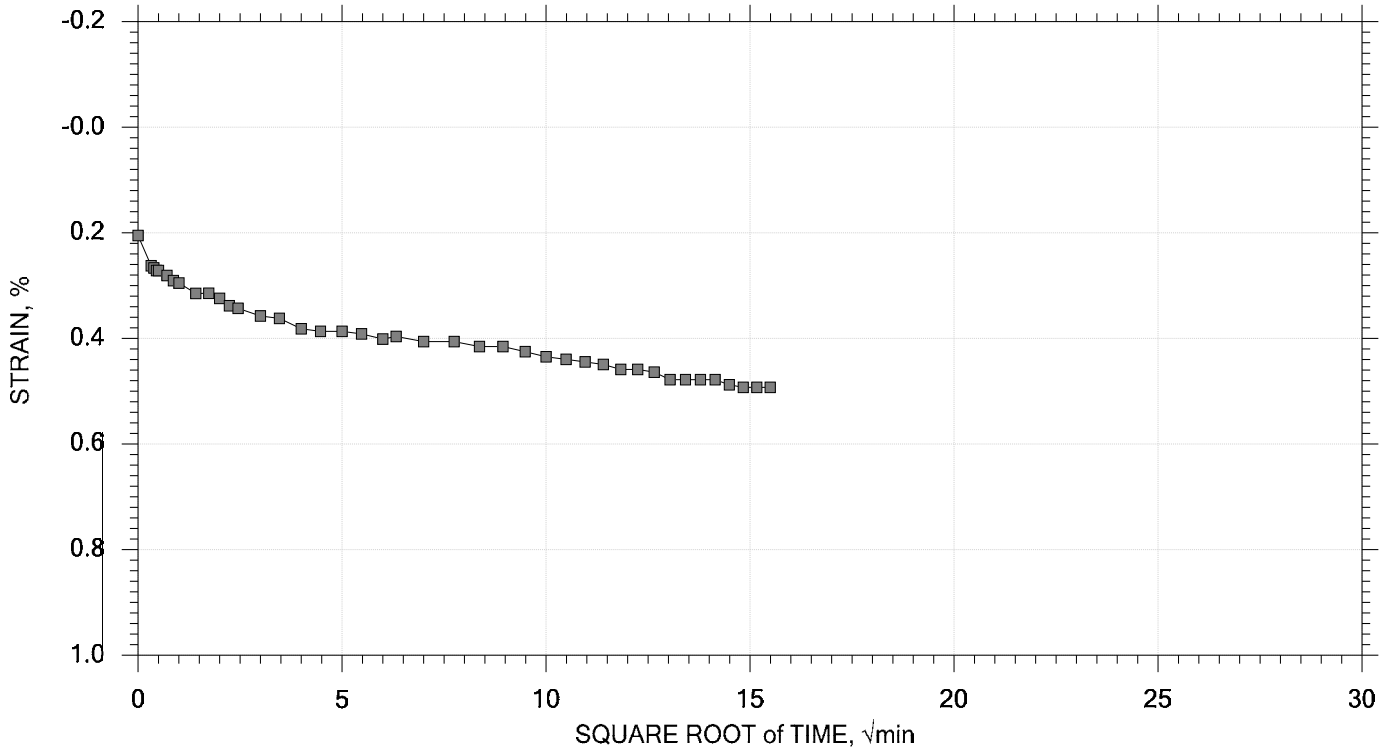
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 2 of 21

Stress: 0.125 tsf





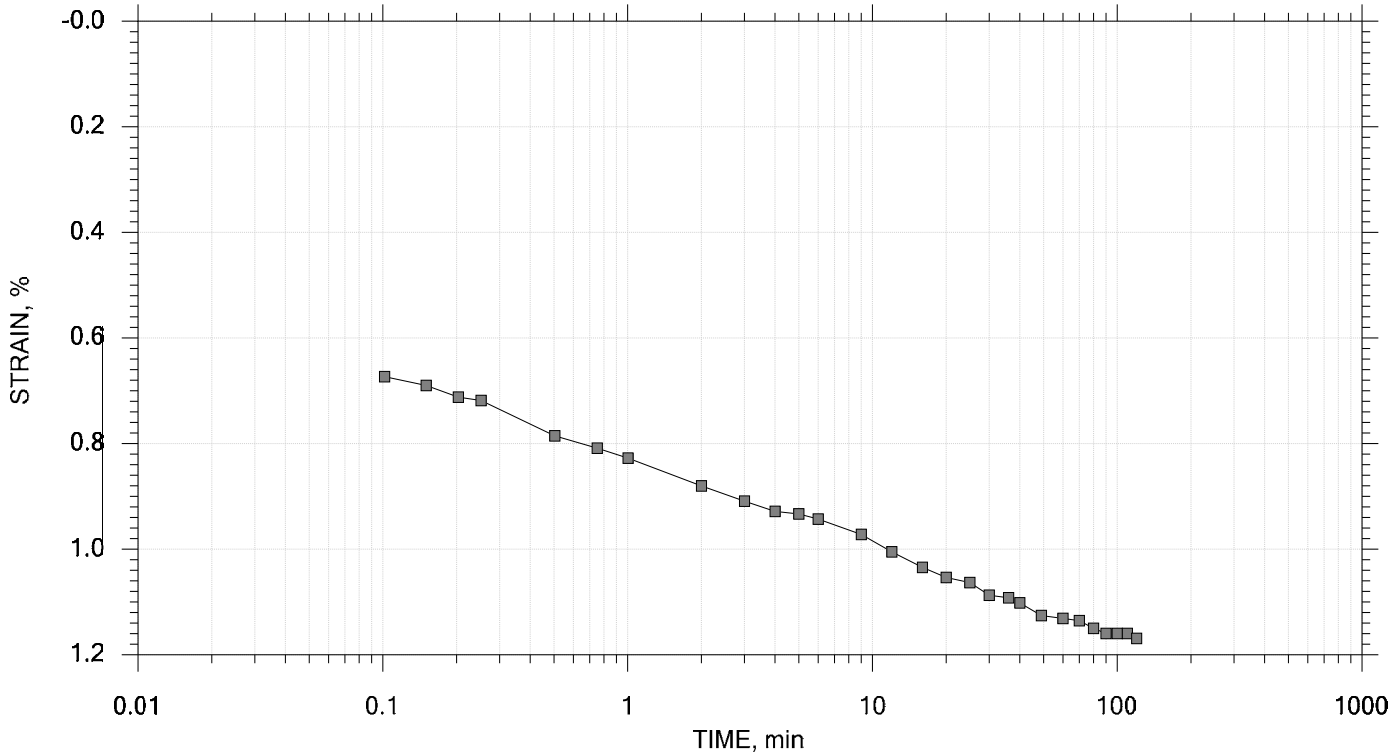
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

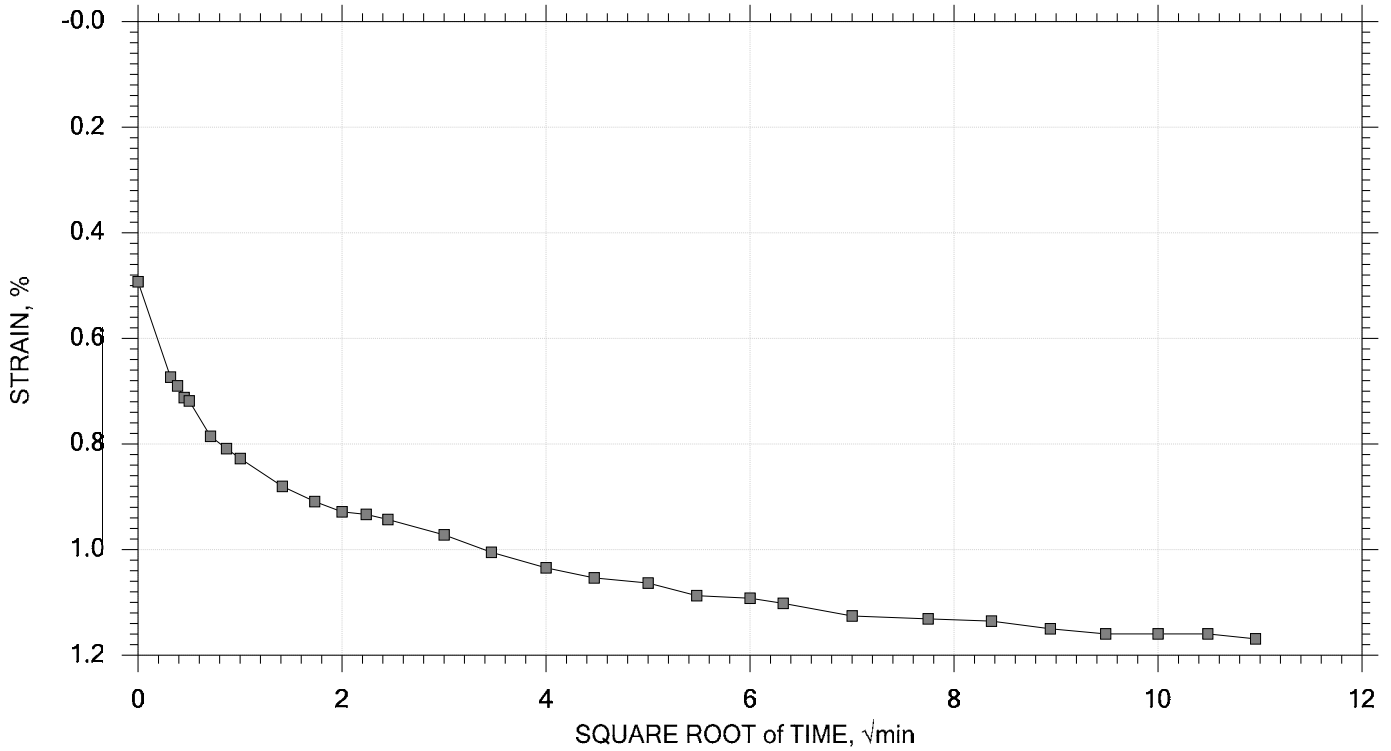
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 3 of 21

Stress: 0.25 tsf





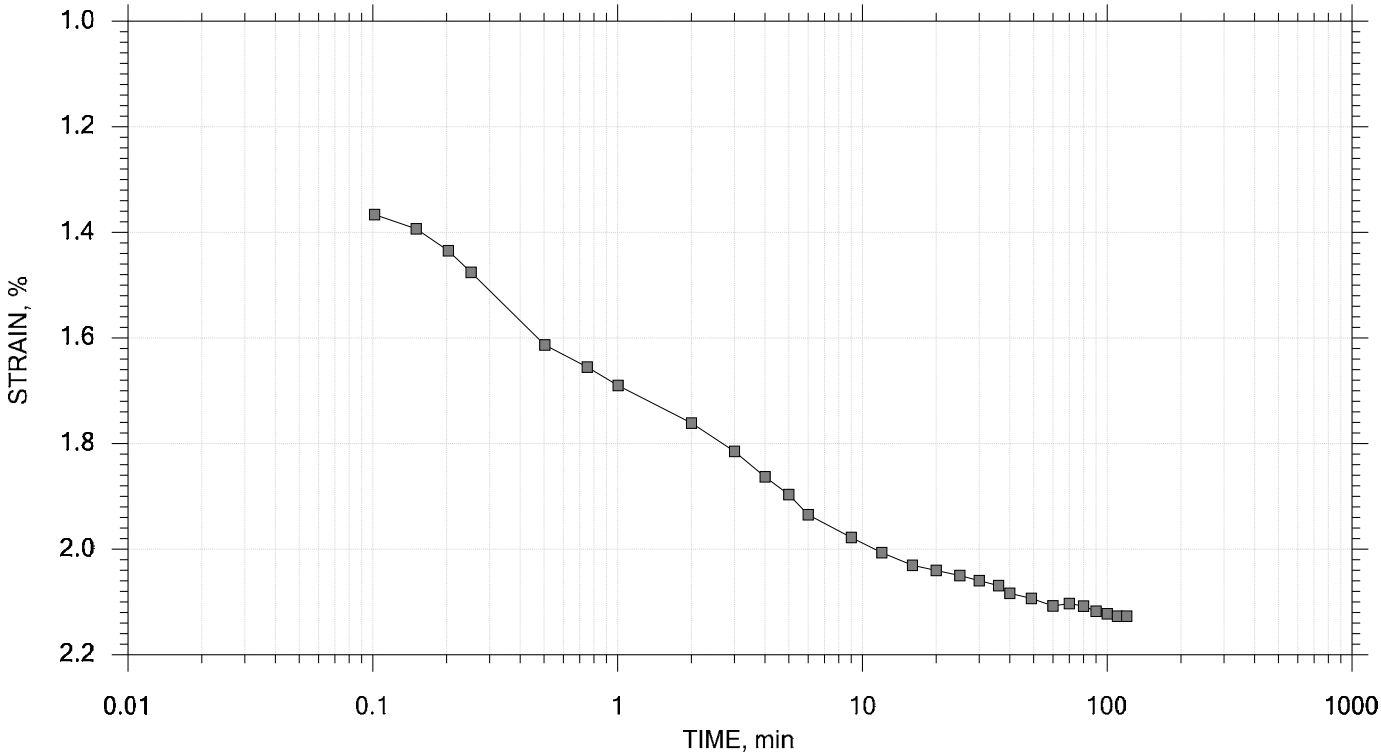
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

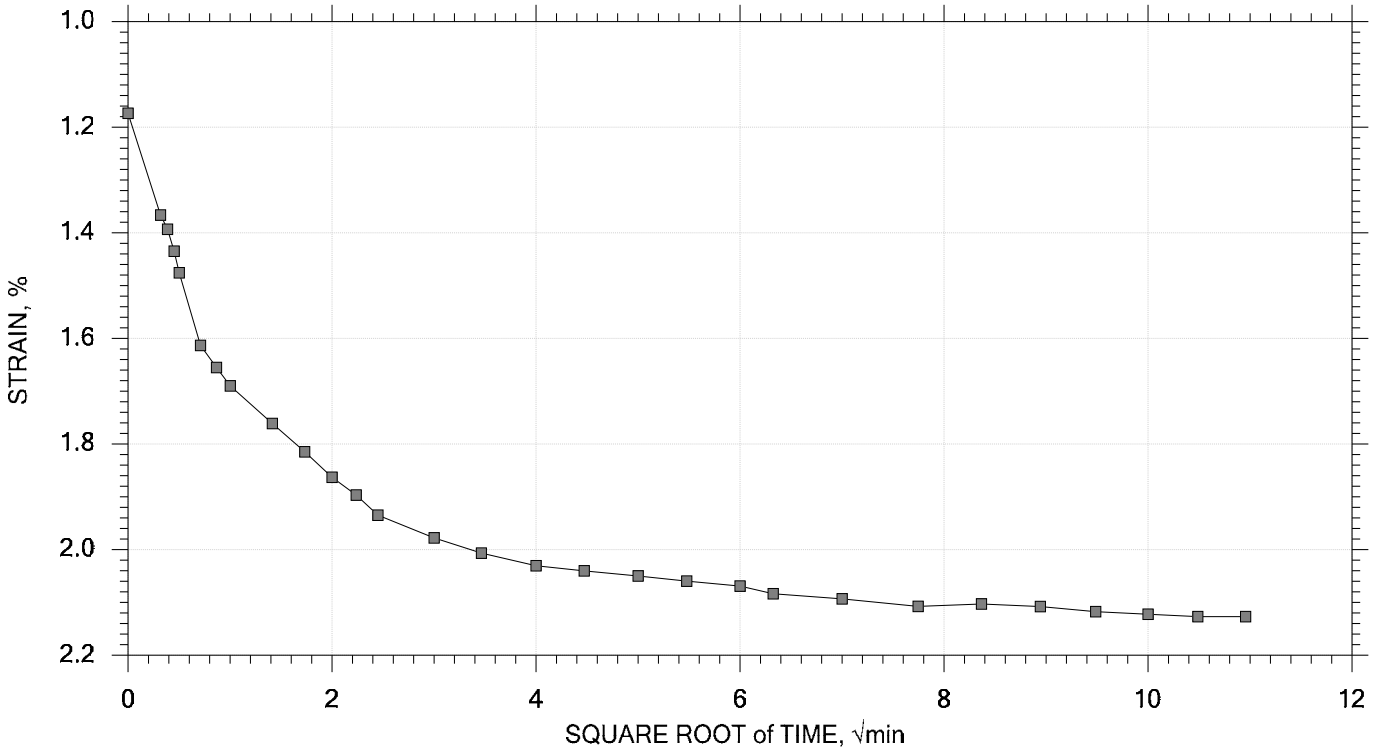
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 4 of 21

Stress: 0.5 tsf





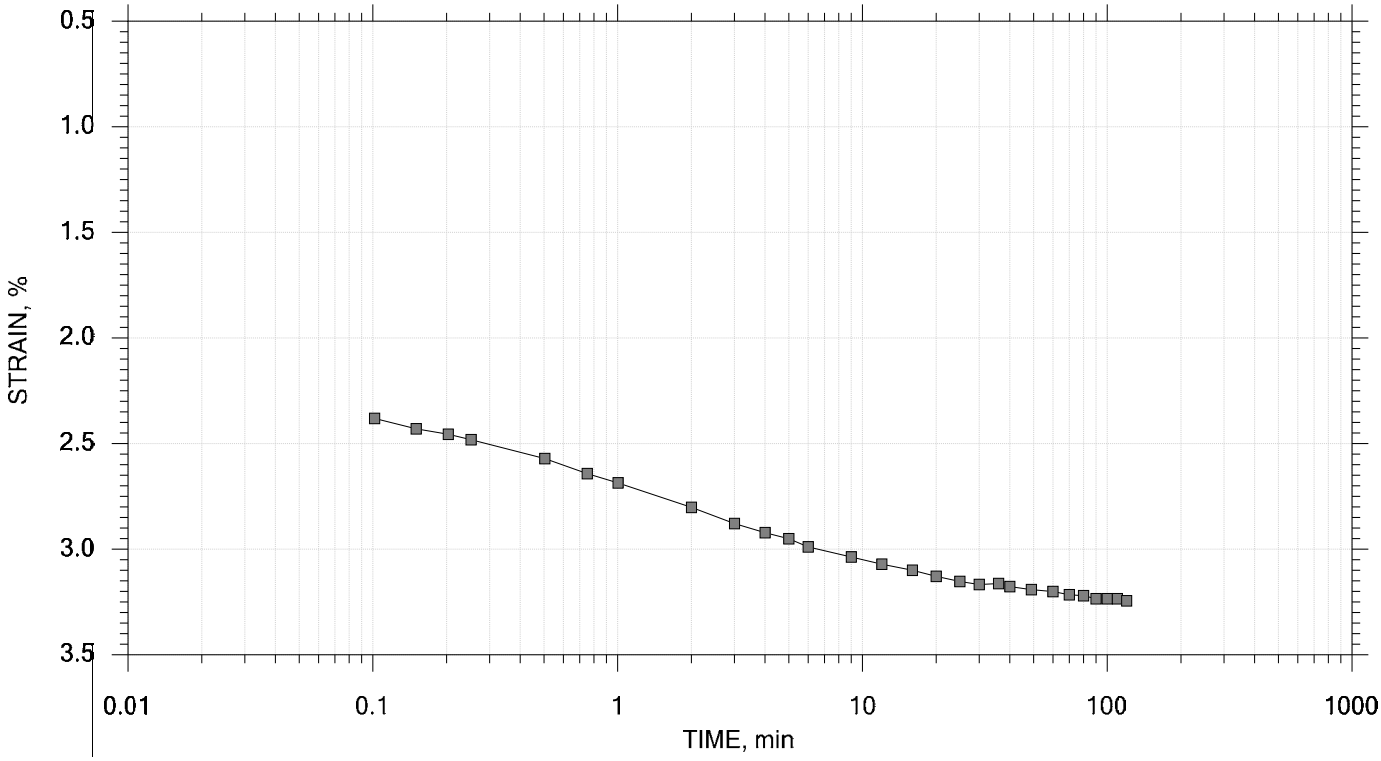
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

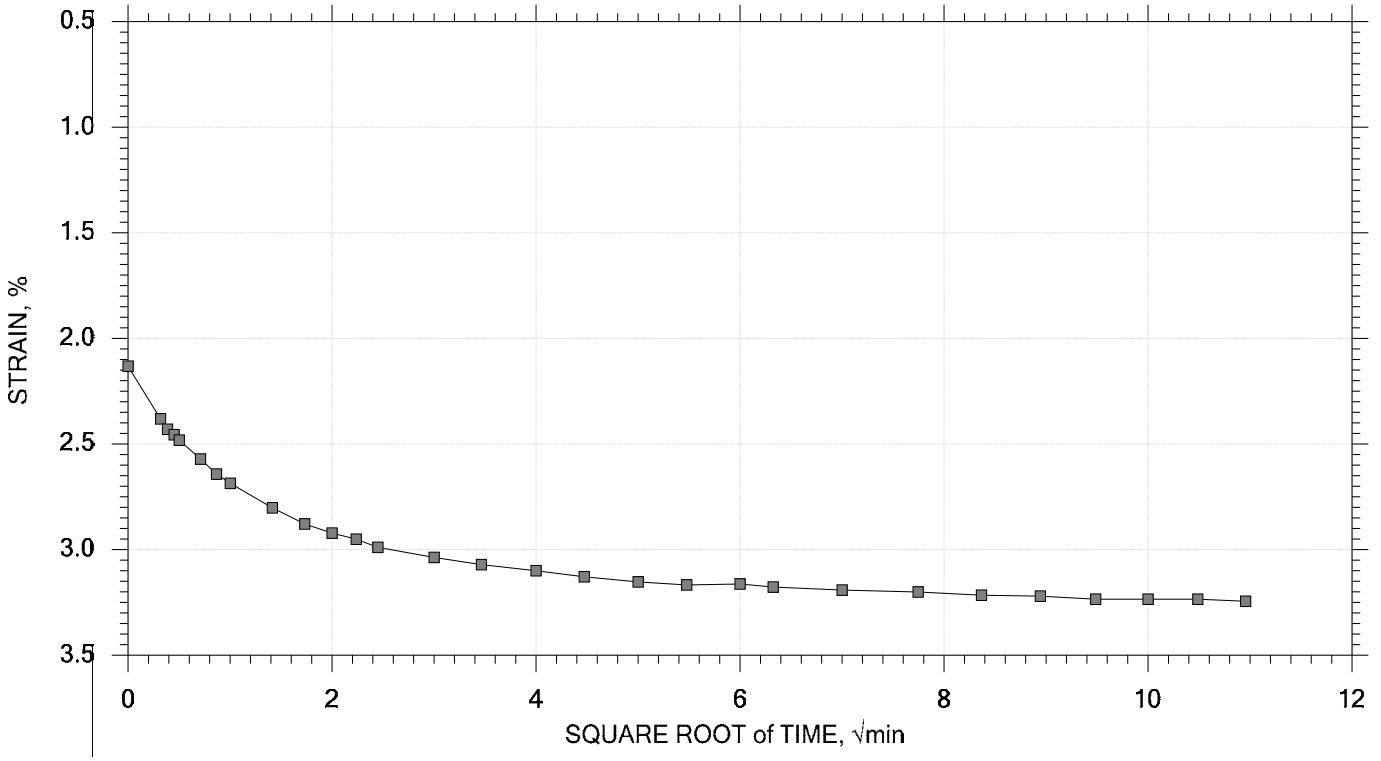
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 5 of 21

Stress: 1 tsf





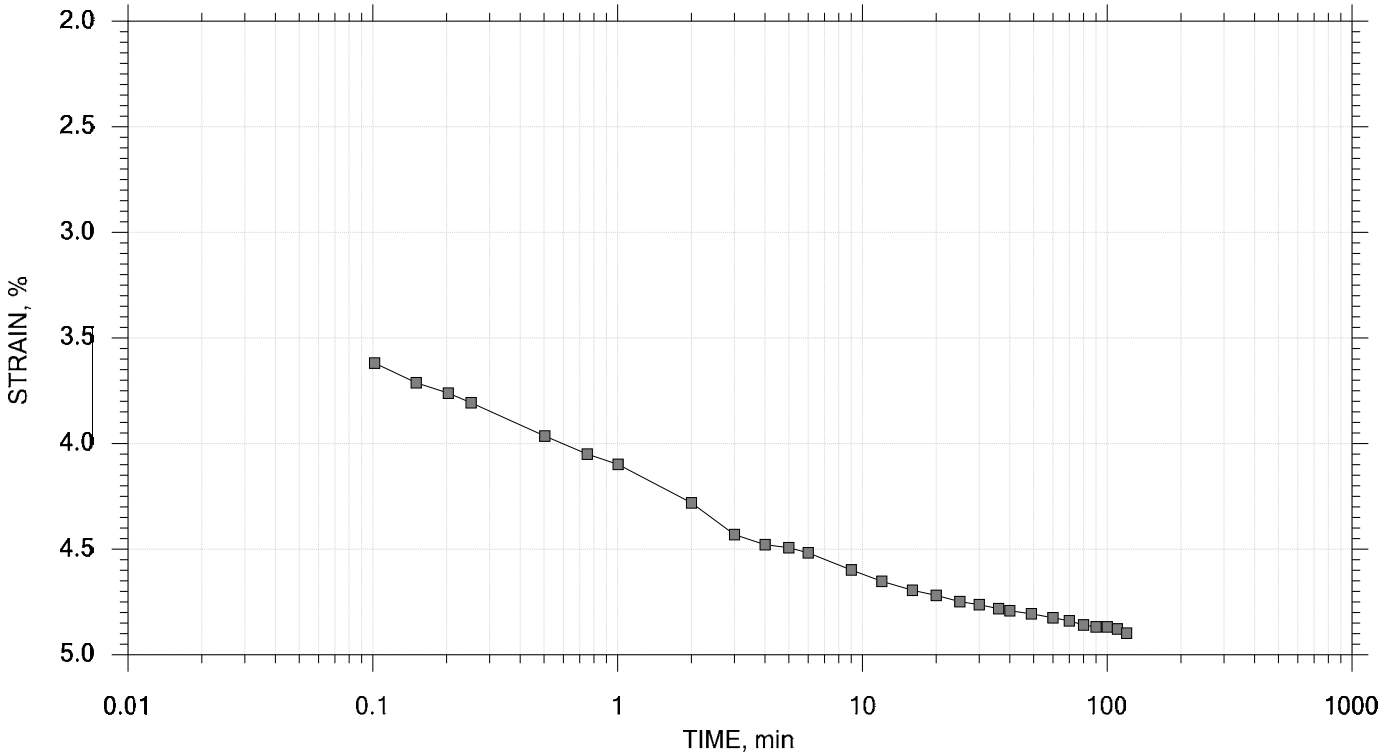
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

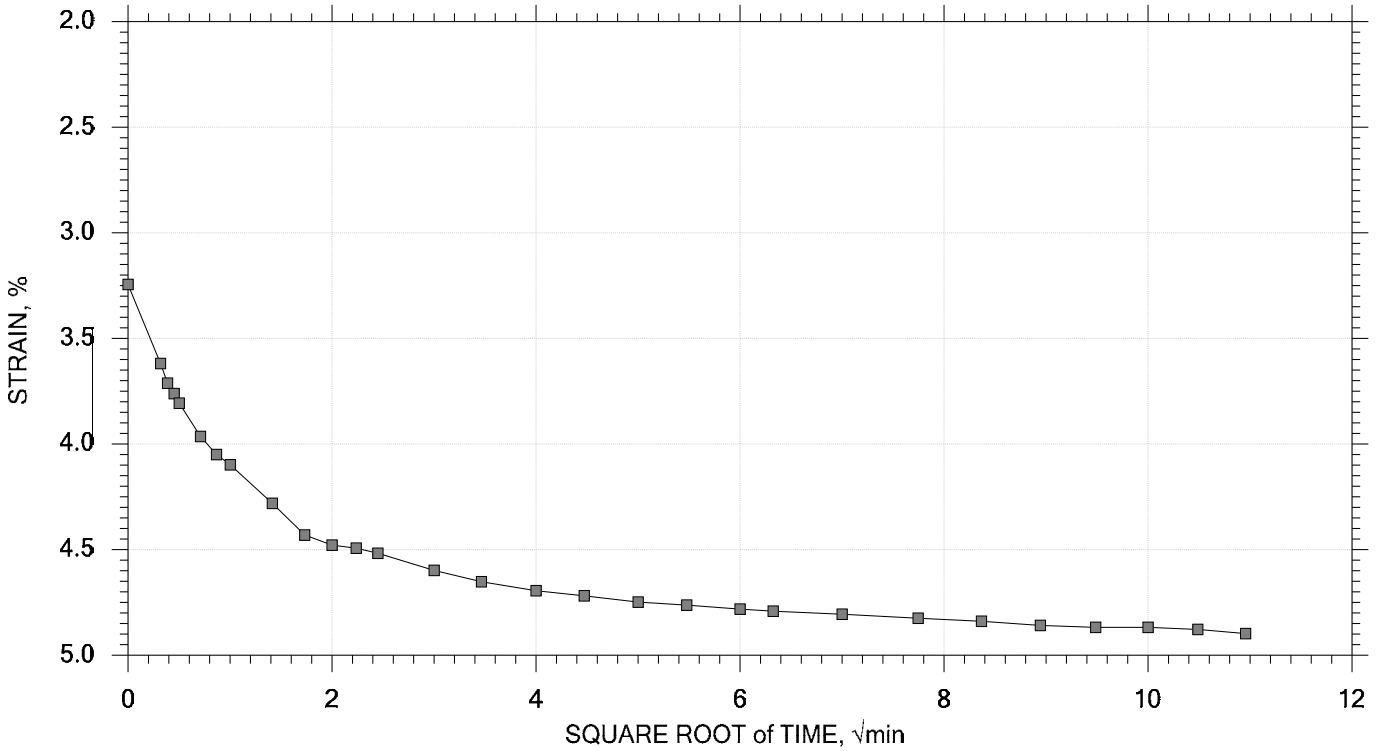
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 6 of 21

Stress: 2 tsf





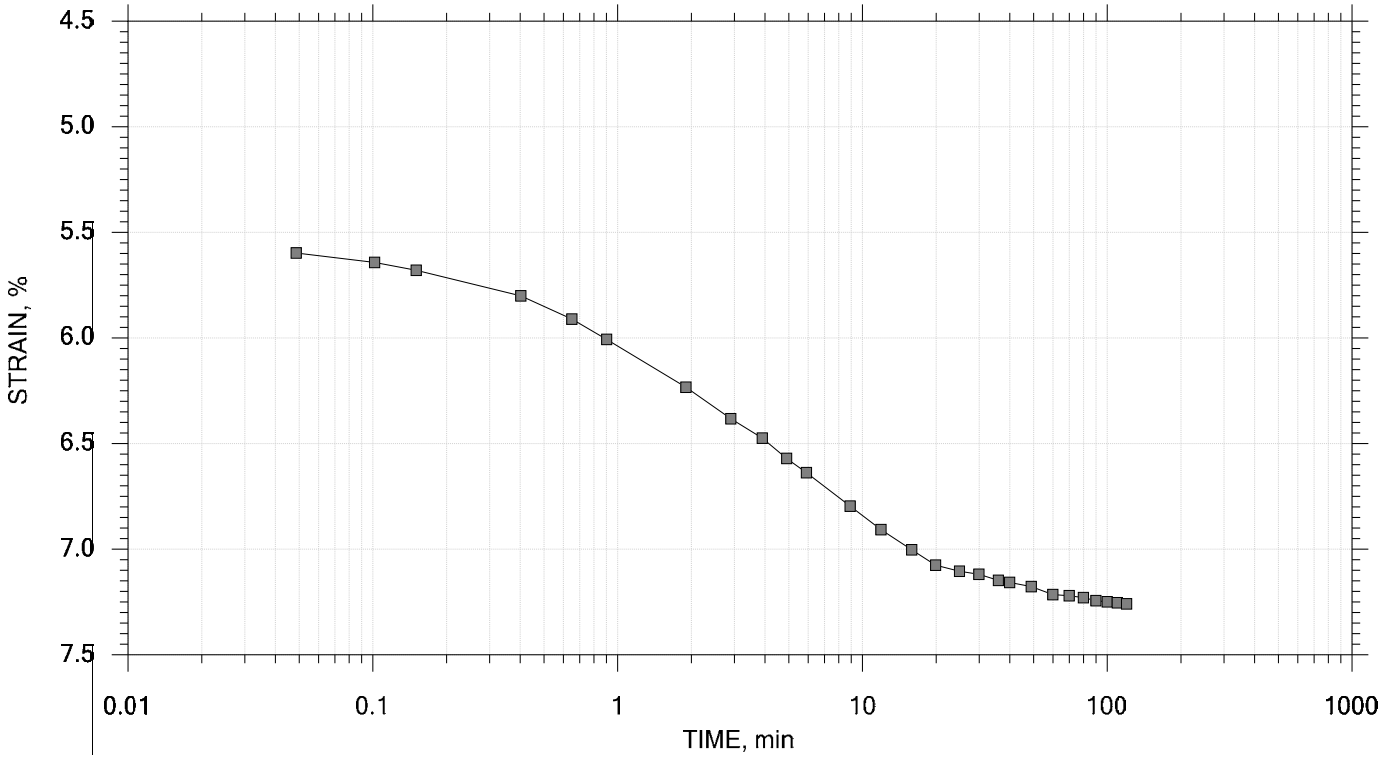
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

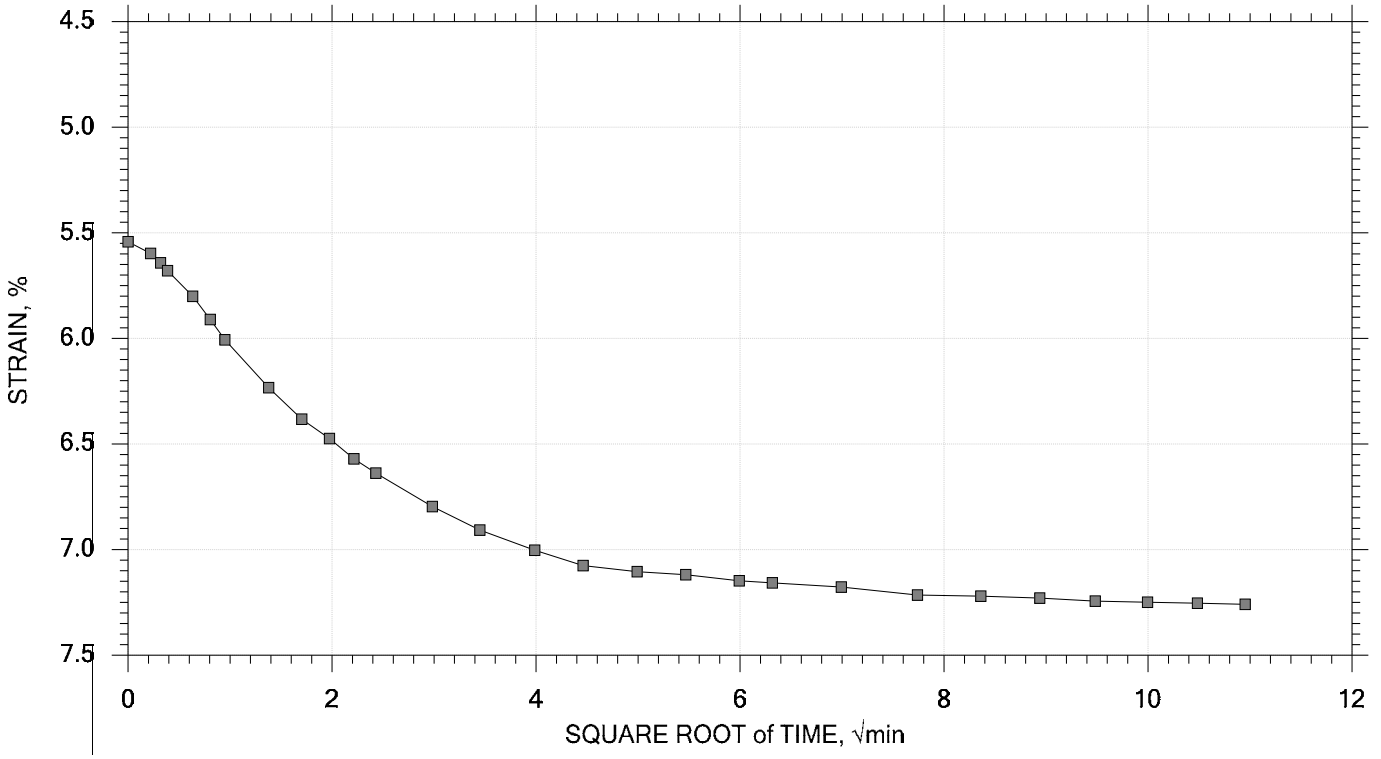
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 7 of 21

Stress: 4 tsf





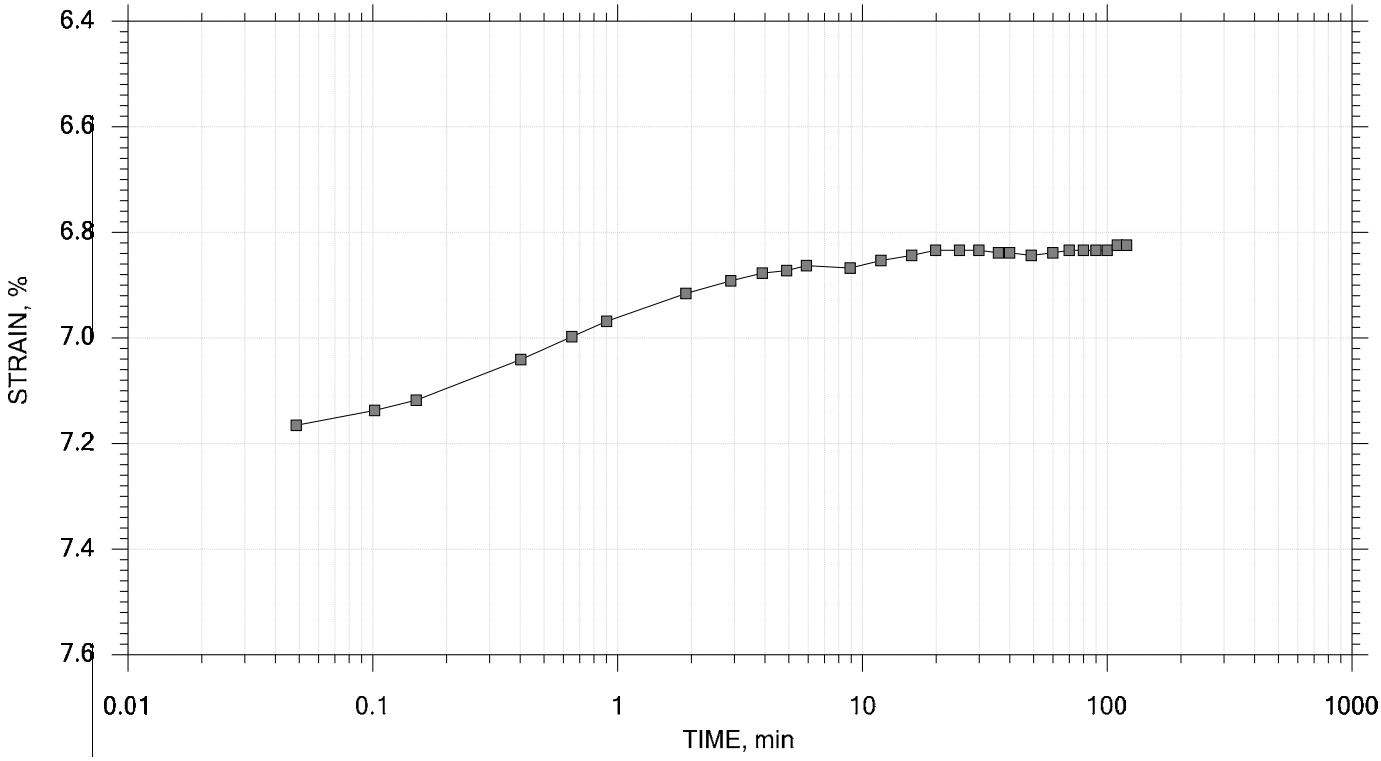
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

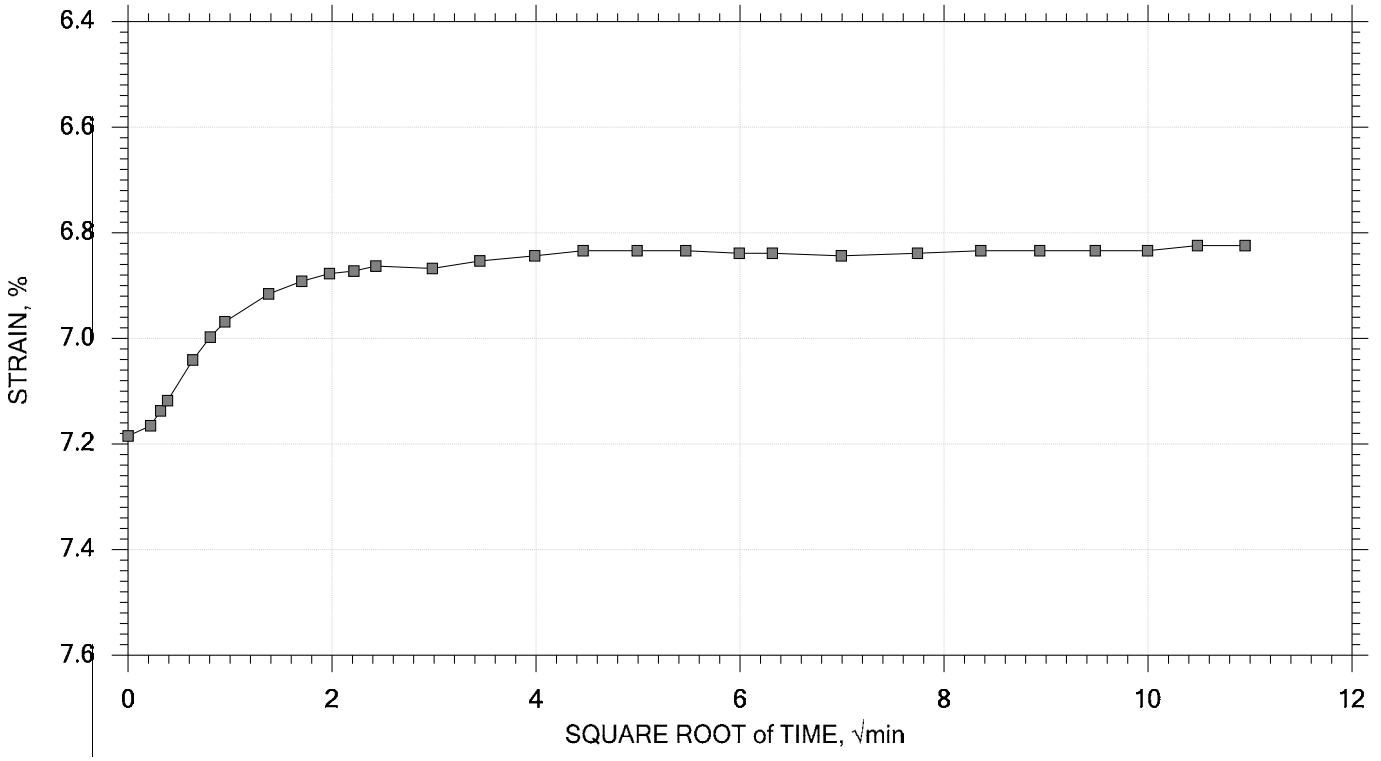
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 8 of 21

Stress: 2 tsf





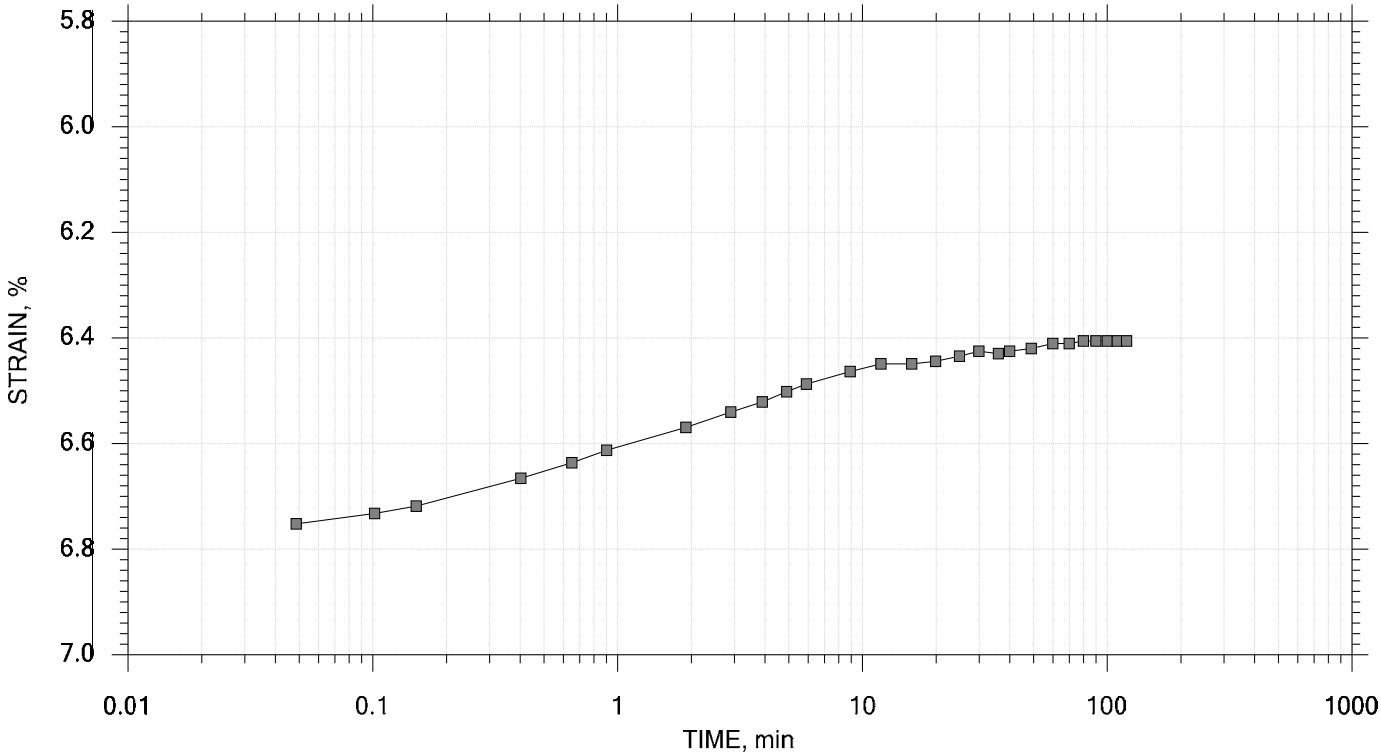
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

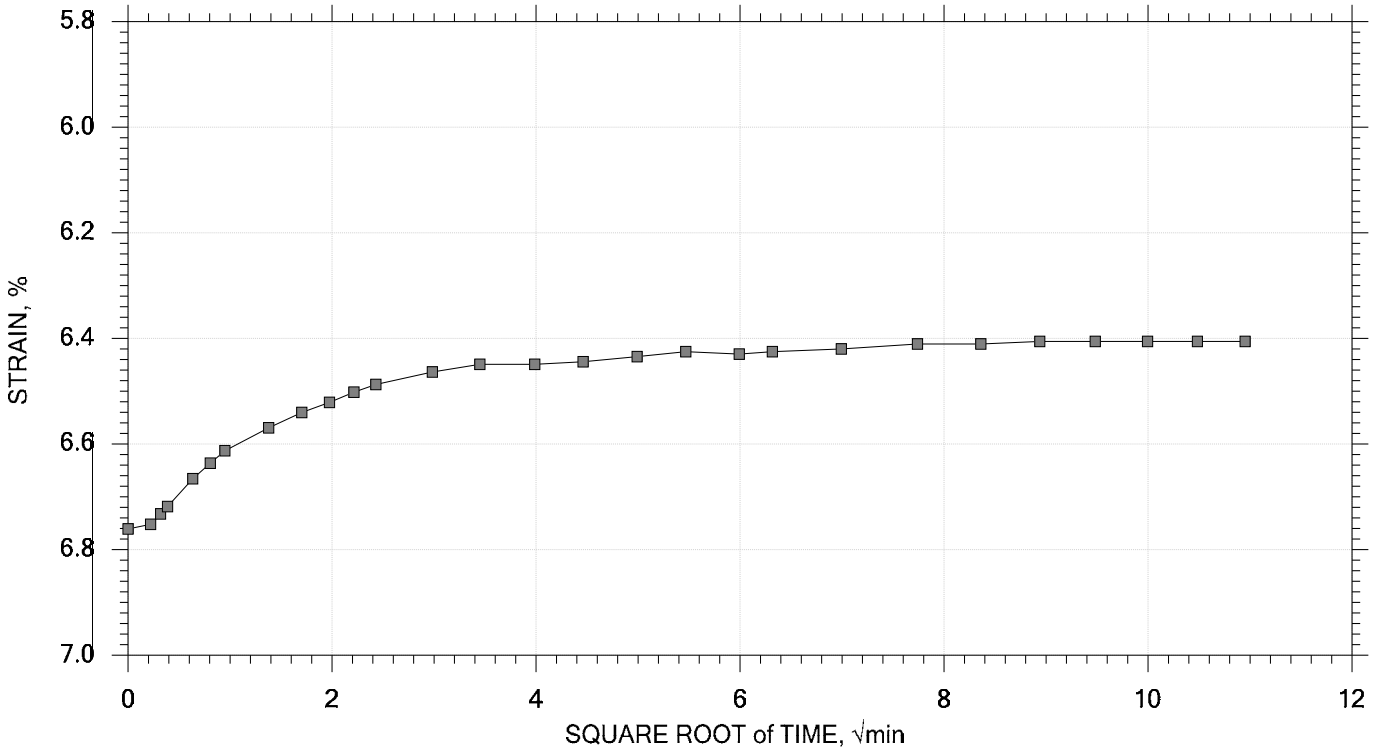
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 9 of 21

Stress: 1 tsf





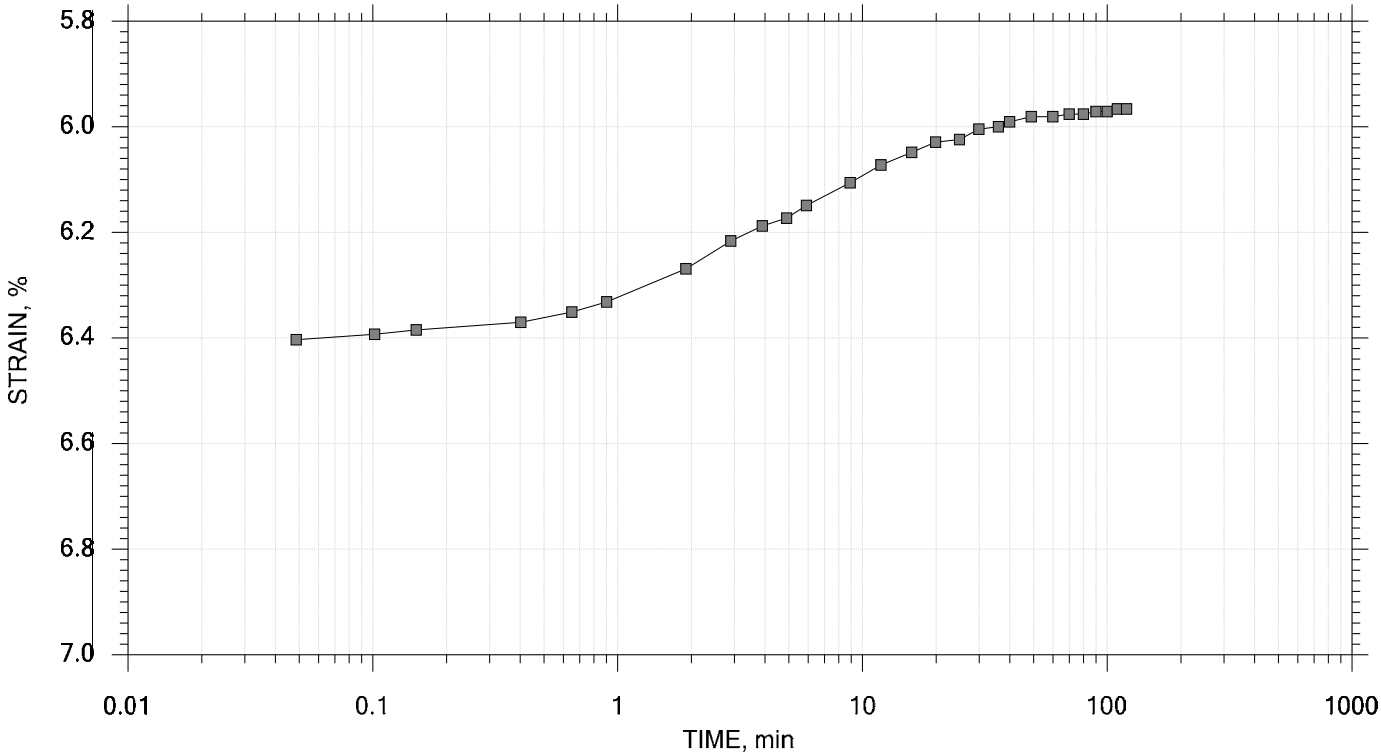
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

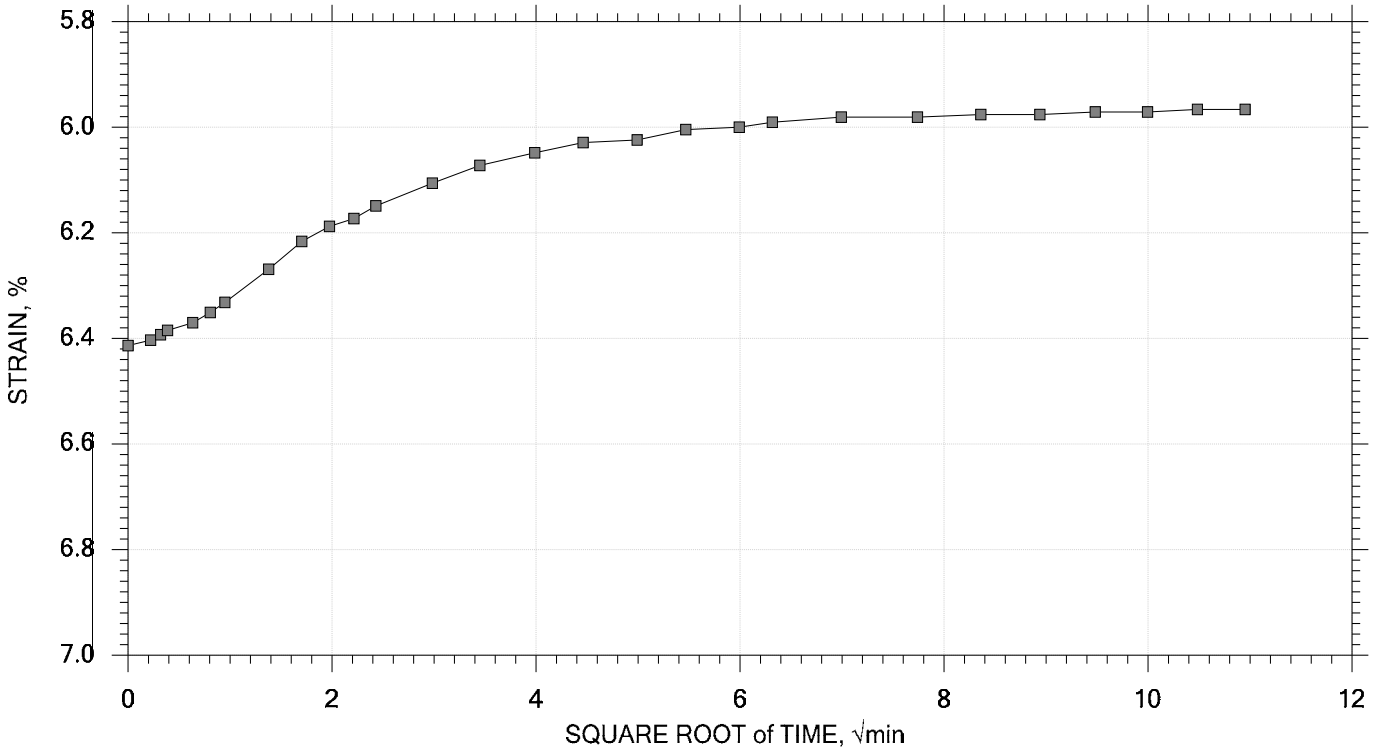
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 10 of 21

Stress: 0.5 tsf





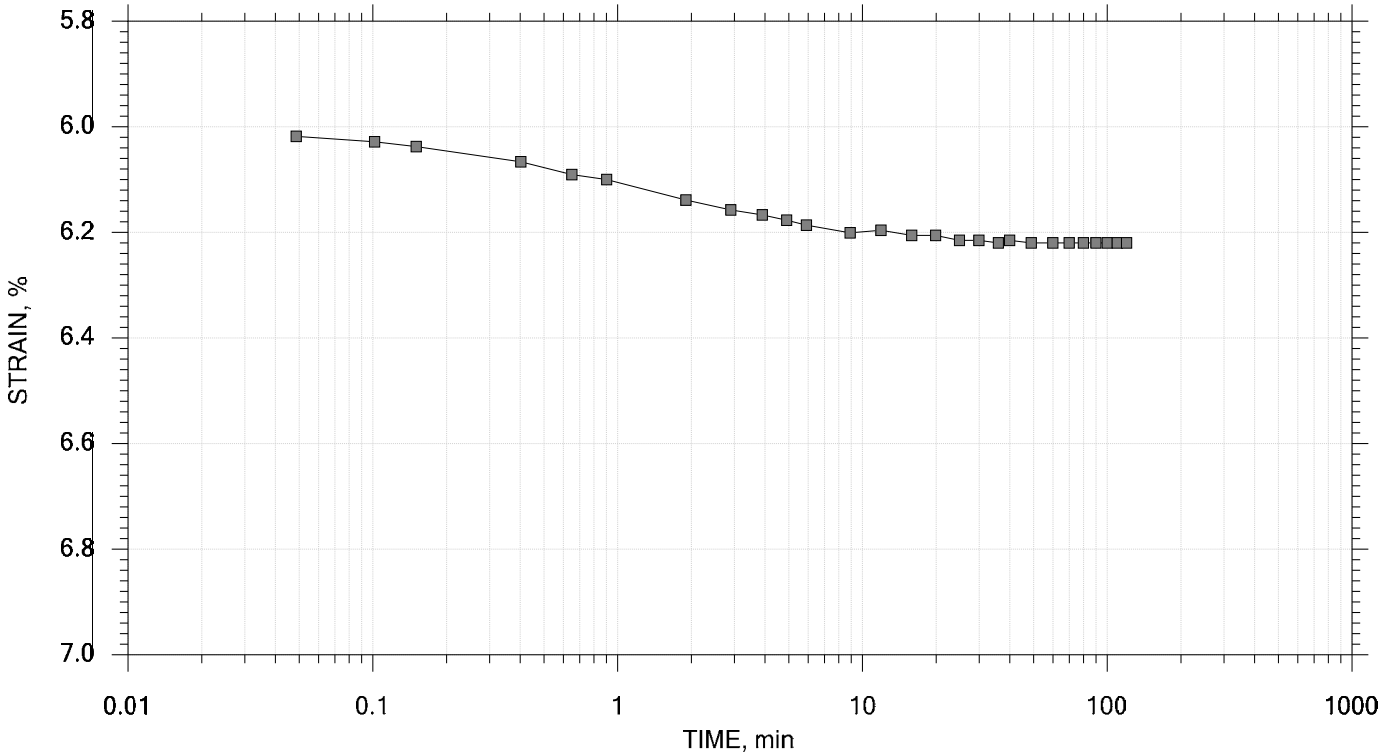
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

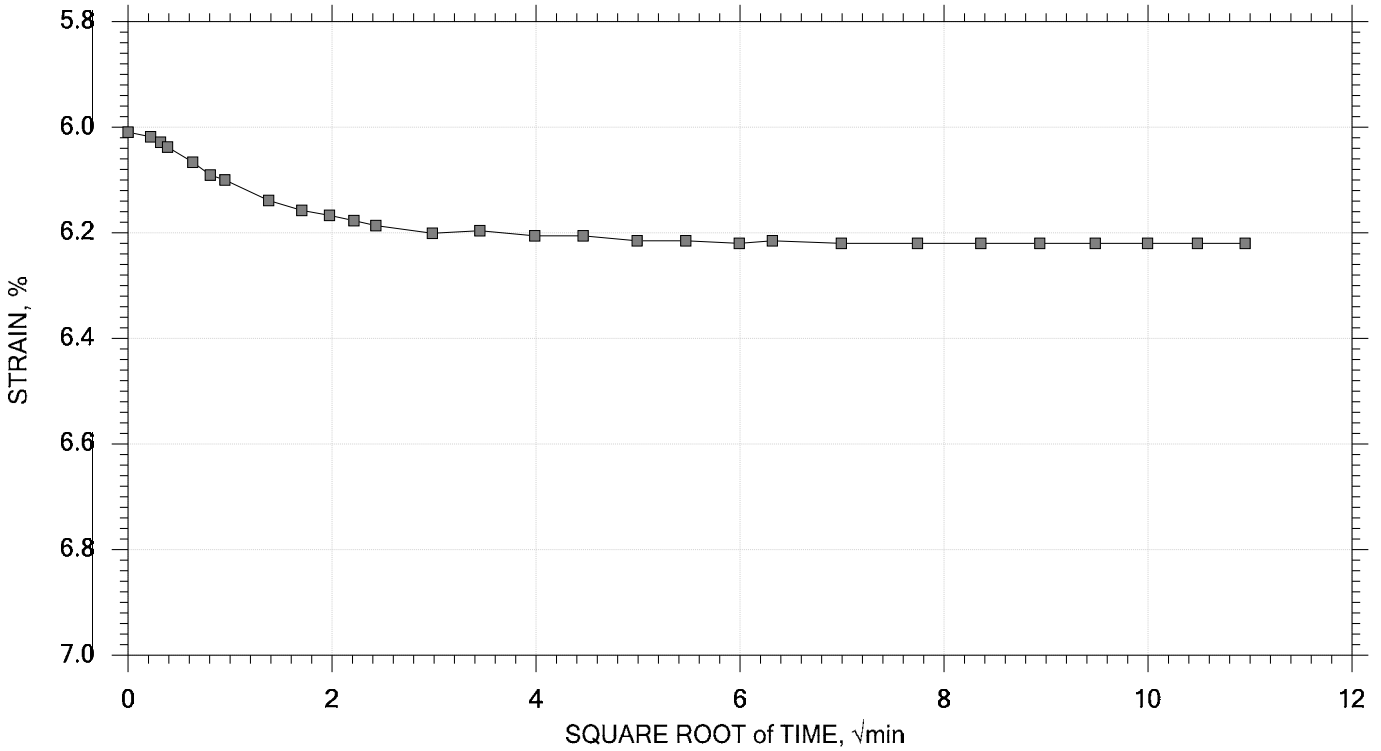
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 11 of 21

Stress: 1 tsf





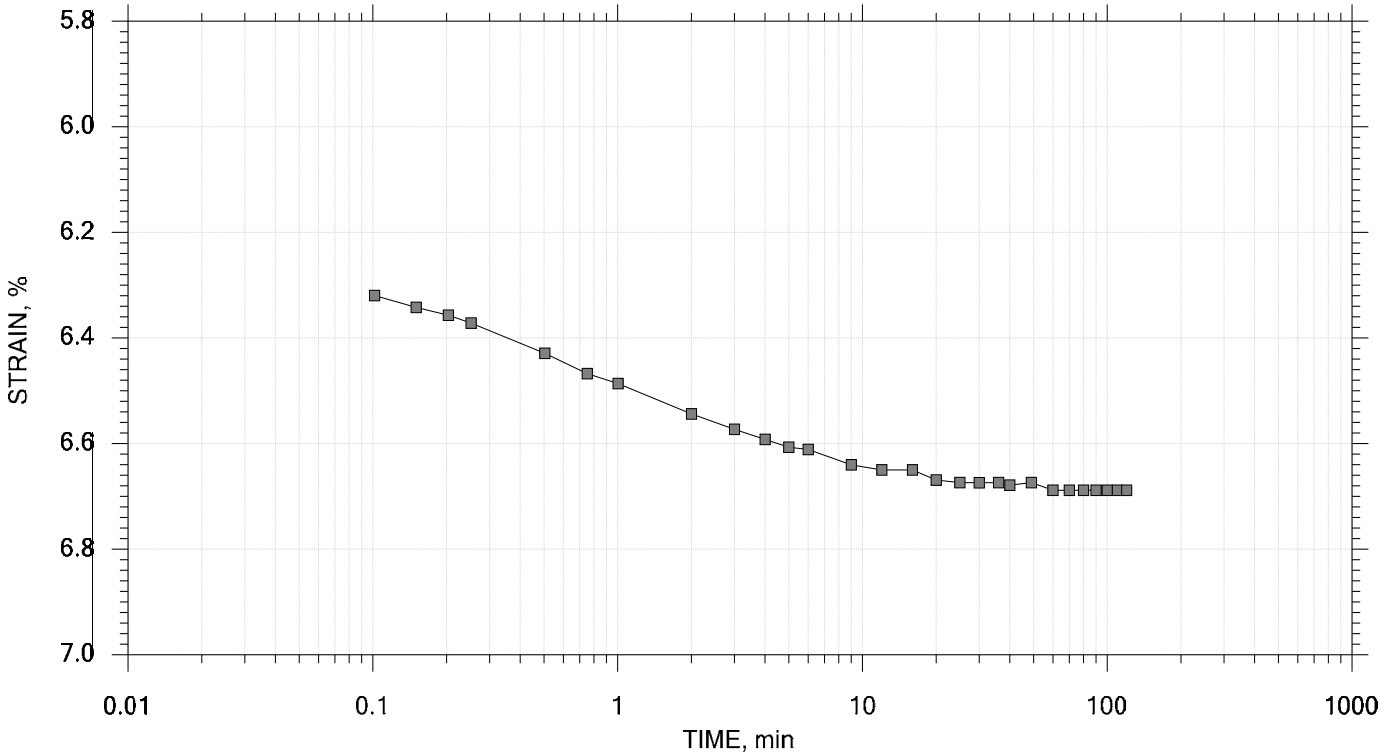
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

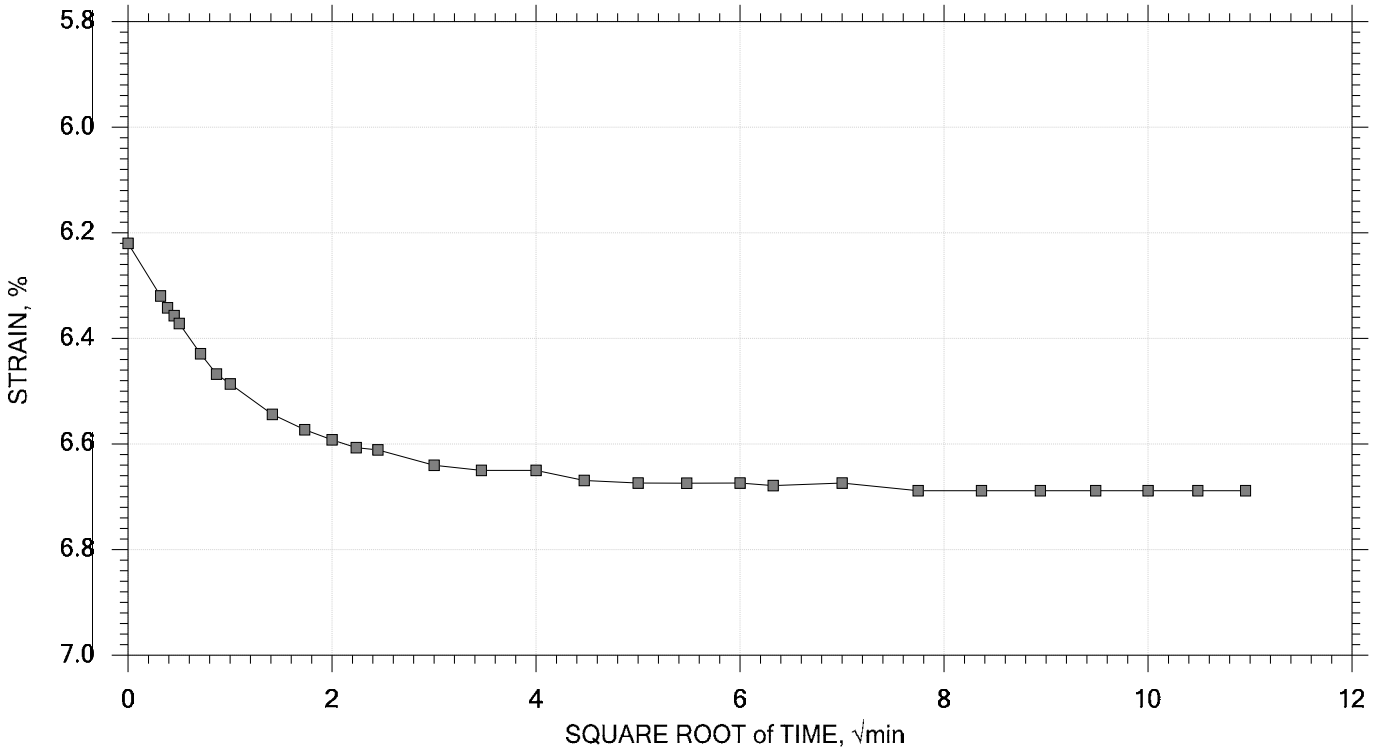
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 12 of 21

Stress: 2 tsf





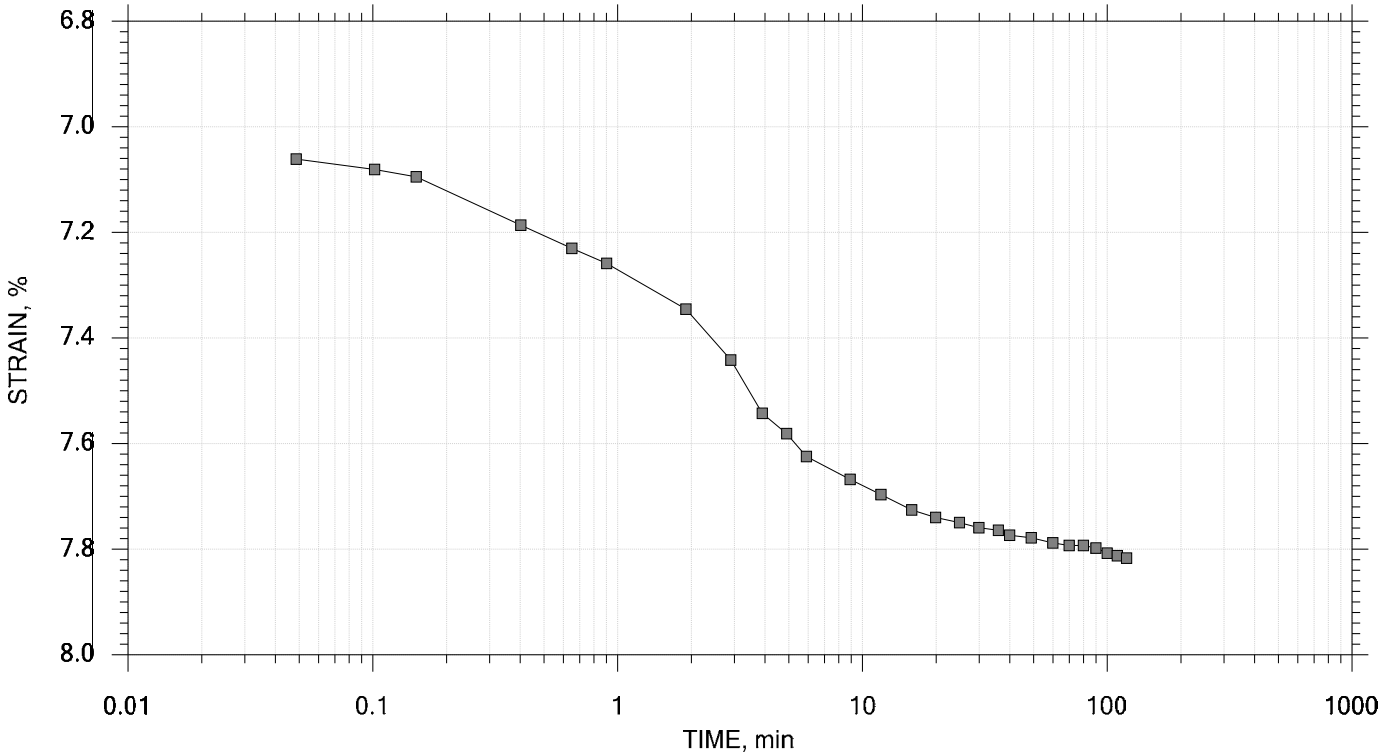
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

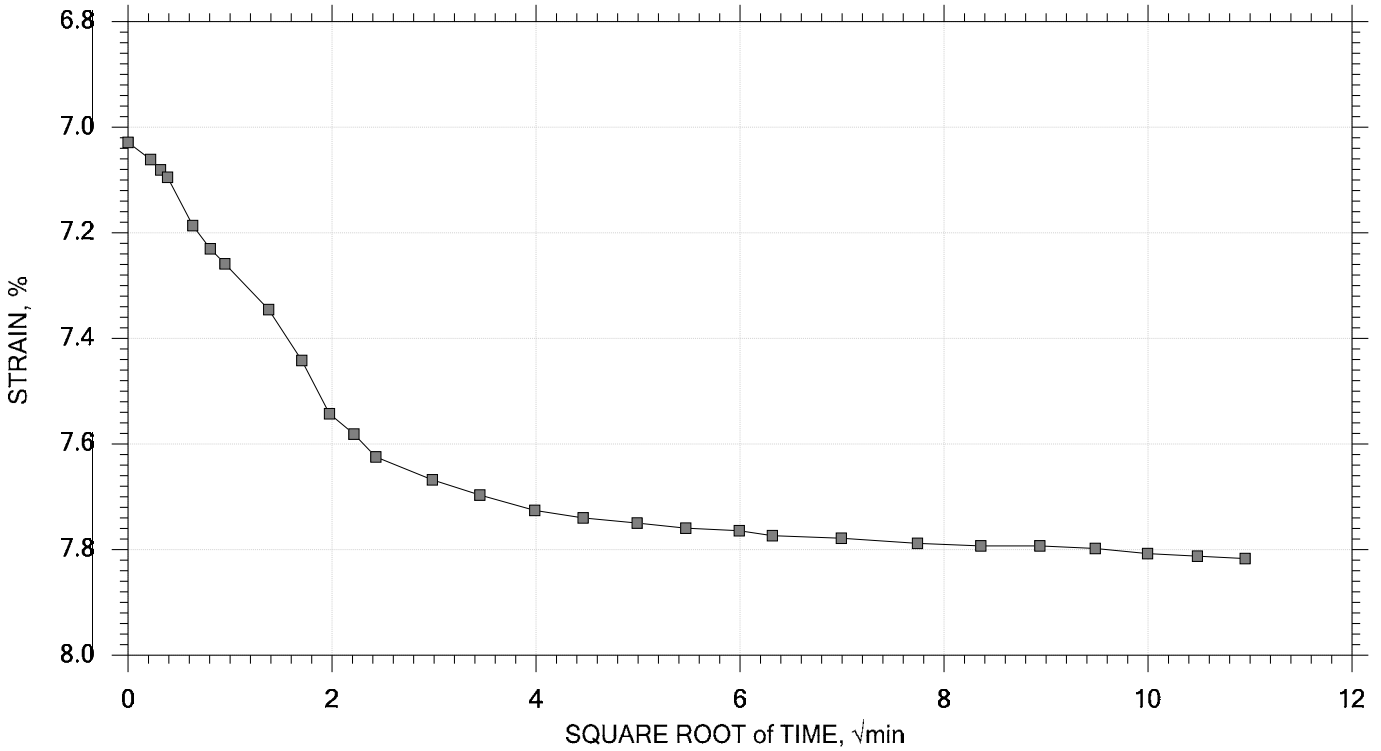
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 13 of 21

Stress: 4 tsf





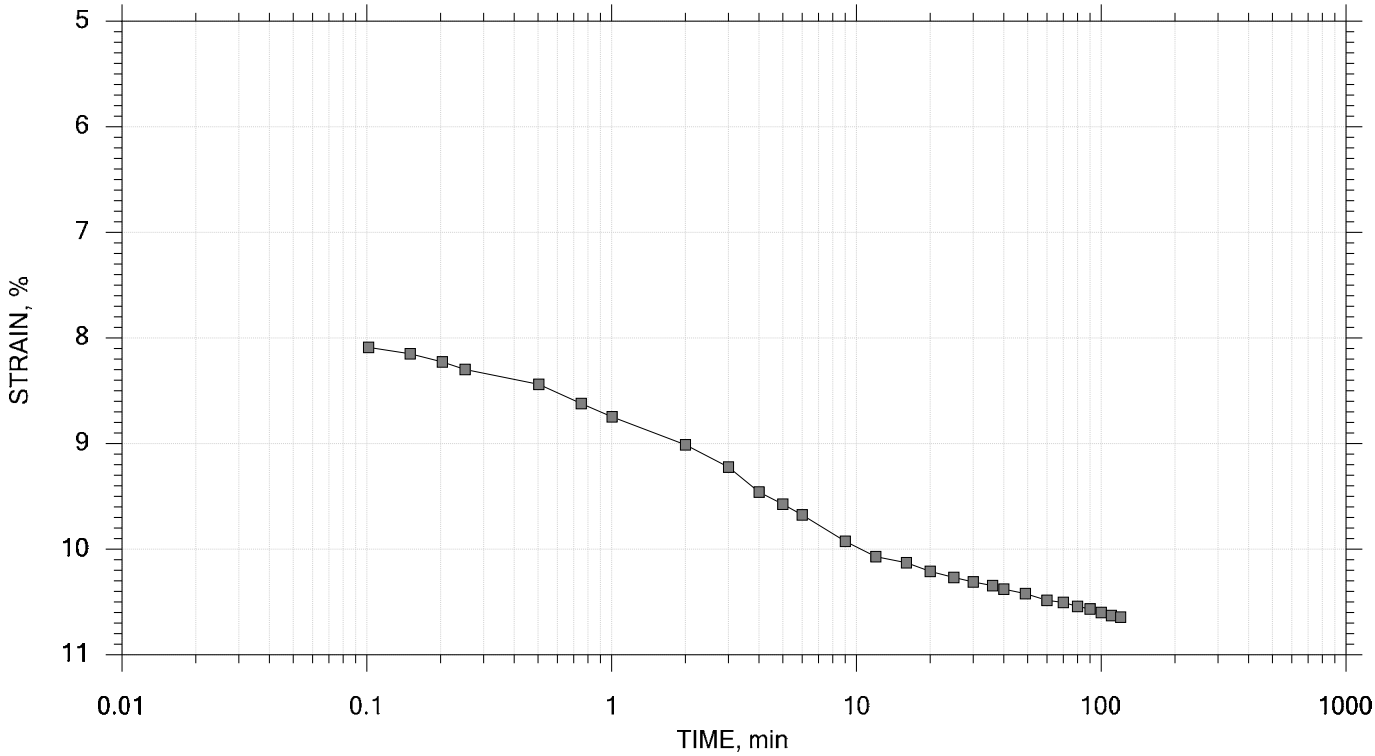
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

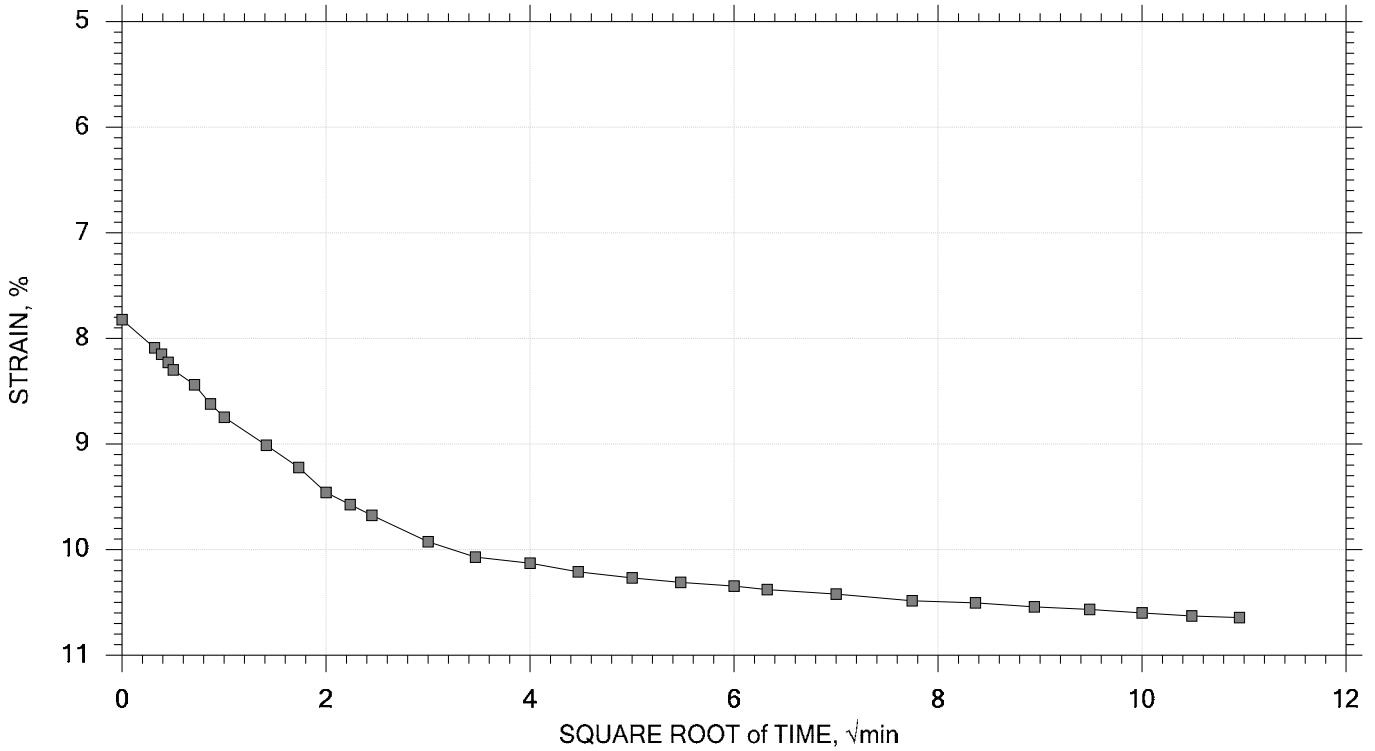
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 14 of 21

Stress: 8 tsf





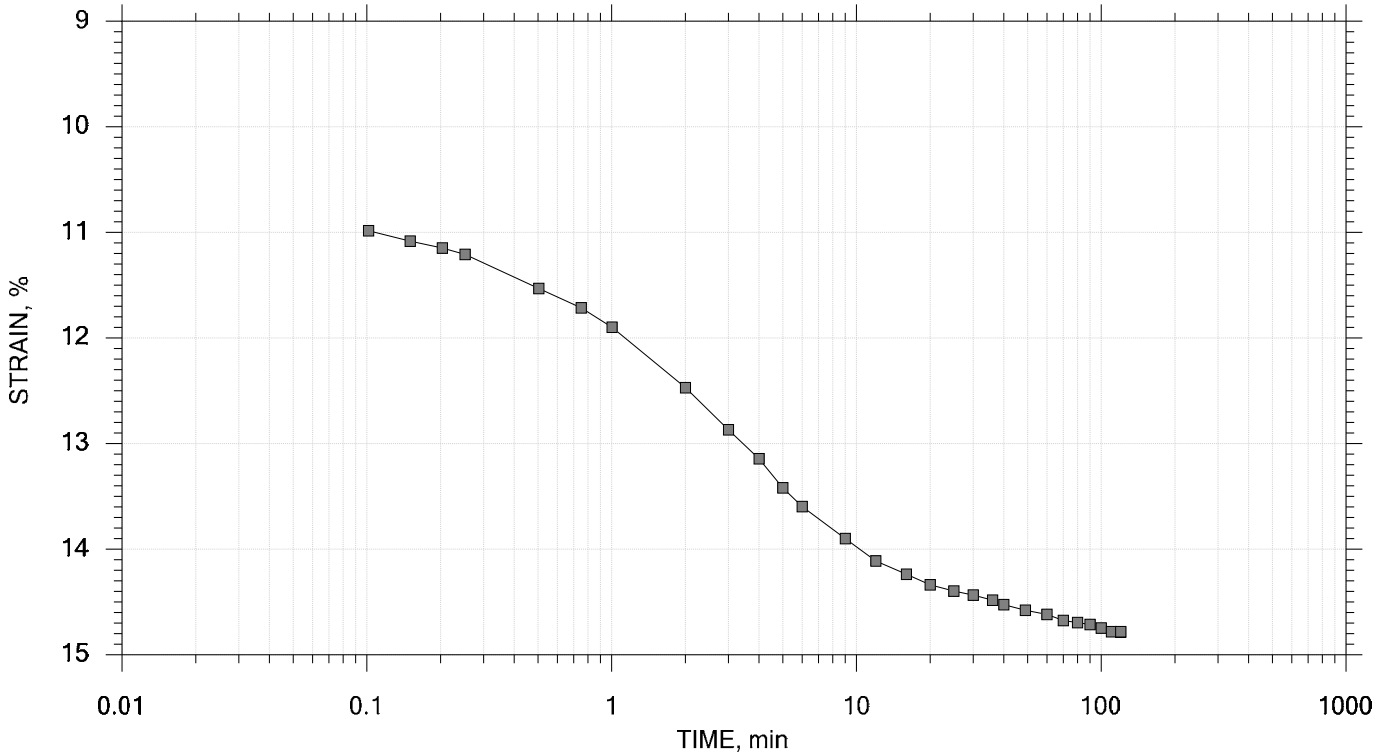
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

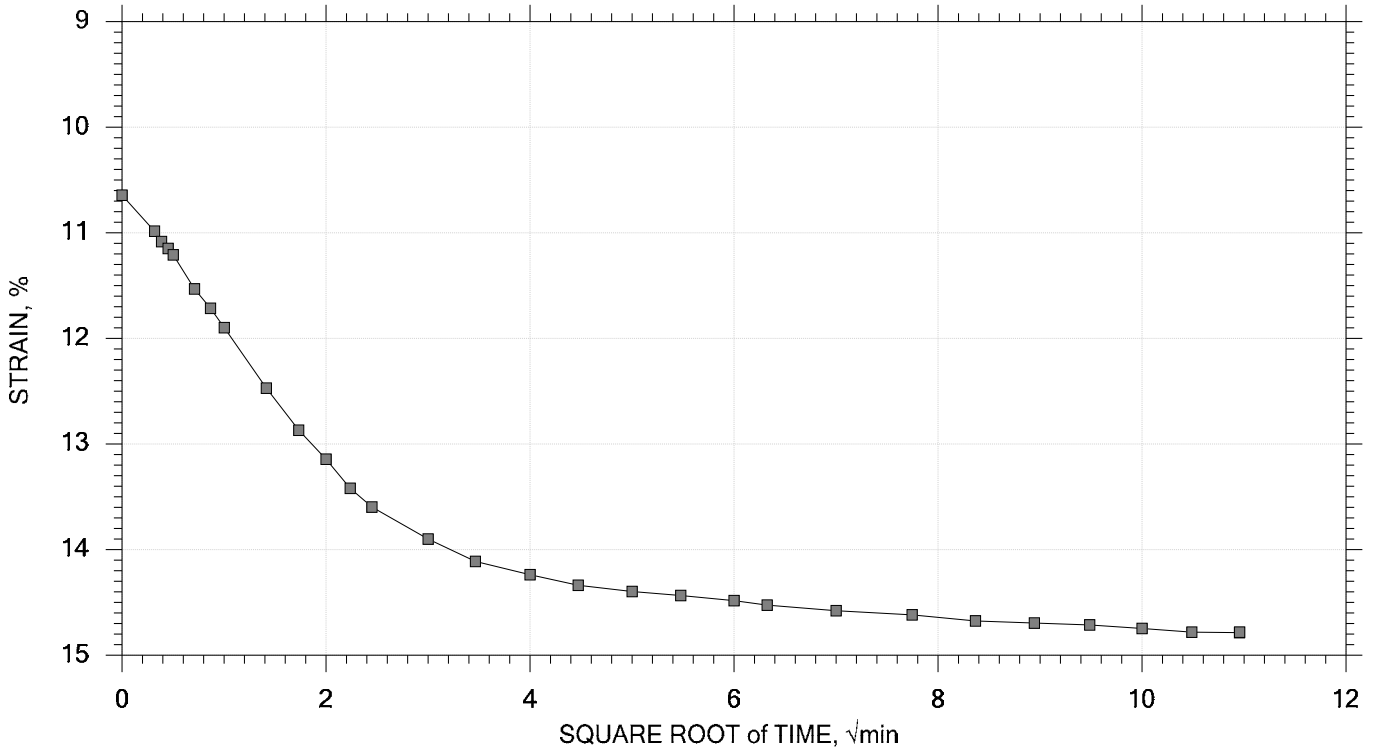
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 15 of 21

Stress: 16 tsf





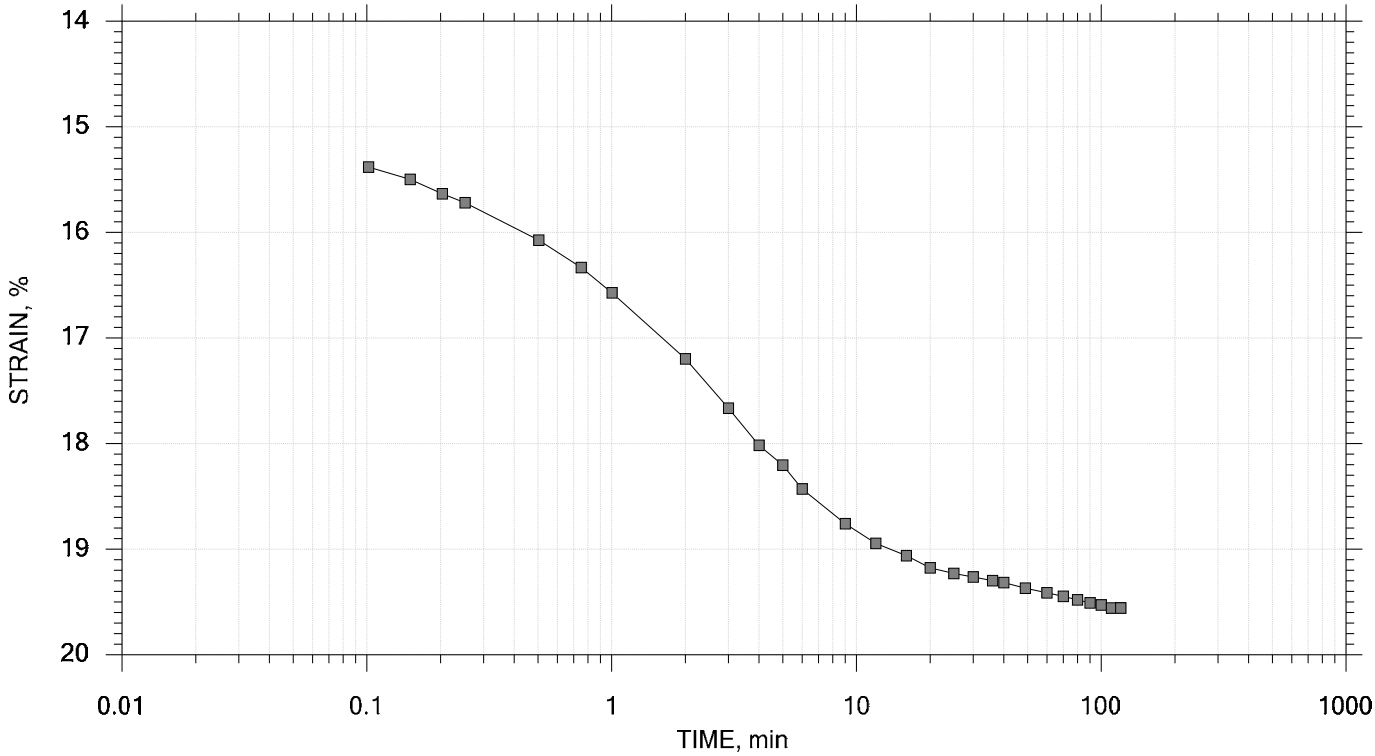
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

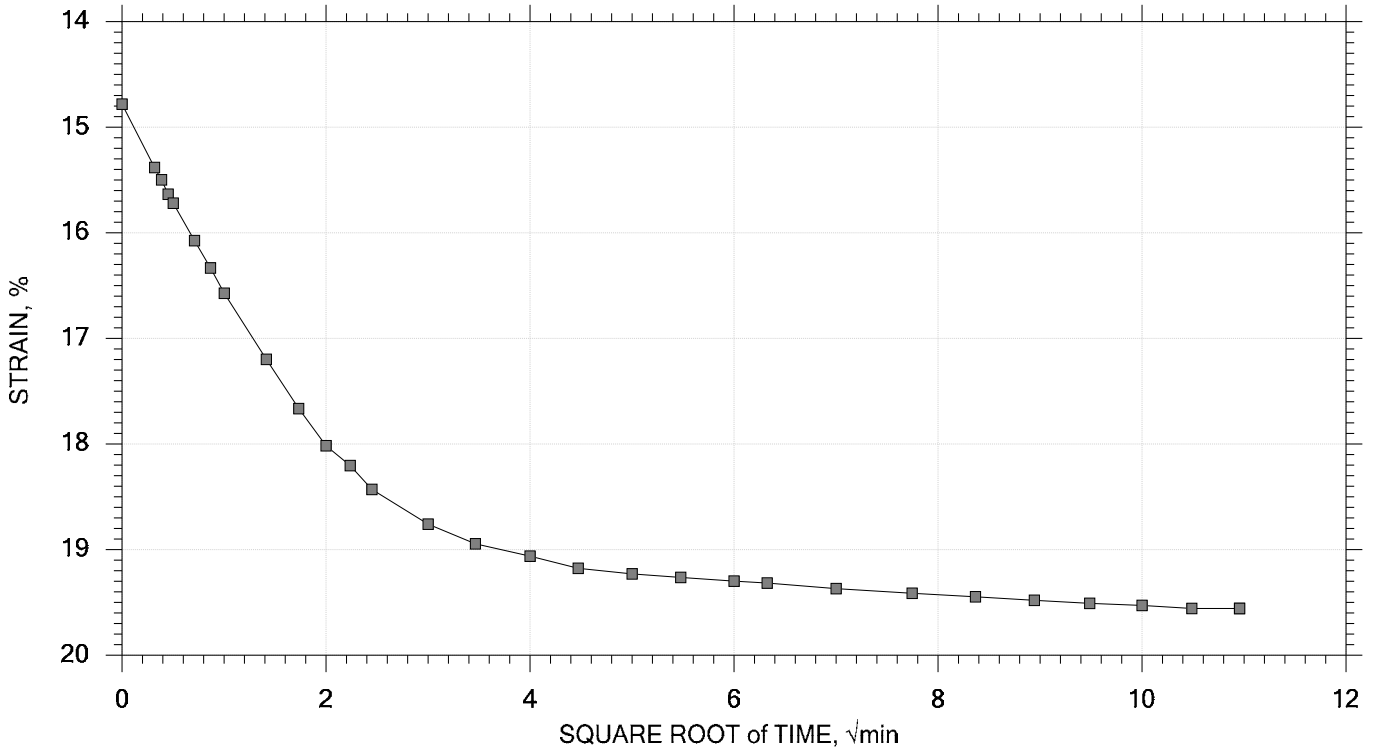
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 16 of 21

Stress: 32 tsf





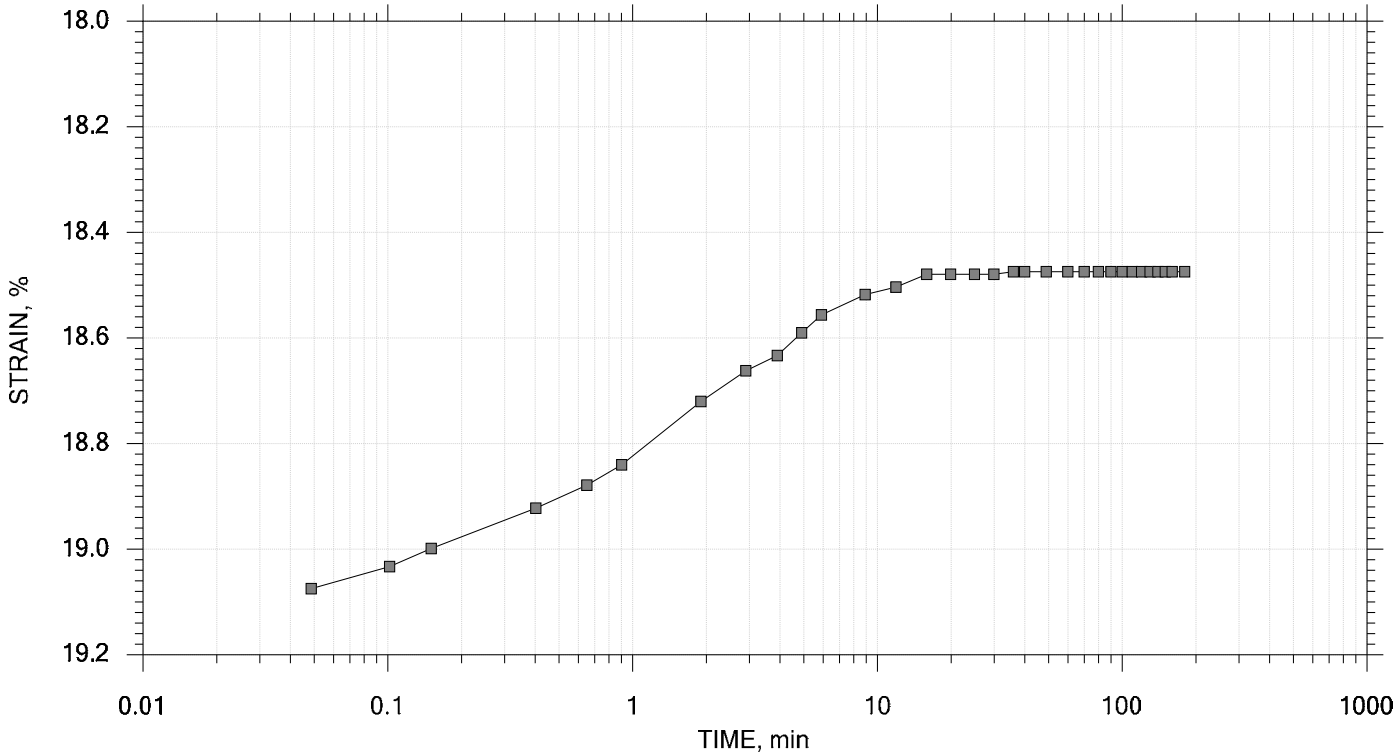
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

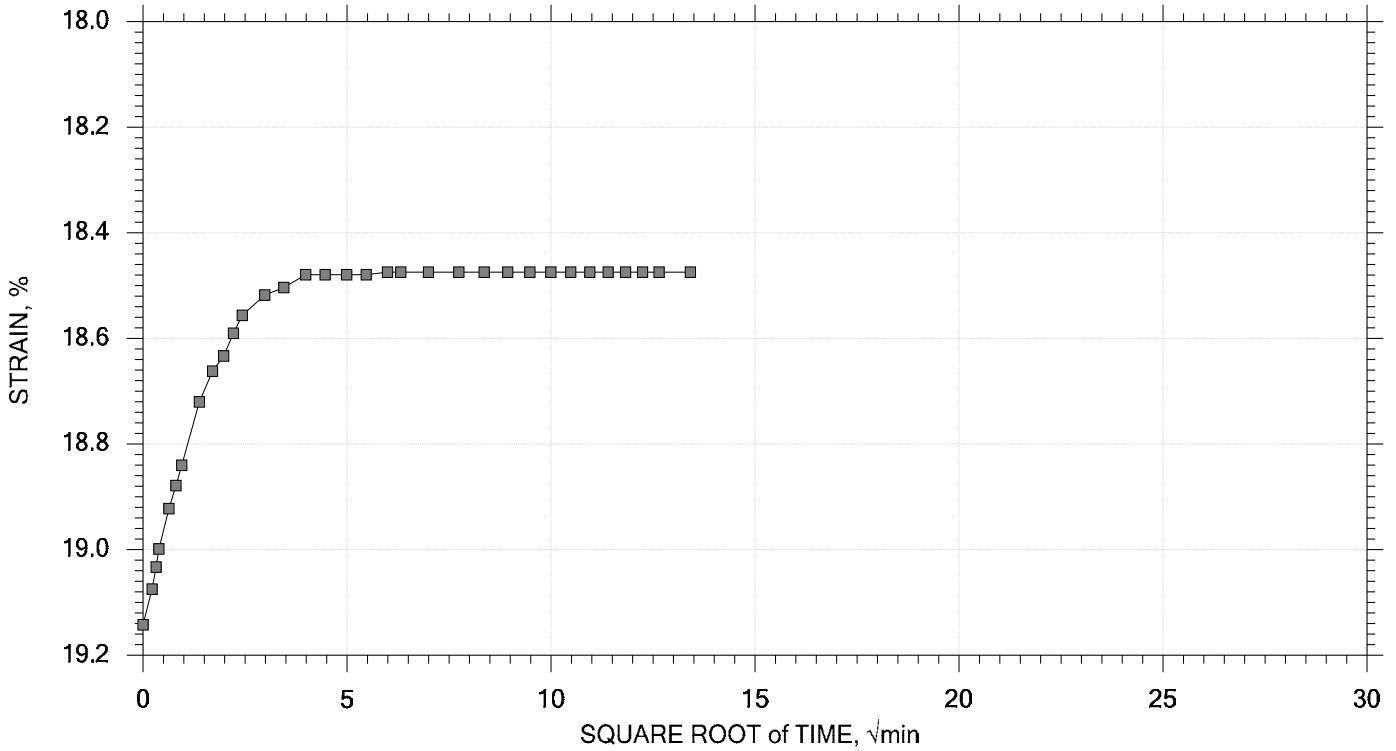
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 17 of 21

Stress: 8 tsf





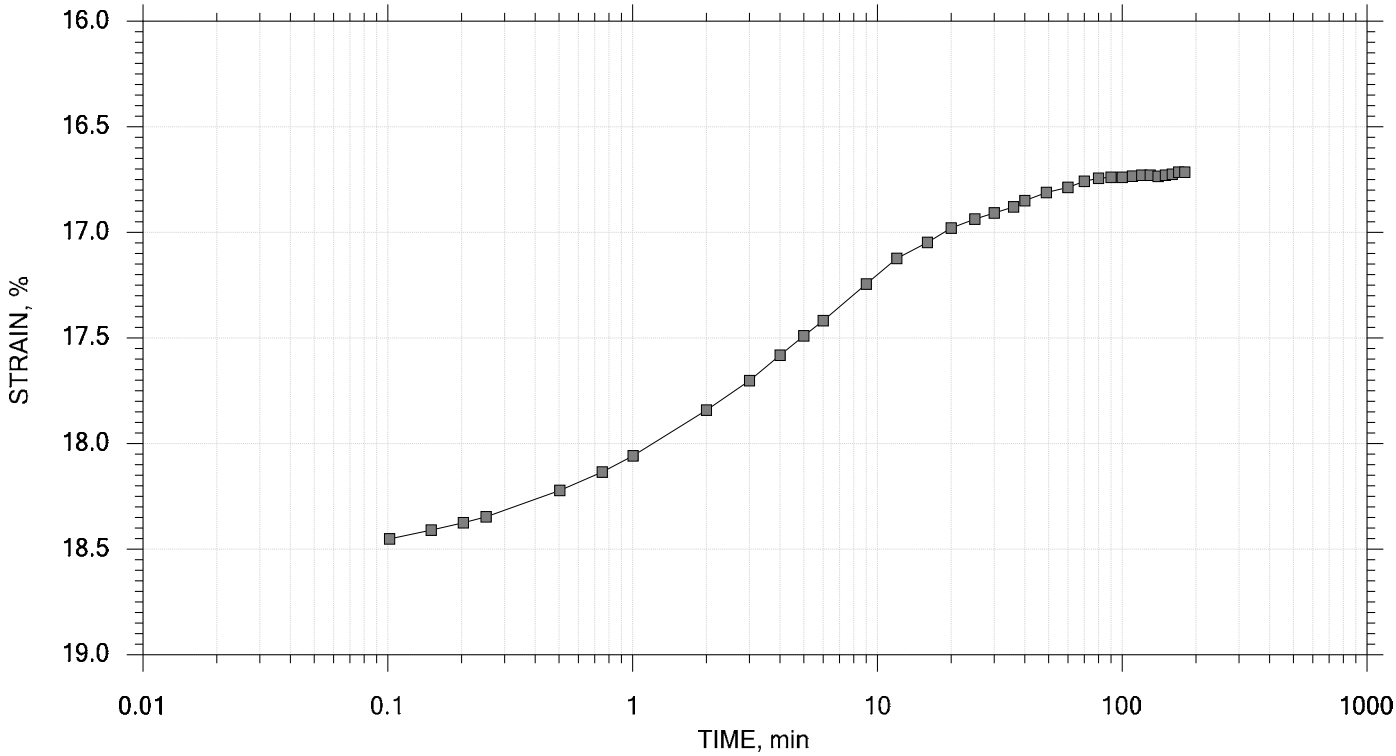
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

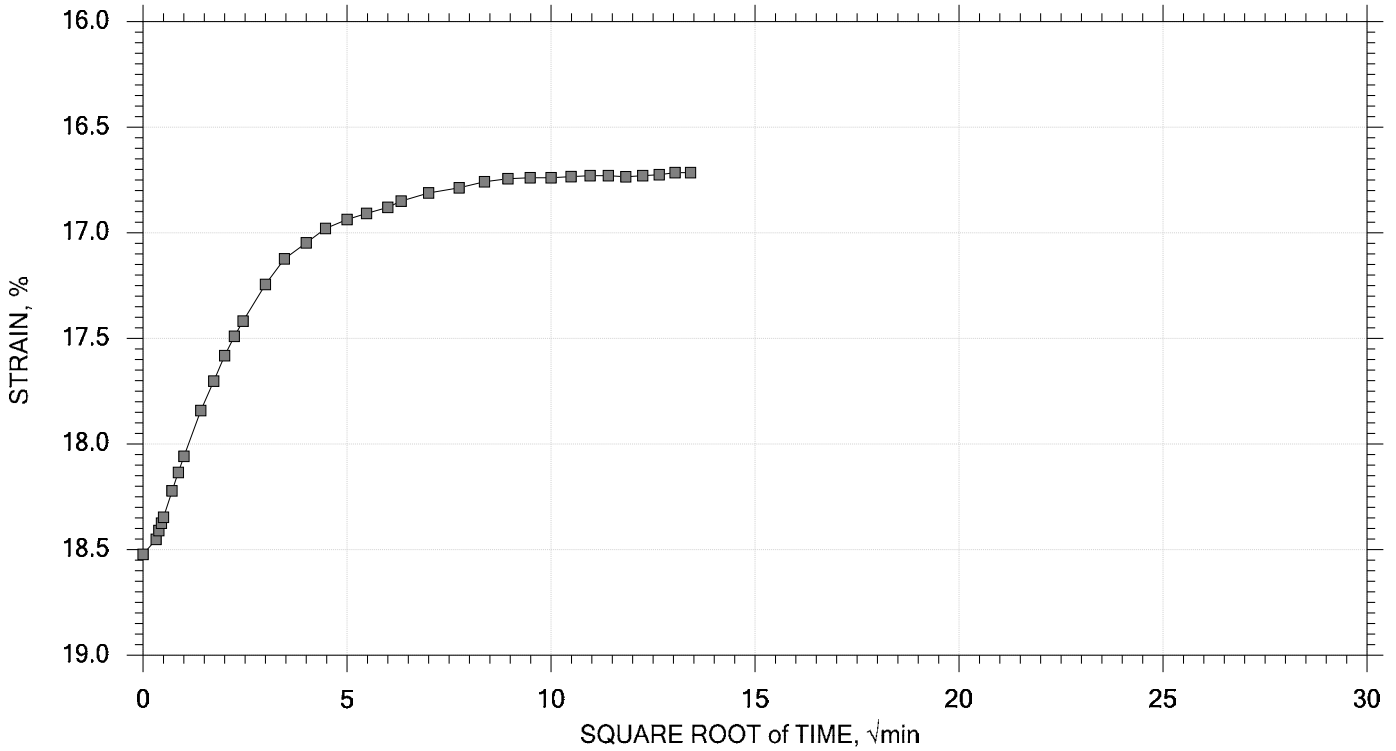
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 18 of 21

Stress: 2 tsf





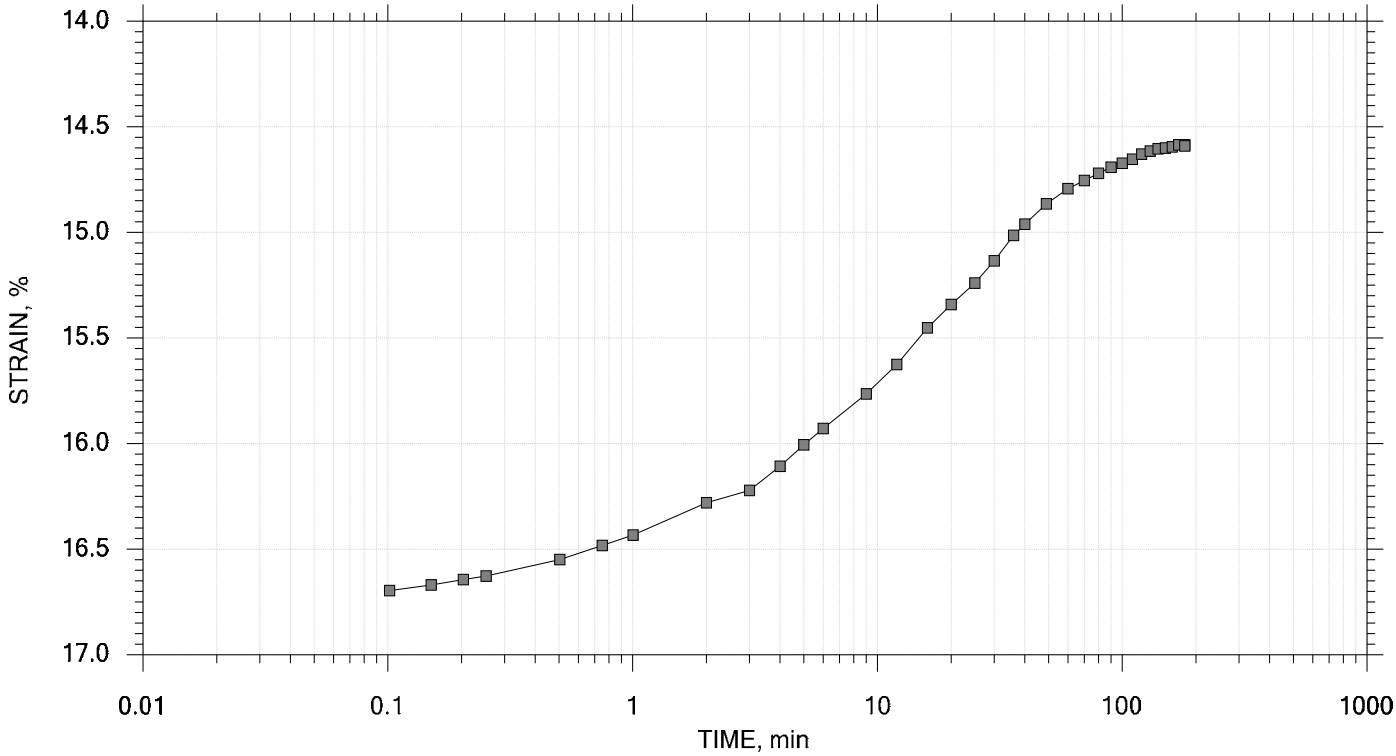
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

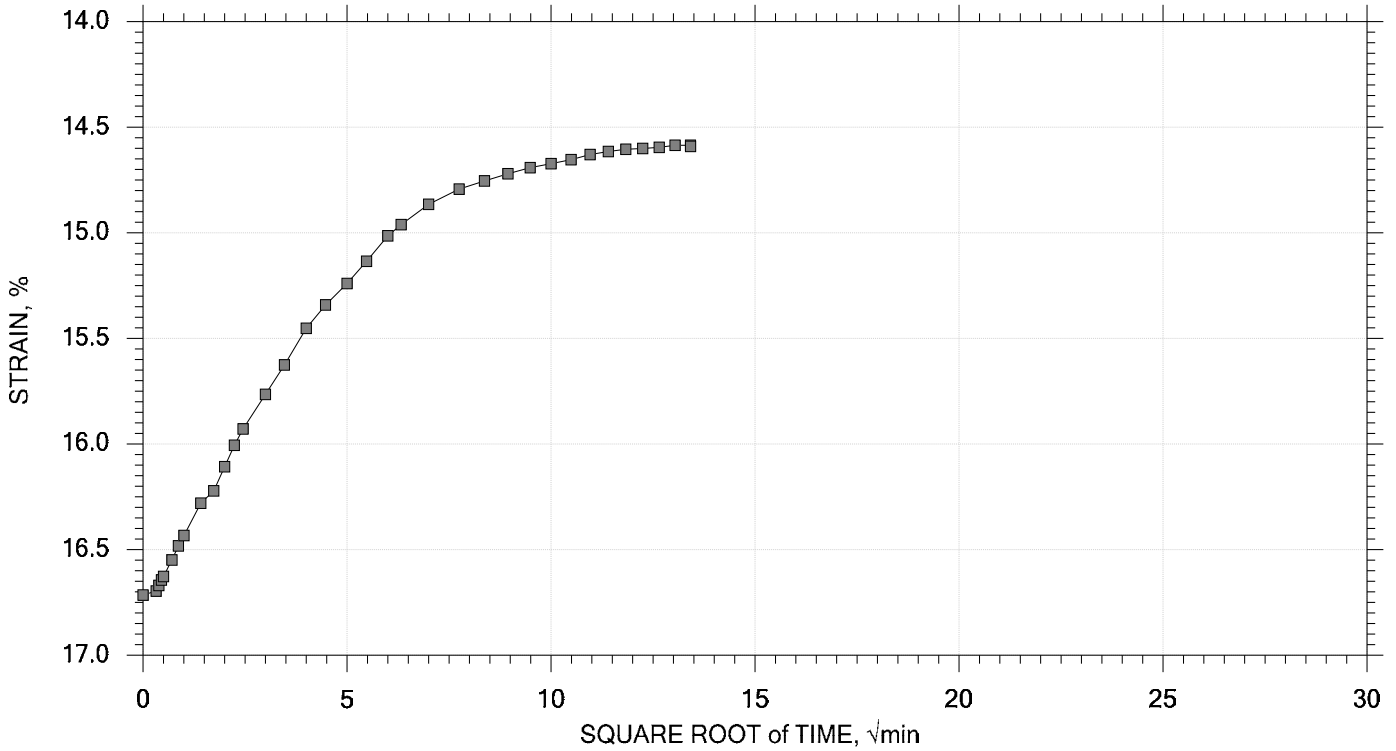
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 19 of 21

Stress: 0.5 tsf





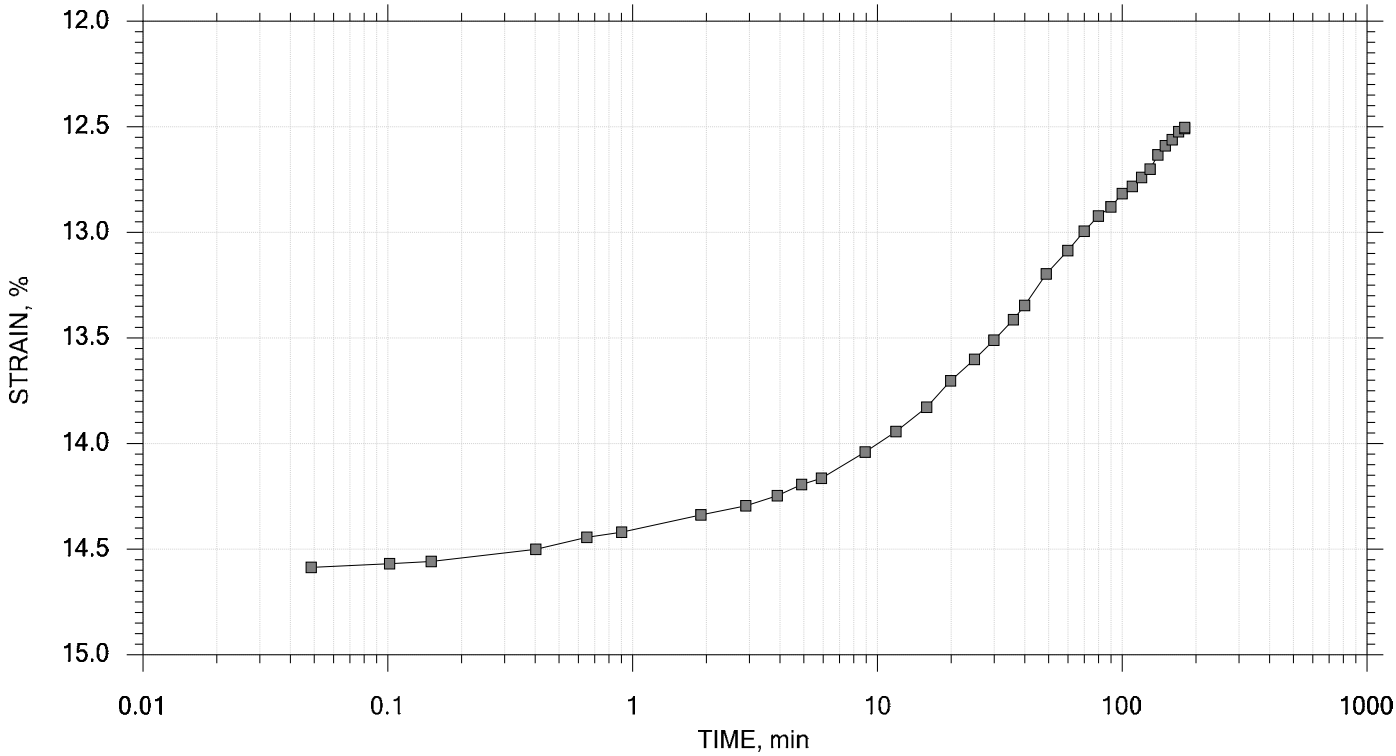
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

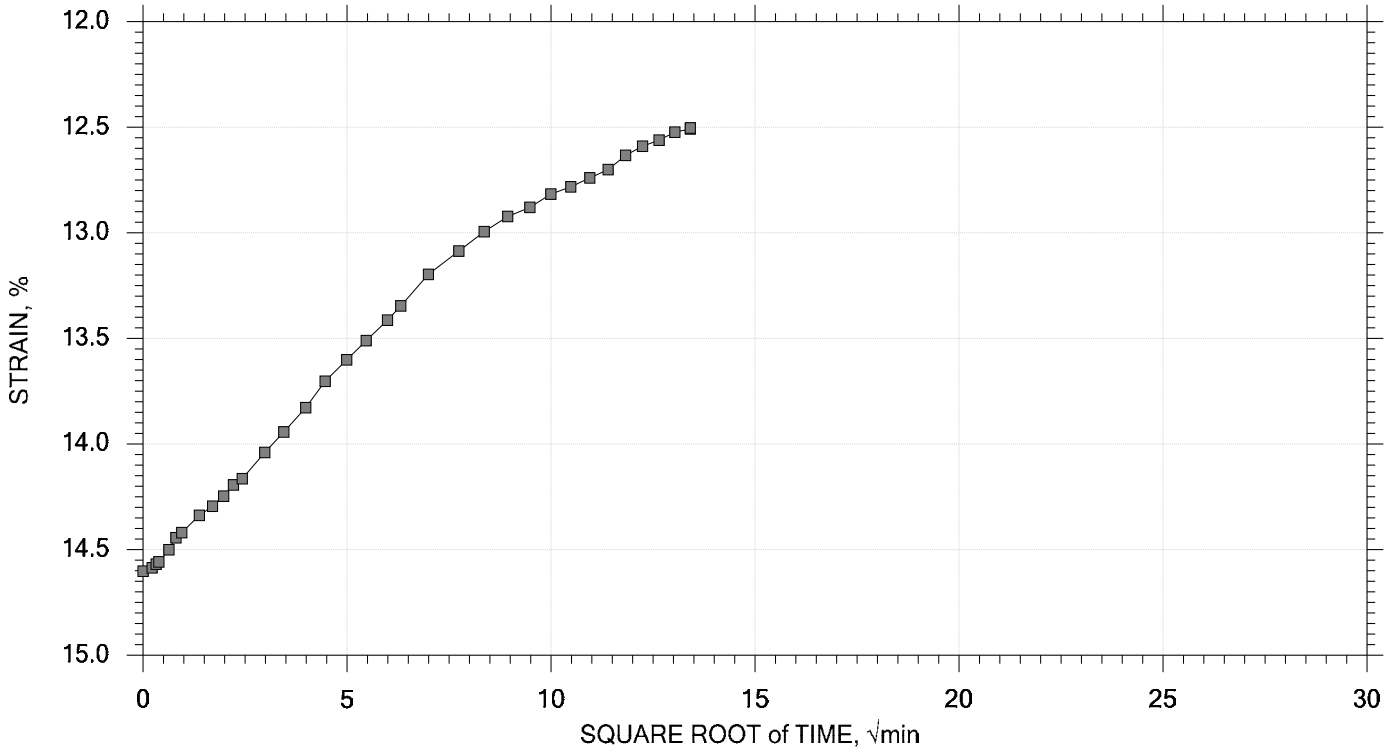
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 20 of 21

Stress: 0.125 tsf





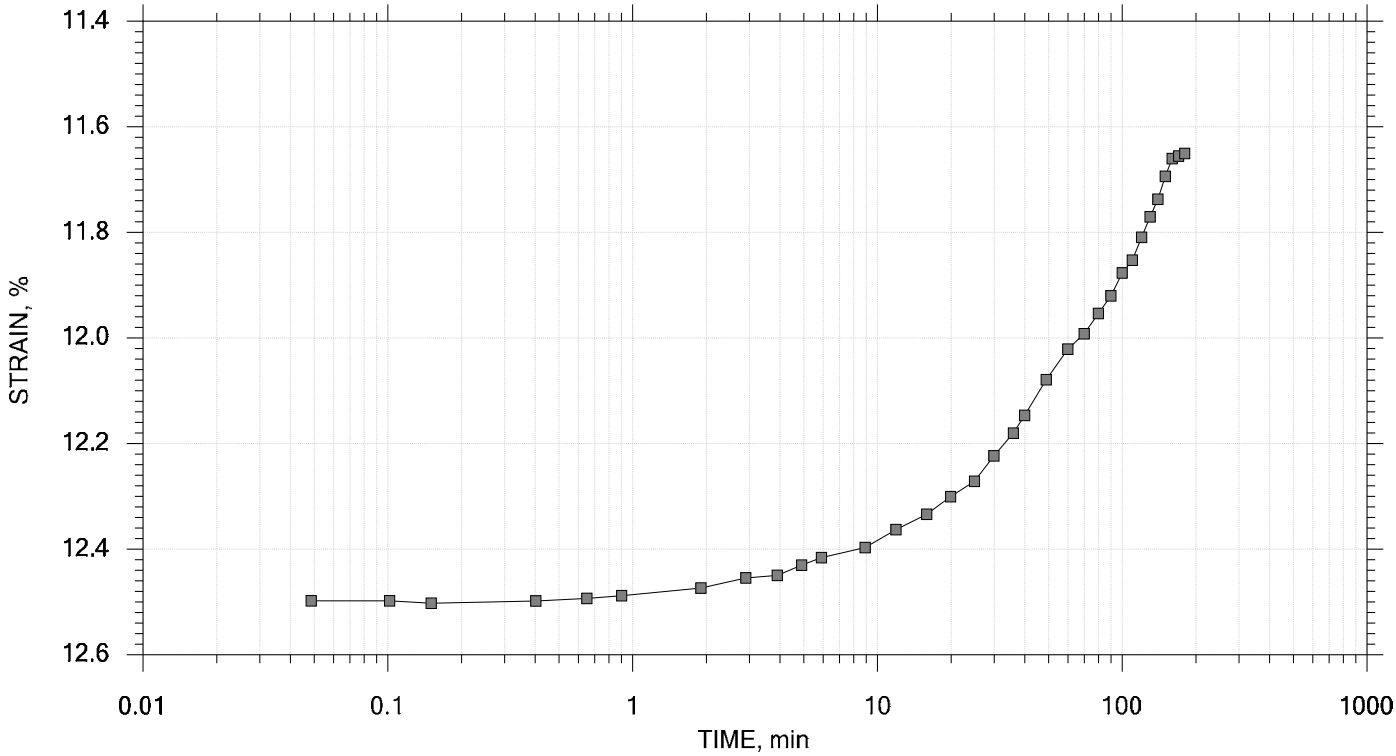
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

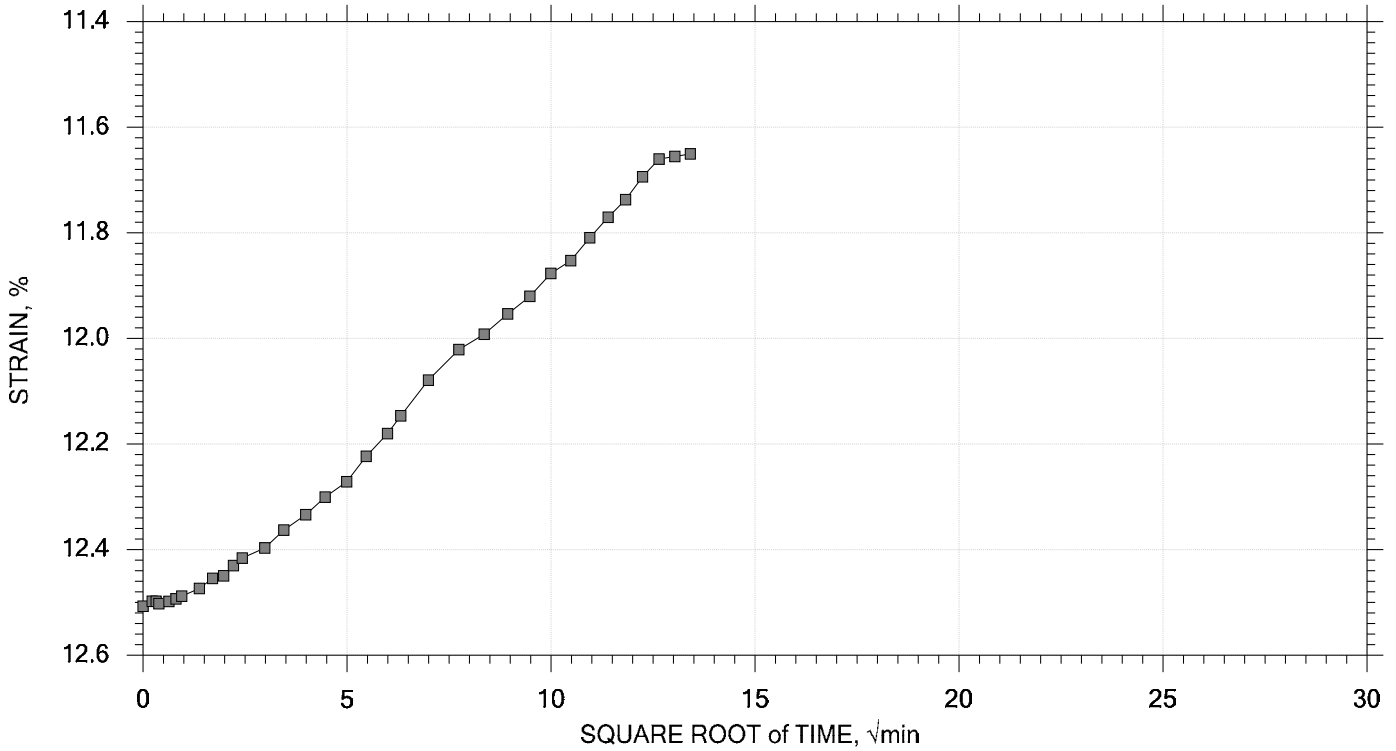
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 21 of 21

Stress: 0.0625 tsf

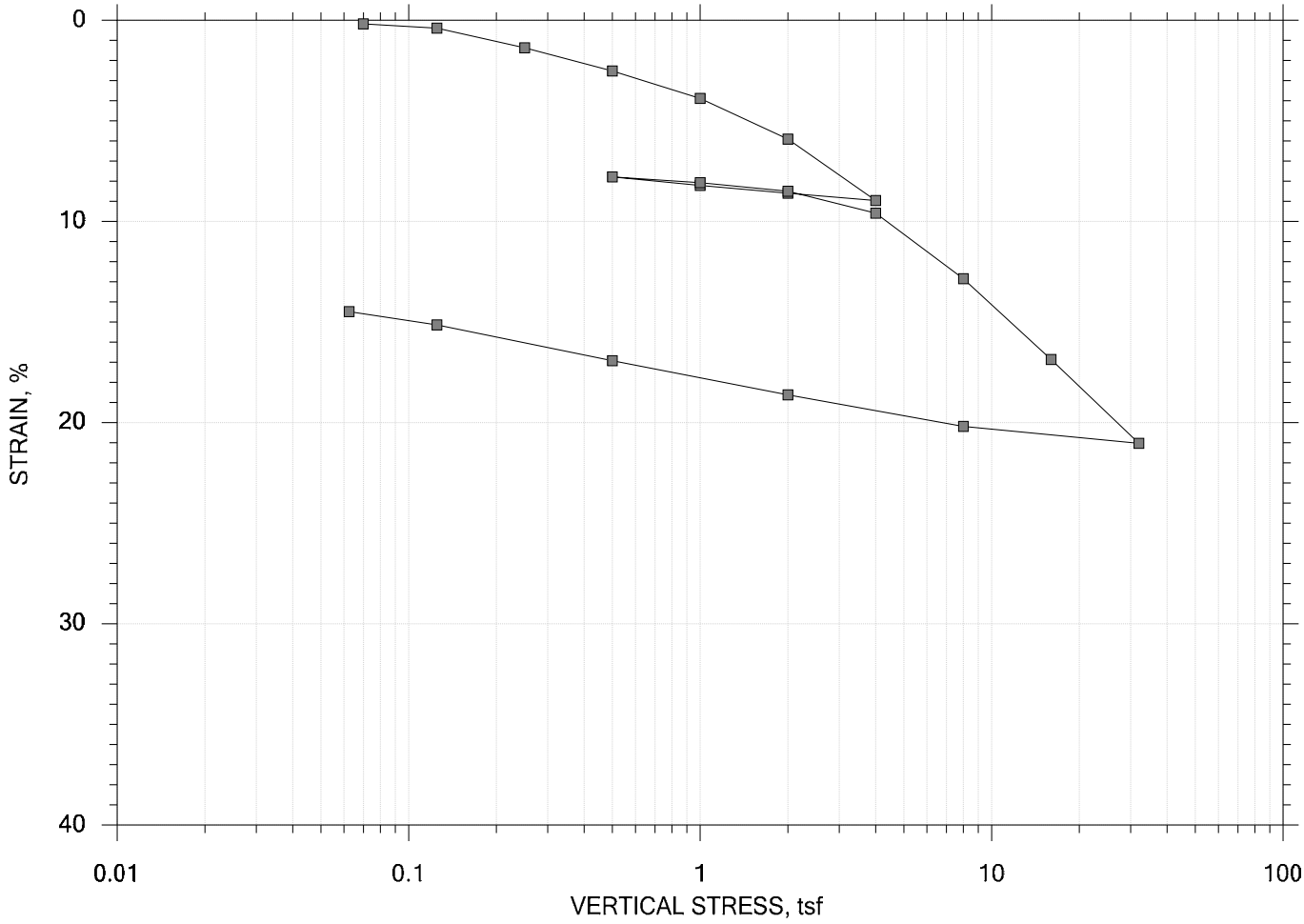


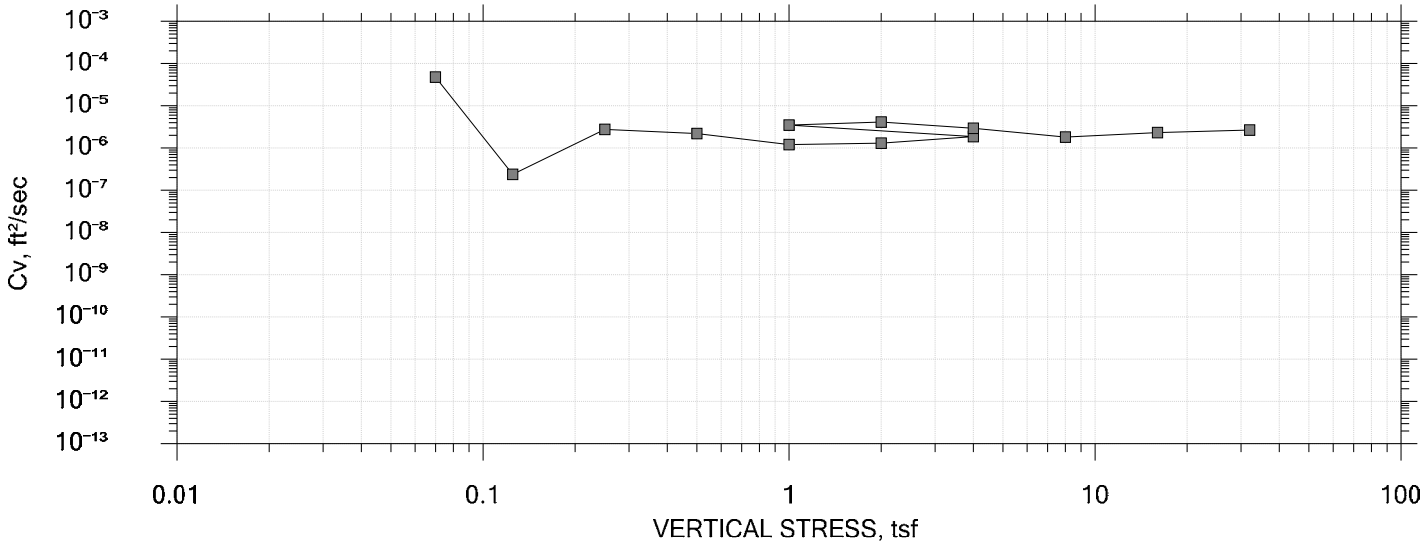


GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-4	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/07/17	Test No.: IP-2
	Depth: 32-34 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System S, Swell Pressure = 0.0740 tsf		

One-Dimensional Consolidation by ASTM D2435 - Method B

SUMMARY REPORT

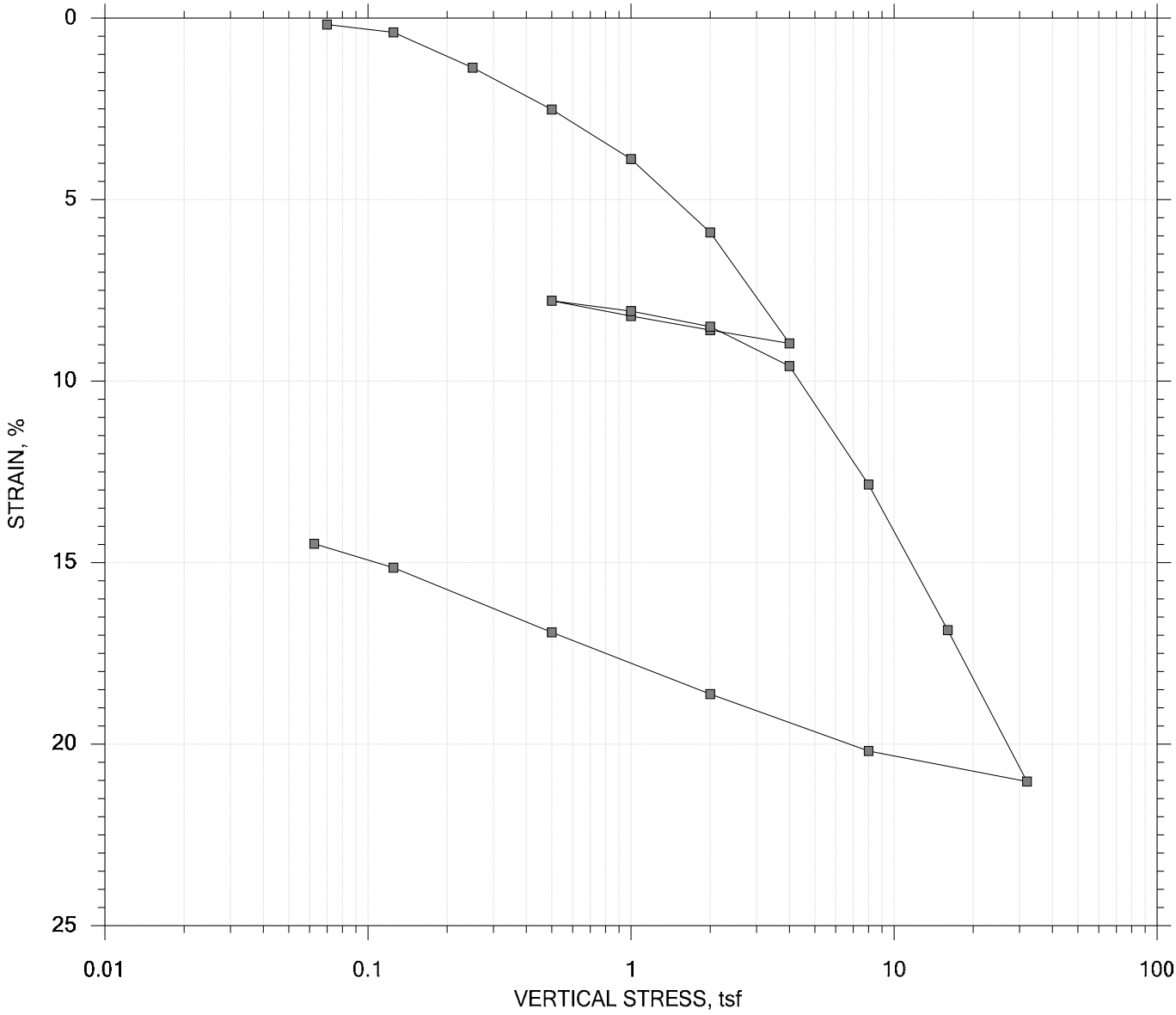




GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

SUMMARY REPORT



					Before Test	After Test
Current Vertical Effective Stress: ---				Water Content, %	32.36	23.48
Preconsolidation Stress: ---				Dry Unit Weight, pcf	91.04	104.64
Compression Ratio: ---				Saturation, %	99.90	100.00
Diameter: 2.5 in		Height: 1 in		Void Ratio	0.90	0.65
LL: 40	PL: 22	PI: 18	GS: 2.76			

GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		
	Displacement at End of Increment		

One-Dimensional Consolidation by ASTM D2435 - Method B

Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
Boring No.: HP-6	Tested By: md	Checked By: mcm
Sample No.: ST-1	Test Date: 08/06/17	Depth: 27-29 ft
Test No.: IP-1	Sample Type: intact	Elevation: ---

Soil Description: Moist, olive clay
Remarks: System R&D, Swell Pressure = 0.0698 tsf

Estimated Specific Gravity: 2.76	Liquid Limit: 40	Specimen Diameter: 2.50 in
Initial Void Ratio: 0.895	Plastic Limit: 22	Initial Height: 1.00 in
Final Void Ratio: 0.649	Plasticity Index: 18	Final Height: 0.87 in

	Before Consolidation		After Consolidation	
	Trimmings	Specimen+Ring	Specimen+Ring	Trimmings
Container ID	C-1678	RING		9353
Wt. Container + Wet Soil, gm	305.64	267.16	256.74	153.08
Wt. Container + Dry Soil, gm	226.18	229.20	229.20	125.59
Wt. Container, gm	8.3300	111.89	111.89	8.5100
Wt. Dry Soil, gm	217.85	117.31	117.31	117.08
Water Content, %	36.47	32.36	23.48	23.48
Void Ratio	---	0.895	0.649	---
Degree of Saturation, %	---	99.90	100.00	---
Dry Unit Weight, pcf	---	91.040	104.64	---

Note: Specific Gravity and Void Ratios are calculated assuming the degree of saturation equals 100% at the end of the test. Therefore, values may not represent actual values for the specimen.

One-Dimensional Consolidation by ASTM D2435 - Method B

Project: Heritage State Park | Location: Lynn, MA | Project No.: GTX-306811
Boring No.: HP-6 | Tested By: md | Checked By: mcm
Sample No.: ST-1 | Test Date: 08/06/17 | Depth: 27-29 ft
Test No.: IP-1 | Sample Type: intact | Elevation: ---

Soil Description: Moist, olive clay
Remarks: System R&D, Swell Pressure = 0.0698 tsf

Displacement at End of Increment

	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Sq.Rt T90 min	Cv ft²/sec	Mv 1/tsf	k ft/day
1	0.0698	0.001775	0.892	0.177	0.869	2.82e-005	2.54e-002	1.93e-003
2	0.125	0.003918	0.888	0.392	154.308	1.58e-007	3.89e-002	1.66e-005
3	0.250	0.01366	0.870	1.37	9.037	2.67e-006	7.79e-002	5.61e-004
4	0.500	0.02516	0.848	2.52	10.492	2.25e-006	4.60e-002	2.79e-004
5	1.00	0.03883	0.822	3.88	20.446	1.12e-006	2.73e-002	8.29e-005
6	2.00	0.05905	0.783	5.90	15.737	1.41e-006	2.02e-002	7.69e-005
7	4.00	0.08960	0.726	8.96	11.630	1.81e-006	1.53e-002	7.45e-005
8	2.00	0.08592	0.733	8.59	2.306	8.85e-006	1.84e-003	4.39e-005
9	1.00	0.08205	0.740	8.21	4.094	5.03e-006	3.86e-003	5.24e-005
10	0.500	0.07784	0.748	7.78	10.049	2.07e-006	8.42e-003	4.69e-005
11	1.00	0.08069	0.742	8.07	5.970	3.48e-006	5.68e-003	5.34e-005
12	2.00	0.08499	0.734	8.50	5.360	3.85e-006	4.31e-003	4.47e-005
13	4.00	0.09586	0.714	9.59	6.041	3.36e-006	5.43e-003	4.92e-005
14	8.00	0.1285	0.652	12.8	10.425	1.86e-006	8.15e-003	4.08e-005
15	16.0	0.1686	0.576	16.9	8.299	2.14e-006	5.01e-003	2.90e-005
16	32.0	0.2103	0.497	21.0	6.219	2.59e-006	2.61e-003	1.82e-005
17	8.00	0.2019	0.513	20.2	4.661	3.32e-006	3.51e-004	3.14e-006
18	2.00	0.1862	0.543	18.6	8.913	1.79e-006	2.61e-003	1.26e-005
19	0.500	0.1692	0.575	16.9	42.277	3.92e-007	1.13e-002	1.20e-005
20	0.125	0.1514	0.608	15.1	127.364	1.36e-007	4.75e-002	1.74e-005
21	0.0625	0.1448	0.621	14.5	0.000	0.00e+000	1.06e-001	0.00e+000

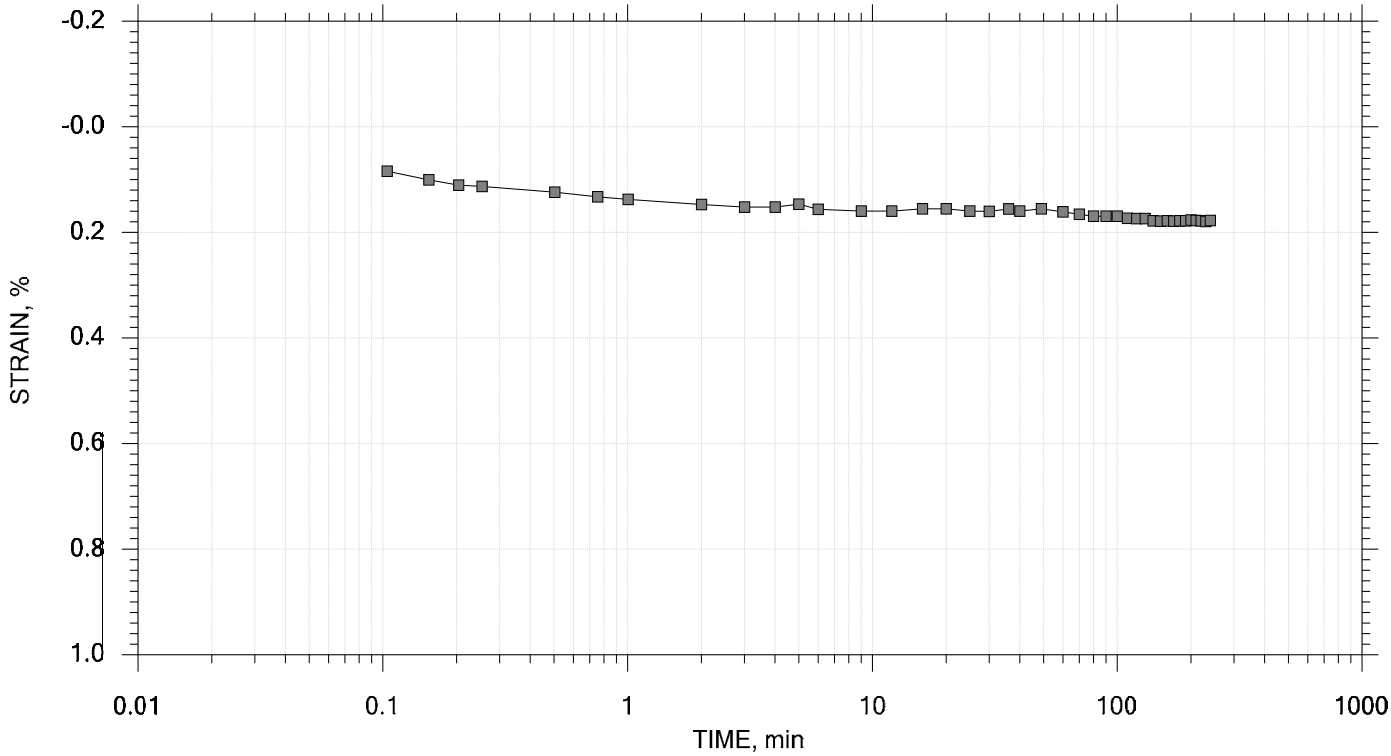
	Applied Stress tsf	Final Displacement in	Void Ratio	Strain at End %	Log T50 min	Cv ft²/sec	Mv 1/tsf	k ft/day	Ca %
1	0.0698	0.001775	0.892	0.177	0.000	0.00e+000	2.54e-002	0.00e+000	0.00e+000
2	0.125	0.003918	0.888	0.392	0.000	0.00e+000	3.89e-002	0.00e+000	0.00e+000
3	0.250	0.01366	0.870	1.37	2.190	2.56e-006	7.79e-002	5.38e-004	0.00e+000
4	0.500	0.02516	0.848	2.52	2.542	2.16e-006	4.60e-002	2.68e-004	0.00e+000
5	1.00	0.03883	0.822	3.88	3.980	1.34e-006	2.73e-002	9.89e-005	0.00e+000
6	2.00	0.05905	0.783	5.90	4.126	1.25e-006	2.02e-002	6.81e-005	0.00e+000
7	4.00	0.08960	0.726	8.96	2.465	1.98e-006	1.53e-002	8.16e-005	0.00e+000
8	2.00	0.08592	0.733	8.59	0.000	0.00e+000	1.84e-003	0.00e+000	0.00e+000
9	1.00	0.08205	0.740	8.21	1.162	4.12e-006	3.86e-003	4.29e-005	0.00e+000
10	0.500	0.07784	0.748	7.78	2.512	1.92e-006	8.42e-003	4.36e-005	0.00e+000
11	1.00	0.08069	0.742	8.07	0.000	0.00e+000	5.68e-003	0.00e+000	0.00e+000
12	2.00	0.08499	0.734	8.50	1.063	4.51e-006	4.31e-003	5.24e-005	0.00e+000
13	4.00	0.09586	0.714	9.59	1.800	2.62e-006	5.43e-003	3.84e-005	0.00e+000
14	8.00	0.1285	0.652	12.8	2.459	1.83e-006	8.15e-003	4.02e-005	0.00e+000
15	16.0	0.1686	0.576	16.9	1.560	2.65e-006	5.01e-003	3.58e-005	0.00e+000
16	32.0	0.2103	0.497	21.0	1.389	2.70e-006	2.61e-003	1.90e-005	0.00e+000
17	8.00	0.2019	0.513	20.2	0.000	0.00e+000	3.51e-004	0.00e+000	0.00e+000
18	2.00	0.1862	0.543	18.6	1.690	2.19e-006	2.61e-003	1.54e-005	0.00e+000
19	0.500	0.1692	0.575	16.9	0.000	0.00e+000	1.13e-002	0.00e+000	0.00e+000
20	0.125	0.1514	0.608	15.1	0.000	0.00e+000	4.75e-002	0.00e+000	0.00e+000
21	0.0625	0.1448	0.621	14.5	0.000	0.00e+000	1.06e-001	0.00e+000	0.00e+000

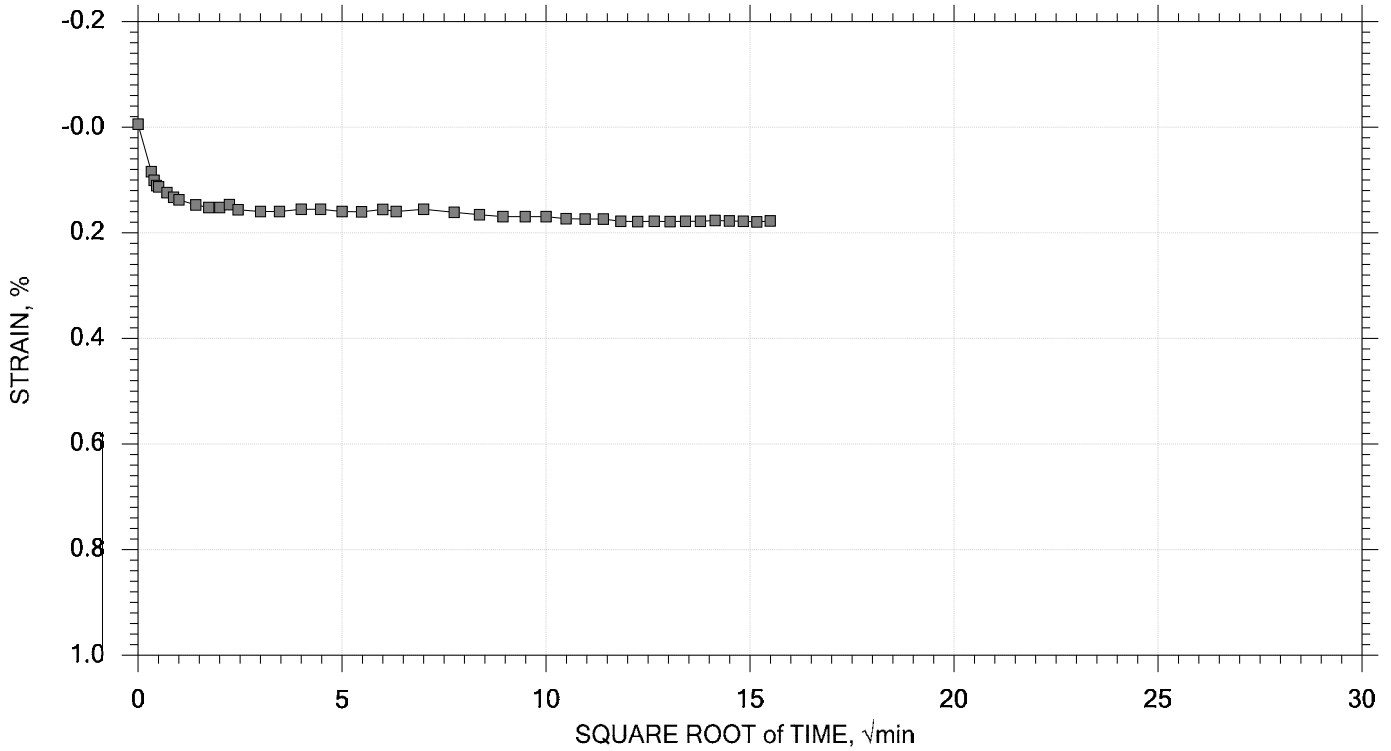
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Volume Step 1 of 21

Stress: 0.069847 tsf





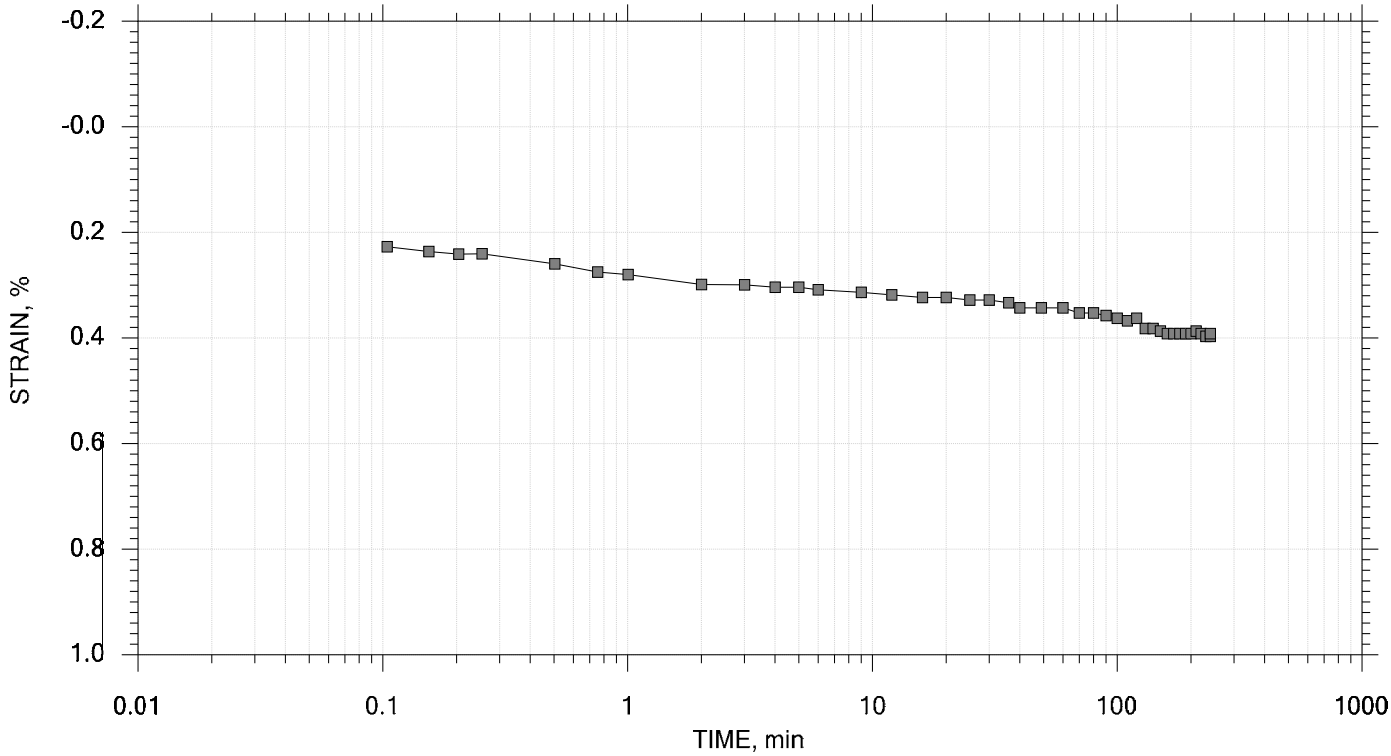
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

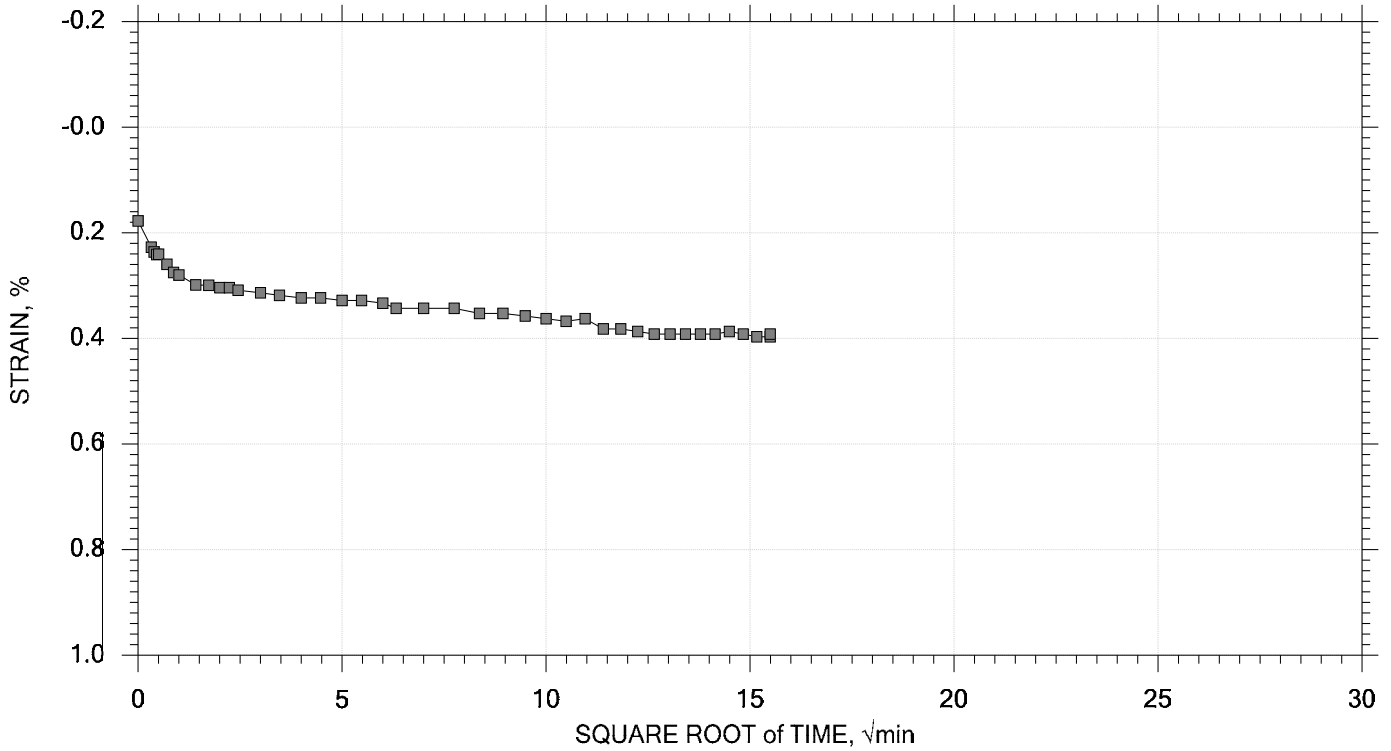
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 2 of 21

Stress: 0.125 tsf





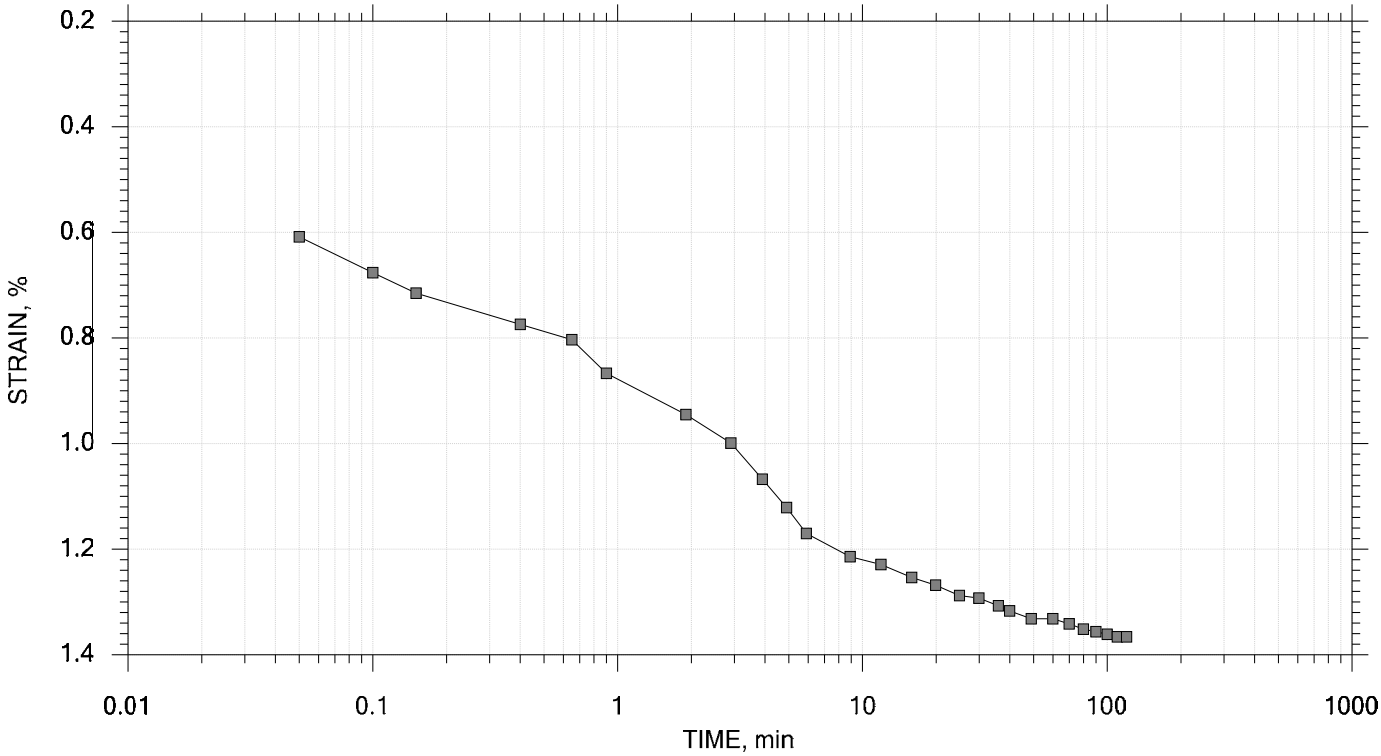
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

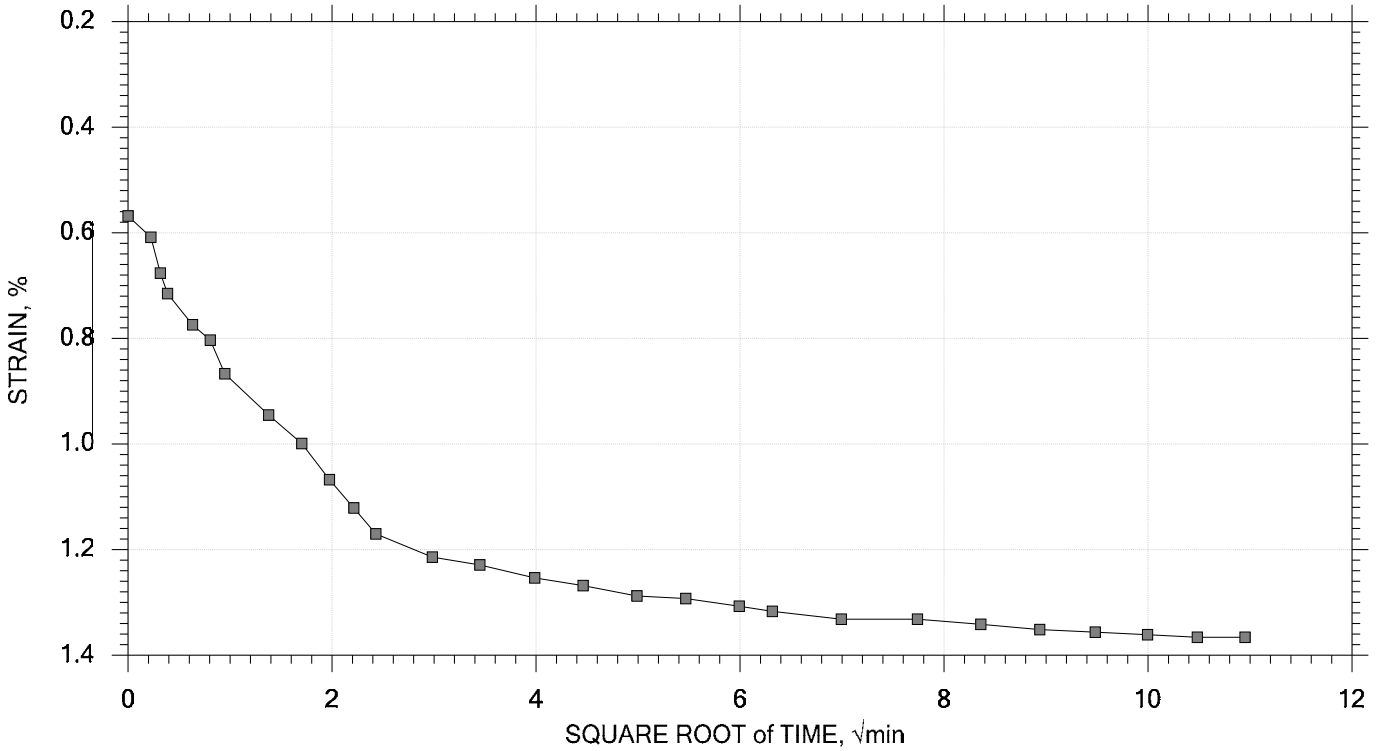
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 3 of 21

Stress: 0.25 tsf





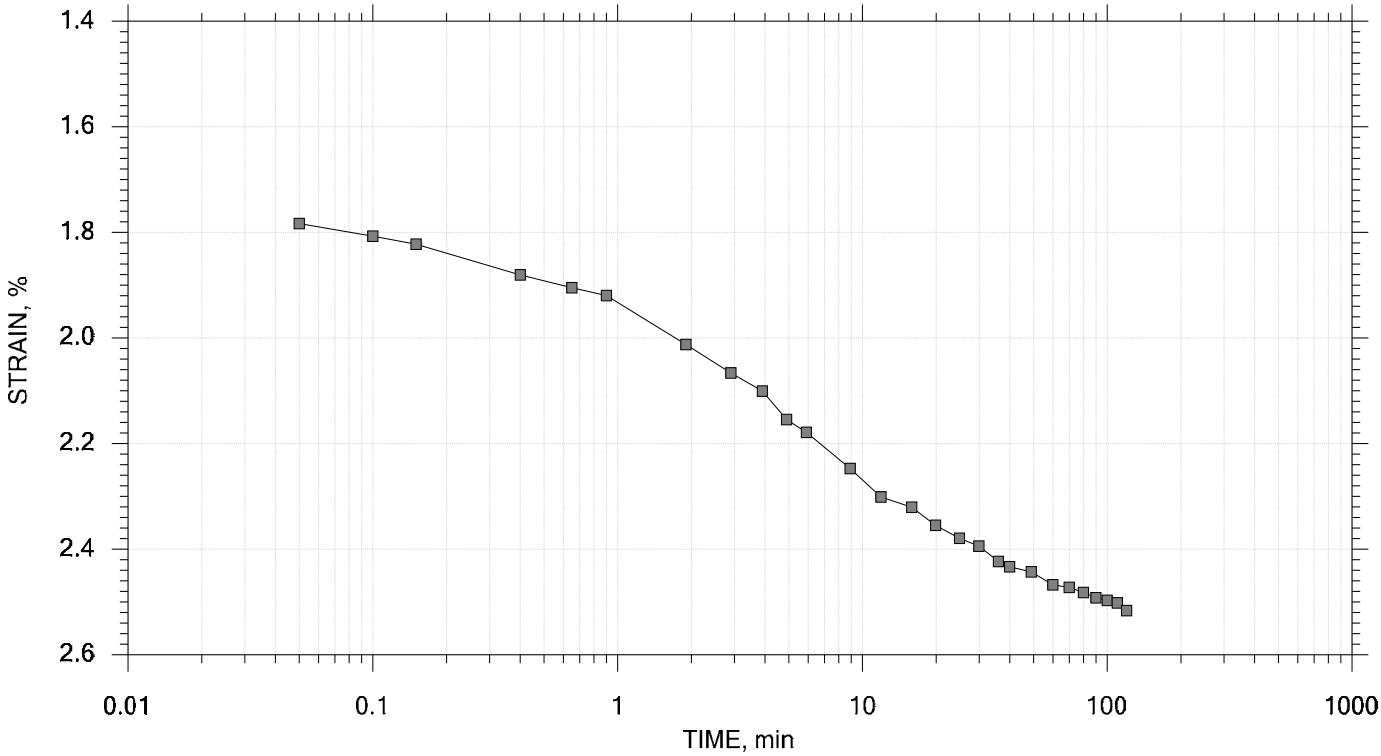
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

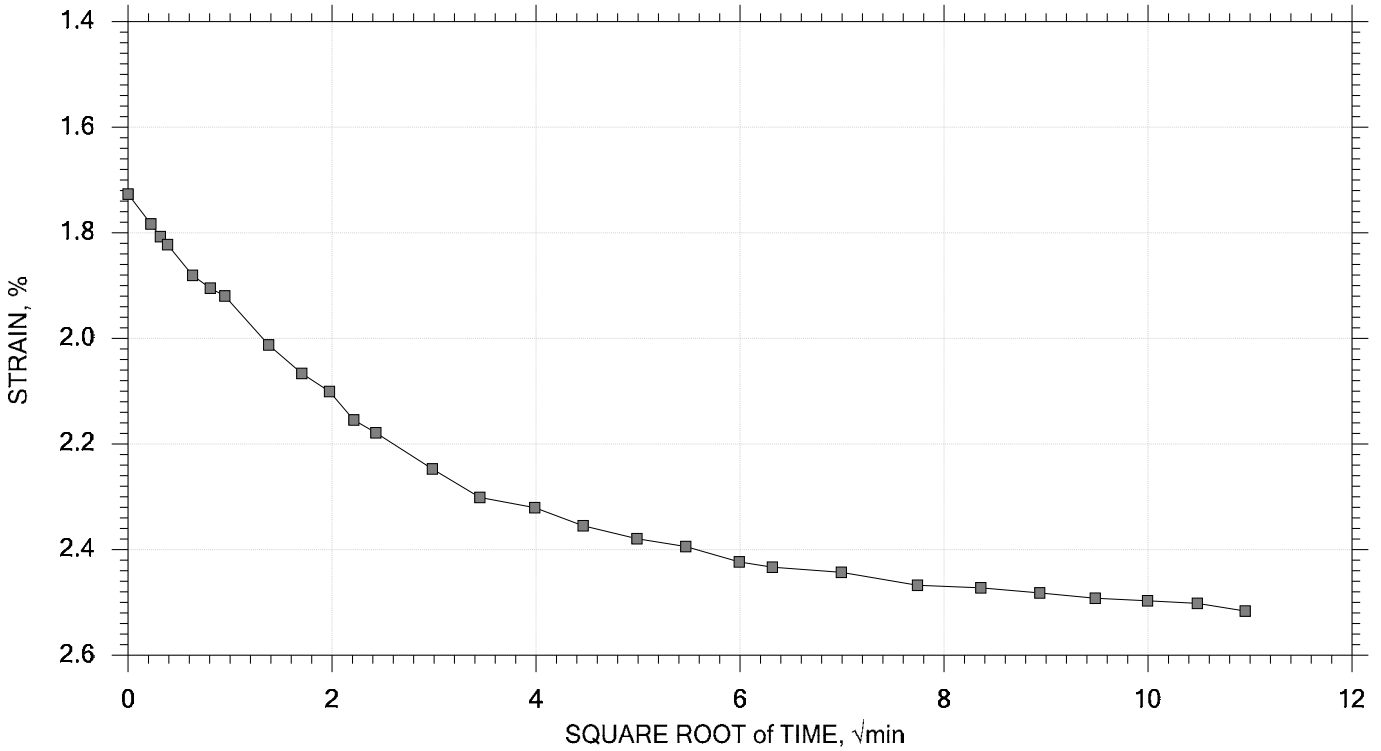
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 4 of 21

Stress: 0.5 tsf





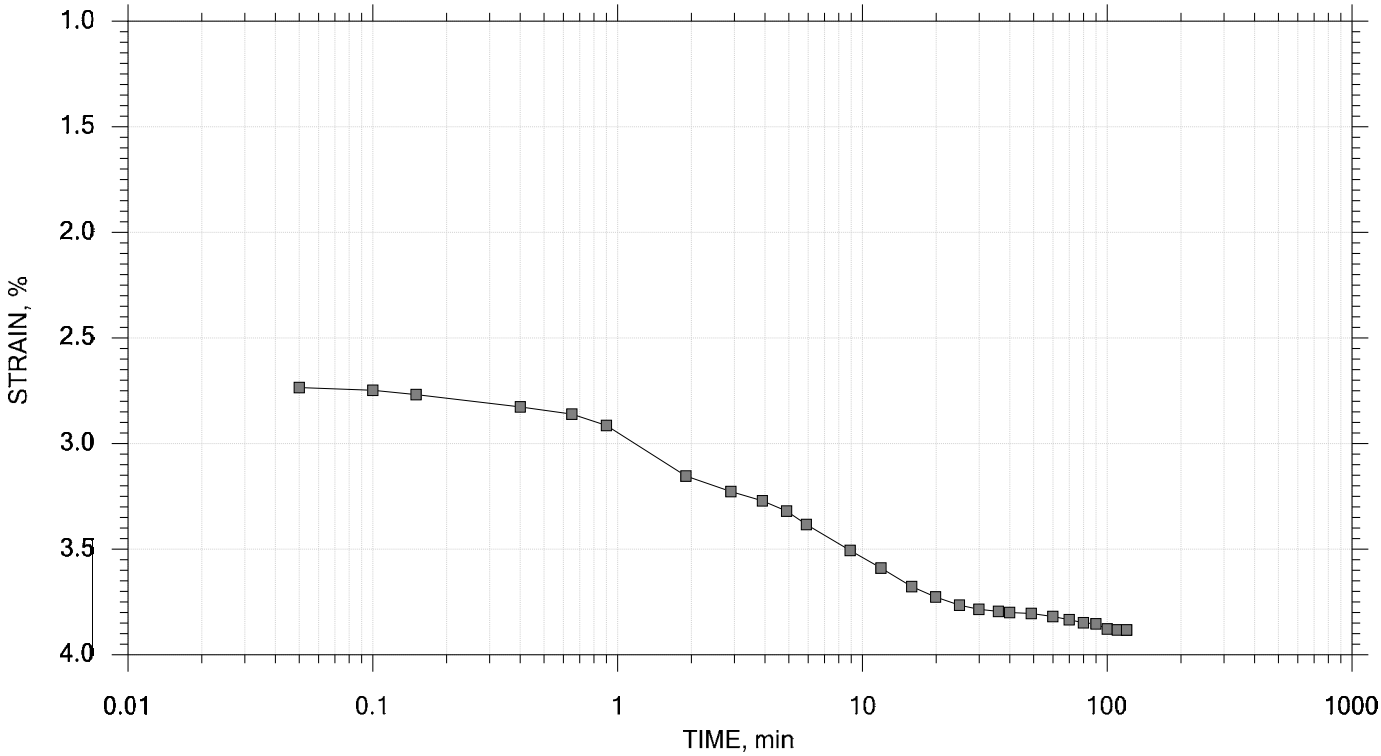
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

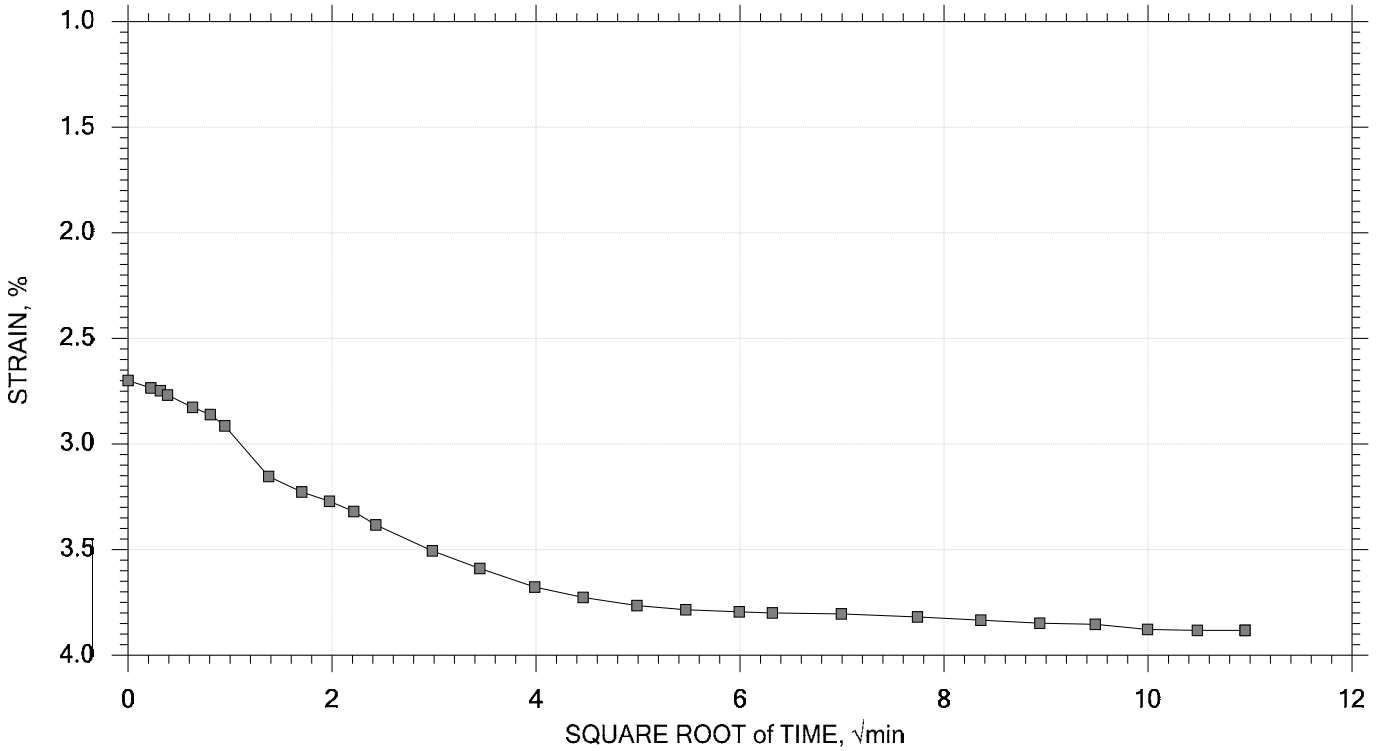
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 5 of 21

Stress: 1 tsf





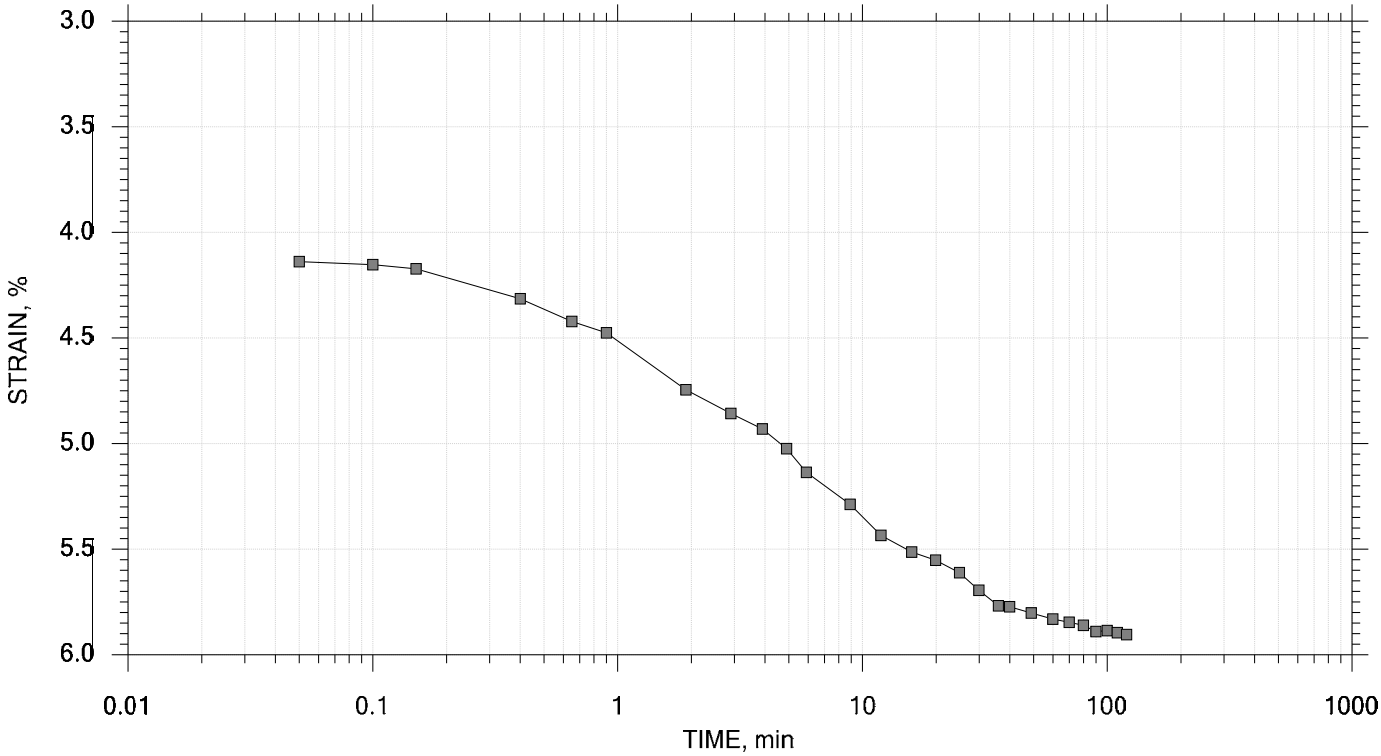
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

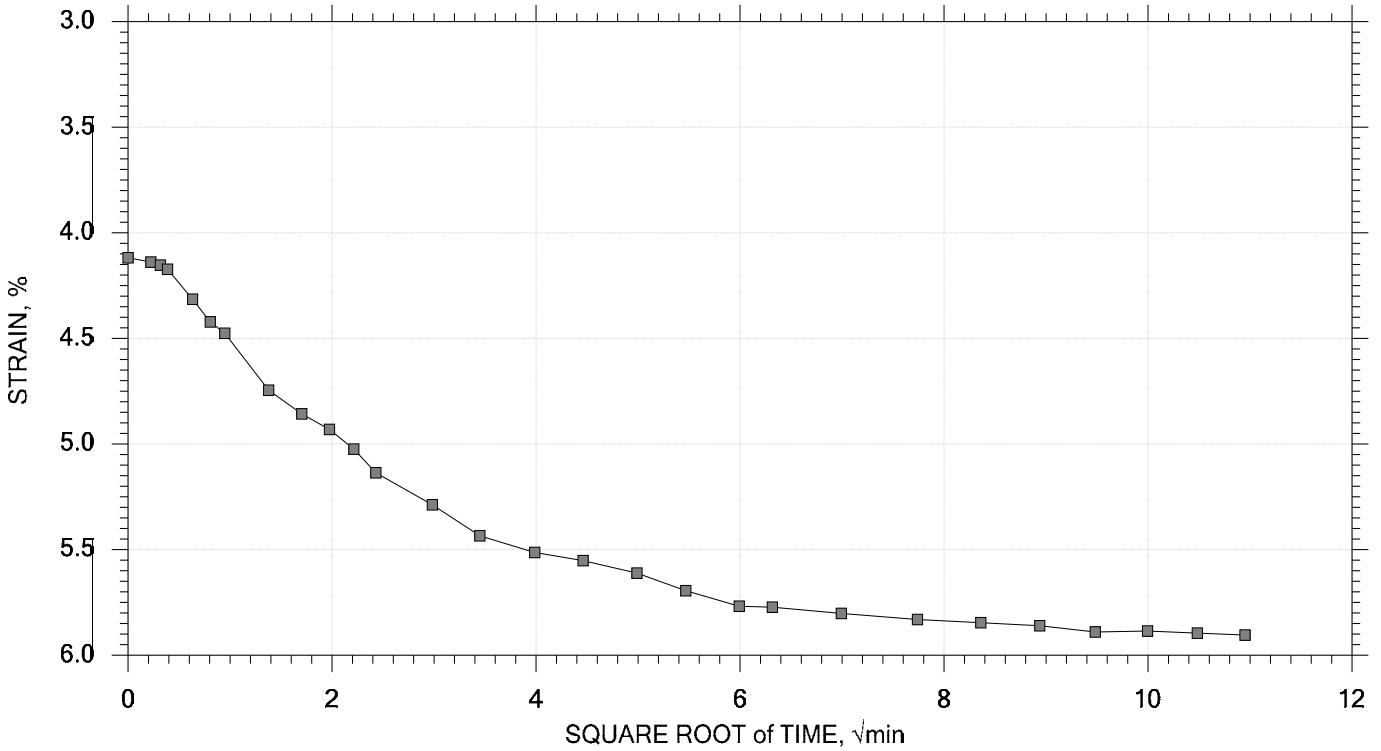
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 6 of 21

Stress: 2 tsf





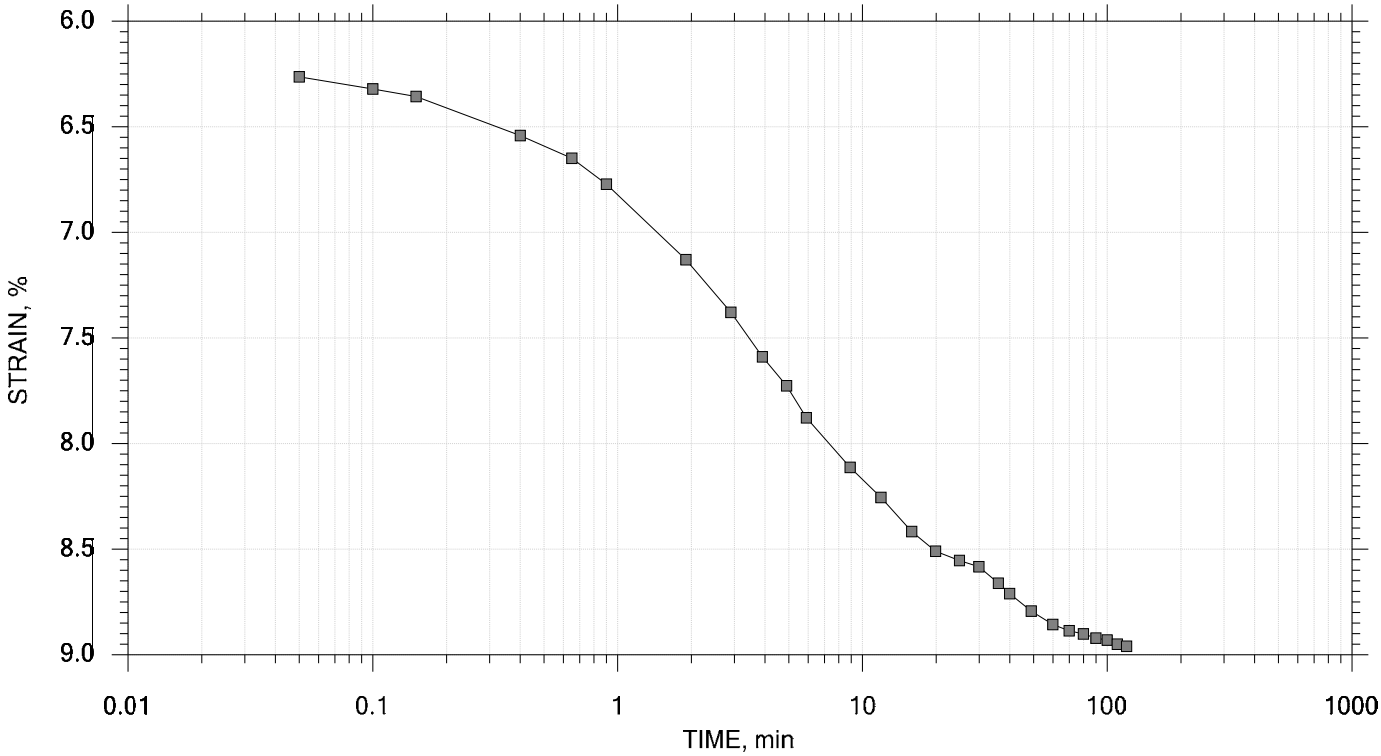
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

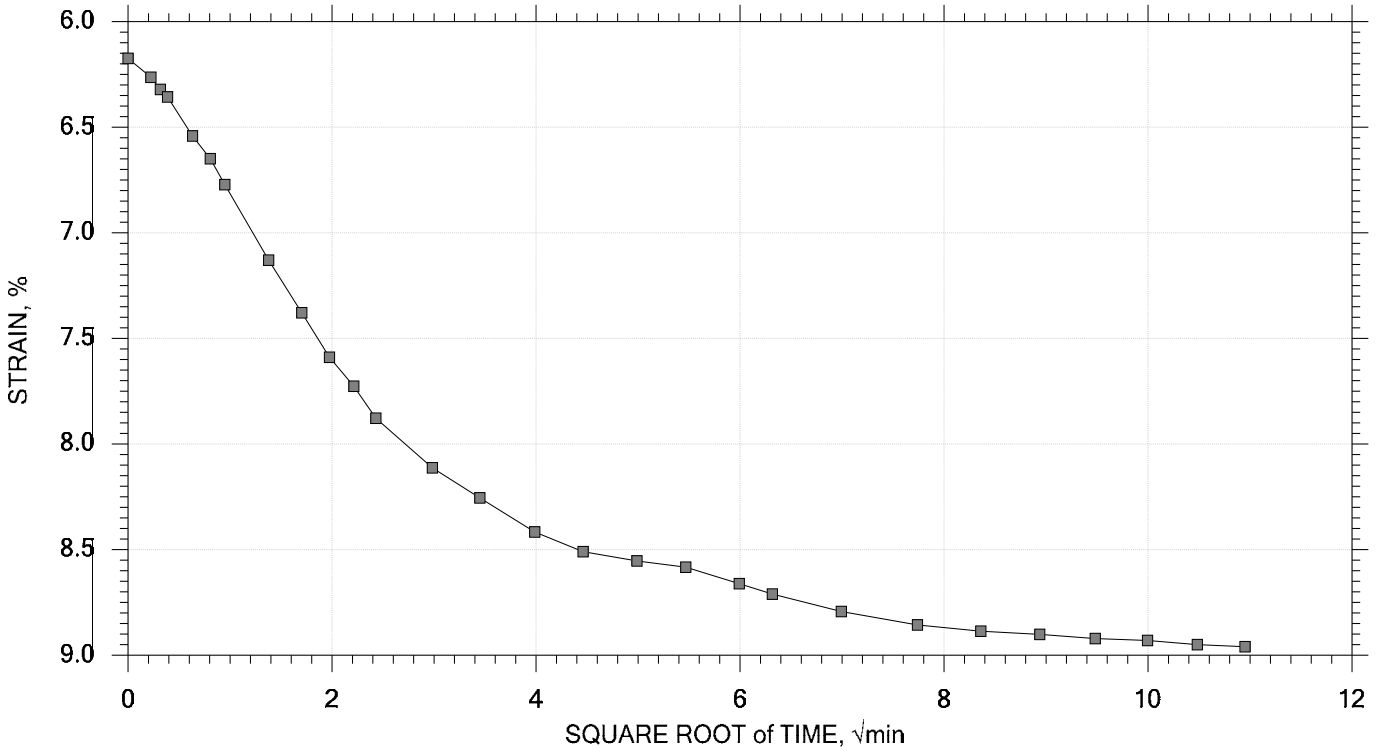
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 7 of 21

Stress: 4 tsf





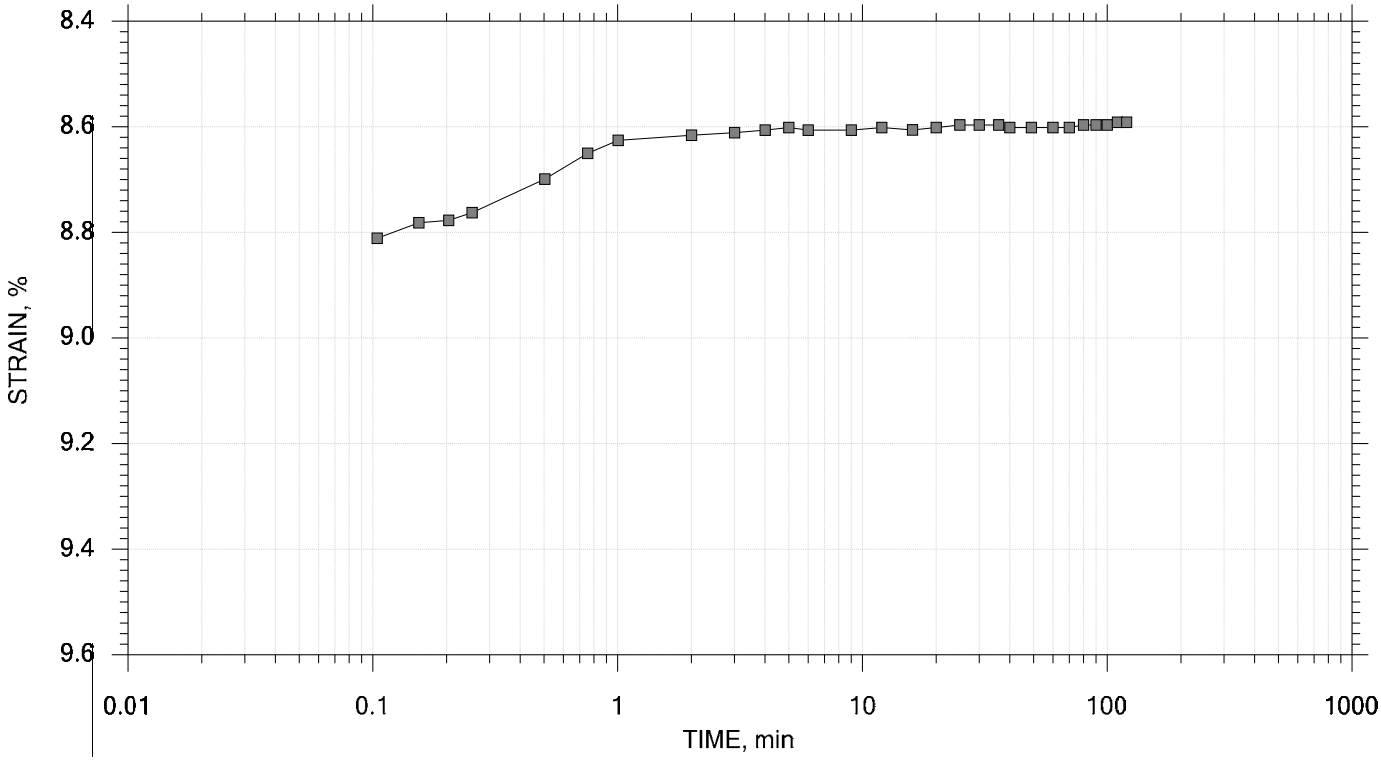
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

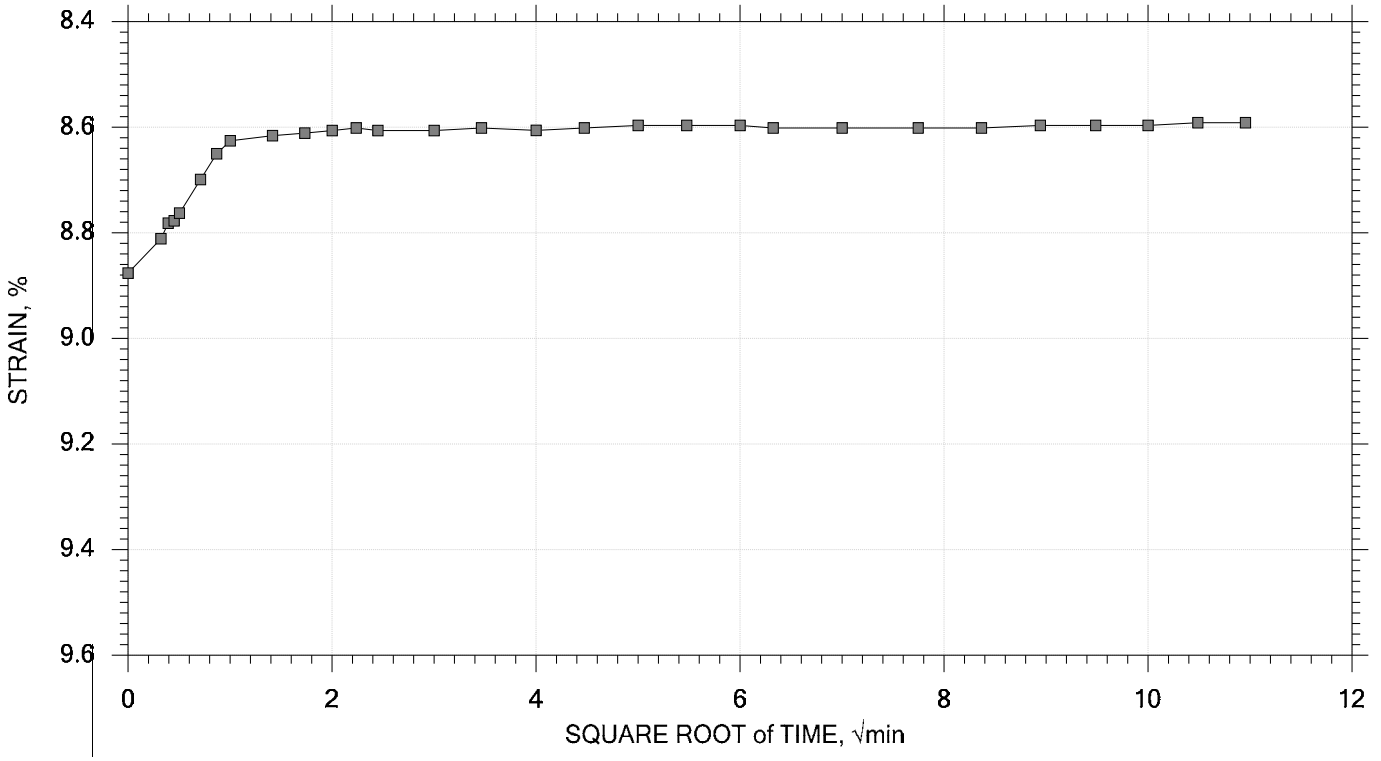
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 8 of 21

Stress: 2 tsf





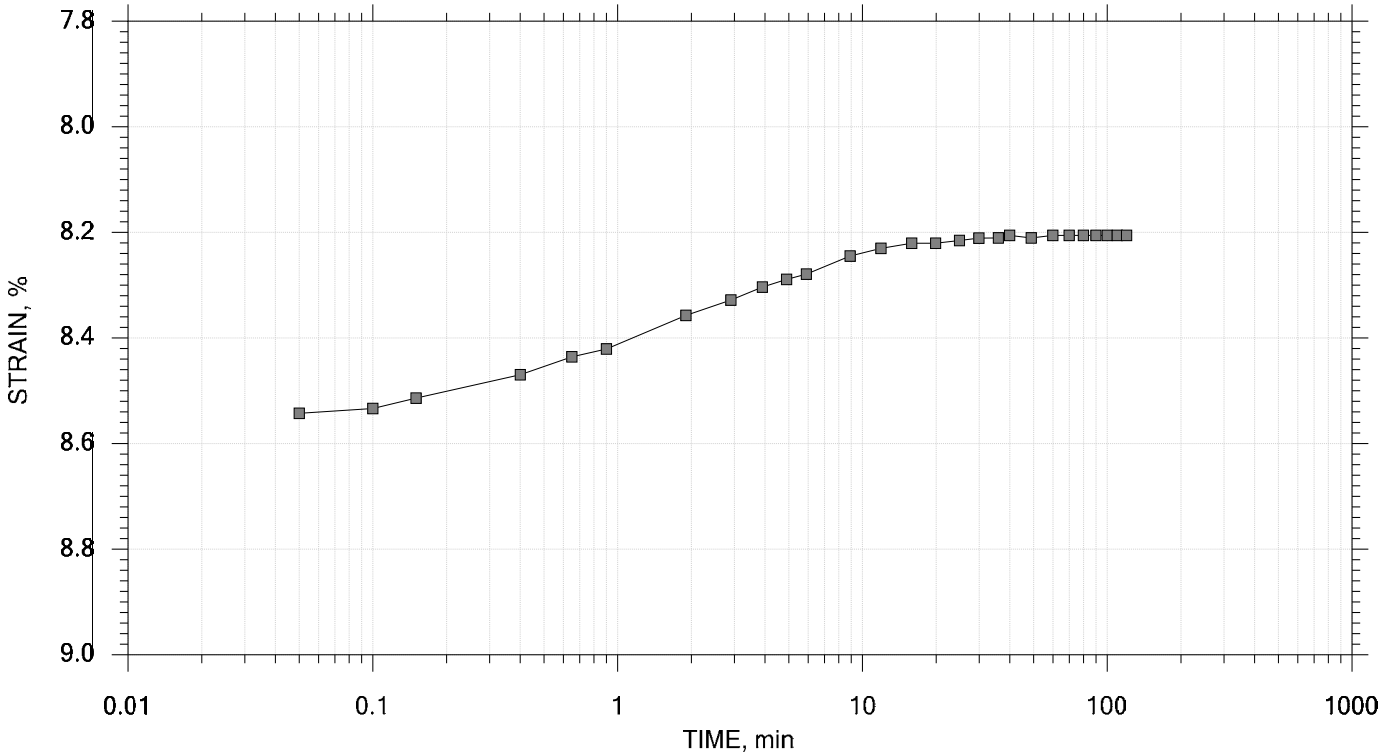
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

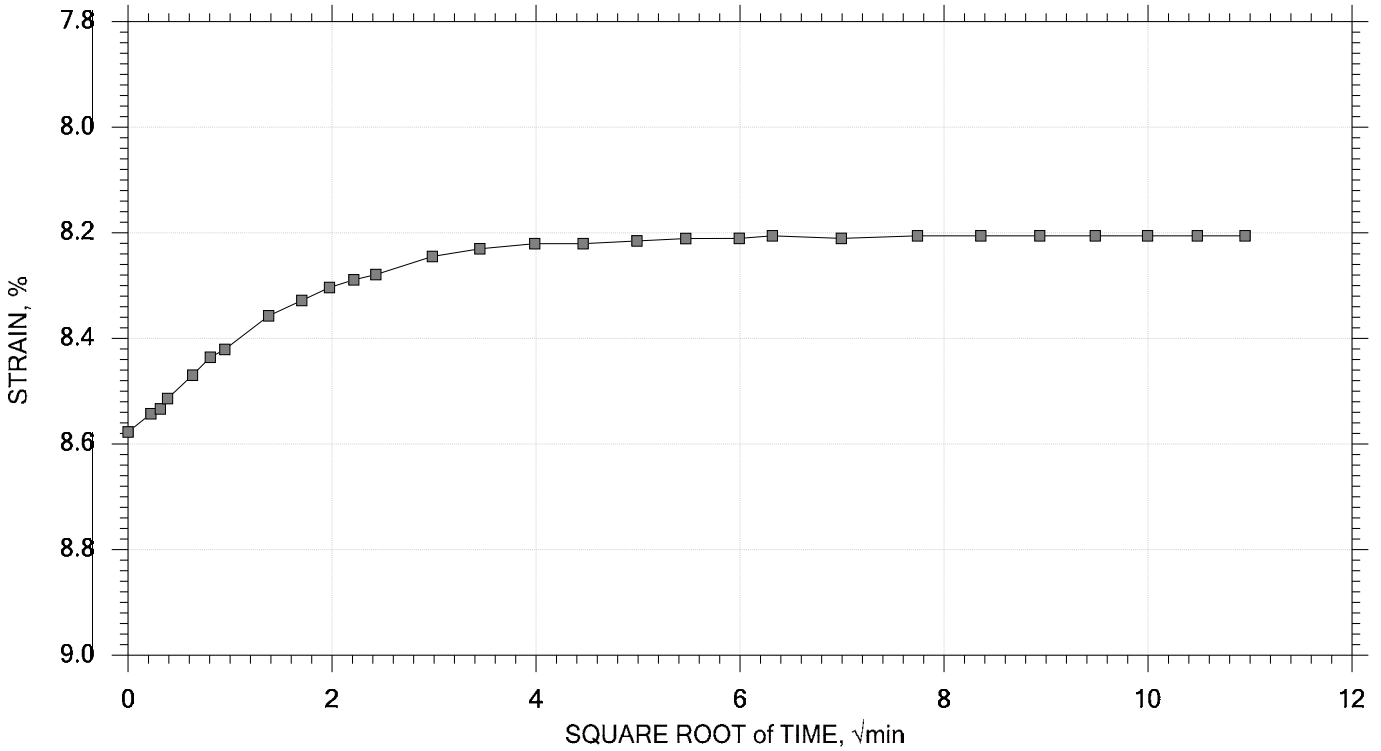
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 9 of 21

Stress: 1 tsf





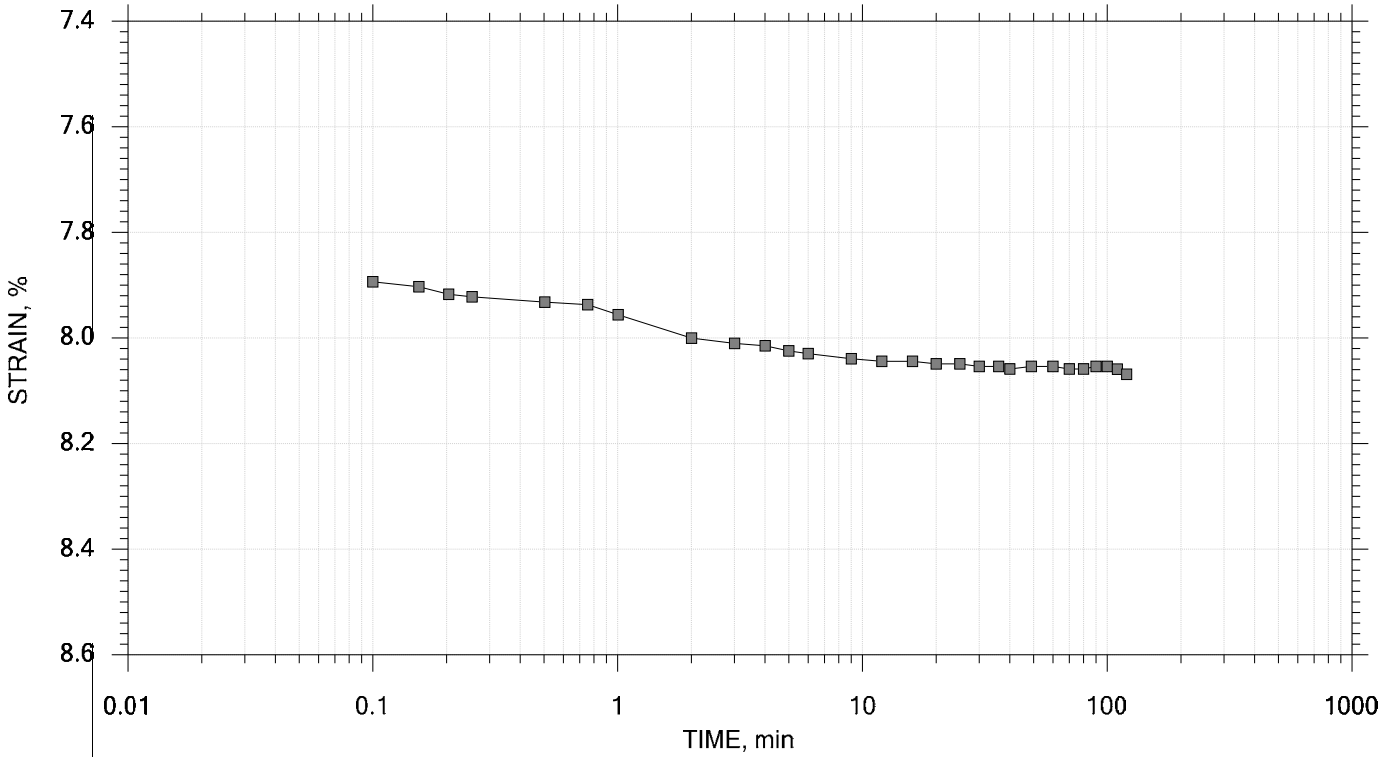
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

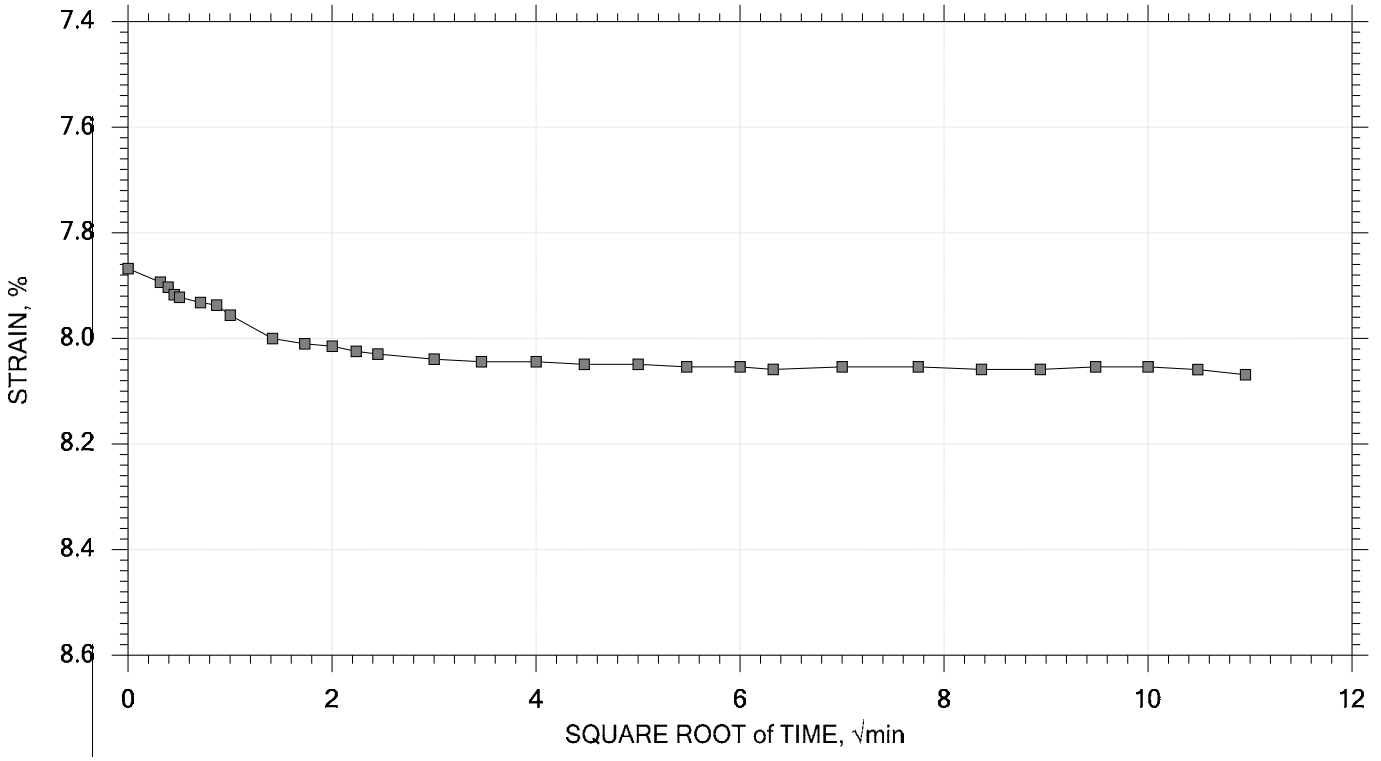
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 11 of 21

Stress: 1 tsf





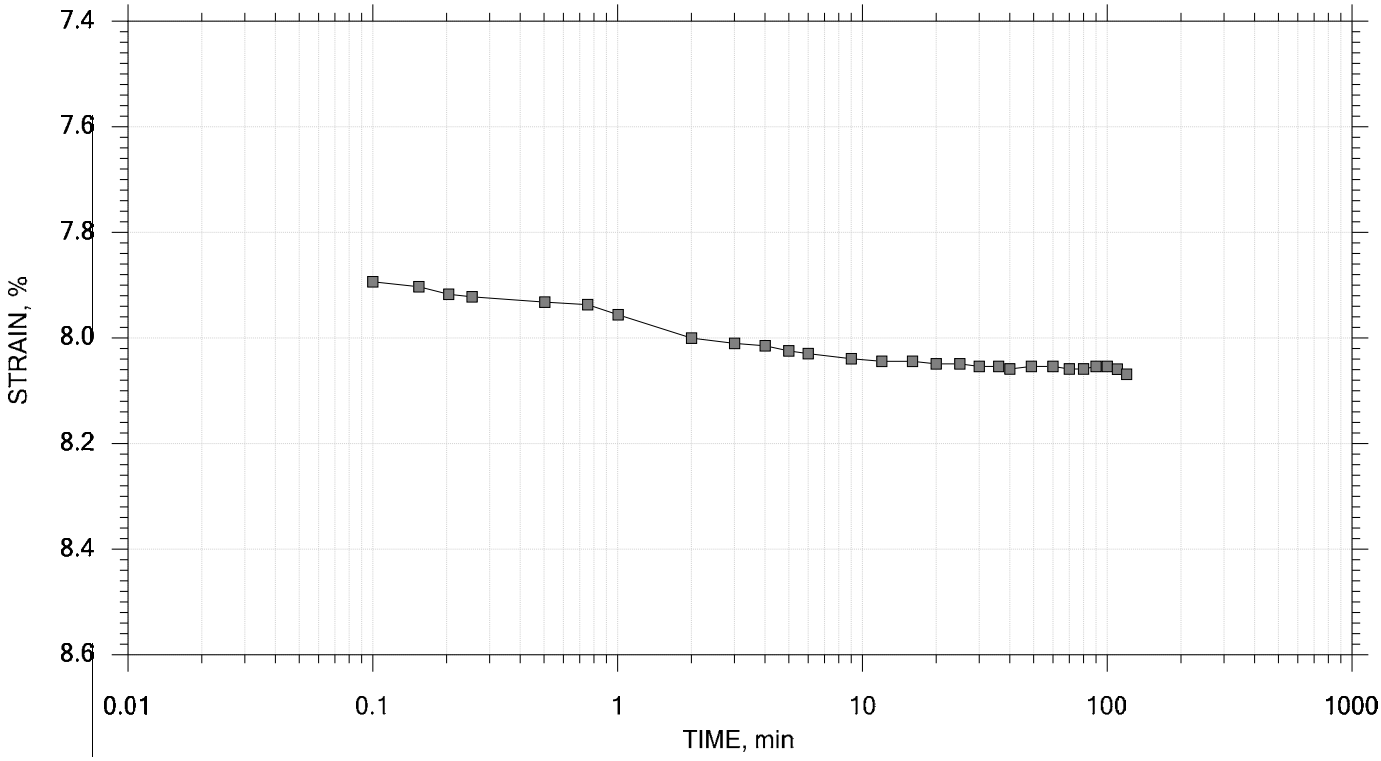
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

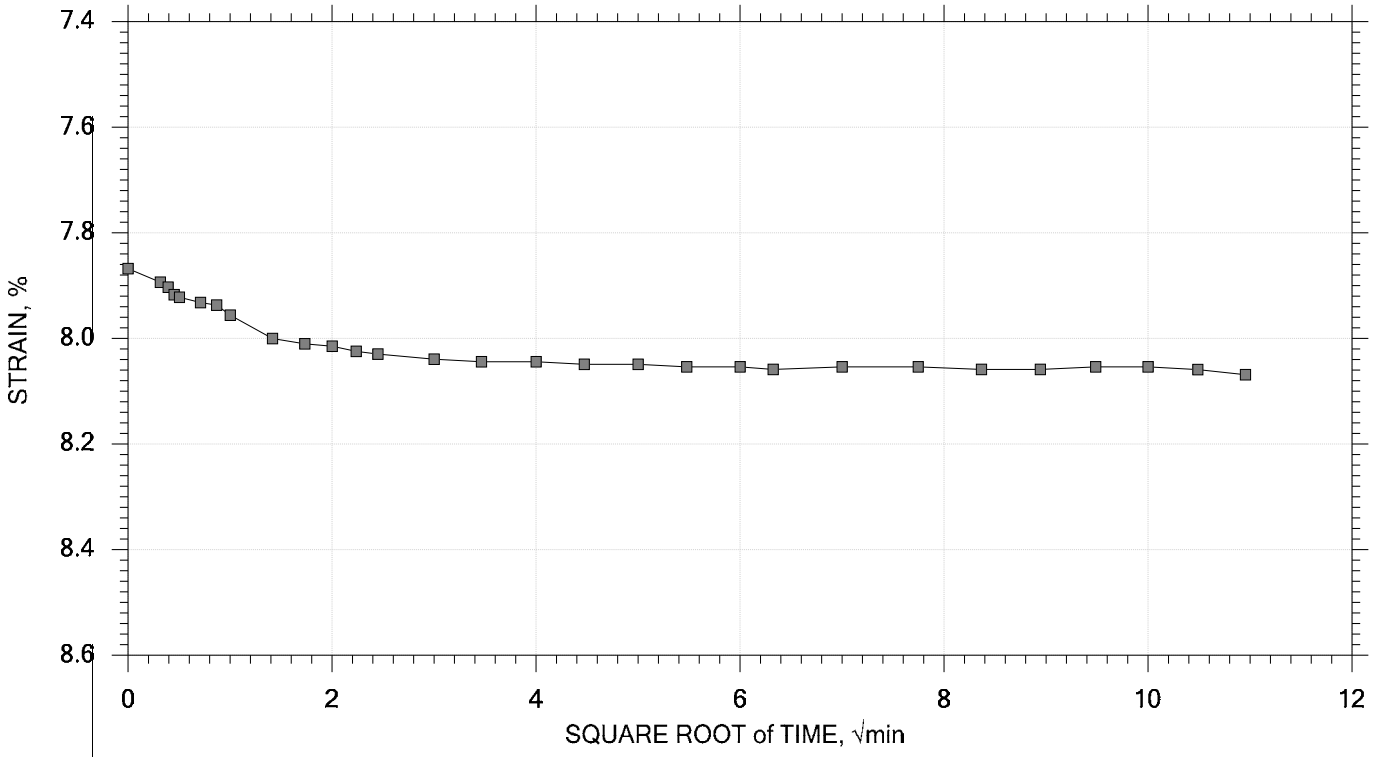
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 11 of 21

Stress: 1 tsf





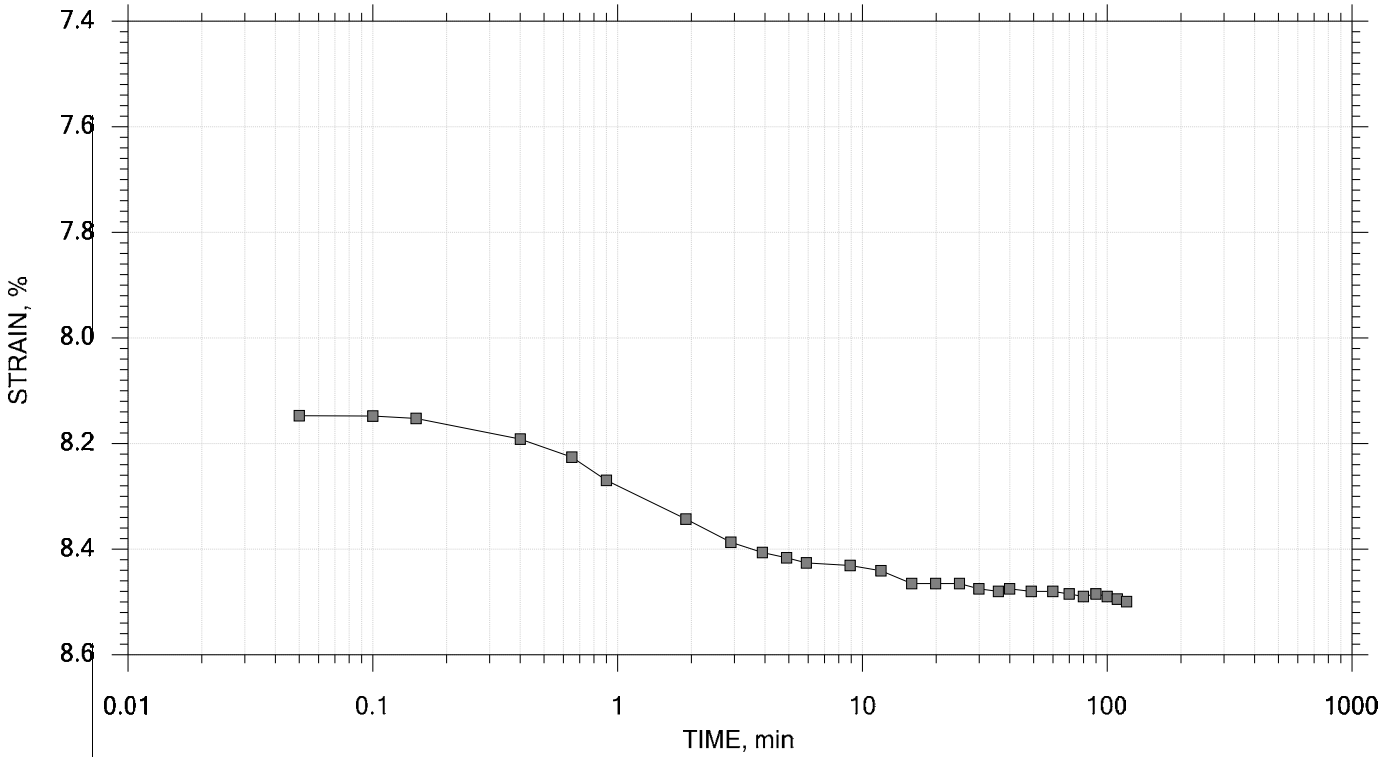
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

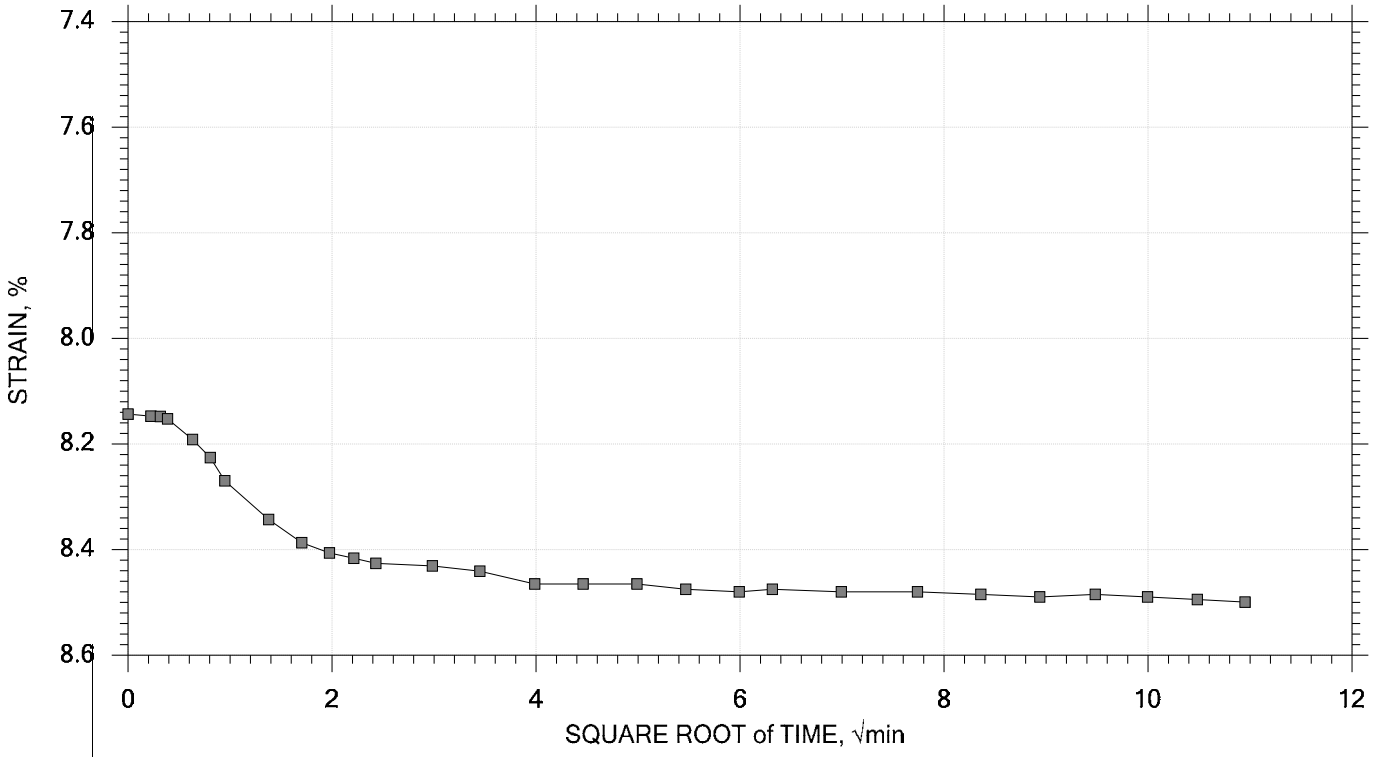
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 12 of 21

Stress: 2 tsf





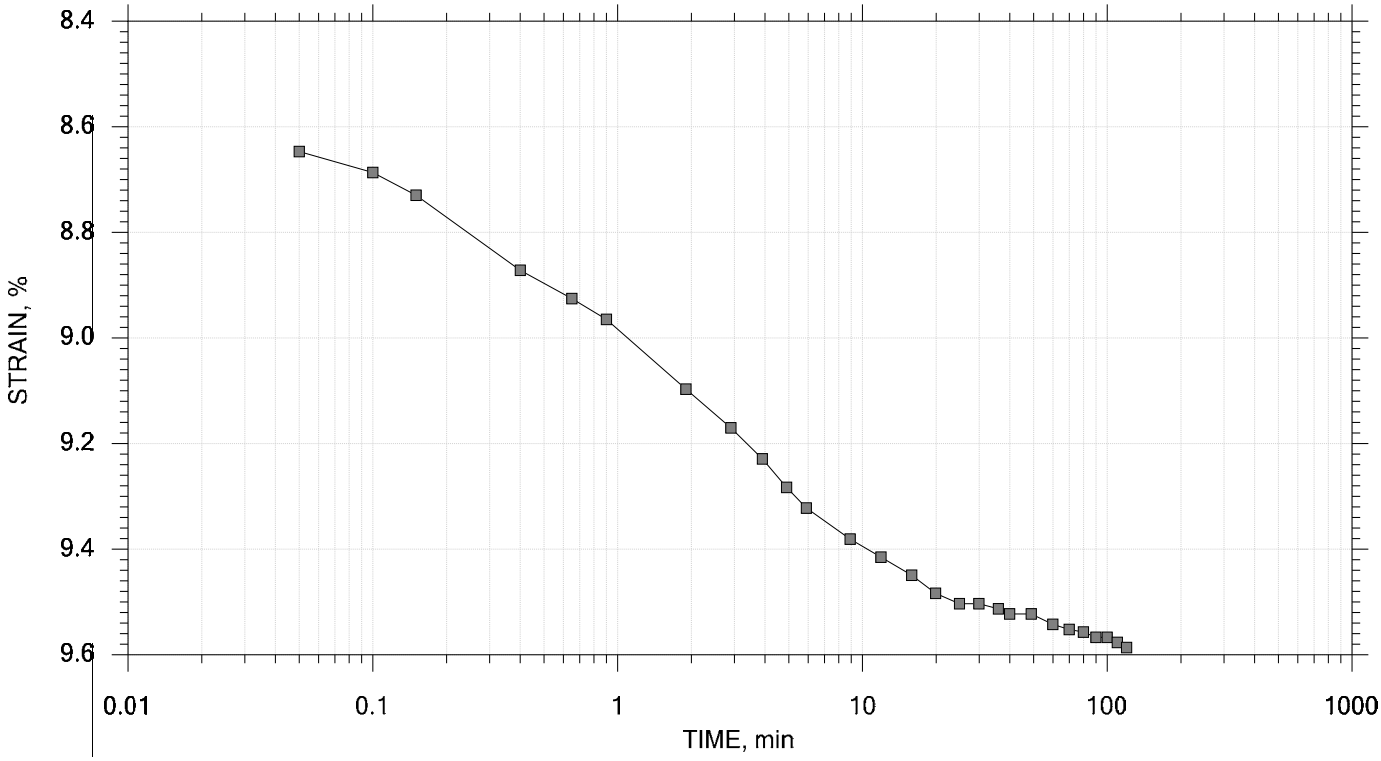
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

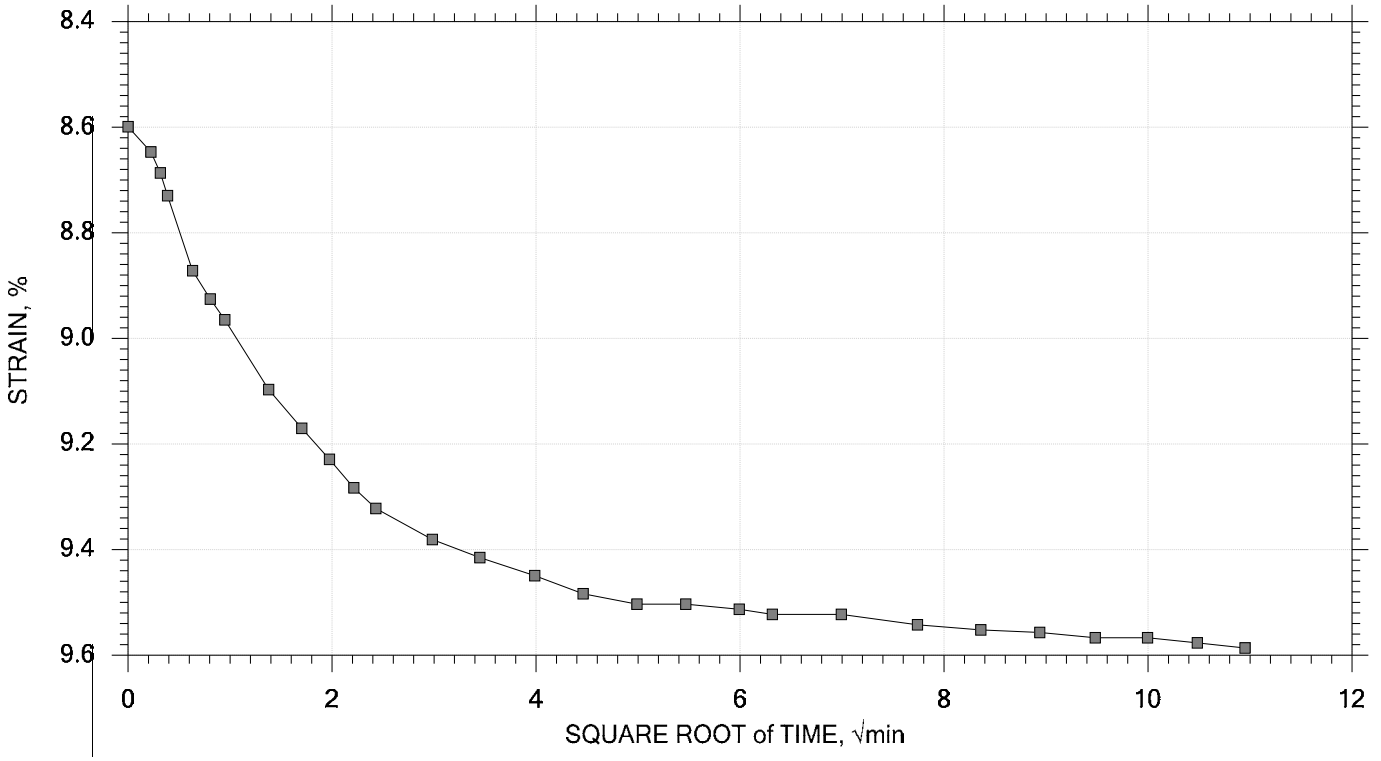
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 13 of 21

Stress: 4 tsf





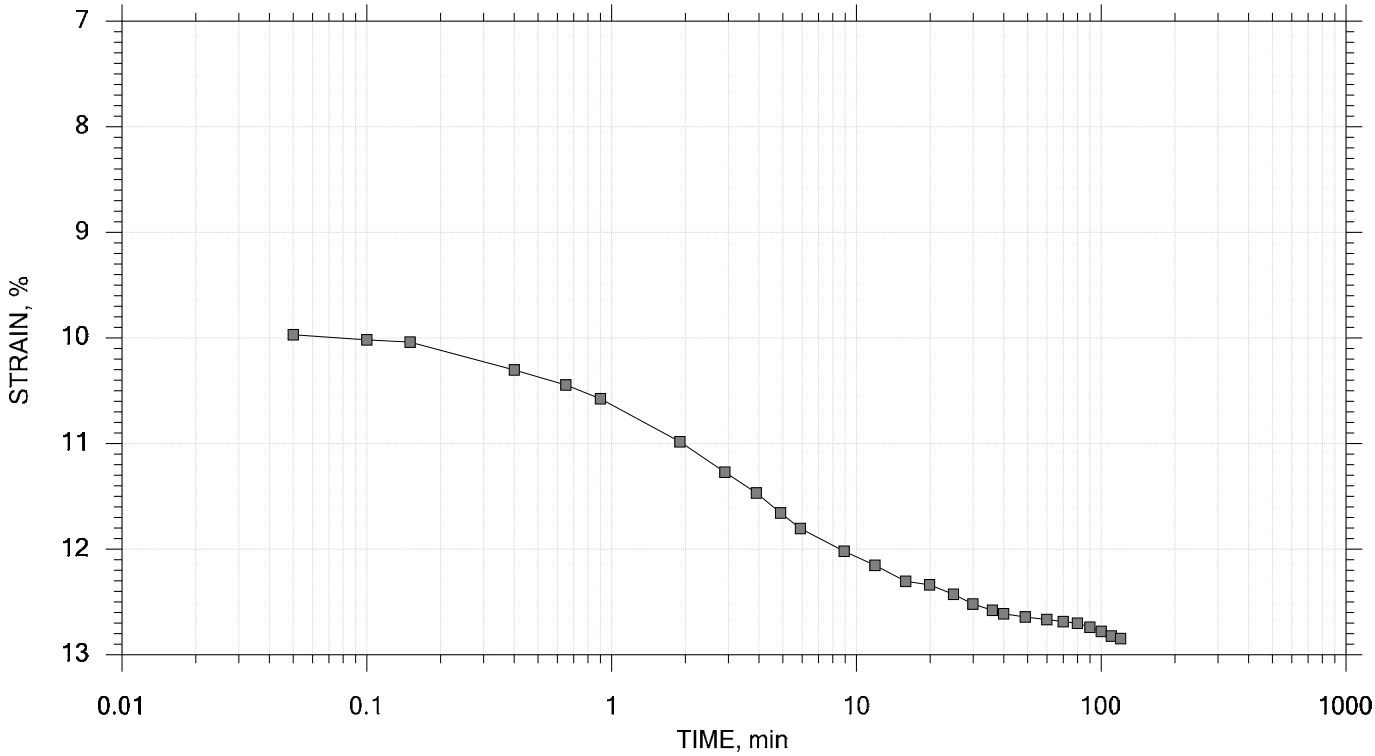
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

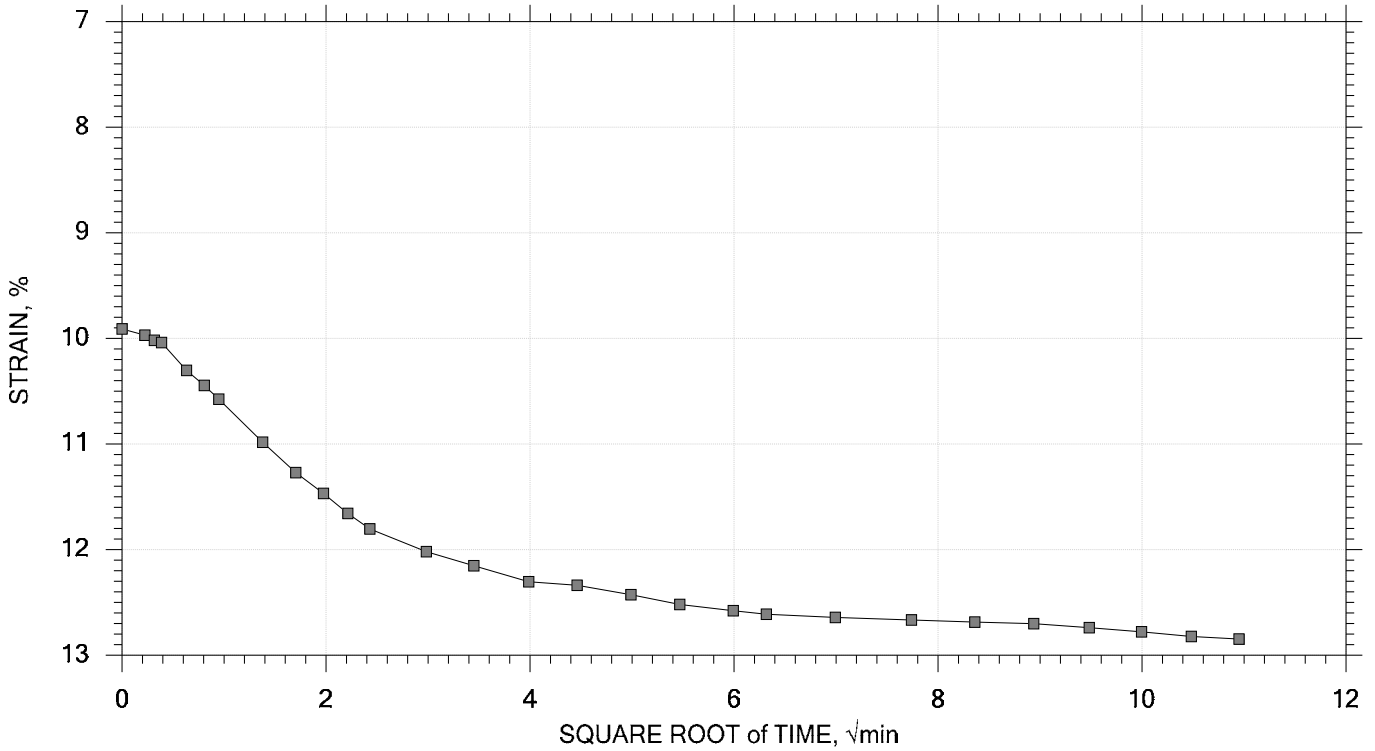
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 14 of 21

Stress: 8 tsf





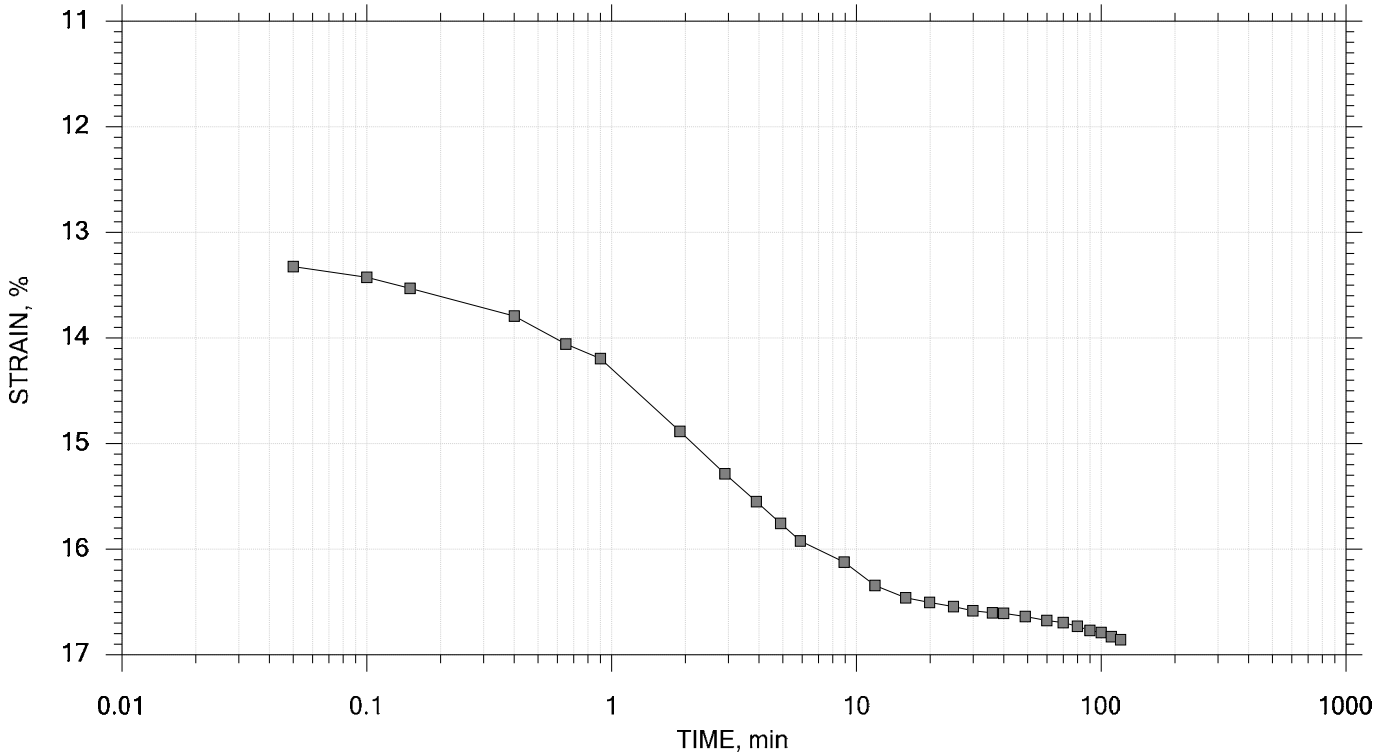
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

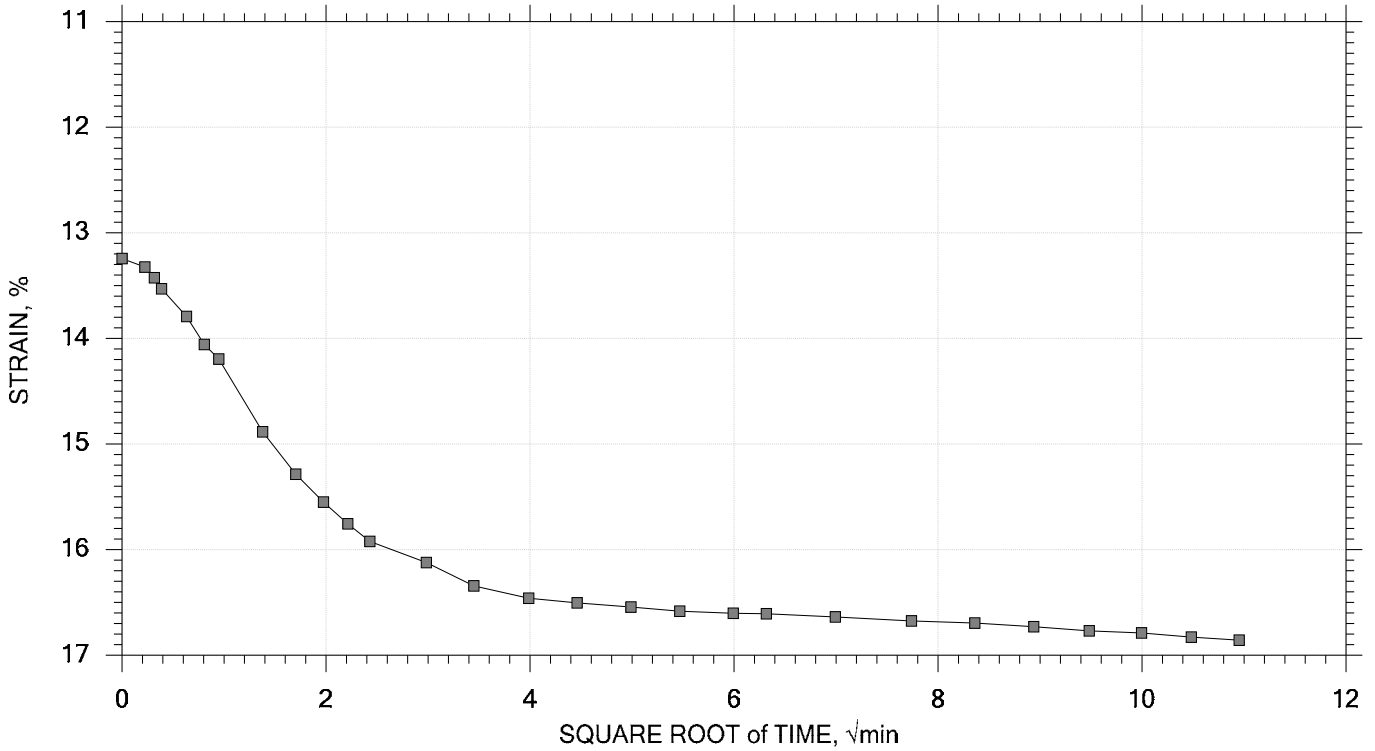
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 15 of 21

Stress: 16 tsf





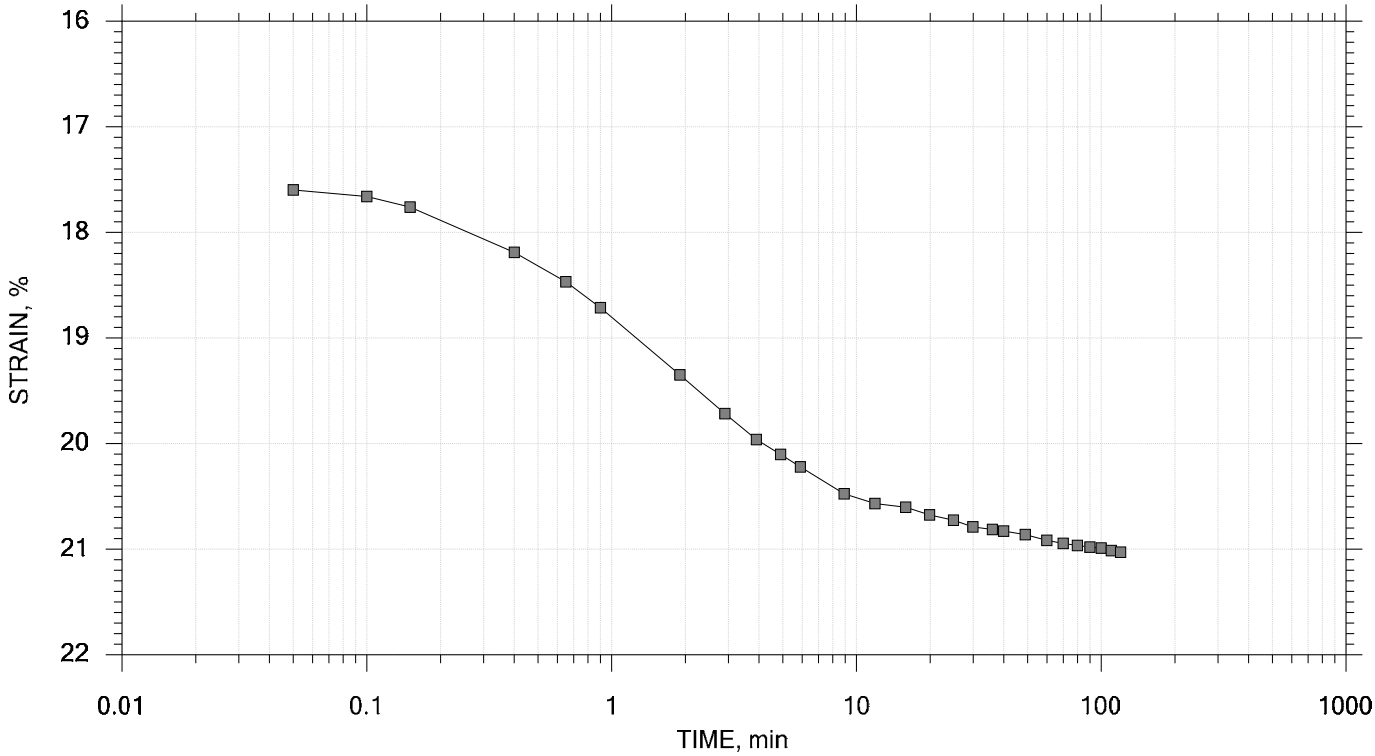
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

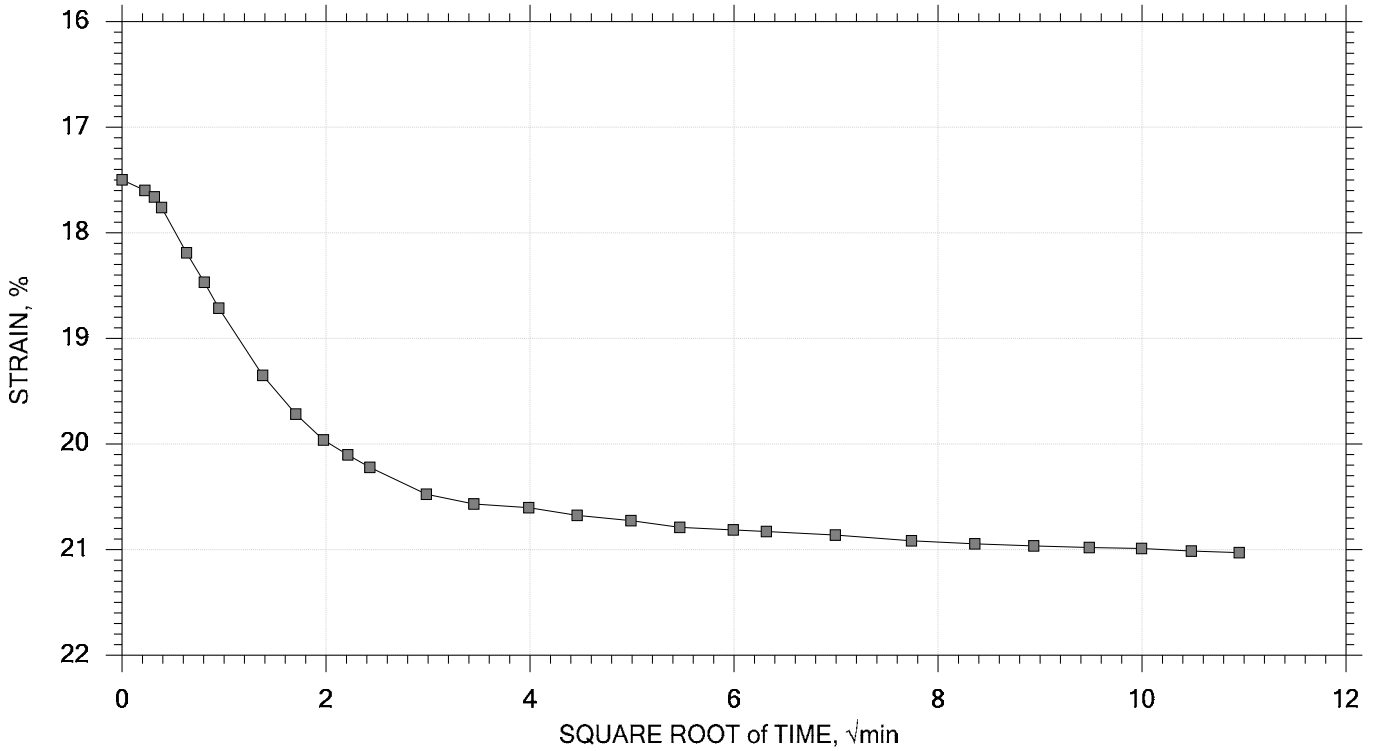
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 16 of 21

Stress: 32 tsf





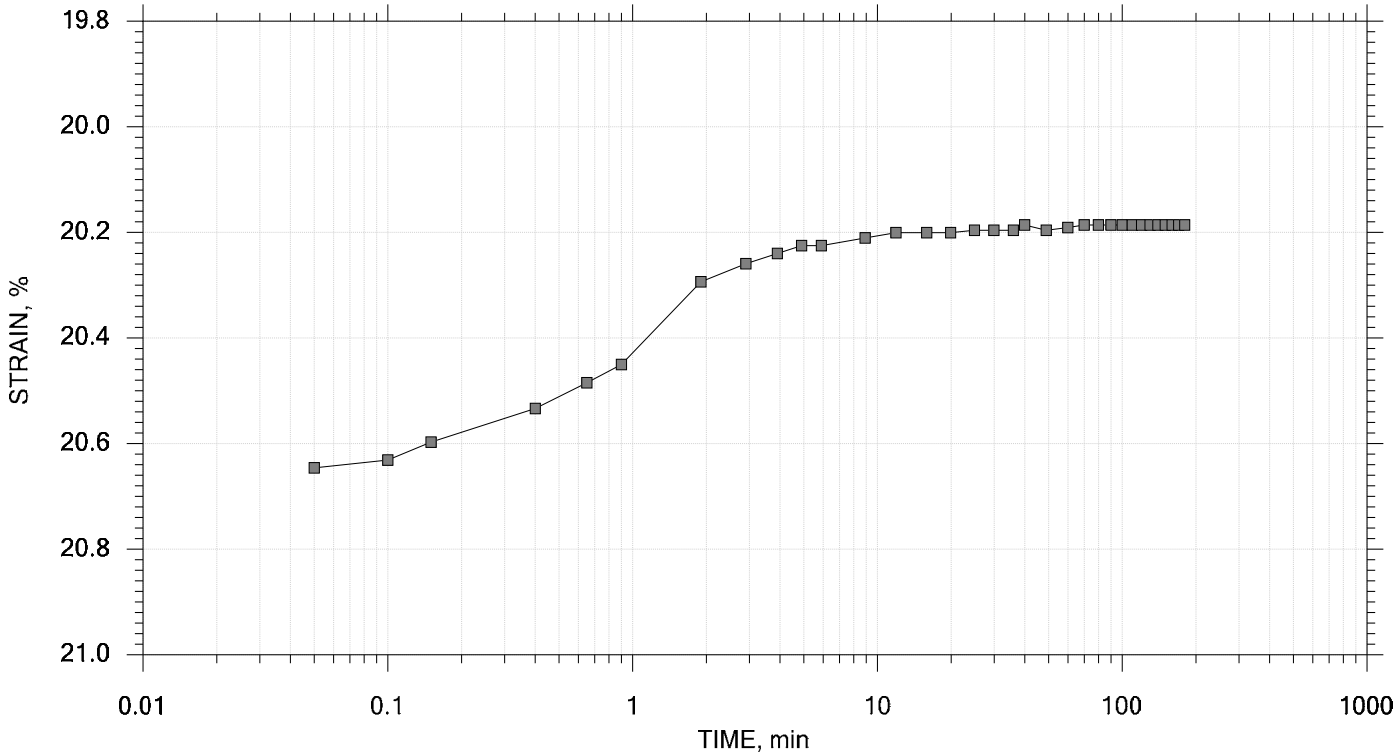
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

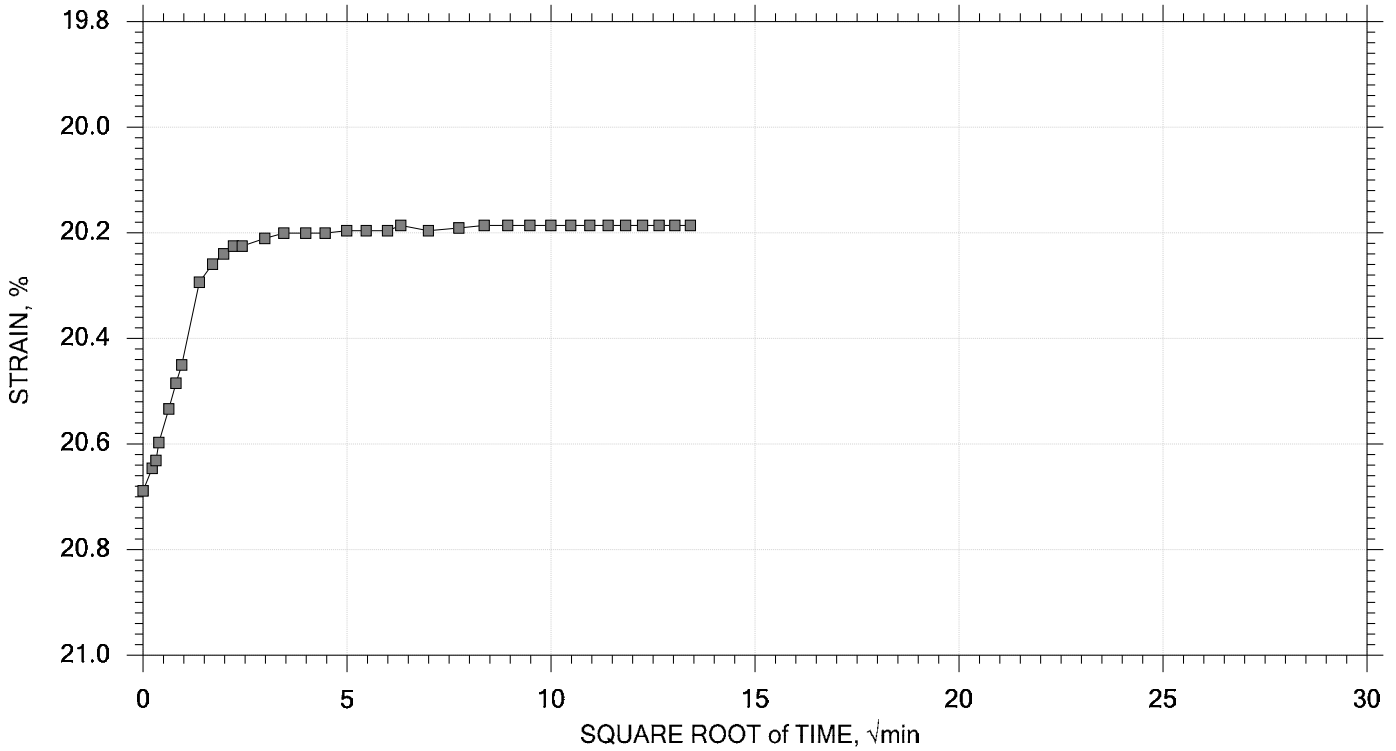
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 17 of 21

Stress: 8 tsf





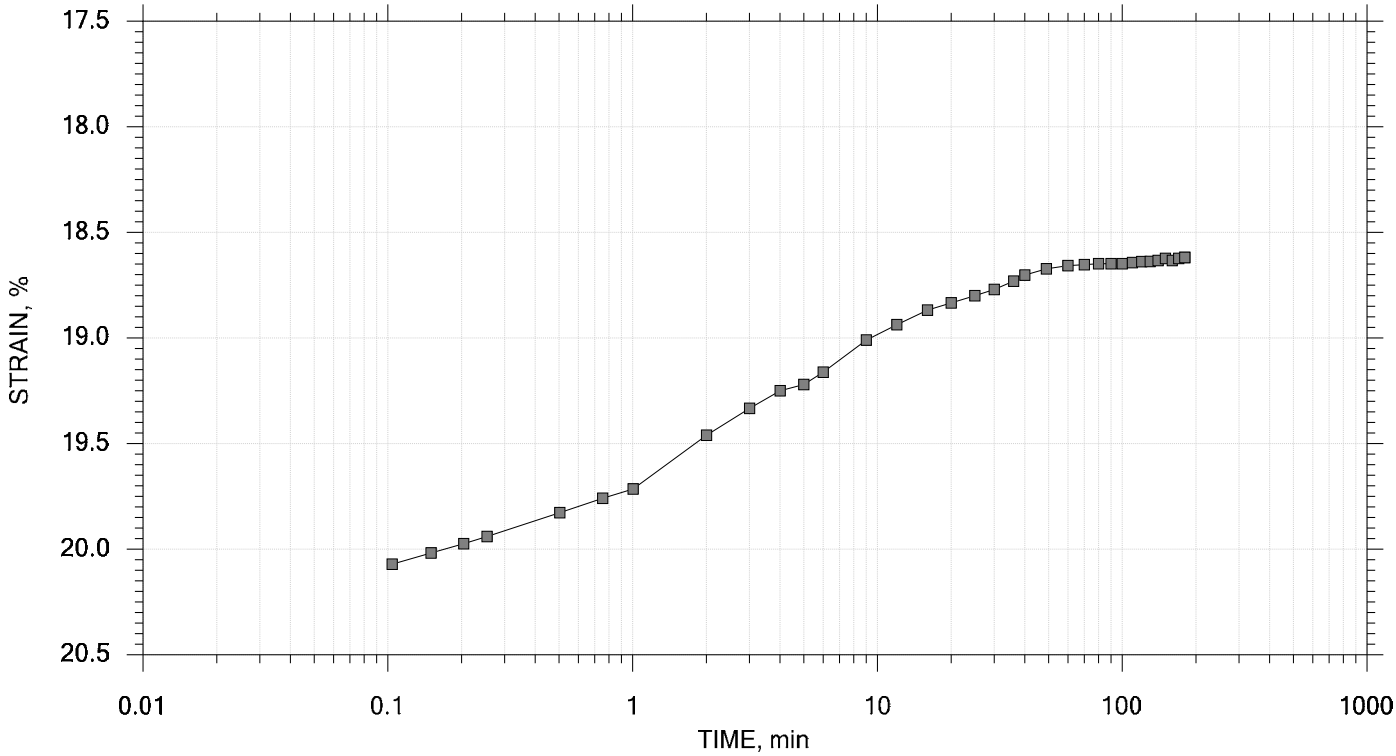
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

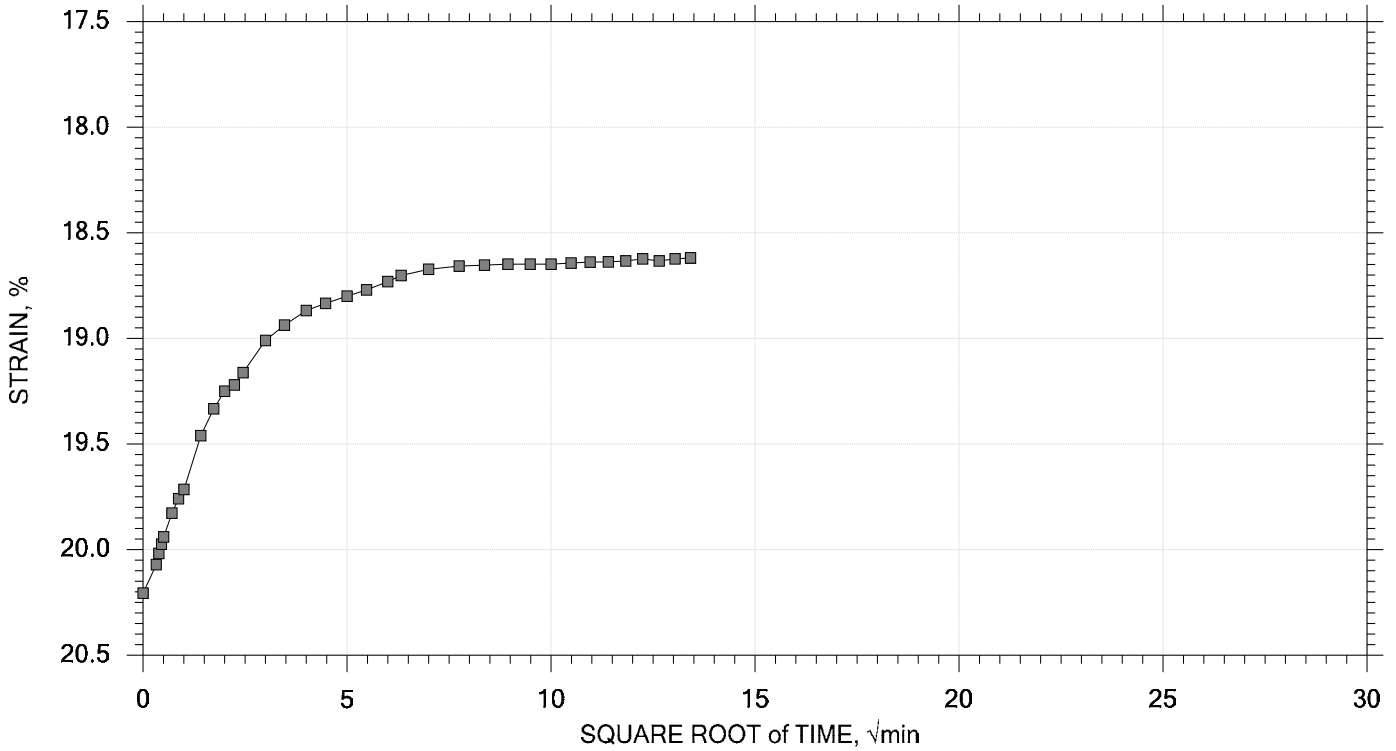
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 18 of 21

Stress: 2 tsf





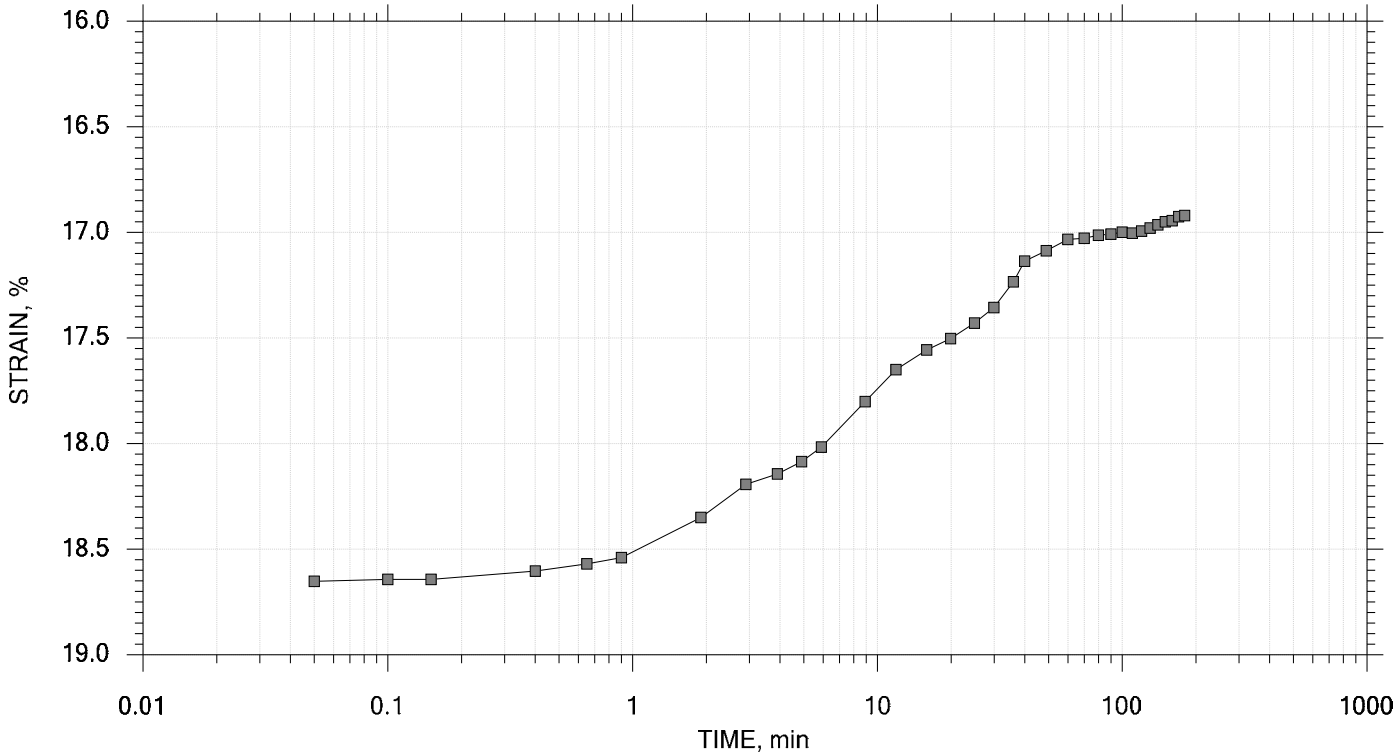
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

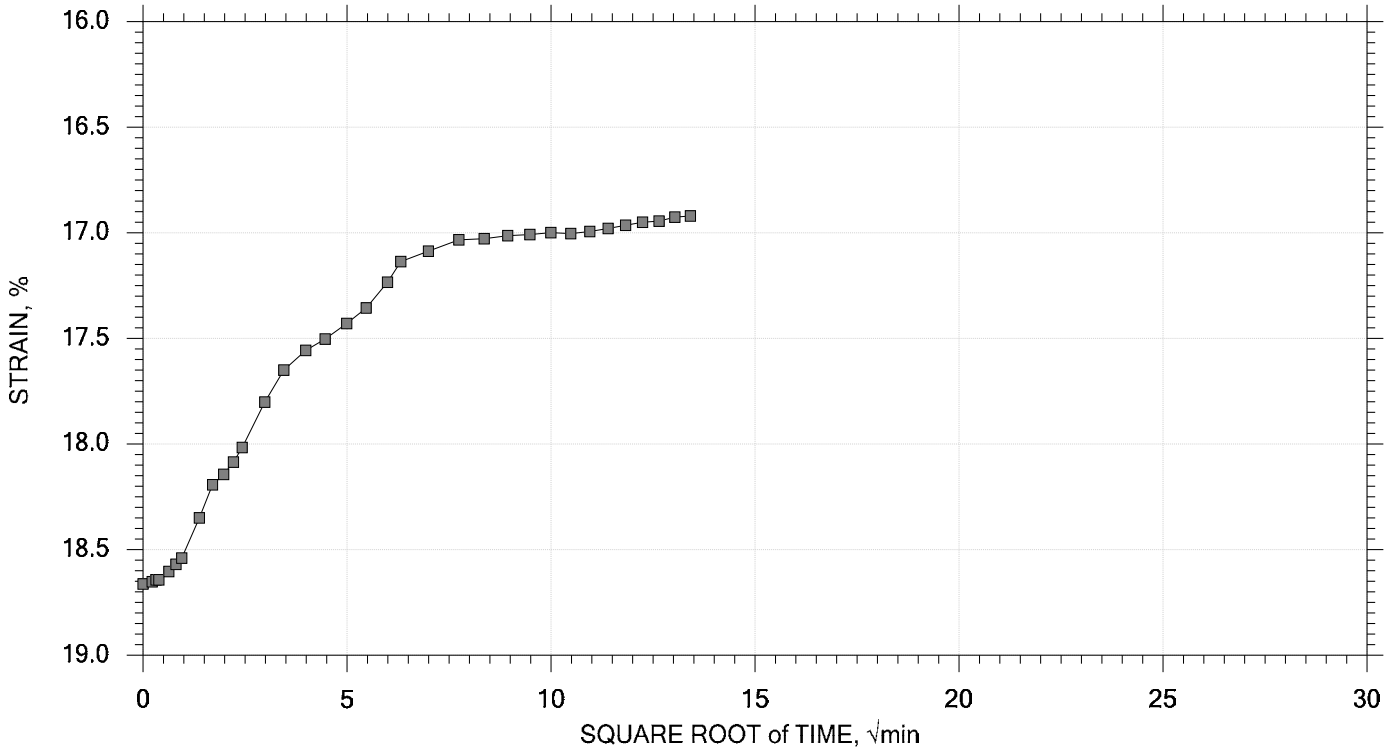
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 19 of 21

Stress: 0.5 tsf





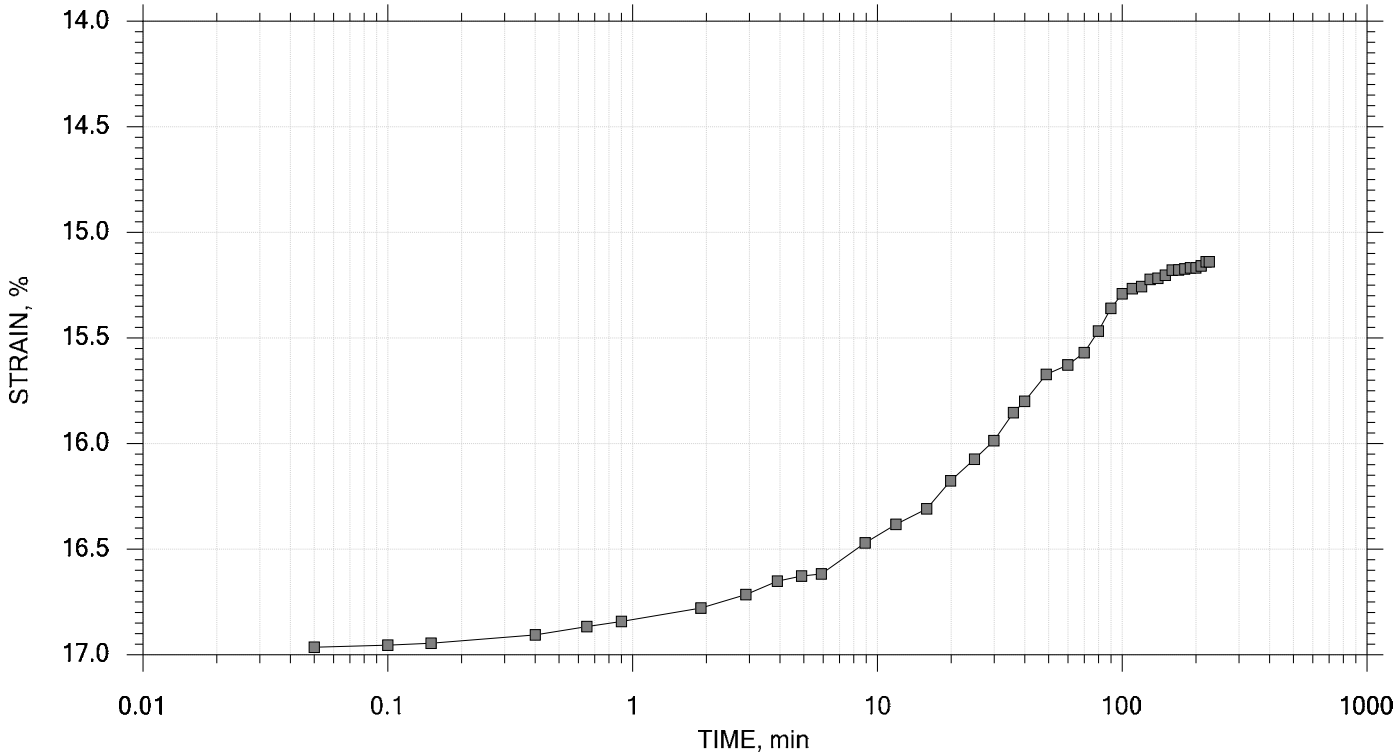
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

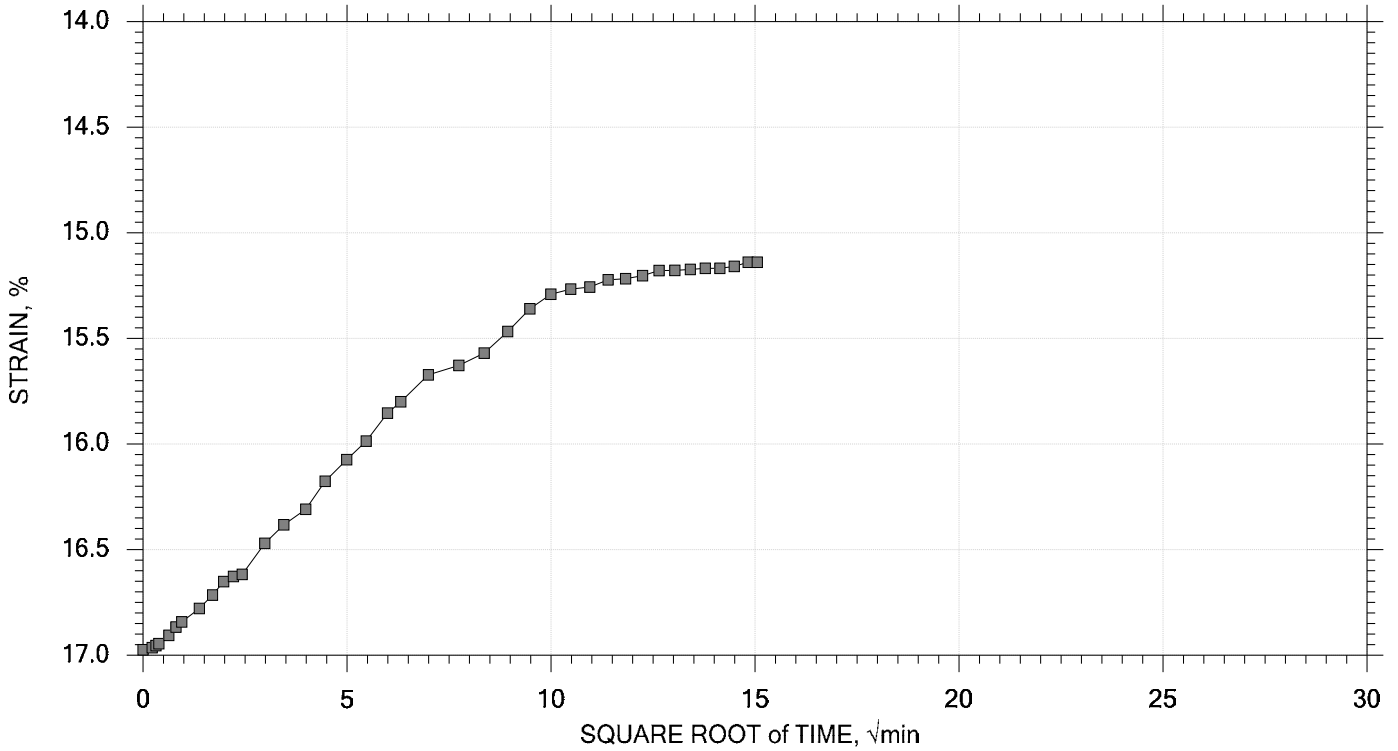
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 20 of 21

Stress: 0.125 tsf





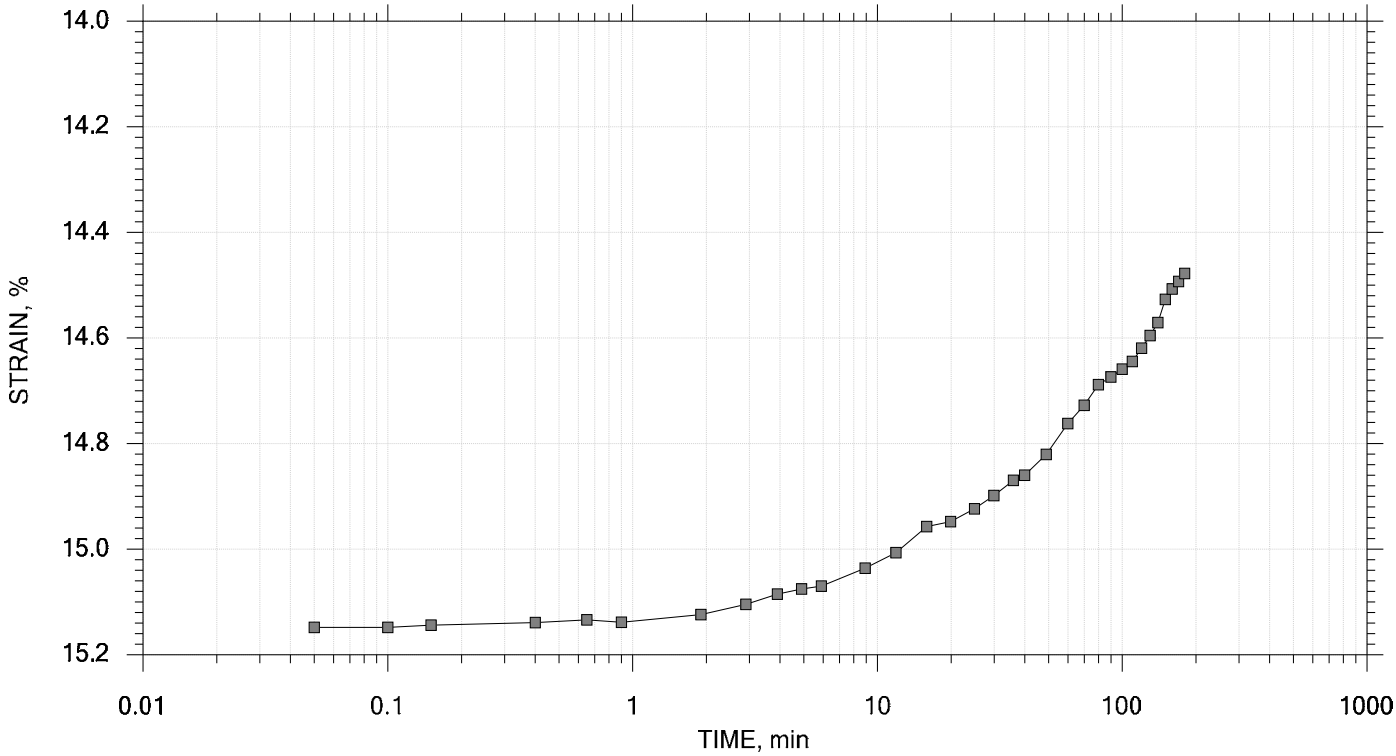
GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

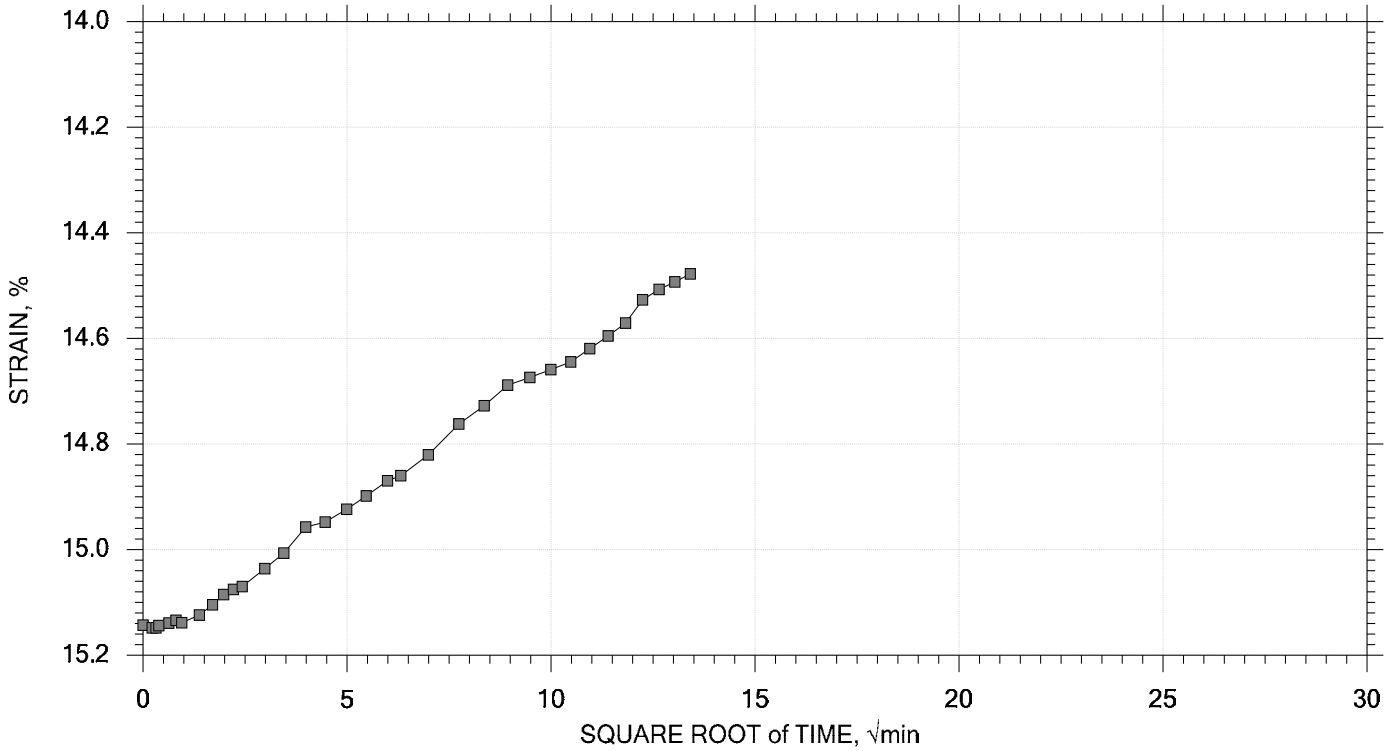
One-Dimensional Consolidation by ASTM D2435 - Method B

TIME CURVES

Constant Load Step 21 of 21

Stress: 0.0625 tsf





GeoTesting EXPRESS	Project: Heritage State Park	Location: Lynn, MA	Project No.: GTX-306811
	Boring No.: HP-6	Tested By: md	Checked By: mcm
	Sample No.: ST-1	Test Date: 08/06/17	Test No.: IP-1
	Depth: 27-29 ft	Sample Type: intact	Elevation: ---
	Description: Moist, olive clay		
	Remarks: System R&D, Swell Pressure = 0.0698 tsf		

GeoTesting EXPRESS

SOIL CHAIN OF CUSTODY & TEST REQUEST

GeoTesting Express, Inc.
125 Nagog Park
Acton, MA 01720
800 434 1062 Toll Free
978 635 0266 Fax

2358 Perimeter Park Drive, Suite 320
Atlanta, GA 30341
770.645 6575 Tel
770 645 6570 Fax

www.geotesting.com

CLIENT		INVOICE (complete if different from Client)	
Company: Stantec		Company:	
Address: 5 Burlington Woods Drive		Address:	
City, State, Zip: Burlington, MA		City, State, Zip:	
Contact: Nick D'Agostino	Phone: (978) 577-1440	Contact:	Phone:
E-mail: Nicholas.D'Agostino@stanted.com	Cell:	E-mail:	Cell:

PROJECT		
Project Name: Heritage State Park	Client Project #: 179410469	Purchase Order#:
Project Location: Lynn, MA	GTX Sales Order #:	Requested Turnaround:
On-site Contact: Nick D'Agostino	E-mail:	Phone:

SOIL

Boring ID	Sample ID	Depth	Atterberg Limits (ASTM D 4318)	USCS – Classification (ASTM D 2487)	Grain Size: ASTM D 422 ☑ Sieve Only ☐ Sieve & Hydrometer ☐	Density: ASTM D 2937 ☐ ASTM D 7263 ☐	Moisture Content (ASTM D 2216)	Organic Content (ASTM D 2974)	pH (ASTM D 4972)	Specific Gravity (ASTM D 854)	Electrical Resistivity (ASTM G 57)	Proctor Compaction: Standard – ASTM D 698 ☐ Modified – ASTM D 1557 ☐	California Bearing Ratio * (ASTM D 1883)	Direct Shear* (ASTM D 3080)	Triaxial Shear* : UU – ASTM D 2850 ☐ CU – ASTM D 4767 ☐ CD – ASTM D7181 ☐	Incremental Consolidation* (ASTM D 2435)	Permeability/ Hydraulic Conductivity* : Fixed Wall – ASTM D 2434 ☐ Flexible Wall – ASTM D 5084 ☐	Unconfined Compression (ASTM D 2166)	Other: Organic Content (ASTM D2974)	Other: Incremental Consolidation (ASTM D2435)
HP-1	S4	7-9'			x		x												x	
HP-1	S10	19-21'	x				x													
HP-1	S15	29-31'	x				x													
HP-1	ST-1	33-35'	x				x													x
HP-2	~~S4~~	~~28-30'~~	x				x													
HP-3	S4	7-9'			x		x												x	
HP-3	S8	16-18'			x		x												x	
HP-3	S14	28-30'	x				x													
HP-4	ST-1	32-34'	x				x													x
HP-6	S2	2-4'			x		x												x	
HP-6	S7	12-14'			x		x												x	

*Specify Test Conditions (Undisturbed or Remolded, Density and moisture, Test Normal Loads, Test Confining Stresses, etc.):

*Incremental Consolidation tests with unload/reload sequence
* Sample HP-3 S-8 has organic content, moisture content, grain size, and hydrometer testing

AUTHORIZE BY SIGNING AND DATING:

SIGNATURE: Brian Foley PRINT NAME: Brian Foley DATE: 8/2/17

For GTX Use Only
Incoming Sample Inspection Performed ☐
Adverse conditions:

Relinquished By:	DATE:	Received By:	DATE: 8/2/17
	TIME:		TIME: 10:05
Relinquished By:	DATE:	Received By:	DATE:
	TIME:		TIME:

GeoTesting EXPRESS

SOIL CHAIN OF CUSTODY & TEST REQUEST

GeoTesting Express, Inc.
125 Nagog Park
Acton, MA 01720
800 434 1062 Toll Free
978 635 0266 Fax

2358 Perimeter Park Drive, Suite 320
Atlanta, GA 30341
770 645 6575 Tel
770 645 6570 Fax

www.geotesting.com

CLIENT		INVOICE (complete if different from Client)	
Company: Stantec		Company:	
Address: 5 Burlington Woods Drive		Address:	
City, State, Zip: Burlington, MA		City, State, Zip:	
Contact: Nick D'Agostino	Phone: (978) 577-1440	Contact:	Phone:
E-mail: Nicholas.D'Agostino@stanted.com	Cell:	E-mail:	Cell:

PROJECT		
Project Name: Heritage State Park	Client Project #: 179410469	Purchase Order#:
Project Location: Lynn, MA	GTX Sales Order #:	Requested Turnaround:
On-site Contact: Nick D'Agostino	E-mail:	Phone:

SOIL

Boring ID	Sample ID	Depth	Atterberg Limits (ASTM D 4318)	USCS – Classification (ASTM D 2487)	Grain Size: ASTM D 422 ☑ Sieve Only ☐ Sieve & Hydrometer ☐	Density: ASTM D 2937 ☐ ASTM D 7263 ☐	Moisture Content (ASTM D 2216)	Organic Content (ASTM D 2974)	pH (ASTM D 4972)	Specific Gravity (ASTM D 854)	Electrical Resistivity (ASTM G 57)	Proctor Compaction: Standard – ASTM D 698 ☐ Modified – ASTM D 1557 ☐	California Bearing Ratio * (ASTM D 1883)	Direct Shear* (ASTM D 3080)	Triaxial Shear* ; UU – ASTM D 2850 ☐ CU – ASTM D 4767 ☐ CD – ASTM D7181 ☐	Incremental Consolidation* (ASTM D 2435)	Permeability/ Hydraulic Conductivity* ; Fixed Wall – ASTM D 2434 ☐ Flexible Wall – ASTM D 5084 ☐	Unconfined Compression (ASTM D 2166)	Other: Organic Content (ASTM D2974)	Other: Incremental Consolidation (ASTM D2435)
HP-6	S9	16-18'	x				x													
HP-6	ST-1	27-29'	x				x													x
HP-6	S16	37-39'	x				x													
HP-7	S7	12-14'	x				x												X	
HP-7	S9	16-18	x				x													
~~HP-7~~	~~S11~~	~~20-22'~~	~~x~~				~~x~~												x	

*Specify Test Conditions (Undisturbed or Remolded, Density and moisture, Test Normal Loads, Test Confining Stresses, etc.):

*Incremental Consolidation tests with unload/reload sequence

* ~~Use standard Consolidation~~

AUTHORIZE BY SIGNING AND DATING:

SIGNATURE: _____ PRINT NAME: Brian Foley DATE: 8/2/17

For GTX Use Only
Incoming Sample Inspection Performed ☐
Adverse conditions:

Relinquished By:	DATE:	Received By:	DATE: 8/2/17
	TIME:		TIME: 10:00
Relinquished By:	DATE:	Received By:	DATE:
	TIME:		TIME:

GeoTesting EXPRESS

WARRANTY and LIABILITY

GeoTesting Express (GTX) warrants that all tests it performs are run in general accordance with the specified test procedures and accepted industry practice. GTX will correct or repeat any test that does not comply with this warranty. GTX has no specific knowledge as to conditioning, origin, sampling procedure or intended use of the material.

GTX may report engineering parameters that require us to interpret the test data. Such parameters are determined using accepted engineering procedures. However, GTX does not warrant that these parameters accurately reflect the true engineering properties of the *in situ* material. Responsibility for interpretation and use of the test data and these parameters for engineering and/or construction purposes rests solely with the user and not with GTX or any of its employees.

GTX's liability will be limited to correcting or repeating a test which fails our warranty. GTX's liability for damages to the Purchaser of testing services for any cause whatsoever shall be limited to the amount GTX received for the testing services. GTX will not be liable for any damages, or for any lost benefits or other consequential damages resulting from the use of these test results, even if GTX has been advised of the possibility of such damages. GTX will not be responsible for any liability of the Purchaser to any third party.

Commonly Used Symbols

A	pore pressure parameter for $\Delta\sigma_1 - \Delta\sigma_3$
B	pore pressure parameter for $\Delta\sigma_3$
CAI	CERCHAR Abrasiveness Index
CIU	isotropically consolidated undrained triaxial shear test
CR	compression ratio for one dimensional consolidation
CSR	cyclic stress ratio
C_c	coefficient of curvature, $(D_{30})^2 / (D_{10} \times D_{60})$
C_u	coefficient of uniformity, D_{60}/D_{10}
C_c	compression index for one dimensional consolidation
C_α	coefficient of secondary compression
c_v	coefficient of consolidation
c	cohesion intercept for total stresses
c'	cohesion intercept for effective stresses
D	diameter of specimen
D	damping ratio
D_{10}	diameter at which 10% of soil is finer
D_{15}	diameter at which 15% of soil is finer
D_{30}	diameter at which 30% of soil is finer
D_{50}	diameter at which 50% of soil is finer
D_{60}	diameter at which 60% of soil is finer
D_{85}	diameter at which 85% of soil is finer
d_{50}	displacement for 50% consolidation
d_{90}	displacement for 90% consolidation
d_{100}	displacement for 100% consolidation
E	Young's modulus
e	void ratio
e_c	void ratio after consolidation
e_o	initial void ratio
G	shear modulus
G_s	specific gravity of soil particles
H	height of specimen
H_R	Rebound Hardness number
i	gradient
I_S	Uncorrected point load strength
$I_{S(50)}$	Size corrected point load strength index
H_A	Modified Taber Abrasion
H_T	Total hardness
K_o	lateral stress ratio for one dimensional strain
k	permeability
LI	Liquidity Index
m_v	coefficient of volume change
n	porosity
PI	plasticity index
P_c	preconsolidation pressure
p	$(\sigma_1 + \sigma_3) / 2$, $(\sigma_v + \sigma_h) / 2$
p'	$(\sigma'_1 + \sigma'_3) / 2$, $(\sigma'_v + \sigma'_h) / 2$
p'_c	p' at consolidation
Q	quantity of flow
q	$(\sigma_1 - \sigma_3) / 2$
q_f	q at failure
q_o, q_i	initial q
q_c	q at consolidation
S_r	Post cyclic undrained shear strength
T	temperature
t	time
U, UC	unconfined compression test
UU, Q	unconsolidated undrained triaxial test
u_a	pore gas pressure
u_e	excess pore water pressure
u, u_w	pore water pressure
V	total volume
V_g	volume of gas
V_s	volume of solids
V_s	shear wave velocity
V_v	volume of voids
V_w	volume of water
V_o	initial volume
v	velocity
W	total weight
W_s	weight of solids
W_w	weight of water
w	water content
w_c	water content at consolidation
w_f	final water content
w_l	liquid limit
w_n	natural water content
w_p	plastic limit
w_s	shrinkage limit
w_o, w_i	initial water content
α	slope of q_f versus p_f
α'	slope of q_f versus p_f'
γ_t	total unit weight
γ_d	dry unit weight
γ_s	unit weight of solids
γ_w	unit weight of water
ε	strain
ε_{vol}	volume strain
ε_h, ε_v	horizontal strain, vertical strain
μ	Poisson's ratio, also viscosity
σ	normal stress
σ'	effective normal stress
σ_c, σ'_c	consolidation stress in isotropic stress system
σ_h, σ'_h	horizontal normal stress
σ_v, σ'_v	vertical normal stress
σ'_{vc}	Effective vertical consolidation stress
σ_1	major principal stress
σ_2	intermediate principal stress
σ_3	minor principal stress
τ	shear stress
φ	friction angle based on total stresses
φ'	friction angle based on effective stresses
φ'_r	residual friction angle
φ_{ult}	φ for ultimate strength

GeoTesting EXPRESS

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	---	Sample Type:	---	Tested By:	GA
Sample ID:	---	Test Date:	11/15/18	Checked By:	emm
Depth :	---	Test Id:	480701		

Moisture, Ash, and Organic Matter - ASTM D2974

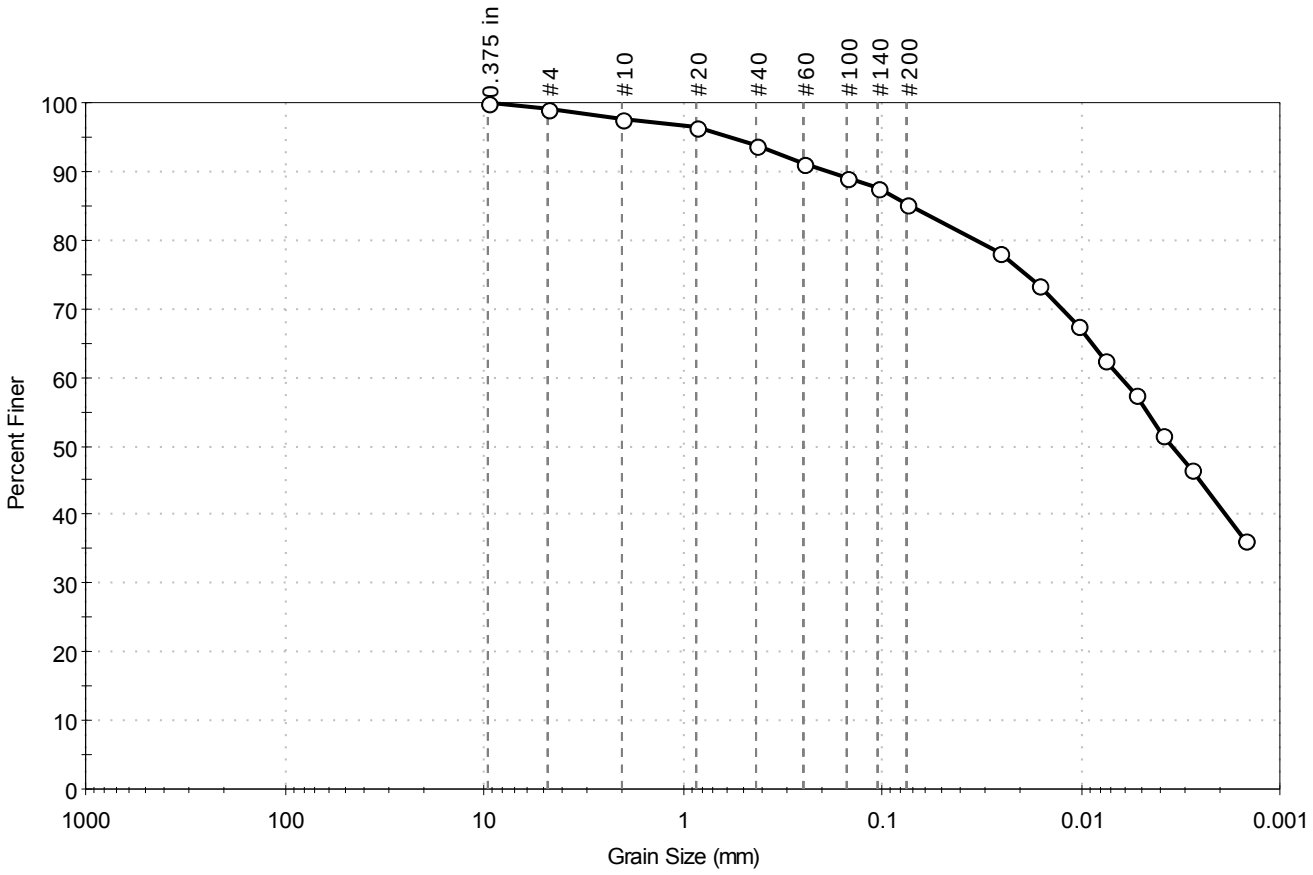
Boring ID	Sample ID	Depth	Description	Moisture Content, %	Ash Content, %	Organic Matter, %
TP-3	---	12 ft	Moist, very dark gray clay	27	97.0	3.0
TP-5	East	5-8 ft	Moist, dark gray silty sand with organics	21	91.9	8.1
HP-27	S7	13-15 ft	Moist, dark gray clay with sand	33	97.4	2.6
HP-26	S8	14-16 ft	Moist, dark gray gravel with silt and sand	18	96.7	3.3
HP-26	S6	10-12 ft	Moist, gray sandy clay	26	97.8	2.2
TP-1	---	7-7.5 ft	Moist, very dark gray sandy clay with organics	35	93.2	6.8

Notes: Moisture content determined by Method A and reported as a percentage of oven-dried mass; dried to a constant mass at temperature of 105º C
Ash content and organic matter determined by Method C; dried to constant mass at temperature 440º C

GeoTesting EXPRESS

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	TP-3	Sample Type:	bag	Tested By:	GA
Sample ID:	---	Test Date:	11/15/18	Checked By:	emm
Depth :	12 ft	Test Id:	480688		
Test Comment:	---				
Visual Description:	Moist, very dark gray clay				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.8	13.9	85.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	98		
#20	0.85	96		
#40	0.42	94		
#60	0.25	91		
#100	0.15	89		
#140	0.11	88		
#200	0.075	85		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0254	78		
---	0.0164	73		
---	0.0103	68		
---	0.0075	63		
---	0.0054	57		
---	0.0039	52		
---	0.0028	47		
---	0.0015	36		

Coefficients

D_{85} = 0.0718 mm	D_{30} = N/A
D_{60} = 0.0064 mm	D_{15} = N/A
D_{50} = 0.0035 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM Lean CLAY (CL)

AASHTO Clayey Soils (A-6 (12))

Sample / Test Description

Sand/Gravel Particle Shape : ---

Sand/Gravel Hardness : ---

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

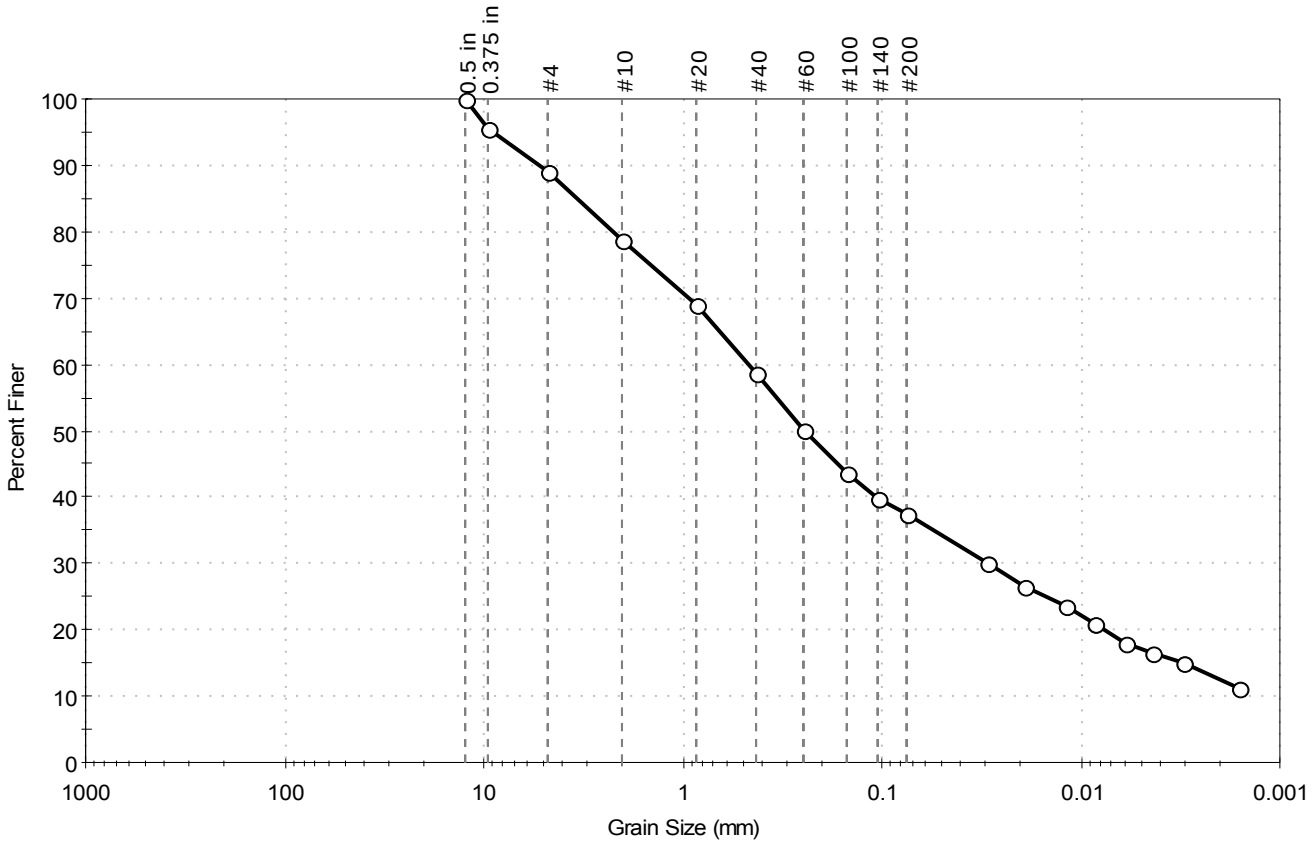
Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	TP-5	Sample Type:	bag	Tested By:	GA
Sample ID:	East	Test Date:	11/15/18	Checked By:	emm
Depth :	5-8 ft	Test Id:	480689		

Test Comment: ---
Visual Description: Moist, dark gray silty sand with organics
Sample Comment: ---

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	11.0	51.5	37.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.5 in	12.50	100		
0.375 in	9.50	96		
#4	4.75	89		
#10	2.00	79		
#20	0.85	69		
#40	0.42	59		
#60	0.25	50		
#100	0.15	44		
#140	0.11	40		
#200	0.075	38		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0293	30		
---	0.0192	27		
---	0.0119	23		
---	0.0085	21		
---	0.0060	18		
---	0.0043	16		
---	0.0031	15		
---	0.0016	11		

Coefficients

D_{85} = 3.3958 mm	D_{30} = 0.0292 mm
D_{60} = 0.4647 mm	D_{15} = 0.0031 mm
D_{50} = 0.2487 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM Silty SAND (SM)

AASHTO Clayey Soils (A-7-5 (2))

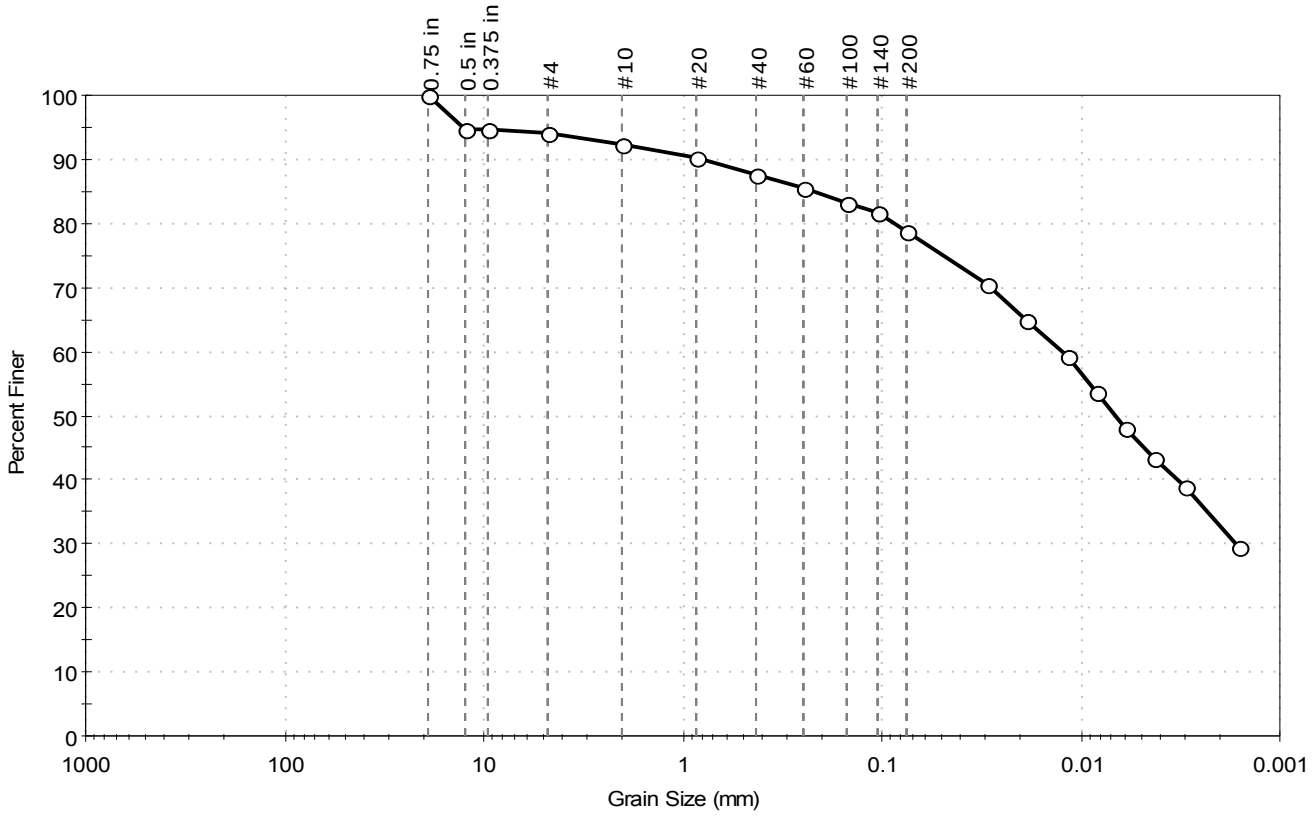
Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR
Sand/Gravel Hardness : HARD
Dispersion Device : Apparatus A - Mech Mixer
Dispersion Period : 1 minute
Est. Specific Gravity : 2.65
Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	HP-27	Sample Type:	jar	Tested By:	GA
Sample ID:	S7	Test Date:	11/15/18	Checked By:	emm
Depth :	13-15 ft	Test Id:	480690		
Test Comment:	---				
Visual Description:	Moist, dark gray clay with sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	5.9	15.5	78.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	95		
0.375 in	9.50	95		
#4	4.75	94		
#10	2.00	92		
#20	0.85	90		
#40	0.42	88		
#60	0.25	85		
#100	0.15	83		
#140	0.11	82		
#200	0.075	79		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0293	70		
---	0.0186	65		
---	0.0116	59		
---	0.0084	54		
---	0.0060	48		
---	0.0043	43		
---	0.0030	39		
---	0.0016	29		

Coefficients

D_{85} = 0.2266 mm	D_{30} = 0.0017 mm
D_{60} = 0.0124 mm	D_{15} = N/A
D_{50} = 0.0067 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM Lean CLAY with Sand (CL)

AASHTO Clayey Soils (A-7-6 (17))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

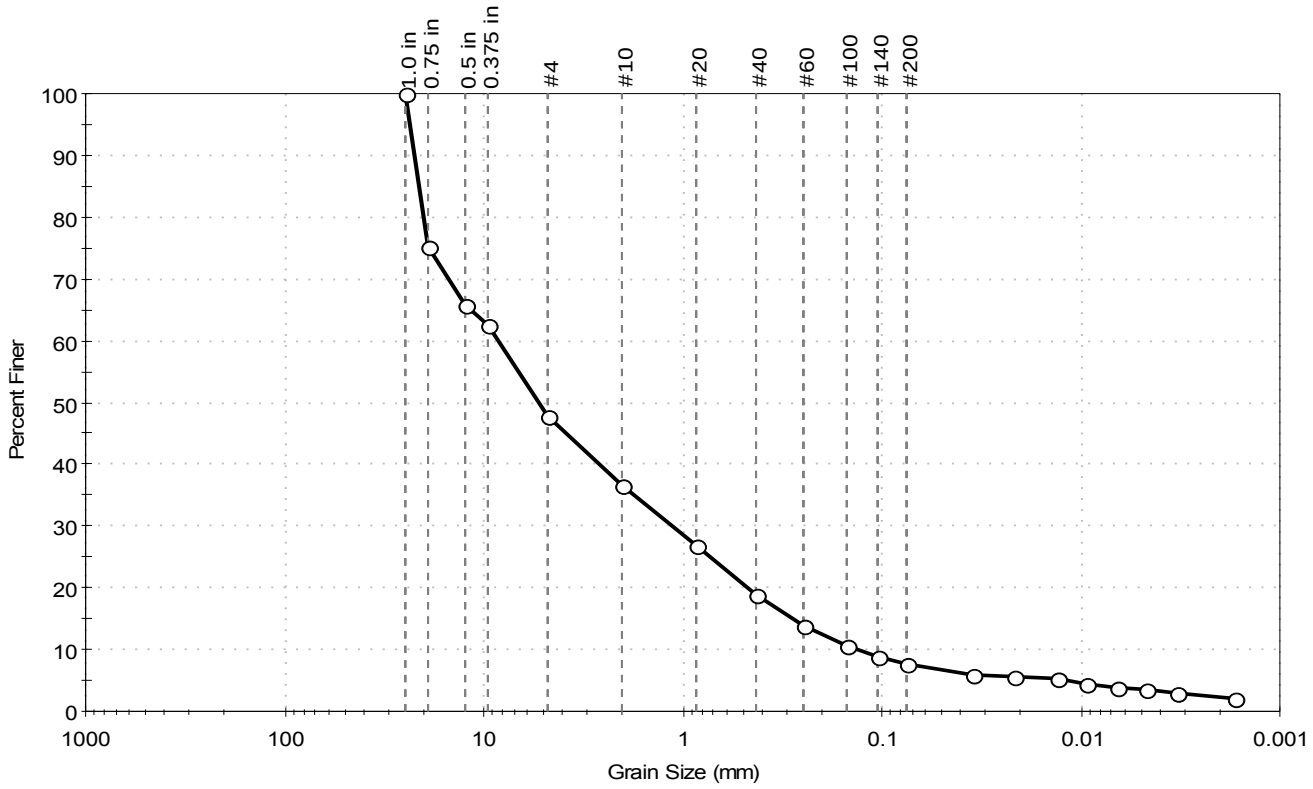
Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	HP-26	Sample Type:	jar	Tested By:	GA
Sample ID:	S8	Test Date:	11/15/18	Checked By:	emm
Depth :	14-16 ft	Test Id:	480691		
Test Comment:	---				
Visual Description:	Moist, dark gray gravel with silt and sand				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	52.2	40.2	7.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1.0 in	25.00	100		
0.75 in	19.00	75		
0.5 in	12.50	66		
0.375 in	9.50	62		
#4	4.75	48		
#10	2.00	37		
#20	0.85	27		
#40	0.42	19		
#60	0.25	14		
#100	0.15	11		
#140	0.11	9		
#200	0.075	7.6		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0346	6		
---	0.0217	6		
---	0.0132	5		
---	0.0094	4		
---	0.0066	4		
---	0.0047	3		
---	0.0033	3		
---	0.0017	2		

Coefficients

D_{85} = 21.1747 mm	D_{30} = 1.1172 mm
D_{60} = 8.4762 mm	D_{15} = 0.2852 mm
D_{50} = 5.2705 mm	D_{10} = 0.1356 mm
C_u = 62.509	C_c = 1.086

Classification

ASTM — Well-graded GRAVEL with Silt and Sand (GW-GM)

AASHTO — Stone Fragments, Gravel and Sand (A-1-a (1))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

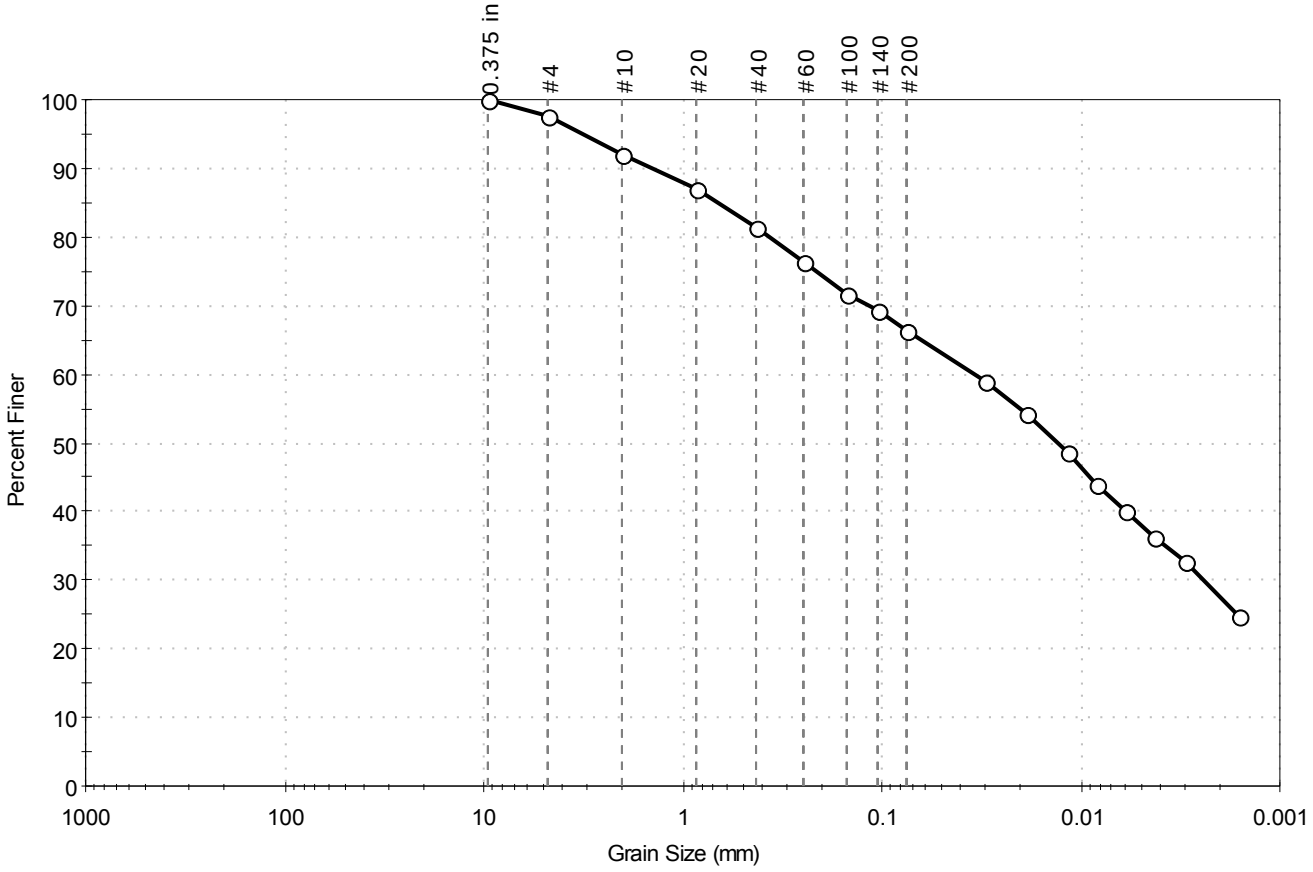
Est. Specific Gravity : 2.65

Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	HP-26	Sample Type:	jar	Tested By:	GA
Sample ID:	S6	Test Date:	11/15/18	Checked By:	emm
Depth :	10-12 ft	Test Id:	480692		
Test Comment:	---				
Visual Description:	Moist, gray sandy clay				
Sample Comment:	---				

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	2.5	31.1	66.4

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	98		
#10	2.00	92		
#20	0.85	87		
#40	0.42	81		
#60	0.25	77		
#100	0.15	72		
#140	0.11	69		
#200	0.075	66		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0305	59		
---	0.0188	54		
---	0.0116	49		
---	0.0084	44		
---	0.0060	40		
---	0.0043	36		
---	0.0030	33		
---	0.0016	25		

Coefficients

D_{85} = 0.6617 mm	D_{30} = 0.0025 mm
D_{60} = 0.0342 mm	D_{15} = N/A
D_{50} = 0.0130 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM Sandy Lean CLAY (CL)

AASHTO Clayey Soils (A-6 (9))

Sample / Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Dispersion Device : Apparatus A - Mech Mixer

Dispersion Period : 1 minute

Est. Specific Gravity : 2.65

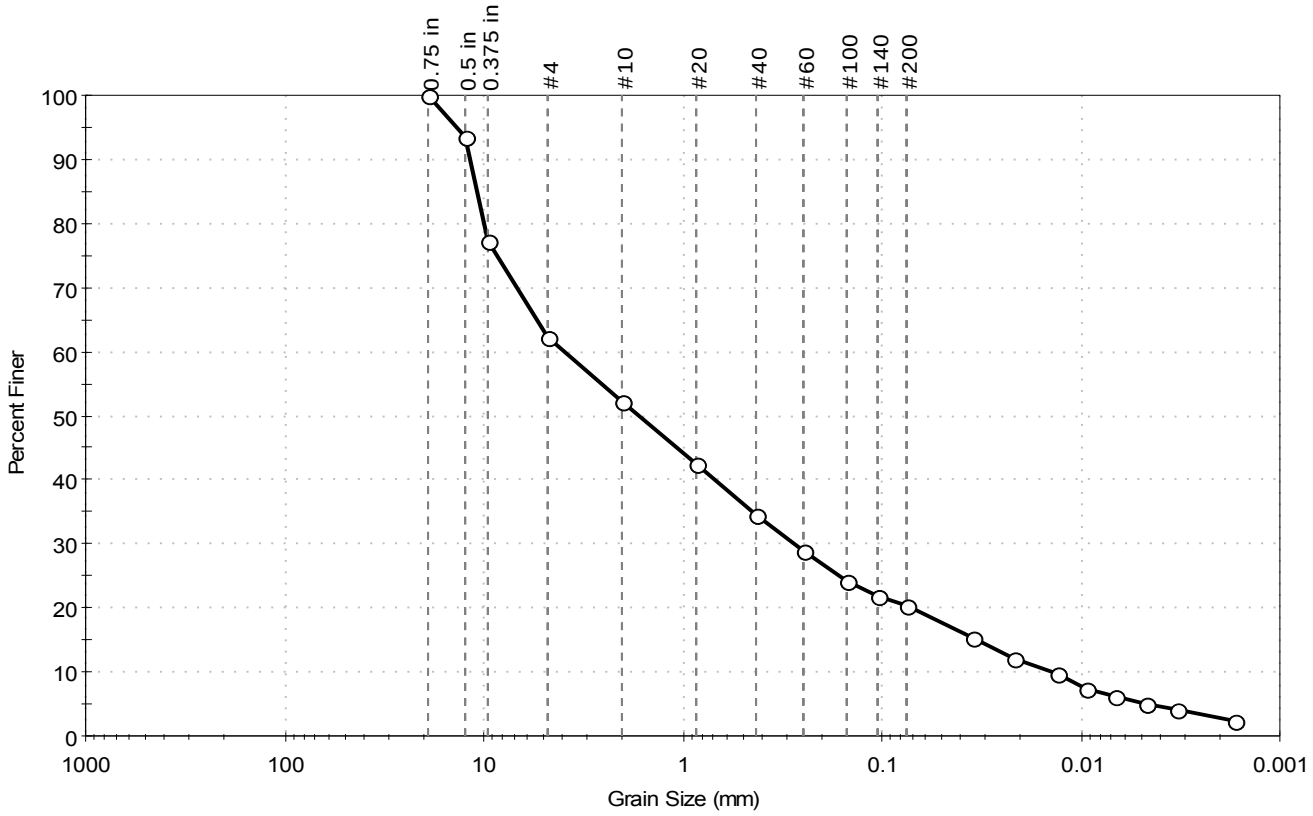
Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	HP-27	Sample Type:	jar	Tested By:	GA
Sample ID:	S6	Test Date:	11/15/18	Checked By:	emm
Depth :	11-13 ft	Test Id:	480693		

Test Comment: ---
Visual Description: Moist, very dark gray silty sand with gravel
Sample Comment: ---

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	37.6	42.1	20.3

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.75 in	19.00	100		
0.5 in	12.50	94		
0.375 in	9.50	77		
#4	4.75	62		
#10	2.00	52		
#20	0.85	42		
#40	0.42	35		
#60	0.25	29		
#100	0.15	24		
#140	0.11	22		
#200	0.075	20		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0347	15		
---	0.0220	12		
---	0.0133	10		
---	0.0094	7		
---	0.0067	6		
---	0.0048	5		
---	0.0033	4		
---	0.0017	2		

Coefficients

D_{85} = 10.8192 mm
D_{30} = 0.2789 mm
D_{60} = 3.8972 mm
D_{15} = 0.0329 mm
D_{50} = 1.6604 mm
D_{10} = 0.0142 mm
C_u = 274.451
C_c = 1.406

Classification

ASTM N/A

AASHTO Stone Fragments, Gravel and Sand (A-1-b (0))

Sample / Test Description

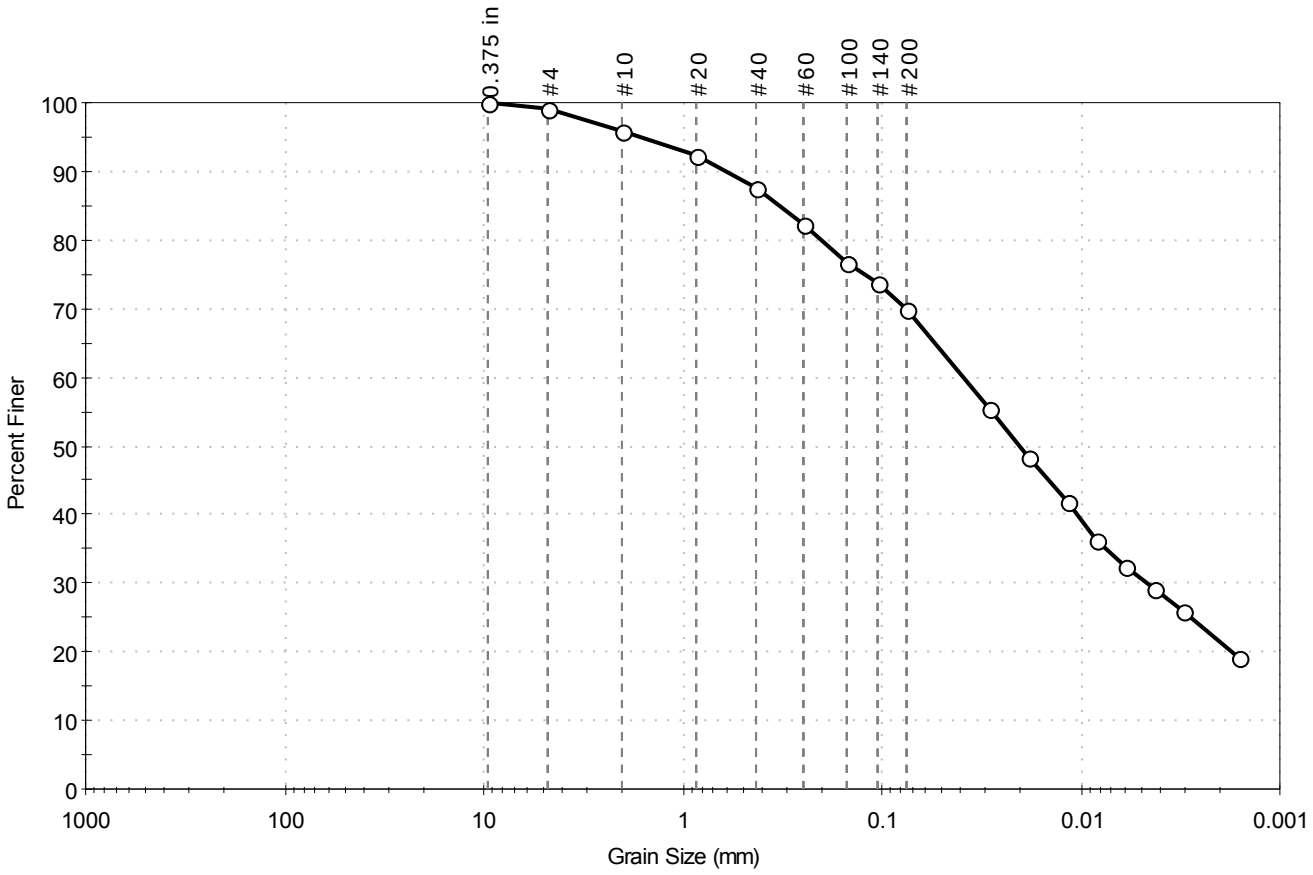
Sand/Gravel Particle Shape : ANGULAR
Sand/Gravel Hardness : HARD
Dispersion Device : Apparatus A - Mech Mixer
Dispersion Period : 1 minute
Est. Specific Gravity : 2.65
Separation of Sample: #200 Sieve

GeoTesting EXPRESS

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	TP-1	Sample Type:	bag	Tested By:	GA
Sample ID:	---	Test Date:	11/15/18	Checked By:	emm
Depth :	7-7.5 ft	Test Id:	480694		

Test Comment: ---
Visual Description: Moist, very dark gray sandy clay with organics
Sample Comment: ---

Particle Size Analysis - ASTM D422



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	0.9	29.2	69.9

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
0.375 in	9.50	100		
#4	4.75	99		
#10	2.00	96		
#20	0.85	92		
#40	0.42	88		
#60	0.25	82		
#100	0.15	77		
#140	0.11	74		
#200	0.075	70		
Hydrometer	Particle Size (mm)	Percent Finer	Spec. Percent	Complies
---	0.0288	56		
---	0.0185	48		
---	0.0116	42		
---	0.0084	36		
---	0.0060	32		
---	0.0043	29		
---	0.0030	26		
---	0.0016	19		

Coefficients

D_{85} = 0.3302 mm	D_{30} = 0.0047 mm
D_{60} = 0.0388 mm	D_{15} = N/A
D_{50} = 0.0205 mm	D_{10} = N/A
C_u = N/A	C_c = N/A

Classification

ASTM Sandy Lean CLAY (CL)

AASHTO Clayey Soils (A-7-6 (15))

Sample / Test Description

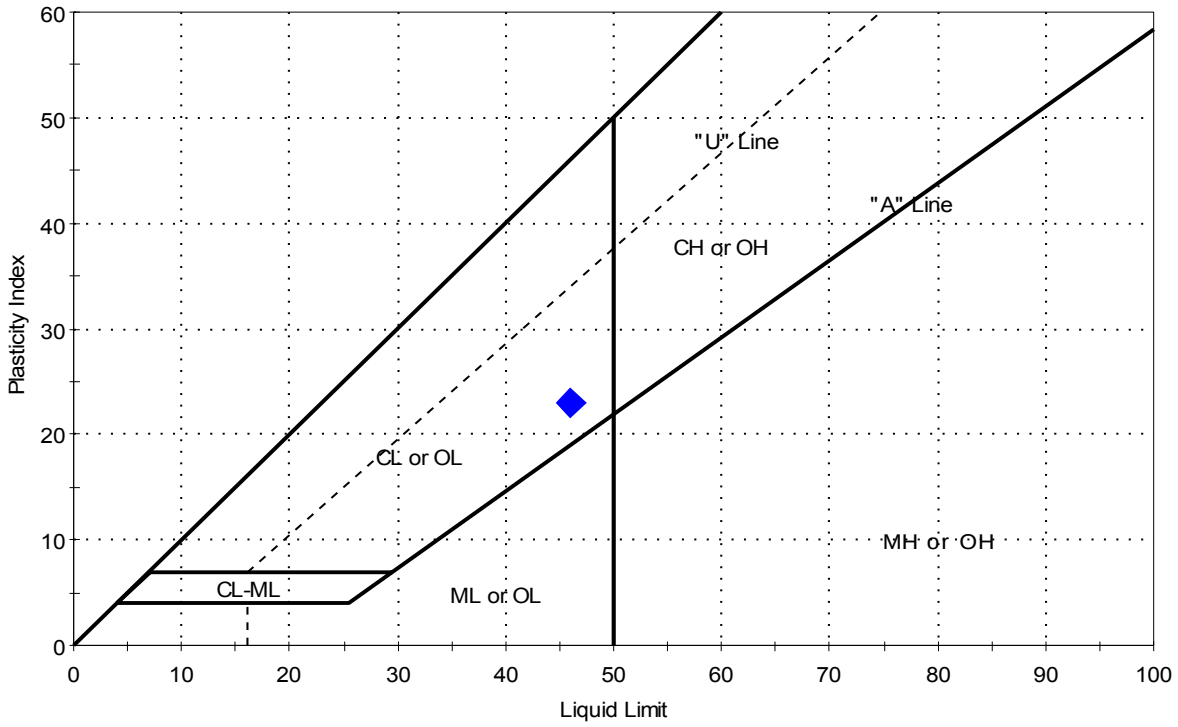
Sand/Gravel Particle Shape : ---
Sand/Gravel Hardness : ---
Dispersion Device : Apparatus A - Mech Mixer
Dispersion Period : 1 minute
Est. Specific Gravity : 2.65
Separation of Sample: #200 Sieve

printed 11/16/2018 1:44:26 PM

GeoTesting EXPRESS

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	TP-1	Sample Type:	bag	Tested By:	GA
Sample ID:	---	Test Date:	11/15/18	Checked By:	emm
Depth :	7-7.5 ft	Test Id:	480687		
Test Comment:	---				
Visual Description:	Moist, very dark gray sandy clay with organics				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



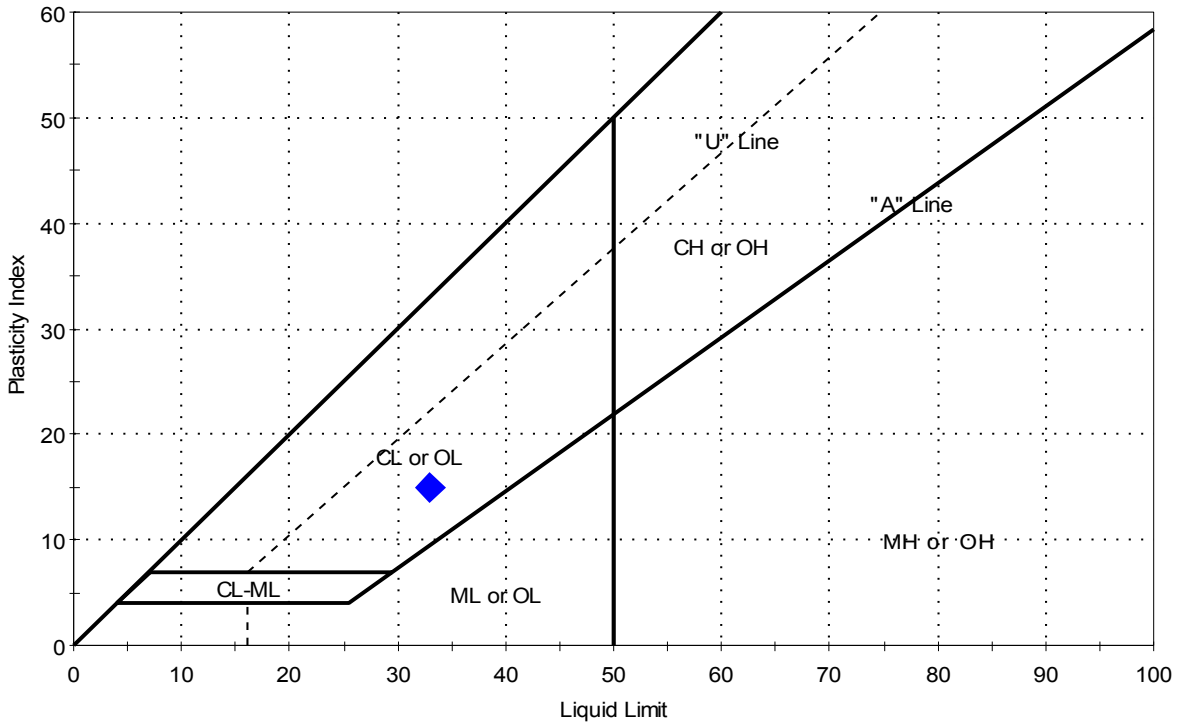
Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	---	TP-1	7-7.5 ft	39	46	23	23	0.7	Sandy Lean CLAY (CL)

Sample Prepared using the WET method
12% Retained on #40 Sieve
Dry Strength: HIGH
Dilatancy: NONE
Toughness: MEDIUM

GeoTesting EXPRESS

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	TP-3	Sample Type:	bag	Tested By:	GA
Sample ID:	---	Test Date:	11/15/18	Checked By:	emm
Depth :	12 ft	Test Id:	480682		
Test Comment:	---				
Visual Description:	Moist, very dark gray clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	---	TP-3	12 ft	27	33	18	15	0.6	Lean CLAY (CL)

Sample Prepared using the WET method

6% Retained on #40 Sieve

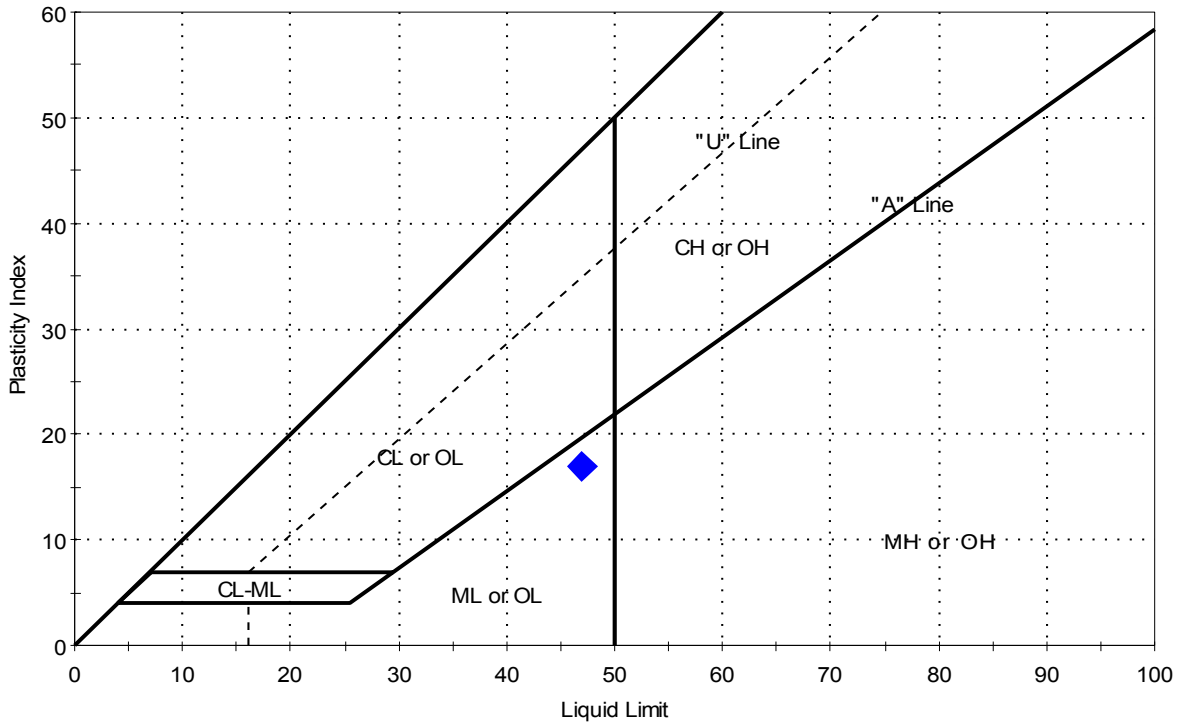
Dry Strength: VERY HIGH

Dilatancy: NONE

Toughness: MEDIUM

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	TP-5	Sample Type:	bag	Tested By:	GA
Sample ID:	East	Test Date:	11/16/18	Checked By:	emm
Depth :	5-8 ft	Test Id:	480683		
Test Comment:	---				
Visual Description:	Moist, dark gray silty sand with organics				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	East	TP-5	5-8 ft	23	47	30	17	-0.4	Silty SAND (SM)

Sample Prepared using the WET method

41% Retained on #40 Sieve

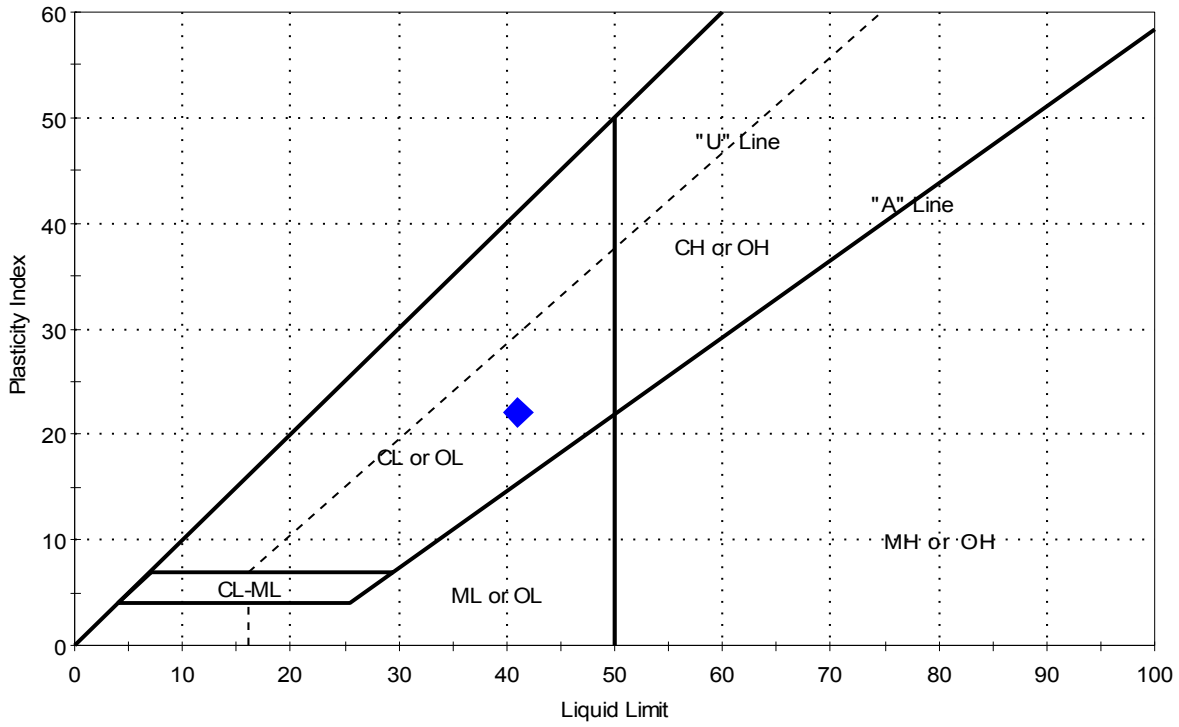
Dry Strength: HIGH

Dilatancy: NONE

Toughness: MEDIUM

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	HP-27	Sample Type:	jar	Tested By:	GA
Sample ID:	S7	Test Date:	11/15/18	Checked By:	emm
Depth :	13-15 ft	Test Id:	480684		
Test Comment:	---				
Visual Description:	Moist, dark gray clay with sand				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S7	HP-27	13-15 ft	35	41	19	22	0.7	Lean CLAY with Sand (CL)

Sample Prepared using the WET method

12% Retained on #40 Sieve

Dry Strength: HIGH

Dilatancy: NONE

Toughness: MEDIUM

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	HP-26	Sample Type:	jar	Tested By:	GA
Sample ID:	S8	Test Date:	11/15/18	Checked By:	emm
Depth :	14-16 ft	Test Id:	480685		
Test Comment:	---				
Visual Description:	Moist, dark gray gravel with silt and sand				
Sample Comment:	---				

Atterberg Limits - ASTM D4318

Sample Determined to be non-plastic

Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S8	HP-26	14-16 ft	18	n/a	n/a	n/a	n/a	Well-graded GRAVEL with Silt and Sand (GW-GM)

81% Retained on #40 Sieve

Dry Strength: NONE

Dilatancy: RAPID

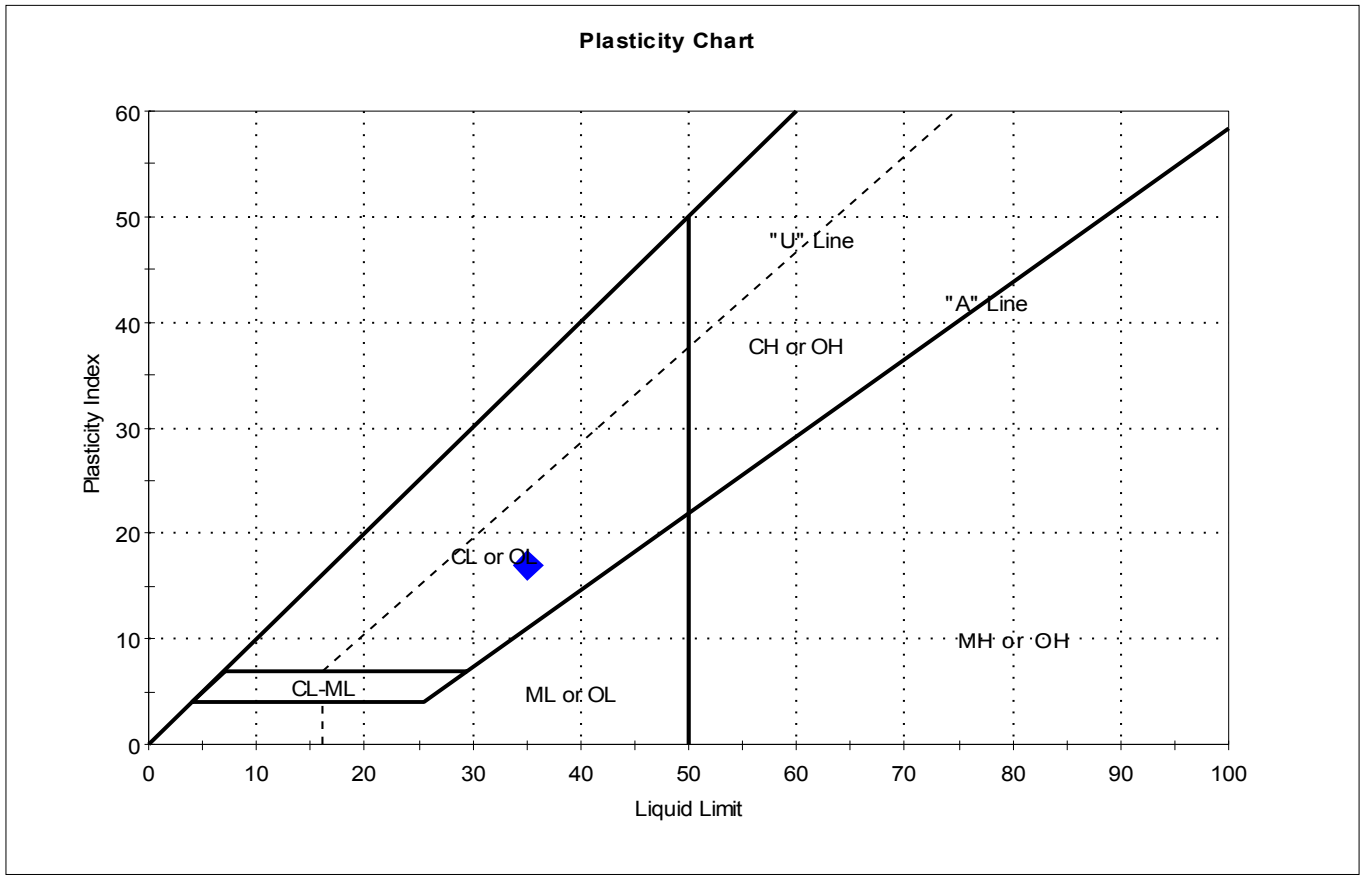
Toughness: n/a

The sample was determined to be Non-Plastic

GeoTesting EXPRESS

Client:	Stantec Inc.				
Project:	Lynn Heritage State Park				
Location:	Lynn, MA			Project No:	GTX-309110
Boring ID:	HP-26	Sample Type:	jar	Tested By:	GA
Sample ID:	S6	Test Date:	11/16/18	Checked By:	emm
Depth :	10-12 ft	Test Id:	480686		
Test Comment:	---				
Visual Description:	Moist, gray sandy clay				
Sample Comment:	---				

Atterberg Limits - ASTM D4318



Symbol	Sample ID	Boring	Depth	Natural Moisture Content, %	Liquid Limit	Plastic Limit	Plasticity Index	Liquidity Index	Soil Classification
◆	S6	HP-26	10-12 ft	25	35	18	17	0.4	Sandy Lean CLAY (CL)

Sample Prepared using the WET method
19% Retained on #40 Sieve
Dry Strength: HIGH
Dilatancy: NONE
Toughness: MEDIUM

APPENDIX E

Stantec

Memo

To:	Brown, Richardson + Rowe, Inc.	From:	Jonathan Spicer Stantec Consulting Services, Inc.
File:	Stormwater Management Memorandum	Date:	November 5, 2019 Revised December 12, 2019

Reference: Stormwater Management Memorandum – Lynn Heritage State Park, 180 Lynnway, Lynn, Massachusetts

Project Description

The owner of the Lynn Heritage State Park, The Commonwealth of Massachusetts Department of Conservation and Recreation (DCR), anticipates the redevelopment of the Lynn State Heritage Park will include a new parking area with an additional vehicular access point, improved sight lines into the park, a large splash pad area, a flexible public plaza with performance stage, overhead shade structures, a stepped waterside overlook deck, a large lawn for passive recreation, and a wide paved promenade. After repair of the seawall and resolution of ground settlement issues, a new boardwalk will be provided as well as a repaired pavilion.

Stormwater Management Standards

The objective of this memo is to document the project's compliance with the Massachusetts Stormwater Management Standards. Each of the ten standards is summarized below, followed by the project's compliance with each. Supporting documentation including the stormwater checklist, calculations and operation and maintenance plan are included as attachments.

1. **Standard 1: No New Untreated Discharges**

   "No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth."

   This project has three existing outfalls, known in the proposed condition as (1) parking lot, (2) splash pad and (3) southern. Subsurface drainpipes connecting to outfalls (2) and (3) will be replaced, however the outlets will remain in their current locations. This project will produce no new untreated discharges.

2. **Standard 2: Peak Rate Attenuation**

   "Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04."

   310 CMR 10.04: *"Land Subject to Coastal Storm Flowage means land subject to any inundation caused by coastal storms up to and including that caused by the 100-year storm, surge of record or storm of record, whichever is greater."*

   This project is located in the coastal flowage zone, therefore Standard 2 is not applicable. Refer to the National Flood Hazard Layer FIRMette, Attachment A (Zone VE = High Risk Costal Zone).

3. **Standard 3: Recharge**

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

"Loss of annual recharge to groundwater shall be eliminated or minimized through the use of infiltration measures including environmentally sensitive site design, low impact development techniques, stormwater best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook."

"Stormwater recharge is not permitted through fill materials composed of asphalt, brick, concrete, construction debris, and materials classified as solid or hazardous waste. When the STAGE 1B field investigation indicates fill is present, the Competent Soils Professional must conduct a soil textural analysis of the parent material below the fill layer. (Volume 3, Chapter 1, Page 10)"

Subsurface explorations including borings and test pits were conducted by New England Boring Contractors in July 2017, September 2017 and October 2018. Results from the subsurface investigations indicate the entire site consisting of variable depths of anthropogenic fill with evidence of brick, concrete, glass, metal debris, ash, asphalt, etc. throughout the fill layer. Below the fill lies a typical profile of a sandy/silt layer atop Boston blue clay, glacial till and bedrock.

Based on the subsurface explorations, the site consists of D soils littered with construction debris making infiltration and recharge infeasible. The full report entitled, "Final Geotechnical Engineering Report", dated December 11, 2018 is bound separately.

4. Standard 4: Water Quality

"Stormwater management systems shall be designed to remove 80% of the average annual postconstruction load of Total Suspended Solids (TSS). This Standard is met when:
a. Suitable practices for source control and pollution prevention are identified in a long term pollution prevention plan, and thereafter are implemented and maintained;
b. Structural stormwater best management practices are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and c. Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook."

Stormwater runoff is captured and conveyed via 3 separate drainage networks with different outfalls. As mentioned in Standard 1, these are named the (1) parking lot, (2) splash pad and (3) southern:

(1) The parking lot runoff requires water quality treatment which will be addressed through a treatment train of catch basins and water quality units. The parking lot runoff will discharge to the existing 72" outlet once treated.

(2) The splash pad runoff is captured in area drains and conveyed to the splash pad outlet. Per the City of Lynn Water and Sewer Commission, the clean splash pad water may be captured and discharged via the drainage network. Email correspondence provided in Attachment D.

(3) The southern drainage network captures stormwater runoff that flows over grass and landscaped areas not requiring treatment. Stormwater will flow be captured and conveyed to the southern outlet.

Stormwater Calculations and supporting information are included in Attachment D.

5. Standard 5: Land Uses with Higher Potential Pollutant Loads (LUHPPL)

"For land uses with higher potential pollutant loads, source control and pollution prevention shall be

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution prevention all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53 and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00."

This project does not meet any criteria that would constitute a LUHPPL.

6. Standard 6: Critical Areas

"Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area, require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, taking into account site specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters shall be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A "storm water discharge" as defined in 314 CMR 3.04(2)(a)1 or (b) to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of a public water supply."

The project is not in a located within a critical area.

7. Standard 7: Redevelopment

"A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions."

The project is considered a new development in accordance with the Stormwater Handbook as it includes new construction on a previously developed site.

8. Standard 8: Construction Period Pollution Prevention and Erosion & Sedimentation Control

"A plan to control construction-related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented."

Construction period pollution prevention and erosion and sedimentation control best management practices (BMP) will be implemented during construction. BMPs will include both structural and vegetative practices. The general contractor will be responsible for implementation of construction period controls. A Site Preparation and Demolition Plan is provided, Sheets L-1, L-2 and L-3, of the project plans, bound separately.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

9. Standard 9: Operation and Maintenance Plan

"A long-term operation and maintenance plan shall be developed and implemented to ensure that stormwater management systems function as designed."

The goal of the operation and maintenance plan is not only to protect resources on-site or nearby, but also to protect resources in the region that may be affected by the activities at the site. The operation and maintenance of the stormwater management system will be performed by the Owner, in conjunction with the maintenance of the remainder of the stormwater management system for the overall project site.

An Operation and Maintenance Plan and Log have been prepared for the specific components of this project, and are included as Attachment E.

10. Standard 10: Prohibition of Illicit Discharges

"All illicit discharges to the stormwater management system are prohibited."

Standard 10 of the Massachusetts Stormwater Handbook prohibits illicit discharges to stormwater management system. As stated in the handbook, *"The stormwater management system is the system for conveying, treating, and infiltrating stormwater on-site, including stormwater best management practices and any pipes intended to transport stormwater to the groundwater, a surface water, or municipal separate storm sewer system. Illicit discharges to the stormwater management system are discharges that are not entirely comprised of stormwater."*

Stormwater runoff captured in the (1) parking area will receive treatment prior to exiting the closed drainage system. Thus, eliminating the potential for illicit discharges. The other two stormwater management locations (the (2) splash pad and (3) southern) on the project site are not collecting any runoff with the potential to generate illicit discharges.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

Attachments

Attachment A – Figures

Attachment B – Stormwater Checklist

Attachment C - Geotechnical Engineering Report (provided separately)

Attachment D – Stormwater Calculations and Supporting Information

Attachment E – Operation and Maintenance Plan

Attachment F – Project Plans (provided separately)

Stantec Consulting Services, Inc.

Jonathan Spicer, PE
Civil Engineer
Phone: 617.654.6043
Jonathan.Spicer@Stantec.com

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

ATTACHMENT A – FIGURES

National Flood Hazard Layer FIRMette

FEMA

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- 513 — Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 9/24/2019 at 3:26:36 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

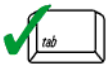
ATTACHMENT B – STORMWATER CHECKLIST

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

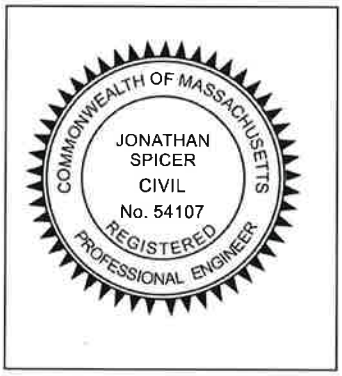
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Signature and Date 11/5/2019

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☒ New development

☐ Redevelopment

☐ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☐ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☐ Reduced Impervious Area (Redevelopment Only)
- ☒ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
  - ☐ Credit 1
  - ☐ Credit 2
  - ☐ Credit 3
- ☐ Use of "country drainage" versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges

- ☒ No new untreated discharges
- ☐ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☐ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☒ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☐ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge not applicable, poor soils with construction debris

☐ Soil Analysis provided.

☐ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☐ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☐ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☐ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☐ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☐ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☒ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☐ The BMP is sized (and calculations provided) based on:

- ☐ The ½" or 1" Water Quality Volume or
- ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☒ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs) not applicable

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas not applicable

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☐ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable not applicable

☐ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

☐ Limited Project

☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.

☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area

☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff

☐ Bike Path and/or Foot Path

☐ Redevelopment Project

☐ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☐ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☐ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☒ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☐ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ☐ Estimated operation and maintenance budget; and
- ☒ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

☐ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☐ An Illicit Discharge Compliance Statement is attached;

☒ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

ATTACHMENT C - GEOTECHNICAL ENGINEERING REPORT (FULL REPORT PROVIDED SEPARATELY)

ATTACHMENT D – STORMWATER CALCULATIONS AND SUPPORTING INFORMATION

TOTAL SUSPENDED SOLIDS (TSS) REMOVAL WORKSHEET

Project: Lynn Heritage State Park
Date: October 18, 2019
Revised:
Project No: 179410750
Location: Lynn, MA
Prepared By: JS
Checked By:

Discharge Location: **Treatment Train #1: Parking Lot**

A BMP	B TSS Removal Rate	C Starting TSS Load	D Amount Removed (BxC)	E Remaining Load (C-D)	F TSS Removal Rate
Deep Sump and Hooded Catch Basin	**0.25**	**1.00**	**0.25**	**0.75**	**25%**
Proprietary Treatment Practice	**0.80**	**0.75**	**0.60**	**0.15**	**85%**

Total TSS Removal = **85%**

Stantec Consulting, LTD
70 Walnut Street, Wellesley MA 02481
Tel: (781) 237-4111 Fax: (781) 237-4144

From:	Ducey, Jennifer
To:	Calnan, John
Cc:	Spicer, Jonathan; Moura, Tony
Subject:	FW: Lynnway Splash Pad
Date:	Tuesday, October 01, 2019 12:36:34 PM
Attachments:	95 OF288.pdf

Hi John, see below and attached relative to the splash pad not needing a sewer connection. If we need something more formal, then we should follow up with Ashley.

- Jen

From: Zak, Marianna <Marianna.Zak@stantec.com>
Sent: Tuesday, October 01, 2019 12:25 PM
To: Ducey, Jennifer <Jennifer.Ducey@stantec.com>
Subject: Re: Lynnway Splash Pad

From: Ashley Keighley <akeighley@lynnwatersewer.org>
Sent: Thursday, June 27, 2019 11:39 AM
To: Zak, Marianna <Marianna.Zak@stantec.com>
Subject: Lynnway Splash Pad

Hi Marianna,

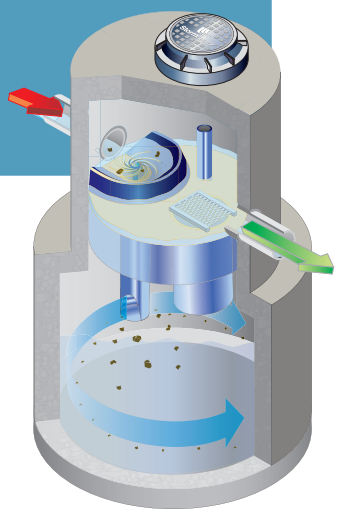
As long as the splash pad is clean water it can be put in the drain. Attached is a plan of the drainage and utilities in the area.

Let me know if you need anything else.

Thanks,
Ashley

Ashley Keighley
Engineering Technician
Lynn Water & Sewer Commission
400 Parkland Ave.
Lynn, MA 01905
781-596-2400 x 246 ext.
781-858-2970 Cell

Stormceptor® STC



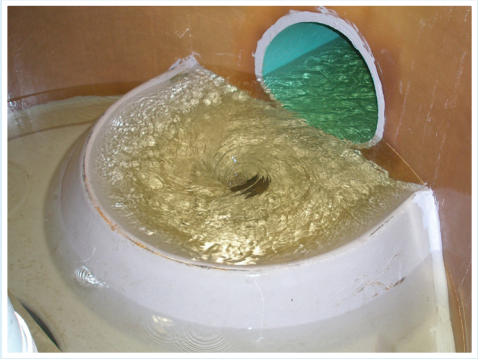
The calm *during* the storm

When it rains, oils, sediment and other contaminants are washed from paved surfaces directly into our storm drains and waterways. Non-point source pollution such as stormwater now accounts for 80% of water pollution in North America and governments are responding with demanding regulations to protect our water resources.

Removing more pollutants

Stormceptor removes more pollutants from stormwater than any other separator.

- Maintains continuous positive treatment of total suspended solids (TSS) year-round, regardless of flow rate
- Designed to remove a wide range of particle sizes, as well as free oils, heavy metals and nutrients that attach to fine sediment
- Can be designed to remove a specific particle size distribution (PSD)



A calm treatment environment

- Stormceptor slows incoming stormwater to create a non-turbulent treatment environment, allowing free oils and debris to rise, and sediment to settle
- Scour prevention technology ensures pollutants are captured and contained during all rainfall events, even extreme storms

Proven performance

With more than 20 years of industry experience, Stormceptor has been performance tested and verified by some of the most stringent technology evaluation programs in North America. Stormceptor has been performance verified through numerous verification programs, including;

- NJCAT
- Washington ECOLOGY
- EN858 Class 2

PCSWMM for Stormceptor – *Advanced online sizing & design software*

The most accurate, easy to use design tool available.

- This continuous simulation modeling software combines localized rainfall data from over 1,900 weather stations across North America allowing for region-specific design with a selection of particle sizes to design the best Stormceptor for your site
- Within a single project, multiple Stormceptor units can be sized and the information revisited as project parameters change
- Provides a summary report that includes projected performance calculations

www.imbriumsystems.com/PCSWMMforStormceptor

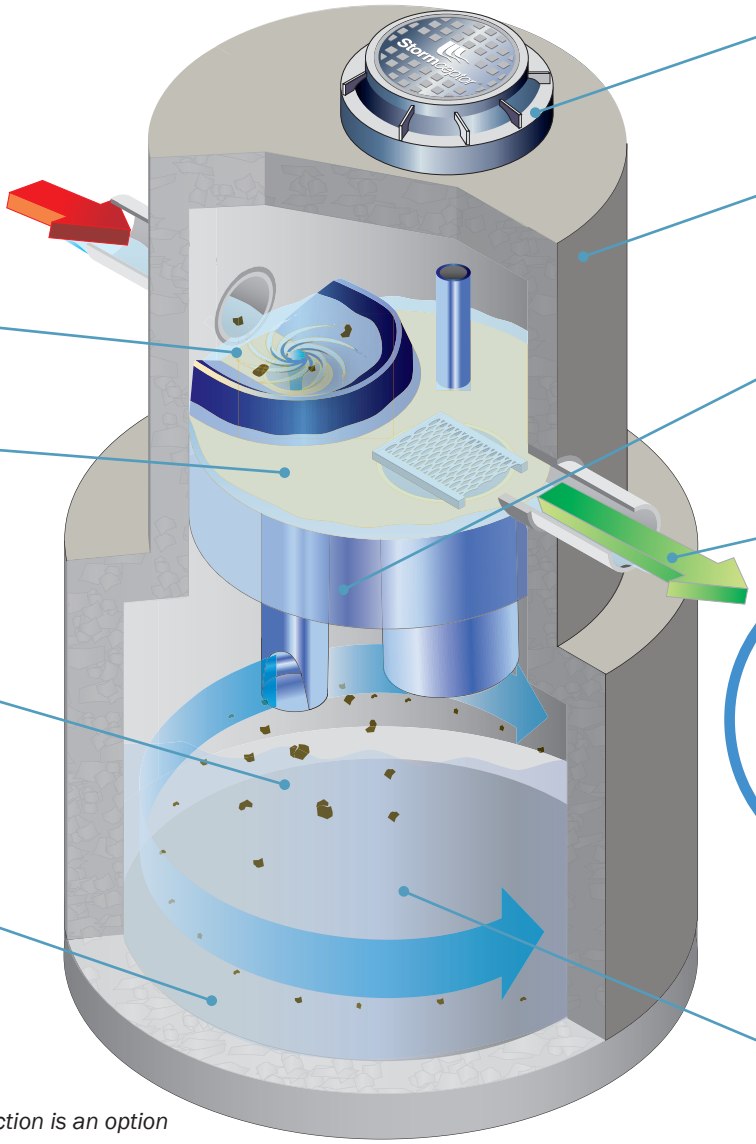
With over 40,000 units operating worldwide, Stormceptor performs and protects every day, in every storm.

CANADA: (800) 565 4801 | USA: (888) 279 8826 | INTERNATIONAL: +1 (416) 960 9900

imbrium®
www.imbriumsystems.com

Stormceptor® STC

The calm *during* the storm



* *Fiberglass construction is an option*

Easy to install

Small footprint saves time and money with limited disruption to your site.

Seamless

Minimal drop between inlet and outlet pipes makes Stormceptor ideal for retrofits and new development projects.

Flexible

Multiple inlets can connect to a single unit.

Can be used as a bend structure.

CANADA: (800) 565 4801 | USA: (888) 279 8826 | INTERNATIONAL: +1 (416) 960 9900

imbrium®
www.imbriumsystems.com

ATTACHMENT E – OPERATION AND MAINTENANCE PLAN

Operation & Maintenance Plan

Lynn Heritage State Park
180 Lynnway
Lynn, MA 01902

October 18, 2019
Revised: December 12, 2019

Prepared for:

Brown, Richardson & Rowe, Inc.
3 Post Office Square, 3rd Floor
Boston, MA 02110

Prepared by:

Stantec Consulting Services Inc.
226 Causeway St., 6th Floor
Boston, MA 02114

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

Table of Contents

1.0 GENERAL INFORMATION I
1.1 INTRODUCTION I

2.0 MAINTENANCE AGREEMENT I
2.1 RESPONSIBLE FOR OPERATION AND MAINTENANCE (24/7 CONTACT) I
2.2 RESPONSIBLE FOR FINANCING MAINTENANCE AND EMERGENCY REPAIRS I
2.3 INSPECTION AND MAINTENANCE LOG I

3.0 OPERATION AND MAINTENANCE PLAN II
3.1 NON-STRUCTURAL POLLUTANT CONTROLS II
3.1.1 Standard Asphalt Pavement Maintenance ii
3.1.2 Deicing Chemicals ii
3.1.3 Fertilizer ii
3.2 STRUCTURAL POLLUTANT CONTROLS III
3.2.1 Catch Basins iii
3.2.2 Drainage Manholes iii
3.2.3 Proprietary Separators iv
3.2.4 Vegetated Areas iv
3.3 SPILL PREVENTION AND CONTROL PLAN V
3.4 GOOD HOUSEKEEPING VI
3.4.1 Deicing vi
3.4.2 Snow Storage/Disposal vi
3.4.3 Materials Management/Housekeeping Practices vi
3.4.4 Spill Prevention Practices vii

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

1.0 GENERAL INFORMATION

1.1 INTRODUCTION

The goal of the Operation and Maintenance Plan is not only to protect resources on-site or nearby, but also to protect resources in the region that may be affected by the activities in the project area. The Plan is in accordance with the requirements of the City of Lynn and the Massachusetts Department of Environmental Protection. An Operations and Maintenance Log is included at the end of this document.

The Stormwater Management System Owner is:

Massachusetts Department of Conservation and Recreation

The Stormwater Management System Owner will perform the inspections and maintenance as outlined in the Operations and Maintenance Plan with their own maintenance personnel.

2.0 MAINTENANCE AGREEMENT

2.1 RESPONSIBLE FOR OPERATION AND MAINTENANCE (24/7 CONTACT)

To be determined.

2.2 RESPONSIBLE FOR FINANCING MAINTENANCE AND EMERGENCY REPAIRS

To be determined.

2.3 INSPECTION AND MAINTENANCE LOG

The inspection and maintenance log is provided as an attachment to the Operation and Maintenance Plan.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

3.0 OPERATION AND MAINTENANCE PLAN

Non-structural pollutant controls include encouraging the use of salt substitutes for maintenance of parking and roadway areas, sweeping of driveways and parking areas on a regular basis, and use of slow-release organic fertilizers on landscaped areas to limit the amount of nutrients that could enter downstream resource areas. Structural pollutant controls include catch basins equipped with deep sumps and hoods, a water quality unit designed to separate gas, oil, and suspended solids from stormwater, and a subsurface infiltration system.

3.1 NON-STRUCTURAL POLLUTANT CONTROLS

The proposed stormwater management system is designed to protect the runoff water quality through the removal of sediment and pollutants. Non-structural pollutant controls used to separate, and capture stormwater pollutants are described below.

3.1.1 Standard Asphalt Pavement Maintenance

Long-term management practices will include regular sweeping of driveways and parking areas. The sweeping/vacuuming program will remove contaminants directly from paved surfaces to prevent their release into the drainage system. Street sweeping/vacuuming has been shown to be an effective initial treatment for reducing pollutant loadings in stormwater.

Sweep or vacuum standard asphalt pavement areas at least two times per year with a commercial cleaning unit and properly dispose of removed material.

Recommended sweeping schedule:

- Oct/Nov
- Apr/May

More frequent sweeping of paved surfaces will result in less accumulation in catch basins, less cleaning of subsurface structures, and less disposal costs.

3.1.2 Deicing Chemicals

Use of road salt (sodium chloride) for maintenance of parking and roadway areas will be limited, and use of salt substitutes, such as calcium magnesium acetate (CMA), will be encouraged. These practices will limit the amount of dissolved pollutants in runoff and minimize potential impacts of deicing chemicals on downstream resource areas.

3.1.3 Fertilizer

Slow-release organic fertilizers will be used in the landscaped areas to limit the amount of nutrients that could enter downstream resource areas. Fertilizer use will be reduced once proposed landscaping is established.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

3.2 STRUCTURAL POLLUTANT CONTROLS

The proposed stormwater management system is designed to protect runoff water quality through the removal of sediment and pollutants. Minimum operation and maintenance requirements for the structural pollutant controls used to separate and capture stormwater pollutants are described below.

3.2.1 Catch Basins

Catch basins on Site will be equipped with deep sumps (minimum 4-feet) and hooded outlets to trap debris, sediments, and floating contaminants, which are the largest constituents of urban runoff. These practices, in coordination with regular street sweeping and minimal use of sand, comprises a multi-level source control approach that prevents sand, sediment, and litter from entering the drainage basins and ultimately the resource area. Regular maintenance and cleaning of catch basins will assure adequate performance of these structures.

The proper removal of sediments and associated pollutants and trash occurs only when catch basin inlets and sumps are cleaned out regularly. The more frequent the cleaning, the less likely sediments will be re-suspended and subsequently discharged. In addition, frequent cleaning also results in more volume available for future deposition and enhances the overall performance. As noted in the pavement O&M section, more frequent sweeping of paved surfaces will result in less accumulation in catch basins, less cleaning of subsurface structures, and less disposal costs.

Inspections and Cleaning

- All catch basins shall be inspected once per year in accordance with DCR NPDES permit for stormwater management..
- Sediment and/or floatable pollutants must also be removed whenever the depth of deposits is greater than or equal to 50% storage capacity. All sediment/pollutants shall be disposed of at an approved offsite facility in accordance with all applicable regulations.
- Any structural damage or other indication of malfunction will be reported to DCR Engineering.
- During colder periods, the catch basin grates must be kept free of snow and ice.
- During warmer periods, the catch basin grates must be kept free of leaves, litter, sand, and debris.

3.2.2 Drainage Manholes

Drainage manholes shall be inspected to remove any sediment build up and to remove any obstructions to the runoff flow. Special care shall be taken to inspect the orifices and above the weir for any potential obstructions.

Inspections and Cleaning

- All drainage manhole structures shall be inspected once per year in accordance with DCR NPDES permit for stormwater management.
- Sediment must be removed whenever the depth of deposits is greater than or equal to 50% storage capacity. All sediment/pollutants shall be disposed of at an approved offsite facility in accordance with all applicable regulations.
- Any structural damage or other indication of malfunction will be reported to DCR Engineering.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

3.2.3 Proprietary Separators

A proprietary separator is a flow-through structure with a settling or separation unit to remove sediments and other pollutants. They typically use the power of swirling or flowing water to separate floatable and coarser sediments, are typically designed and manufactured by private businesses, and come in different sizes to accommodate different design storms and flow conditions.

Long-Term Maintenance

- Inspect and clean these units in strict accordance with manufacturers' recommendations and requirements. Clean the units using the method specified by the manufacturer.
- Vactor trucks are typically used to clean these units. Clamshell buckets typically used for cleaning catch basins are almost never allowed by manufacturers.
- Sometimes it will be necessary to remove sediment manually.

3.2.4 Vegetated Areas

Although not a structural component of the drainage system, the maintenance of vegetated areas may affect the functioning of stormwater management practices. This includes the health/density of vegetative cover and activities such as the application and disposal of lawn and garden care products, disposal of leaves and yard trimmings.

- Inspect planted areas on a semi-annual basis and remove any litter.
- Maintain planted areas adjacent to pavement to prevent soil washout.
- Immediately clean any soil deposited on pavement.
- Re-install plant material in bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming.
- Plant alternative shrubs or perennials in the event of unsuccessful establishment.

Initial Post-Construction Inspection

During the initial period of vegetation establishment pruning and weeding are required twice in first year by contractor or owner. Any dead vegetation/plantings found after the first year will be replaced. Proper mulching is mandatory and regular watering may be required initially to ensure proper establishment of new vegetation.

Long-Term Maintenance

The planted areas will be inspected on a semi-annual basis and any litter removed. Weeds and invasive plant species will be removed by hand. Maintain planted areas adjacent to pavement to prevent soil washout. Immediately clean any soil deposits on pavement. Leaf litter and other detritus shall be removed twice per year. If needed to maintain aesthetic appearance, perennial plantings may be trimmed at the end of the growing season.

Trees and shrubs will be inspected twice per year to evaluate health and attended to as necessary. Seeded ground cover or grass areas shall not receive mulching. Re-install plant material in bare areas; install appropriate erosion control measures when native soil is exposed, or erosion channels are forming. Plant alternative shrubs or perennials in the event of unsuccessful establishment.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

Fertilizer usage will be avoided. If deemed necessary, slow release fertilizer will be used. Fertilizer will be used to begin the establishment of vegetation in bare or damaged areas but will not be applied on a regular basis unless necessary. Inspect planted areas on a semi-annual basis and remove any litter.

- Maintain planted areas adjacent to pavement to prevent soil washout.
- Immediately clean any soil deposited on pavement.
- Re-install plant material in bare areas; install appropriate erosion control measures when native soil is exposed or erosion channels are forming.
- Plant alternative shrubs or perennials in the event of unsuccessful establishment.

Pesticide/Herbicide Usage

The Redevelopment Project will require that landscaping maintenance contractors implement a program to test soils at the site annually and to limit the amount of fertilizer, pesticides, and herbicides to only what is needed to maintain healthy plant materials and landscaped areas.

No pesticides or herbicides are to be used unless a single spot treatment is required for a specific control application.

Fertilizer usage will be avoided. If deemed necessary, slow release fertilizer will be used, and applied only in the minimum amounts recommended by the manufacturer. Once applied, the fertilizer will be worked into the soil to limit exposure to stormwater. Storage will be in a covered area; and the contents of any partially used bags will be transferred to a sealable, plastic bin to avoid spills.

Fertilizer will be used to begin the establishment of vegetation in bare or damaged areas, but will not be applied on a regular basis unless necessary.

Records of soil management, application dates, planting dates, preventive measures, treatments, and other appropriate information should be kept. This information will be used as a reference when fertilizer/pesticide/herbicide management decisions in the future.

3.3 SPILL PREVENTION AND CONTROL PLAN

The Property Manager will be responsible for training of people in the proper handling and cleanup of spilled materials. No spilled hazardous materials or hazardous wastes will be allowed to come in contact with stormwater discharges. If such contact occurs, the stormwater discharge will be contained on site until appropriate measures in compliance with state and federal regulations are taken to dispose of such contaminated stormwater.

In order to minimize the potential for a spill of hazardous materials to come into contact with stormwater, the following steps will be implemented:

1. All materials with hazardous properties (such as pesticides, petroleum products, fertilizers, detergents, construction chemicals, acids, paints, paint solvents, cleaning solvents, additives for soil stabilization, concrete curing compounds and additives, etc.) will be stored in a secure location, with their lids on, preferably under cover, when not in use.
2. The minimum practical quantity of all such materials will be kept on the site.

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

3. A spill control and containment kit (containing, for example, absorbent materials, acid neutralizing powder, brooms, dust pans, mops, rags, gloves, goggles, plastic, and metal trash containers, etc.) will be provided at the maintenance area of the site.
4. Manufacturers recommended methods for spill cleanup will be clearly posted and site personnel will be trained regarding these procedures and the location of the information and cleanup supplies.

In the event of a spill, the following procedures should be followed:

1. All spills will be cleaned up immediately after discovery.
2. The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with the hazardous substances.
3. The Owner and Property Manager will be notified immediately.
4. Spills of toxic or hazardous materials will be reported to the appropriate federal, state, and/or local government agency, regardless of the size of the spill.
5. Please review the "Spill Containment Plan" for location of basin overflow locations within the vegetated swales to be capped within the vicinity of the spill.

The Property Manager will be the spill prevention and response coordinator. He will designate the individuals who will receive spill prevention and response training. These individuals will each become responsible for a particular phase of prevention and response. The names of these personnel will be posted in the material storage area and other applicable areas onsite.

3.4 GOOD HOUSEKEEPING

The following measures will be employed to control potential sources of contamination and prevent pollution.

3.4.1 Deicing

To prevent increased pollutant concentrations in stormwater discharges, the amount of road salt applied will be controlled.

3.4.2 Snow Storage/Disposal

Snow storage/disposal will be allowed in landscaped islands and underutilized parking spaces. Areas designated for snow storage within the limits of the porous pavement will require additional street sweeping to ensure that the pavement system does not clog following periods of snow melting.

3.4.3 Materials Management/Housekeeping Practices

The following product-specific practices will be followed on-site. Recommendations are provided for petroleum products, fertilizers, solvents, paints, and other hazardous substances, and concrete.

Petroleum Products

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

No vehicle maintenance or handling of petroleum products will occur on site. No petroleum products or asphalt substances will be stored on-site.

Solvents, Paints, and other Hazardous Substances

All containers will be tightly sealed and stored indoors when not required for use. Excess materials will not be discharged to the storm sewer system but will be properly disposed according to manufacturer's instructions or state and local regulations. Outside storage on the property will be prohibited.

3.4.4 Spill Prevention Practices

The Redevelopment Project will implement a spill prevention program that will include stormwater contamination assessment, flow diversion, record keeping, internal reporting, employee training, and preventive maintenance. The following specific practices will be followed for spill control, notification, and cleanup.

- Manufacturer's recommended methods for spill cleanup for any chemicals used or stored on site will be clearly posted and site personnel will be informed of the procedures and the location of the information and cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area on-site. Equipment and materials may include, as appropriate, shovels, wheelbarrows, brooms, dust pans, mops, rags, gloves, goggles, kitty litter or Speedi-Dry, sand, sawdust, and plastic and metal trash containers specifically designated for this purpose.
- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material in excess of reportable quantities, as established in the Massachusetts Contingency Plan (MCP), will be reported to the Massachusetts Department of Environmental Protection Division

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

Lynn Heritage State Park

Operation and Maintenance Log

Structural Best Management Practice	Action	Date Completed	Completed By	Condition	Additional Action	Date Completed	Completed By	Comments
Standard Asphalt Pavement • Inspect monthly • Sweep twice per year (Oct/Nov & Apr/May)	Inspect							
	Sweep							
Catch Basins • Inspect once per year in accordance with DCR NPDES permit • Clean when sump is 50% full	Inspect							
	Inspect							
	Clean							
Drain Manholes • Inspect once per year in accordance with DCR NPDES permit • Clean when sump is 50% full	Inspect							
	Remove Sediment /Clean							
Proprietary Separators • Inspect and clean in strict accordance with manufacturers recommendations	Inspect							
	Clean							
Overall Site Inspection • Inspect annually	Inspect							
	Inspect							

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

ATTACHMENT F – PROJECT PLANS (PROVIDED SEPARATELY)

APPENDIX F

Lynn Waterfront Heritage Park
Lynn, Massachusetts

Waterfront Infrastructure Inspection Report

Date Issued: October 31, 2018
Revision 1 Issued: December 12, 2019

Prepared by:

15 Creek Road | Marion, MA 02738
t: 508.748.0937 | t: 800.668.3220 | f: 508.748.1363
www.Foth.com

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

TABLE OF CONTENTS

EXECUTIVE SUMMARY 2
INTRODUCTION/SITE DESCRIPTION 3
SUMMARY OF FINDINGS 4
Stone Revetments: 4
Description of Structure: 4
Observed Conditions: Western Stone Revetment – Station 11+33 to Station 19+10 5
Western Stone Revetment Structural Assessment: 5
Western Stone Revetment Recommendations: 5
Observed Conditions: Eastern Stone Revetment – Station 22+10 to Station 31+64 11
Eastern Stone Revetment Structural Assessment: 11
Eastern Stone Revetment Recommendations: 11
Observed Conditions: Southern Stone Revetment & Concrete Seawall - Station 19+10 to Station 22+10 15
Southern Stone Revetment & Concrete Seawall Structural Assessment: 15
Southern Stone Revetment & Concrete Seawall Recommendations: 15
Pile Supported Timber Pavilion: 21
Description of Structure: 21
Observed Conditions: 21
Structural Assessment: 21
Recommendations: 21
Pile Supported Timber Boardwalk: 24
Description of Structure: 24
Observed Conditions: 26
Structural Assessment: 27
Recommendations: 27
Grade Beam Supported Timber Boardwalk: 31
Description of Structure: 31
Observed Conditions: 31
Structural Assessment: 33
Recommendations: 33

LIST OF ATTACHMENTS

Attachment A: Existing Condition & Inspection Plans
Attachment B: Grade Beam Supported Timber Boardwalk – Decking Grade Differential Settlement & Variation
Attachment C: Lynn Heritage State Park Condition Spreadsheets

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

EXECUTIVE SUMMARY

This report summarizes the results of a visual investigation performed by Foth-CLE Engineering Group (Foth-CLE) at the Lynn Heritage State Park, Lynn, MA on August 09, 2018 & October 17, 2018. The Lynn Heritage State Park is owned by the Massachusetts Department of Conservation and Recreation (DCR). Foth-CLE teamed with Fathom Diving (Fathom) on October 04, 2018 to perform the underwater structural inspection of the marine infrastructure. The intent of the inspection was to determine and document baseline existing conditions of the waterfront structures and when applicable, provide recommendations for repair. Foth - CLE's inspection scope was limited to the stone revetments, concrete seawall, pile supported timber pavilion, pile supported timber boardwalk, and grade beam supported timber boardwalk.

The attached inspection plans detail existing conditions and areas of concern observed by Foth-CLE. The report was drafted by Jonathan Delgado, Scott Skuncik, P.E., and Jennifer Green, P.E. and provides findings/assessments, general advice, and repair concepts, and is based on engineering principals as they relate to Foth-CLE's condition assessment inspection. Questions or concerns regarding this report or the contents contained herein should be directed to Foth-CLE at (508) 748-0937.

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

INTRODUCTION/SITE DESCRIPTION

The Lynn Heritage State Park is owned by the Massachusetts Department of Conservation and Recreation (DCR). The project site is located off of Lynnway in the City of Lynn, MA just west of the Nahant Town Line. It is believed that the existing infrastructure may have been constructed on fill sourced from the remains of the 1973 Chelsea fire. The five± (5) acre park consists of an approximate 20,000 square foot parking area with walking paths and a small seating area, along with a Marina and condominium complex.

The existing Heritage Park infrastructure includes stone revetments, a concrete seawall, a pile supported timber pavilion, a pile supported timber boardwalk, and a grade beam supported timber boardwalk as shown in Figure 1. The existing coastal protection and access structures extend a total length of approximately 2,031 linear feet, along the shoreline of Lynn Harbor. The Seaport Landing Marina, owned by the City of Lynn, is located along the east side of the 154 Lynnway condominium building. The entire shoreline is armored by a continuous granite revetment, referred to herein as the West, South and East Revetment. The marina can be accessed from both the southern and eastern boardwalks, which run along the shoreline. Additionally, a timber boardwalk and timber pavilion structure were constructed on top of the southern revetment. The timber boardwalk continues along the shoreline on top of the eastern revetment, which wraps around the condominium and office complex. It is reported that the condominium buildings, are founded on piles.

Figure 1: Lynn Waterfront Heritage Park Inspection Scope

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

SUMMARY OF FINDINGS

Presented below is a detailed description of the conditions observed at the project site, along with structural assessments and recommendations by Foth-CLE. The structural assessments provided are limited to topside visual investigations conducted by Foth-CLE on August 09, 2018 & October 17, 2018. Foth-CLE teamed with Fathom Diving (Fathom) on October 04, 2018 to perform the underwater structural inspection of the pile supported timber boardwalk A site inspection plan, as prepared by Foth-CLE utilizing an existing conditions plan of the project site, prepared and provided to Foth-CLE by Stantec and Survey & Mapping Consultants, is provided in Attachment A.

Stone Revetments:

Description of Structure:

The stone revetments provide coastal protection to Lynn Heritage State Park and its infrastructure, consisting of paved walkways, landscaped areas, utilities, timber boardwalks, and two condominium complexes. The existing Western Stone Revetment extends approximately 777 linear feet along the western shoreline of Lynn Harbor. This structure begins at Station 11+33 and ends at Station 19+10. The existing Eastern Stone Revetment, beginning at Station 22+10 and ending at Station 31+64, extends approximately 954 linear feet along the eastern shoreline of Lynn Harbor. The eastern revetment wraps around along the seaward face of the existing grade beam supported timber boardwalk. Both stone revetments are comprised of 2-4 ton angular stones, placed with a smooth face finish. At six (6) locations, outfall pipes of various diameters and materials extend through the face of the granite revetment.

Located between the two stone revetments, along the southern shoreline, is a concrete seawall with southern stone revetment that extends out from the face of the seawall. The revetment and seawall extend approximately 300 linear feet, beginning at Station 19+10 and ending at Station 22+10. The southern stone revetment is also comprised of 2-4 ton angular stones, with a smooth face finish. The stone revetment is placed on top of a bedding material with a filter fabric. Based on historical reference information, the top of the existing concrete seawall is at Elevation +12.19 NAVD88 (Elevation +13.0 NVGD). The existing concrete seawall runs along the landward side of the property parallel to the pile supported boardwalk. The original design drawings indicate that the concrete seawall is 7-feet high by 1-foot thick and is founded on a 5-foot wide by 1.5-foot thick reinforced concrete footing, set on a 6-foot wide by 1-foot thick layer of crushed stone. Reference information also indicates that the concrete seawall contains 4-inch diameter weep holes, spaced approximately 10-feet on center.

Based on historical design drawings of the Lynn Heritage State Park, dated September 1982, the existing revetment slope protection was originally designed to be 3-feet thick, underlain with 12-inches of bedding material and filter fabric. Along the Western Stone Revetment, between Stations 11+33 and 19+10, historical drawings indicate that the revetment was placed at a 2 horizontal to 1 vertical slope. The historic drawings also indicate that the top of the slope is was set at Elevation +12.19 NAVD88 (Elevation +13.0 NVGD) and the toe of the slope was set to terminate at the bottom of the brown organic silt later (removed through dredging) and top of the medium to stiff clay layer. Along the Eastern Stone Revetment, between Stations 22+11 to 24+98 and Stations 27+09 to 29+96, historical documents indicate that the revetment was placed at a 1.5 horizontal to 1 vertical slope. The historical drawings also indicate that the top of the Eastern Stone Revetment slope was set at Elevation +12.19 NAVD88 (Elevation +13.0 NVGD) and

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

SUMMARY OF FINDINGS

Presented below is a detailed description of the conditions observed at the project site, along with structural assessments and recommendations by Foth-CLE. The structural assessments provided are limited to topside visual investigations conducted by Foth-CLE on August 09, 2018 & October 17, 2018. Foth-CLE teamed with Fathom Diving (Fathom) on October 04, 2018 to perform the underwater structural inspection of the pile supported timber boardwalk A site inspection plan, as prepared by Foth-CLE utilizing an existing conditions plan of the project site, prepared and provided to Foth-CLE by Stantec and Survey & Mapping Consultants, is provided in Attachment A.

Stone Revetments:

Description of Structure:

The stone revetments provide coastal protection to Lynn Heritage State Park and its infrastructure, consisting of paved walkways, landscaped areas, utilities, timber boardwalks, and two condominium complexes. The existing Western Stone Revetment extends approximately 777 linear feet along the western shoreline of Lynn Harbor. This structure begins at Station 11+33 and ends at Station 19+10. The existing Eastern Stone Revetment, beginning at Station 22+10 and ending at Station 31+64, extends approximately 954 linear feet along the eastern shoreline of Lynn Harbor. The eastern revetment wraps around along the seaward face of the existing grade beam supported timber boardwalk. Both stone revetments are comprised of 2-4 ton angular stones, placed with a smooth face finish. At six (6) locations, outfall pipes of various diameters and materials extend through the face of the granite revetment.

Located between the two stone revetments, along the southern shoreline, is a concrete seawall with southern stone revetment that extends out from the face of the seawall. The revetment and seawall extend approximately 300 linear feet, beginning at Station 19+10 and ending at Station 22+10. The southern stone revetment is also comprised of 2-4 ton angular stones, with a smooth face finish. The stone revetment is placed on top of a bedding material with a filter fabric. Based on historical reference information, the top of the existing concrete seawall is at Elevation +12.19 NAVD88 (Elevation +13.0 NVGD). The existing concrete seawall runs along the landward side of the property parallel to the pile supported boardwalk. The original design drawings indicate that the concrete seawall is 7-feet high by 1-foot thick and is founded on a 5-foot wide by 1.5-foot thick reinforced concrete footing, set on a 6-foot wide by 1-foot thick layer of crushed stone. Reference information also indicates that the concrete seawall contains 4-inch diameter weep holes, spaced approximately 10-feet on center.

Based on historical design drawings of the Lynn Heritage State Park, dated September 1982, the existing revetment slope protection was originally designed to be 3-feet thick, underlain with 12-inches of bedding material and filter fabric. Along the Western Stone Revetment, between Stations 11+33 and 19+10, historical drawings indicate that the revetment was placed at a 2 horizontal to 1 vertical slope. The historic drawings also indicate that the top of the slope is was set at Elevation +12.19 NAVD88 (Elevation +13.0 NVGD) and the toe of the slope was set to terminate at the bottom of the brown organic silt later (removed through dredging) and top of the medium to stiff clay layer. Along the Eastern Stone Revetment, between Stations 22+11 to 24+98 and Stations 27+09 to 29+96, historical documents indicate that the revetment was placed at a 1.5 horizontal to 1 vertical slope. The historical drawings also indicate that the top of the Eastern Stone Revetment slope was set at Elevation +12.19 NAVD88 (Elevation +13.0 NVGD) and

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

the toe of the slope set to terminate at the bottom of the brown organic silt later (removed through dredging) and top of the medium to stiff clay layer. Between Stations 24+98 and 27+09, historical documents indicate that the Eastern Stone Revetment was placed at a 2 horizontal to 1 vertical slope. Dredging is assumed to have occurred around the same time as revetment construction and at these locations, historic documents indicate that he toe was set to terminate at the bottom of the brown organic silt later (removed through dredging) and top of the medium to stiff clay layer. Between Stations 19+10 and 22+11, historical reference drawings indicate that the Southern Stone Revetment was placed at a 2 horizontal to 1 vertical slope, with the top of the slope starting at approximately the same elevation as the top of the seawall footing elevation and the toe of the slope terminating at Elevation -10.81 NAVD88 (Elevation -10.0 NGVD).

Observed Conditions: Western Stone Revetment – Station 11+33 to Station 19+10

The Western Stone Revetment was observed to be in ***"Fair"*** condition throughout its length. The Western Stone Revetment exhibited localized areas of settlement caused by a bearing capacity failure at the toe of the slope. This failure has resulted in lateral displacement of the armor stone along slope and separation from the bench layer causing erosion and loss of material *(Refer to Photographs 7 through 9)*. Evidence of the subsequent vertical settlement can been seen between Stations 15+00 to 19+00, where the paved walkway and ground surface behind were observed to have rolling, uneven settlement with differential vertical displacements of up to 2-feet *(Refer to Photographs 2, 7, 8, & 9)*. Between Stations 12+00 through 13+00 and 15+00 through 19+00, additional visual evidence of the bearing capacity failure can also be seen in where gaps, as large as 3-feet wide, have developed between the cap stones and the slope *(Refer to Photographs 1 through 6)* along with a reverse pitch at one of the outfall pipes. Four (4) existing outfall pipes that discharge from the revetment were observed approximately at Station 11+50, Station 15+50, Station 16+25 and Station 18+10. Foth-CLE also observed subsidence of the paved walkway and lawn areas. This subsidence is likely due to decomposition of subsurface debris sourced from the 1973 Chelsea fire and not as a result of coastal processes and slope failures.

Western Stone Revetment Structural Assessment:

The stone revetment structures were found to be in "Fair" condition. Foth-CLE does not anticipate any imminent structural failures based on conditions observed.

Western Stone Revetment Recommendations:

Foth-CLE recommends further evaluation of the revetment to confirm if existing stone size and toe depth is adequate for the anticipated environmental design (wind, wave and current) loads and to determine optimal crest elevation to prevent future overtopping and design of repairs if deficiencies are found. If no structural improvements are needed, alternatives should be developed to address aesthetics.

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 1	Date: 08/09/2018
Direction Photo Taken: Looking South	
Station: 13+00	
Description: Western Stone Revetment Voids between Capstones and Slope, Resulting from Bearing Capacity Failure.	

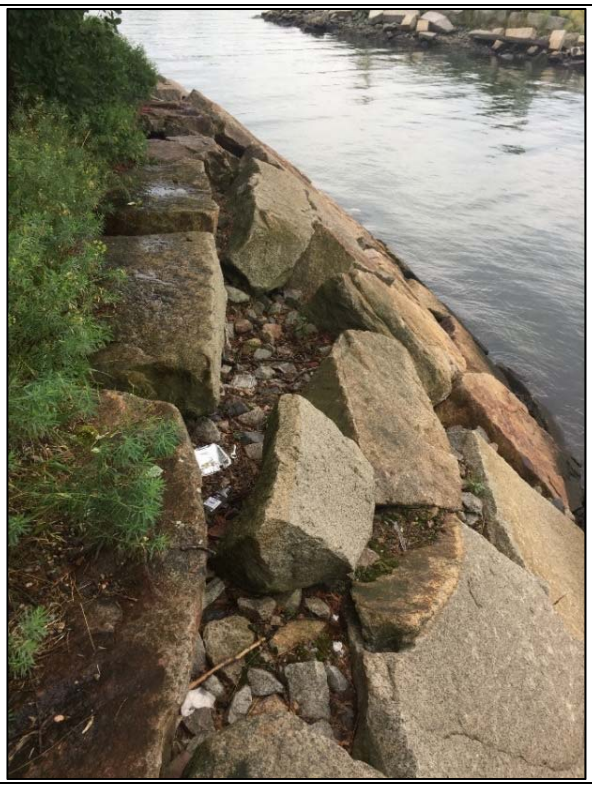
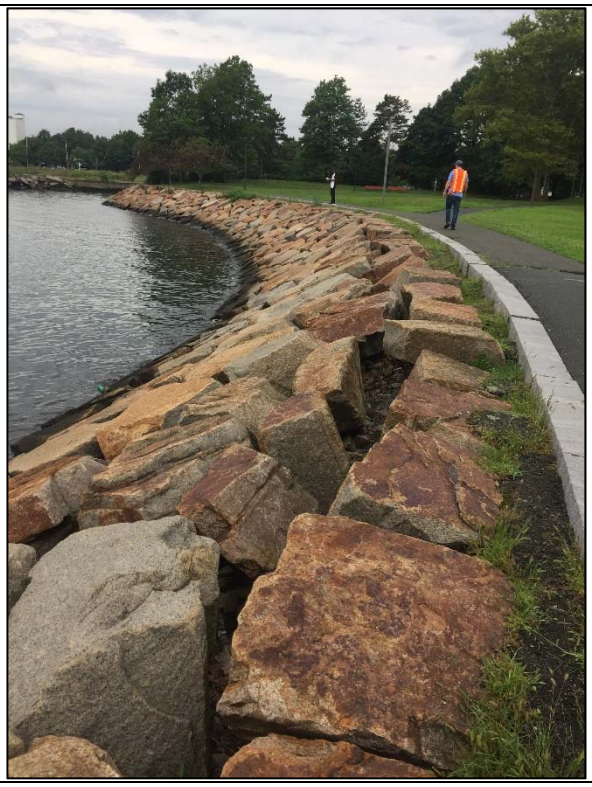


Photo No. 2	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: 15+50	
Description: Western Stone Revetment Voids between Capstones and Slope, Along with Ground Settlement Resulting from Bearing Capacity Failure.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 3	Date: 08/09/2018
Direction Photo Taken: Looking Southeast	
Station: 15+50	
Description: Western Stone Revetment Voids between Capstones and Slope Resulting from Bearing Capacity Failure. Typical Example of Satisfactory Revetment Conditions.	

Photo No. 4	Date: 08/09/2018
Direction Photo Taken: Looking Northwest	
Station: 16+25	
Description: Western Stone Revetment Voids between Capstones and Slope, Resulting from Bearing Capacity Failure.	



15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 5	Date: 08/09/2018
Direction Photo Taken: Looking Northwest	
Station: 16+75	
Description: Western Stone Revetment Voids between Capstones and Slope Resulting from Bearing Capacity Failure. Typical Example of Satisfactory Revetment Conditions.	

Photo No. 6	Date: 08/09/2018
Direction Photo Taken: Looking South	
Station: 17+00	
Description: Western Stone Revetment Voids between Capstones and Slope, Along with Ground Settlement Resulting from Bearing Capacity Failure.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 7	Date: 08/09/2018
Direction Photo Taken: Looking South	
Station: 17+50	
Description: Western Stone Revetment Voids between Capstones and Slope, Rolling Ground Settlement, & Revetment Settlement Resulting from Bearing Capacity Failure.	

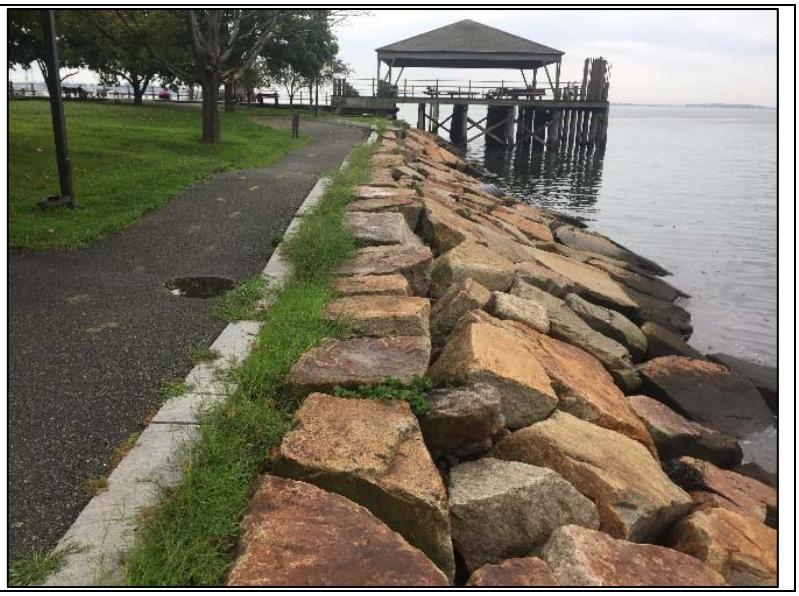


Photo No. 8	Date: 08/09/2018
Direction Photo Taken: Looking North	
Station: 18+00	
Description: Western Stone Revetment Localized Areas of Ground Settlement & Revetment Settlement Resulting from Bearing Capacity Failure.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 9	Date: 08/09/2018
Direction Photo Taken: Looking Northeast	
Station: 19+00	
Description: Western Stone Revetment Localized Areas of Ground Settlement & Revetment Settlement Resulting from Bearing Capacity Failure.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Observed Conditions: Eastern Stone Revetment – Station 22+10 to Station 31+64

The Eastern Stone Revetment was observed to be in ***"Fair"*** condition throughout its length *(Refer to Photographs 10 through 12)*. Between 22+00 through Station 26+00 and Station 30+50 through Station 31+64, Foth-CLE observed localized areas of settlement caused by a bearing capacity failure at the toe of the slope and decomposition of the fill material *(Refer to Photograph 14)*. This has resulted in lateral displacement of the armor stone along slope and separation from the bench layer causing erosion and loss of material *(Refer to Photographs 7 through 9)*. Visual evidence of the localized bearing failure can be seen where a separation has developed between the revetment and the timber boardwalk. At Station 31+00, Foth-CLE observed exposed filter fabric (*Refer to Photograph 13).*

Eastern Stone Revetment Structural Assessment:

The stone revetment structures were found to be in "Fair" condition. Foth-CLE does not anticipate any imminent structural failures based on conditions observed.

Eastern Stone Revetment Recommendations:

Foth-CLE recommends further evaluation of the revetment to confirm if existing stone size and toe depth is adequate for the anticipated environmental design (wind, wave and current) loads and to determine design of repairs if deficiencies are found. If no structural improvements are needed, alternatives should be developed to address aesthetics.

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 10	Date: 08/09/2018
Direction Photo Taken: Looking North	
Station: 26+75	
Description: Eastern Stone Revetment Typical Example of Satisfactory Revetment Conditions.	

Photo No. 11	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: 27+25	
Description: Eastern Stone Revetment Typical Example of Satisfactory Revetment Conditions.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 12	Date: 08/09/2018
Direction Photo Taken: Looking North	
Station: 28+00	
Description: Eastern Stone Revetment Typical Example of Satisfactory Revetment Conditions.	

Photo No. 13	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: 31+00	
Description: Eastern Stone Revetment Voids between Capstones and Slope, Resulting from Bearing Capacity Failure.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 14	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: 31+25	
Description: Eastern Stone Revetment Voids between Capstones and Slope, Resulting from Bearing Capacity Failure.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Observed Conditions: Southern Stone Revetment & Concrete Seawall - Station 19+10 to Station 22+10

The Southern Stone Revetment was observed to be in "Fair" condition while the Concrete Seawall was observed to be in ***"Poor"*** condition. Similar to the Western and Eastern Stone Revetments, the Southern Stone Revetment has exhibited localized areas of settlement caused by a bearing capacity failure at the toe of the slope and decomposition of the fill material, primarily between Station 19+57 and Station 22+00 (*Refer to Photograph 23 and 24)*. This failure has resulted in lateral displacement of the armor stone along the slope and separation from the bench layer causing erosion and loss of material.

While the impact of the revetment stone displacement and settlement, as a means to protect the slope, is minimal, the impact on the seawall is significant. Because the wall footing is located at approximately the same elevation as the revetment crest, the revetment settlement and stone displacement has resulted in exposure of the concrete wall footing. This exposure to coastal processes has caused localized areas of undermining along the concrete wall footing, primarily between Station 19+57 and Station 19+77, with less severe but still notable undermining observed between Station 19+77 and Station 20+38 and between Station 21+36 to Station 22+10. *(Refer to Photograph 15)*. Foth-CLE also documented minor cracking throughout the length of the concrete seawall stem *(Refer to Photographs 16, 17, & 20*) with more severe cracking and spalling observed at Station 21+72 (*Refer to Photographs 18 & 19*).

These observations are indicative of both vertical settlement and possible rotation resulting from exposure and footing undermining. Vertical settlement was also indicated by differences in top of structure elevations between the concrete seawall and the adjacent walkway. Additionally, Foth-CLE observed open gaps at seawall expansion joints at Station 19+36, Station 19+77, and Station 21+32. At these locations, material loss was noted though gaps. Where the concrete wall returns at the building, Station 21+77, Foth-CLE observed vertical settlement of the concrete seawall, grade beam supported boardwalk or both which has resulted in variations in elevations between the two adjacent structures *(Refer to Photograph 21 and 22)*. The top of structures, originally shown at Elevation +13.0 (NGVD) on the reference drawings, no longer matches. One additional indication of settlement is at Sta. 20+62, where Foth-CLE observed the existing 24-inch diameter outfall pipe pitched landward.

Southern Stone Revetment & Concrete Seawall Structural Assessment:

The stone revetment structures were found to be in "Poor" condition. Deficiencies should be addressed to prevent seawall failure and ensure that the existing function of the seawall is maintained.

Southern Stone Revetment & Concrete Seawall Recommendations:

Foth-CLE recommends further evaluation of the revetment to confirm if existing stone size and toe depth is adequate for the anticipated environmental design (wind, wave and current) loads and to determine design of repairs if deficiencies are found. If no structural improvements are needed, alternatives should be developed to address aesthetics. Foth-CLE also recommends development of design alternatives to address the concrete seawall existing conditions. These alternatives could include strengthening, replacement or retrofit of the existing concrete seawall structure.

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 15	Date: 10/16/2018
Direction Photo Taken: Looking East	
Station: 19+57	
Description: Southern Stone Revetment Voids between Capstones and Slope, Resulting from Bearing Capacity Failure and Causing Undermining of Concrete Seawall Footing.	

Photo No. 16	Date: 10/16/2018
Direction Photo Taken: Looking North	
Station: 19+57	
Description: Southern Stone Revetment Typical Spider Cracks on Concrete Seawall.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 17	Date: 10/16/2018
Direction Photo Taken: Looking North	
Station: 20+30	
Description: Southern Stone Revetment Typical 1/8" wide Cracks on Concrete Seawall Stem.	

Photo No. 18	Date: 10/16/2018
Direction Photo Taken: Looking North	
Station: 21+72	
Description: Southern Stone Revetment Spalling & Cracking Conditions on Concrete Seawall Stem Below Boardwalk.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 19	Date: 10/16/2018
Direction Photo Taken: Looking West	
Station: 21+72	
Description: Southern Stone Revetment Spalling & Cracking Conditions on Concrete Seawall Stem (Topside).	

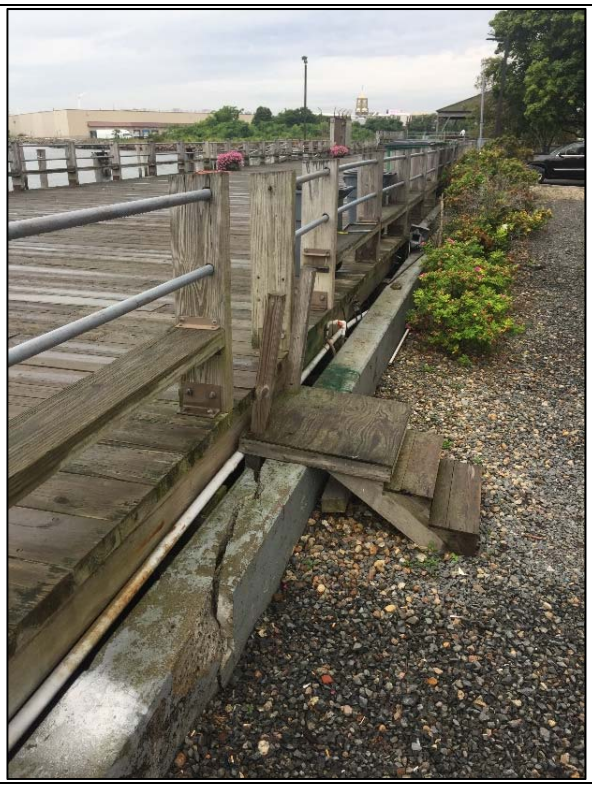


Photo No. 20	Date: 10/16/2018
Direction Photo Taken: Looking North	
Station: 19+78	
Description: Southern Stone Revetment Typical Cracking on Concrete Seawall Footing.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 21	Date: 10/16/2018
Direction Photo Taken: Looking North	
Station: 21+77	
Description: Southern Stone Revetment Existing Concrete Seawall & Abandoned Staircase.	

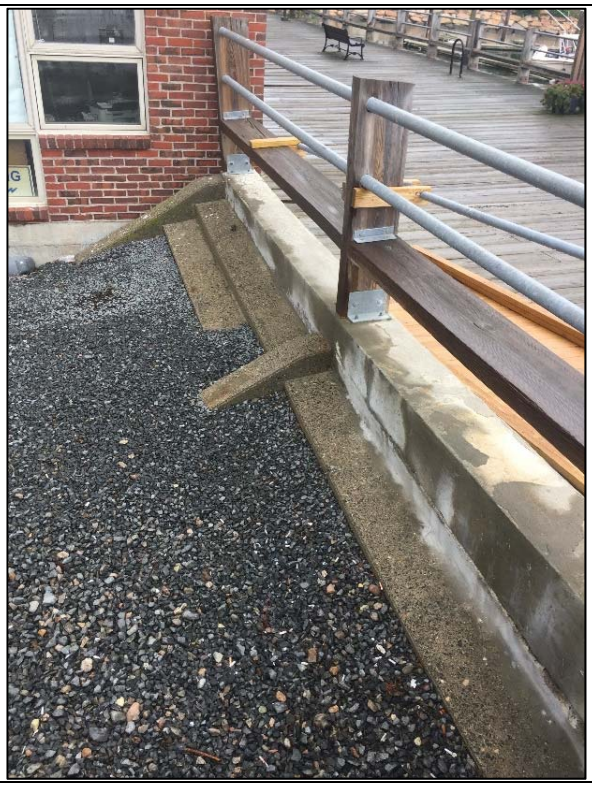


Photo No. 22	Date: 10/16/2018
Direction Photo Taken: Looking South	
Station: 20+75	
Description: Southern Stone Revetment Typical Elevation Differential Between Concrete Seawall and Boardwalk.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 23	Date: 10/16/2018
Direction Photo Taken: Looking East	
Station: 20+00	
Description: Southern Stone Revetment Typical Condition of Stone Revetment Conditions.	

Photo No. 24	Date: 10/16/2018
Direction Photo Taken: Looking East	
Station: 20+00	
Description: Southern Stone Revetment Voids Between Capstones & Slope Along Face of Concrete Seawall, Resulting from Bearing Capacity Failure.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Pile Supported Timber Pavilion:

Description of Structure:

The Pile Supported Timber Pavilion provides overhead cover for a seating area overlooking Lynn Harbor. The existing timber pile supported timber pavilion is located at the west end of the existing pile supported timber boardwalk, along the southern shoreline of the project site. The pavilion is approximately 40 feet long by 40 feet wide (1,600 square feet). Each of the four (4) columns are comprised of three (3) 5-inch square hollow steel tubes, which support the 5-inch wide by 22–inch deep perimeter timber header beams. The roof is supported by 5-inch wide by 22-inch deep timber rafters along with 5-inch wide by 18-inch deep and 5-inch wide by 10-inch deep timber purlins. The roof sheathing is made up of 1-inch thick by 5-inch wide timber boards, topped with asphalt shingles.

Observed Conditions:

These observed conditions pertain to the pavilion superstructure only. Inspection of timber pavilion support piles are included with the timber pile supported boardwalk. During the inspection of the Pile Supported Timber Pavilion, Foth-CLE observed minor dry rot conditions at the location where the timber sloped roof edge meets the roof flashing and soffit. All hardware material was observed to be sound, without indications of corrosion or section loss. No additional areas of deterioration were observed *(Refer to Photographs 25 through 27)*.

Structural Assessment:

Overall, the condition of the pile supported timber pavilion was observed to be in ***"Satisfactory"*** condition with no structural elements requiring immediate repair.

Recommendations:

Given the observed conditions during the inspection, Foth-CLE does not recommend any immediate repairs. Within the next five (5), Foth-CLE recommends replacement of the asphalt shingles and flashing to ensure adequate continued protection of the structural timber framing members.

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 25	Date: 08/09/2018
Direction Photo Taken: Looking Northwest	
Station: N/A	
Description: General Construction of the Pile Supported Timber Pavilion.	

Photo No. 26	Date: 08/09/2018
Direction Photo Taken: N/A	
Station: N/A	
Description: Typical Framing of the Pile Supported Timber Pavilion.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 27	Date: 08/09/2018
Direction Photo Taken: Looking Southeast	
Station: N/A	
Description: Typical Framing of the Pile Supported Timber Pavilion.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Pile Supported Timber Boardwalk:

Description of Structure:

The existing Pile Supported Timber Boardwalk is located along the southern shoreline of the project site, between Station 19+10 and Station 22+10. The boardwalk is approximately 36 feet wide by 300 feet long and is constructed of timber material. The existing timber boardwalk structure is comprised of 4-inch thick by 12-inch wide deck timbers set on top of 8-inch wide by 14-inch deep timber stringers, spaced approximately 2-feet on center. The timber stringers are set on 12-inch by 12-inch timber pile caps, supported by 12-inch diameter southern yellow pine creosote pressure treated timber piles. The piles are braced with 3-inch thick by 8-inch wide diagonal timber bracing, as shown in Figure 2 below.

Approximately thirty-seven (37), 12-inch diameter timber fender piles exist along the seaward edge of the boardwalk, typically one (1) fender pile per bent. All timber material is southern yellow pine, CCA or ACA treated timber. Typical connections consist of ½-inch diameter and ¾-inch diameter drift pins and 2-2GA 7-inch decking spikes. All hardware was observed to be hot dipped galvanized. A timber and steel pedestrian railing runs along the seaward edge of the boardwalk and is comprised of 4-inch by 12-inch timber posts with a horizontal timber base rail/seat and two horizontal steel pipe rails. The scope of the Foth-CLE inspection included visual observation and inspection of 312, 12-inch diameter timber piles, which includes the 37 timber fender piles and ±300 linear feet of timber boardwalk structure.

Foth-CLE included the two (2) existing timber gangway platforms as part of the pile supported timber boardwalk inspection scope. One of the timber gangway platforms located along the southern side of the boardwalk (Station 20+00) and provides gangway access to the abandoned floating docks. The second timber gangway platform is located at the southeastern corner of the boardwalk (Station 22+00). This gangway structure currently provides gangway access to the floating dock system owned by the City of Lynn. Both timber gangway platforms appear to be of similar construction as the Pile Supported Timber Boardwalk.

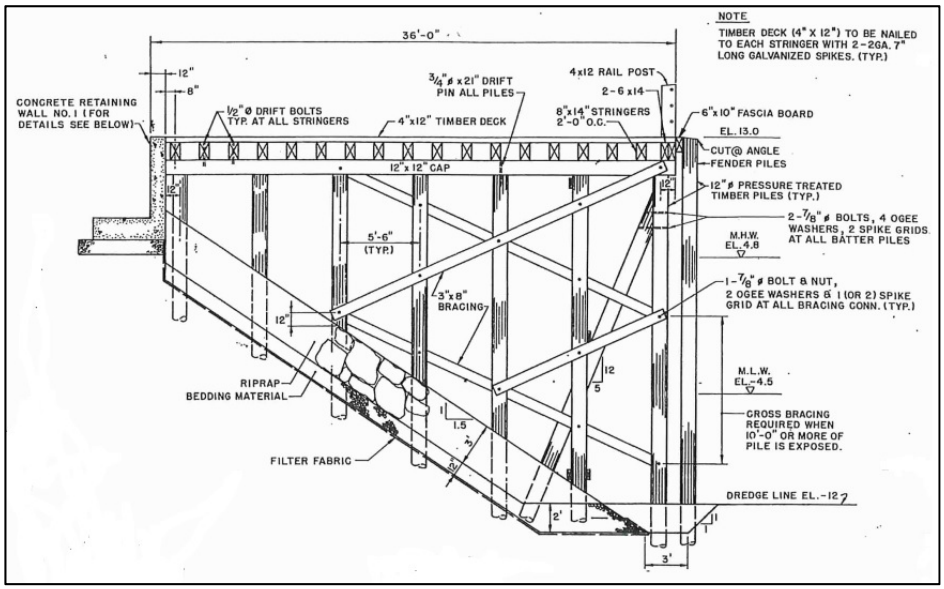


Figure 2: Lynn Waterfront Heritage Park Existing Pile Supported Timber Boardwalk Typical Cross-Section

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Existing reference drawings dated 1982 along with historical imagery obtained from Google Earth, show floating docks and a paddle boat dock adjacent to the western side of the existing Pile Supported Timber Boardwalk, as well as, floating docks along the southern side of the existing pile supported timber boardwalk, as seen in Figures 3 through 7 below. According to the historical imagery, the structures to the west of the existing Pile Supported Timber Boardwalk were abandoned sometime prior to 1995 and between the years 1982 and 1995, the floating dock structure to the south of the existing Pile Supported Timber Boardwalk was constructed.

This floating dock structure located to the south of the existing Pile Supported Timber Boardwalk was then abandoned sometime prior to 2013. These structures (to the west or south of the existing Pile Supported Timber Boardwalk) are no longer existing aside from the timber piles remaining at the offshore side of the existing boardwalk at the side. The remaining piles include six (6) timber dolphin clusters, each consisting of seven (7) 12-inch timber piles along in addition to approximately sixty-five (65) timber piles that were originally used to anchor floats at the existing abandoned marina. The scope of work for this inspection did not include the inspection of these remaining timber piles.

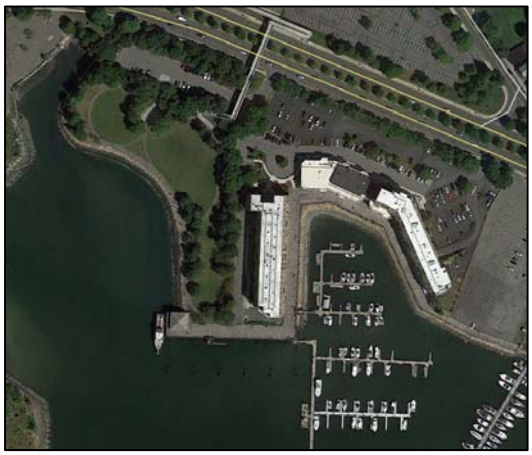


Figure 3: Lynn Waterfront Heritage Park Historical Image Dated August 24, 2013.

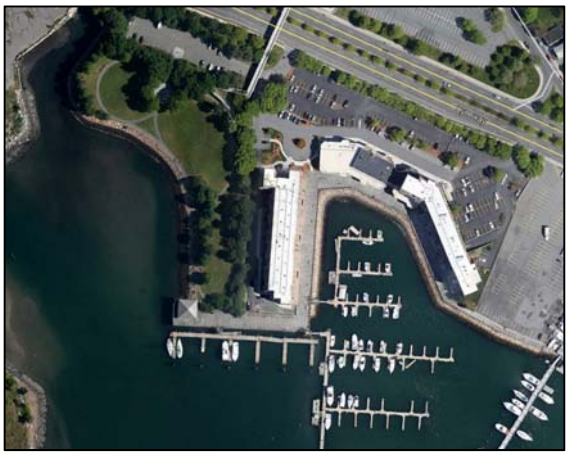


Figure 4: Lynn Waterfront Heritage Park Historical Image Dated June 18, 2010.

Figure 5: Lynn Waterfront Heritage Park Historical Image Dated April 02, 1995.

Figure 6: Lynn Waterfront Heritage Park Historical Image Dated 1978.

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

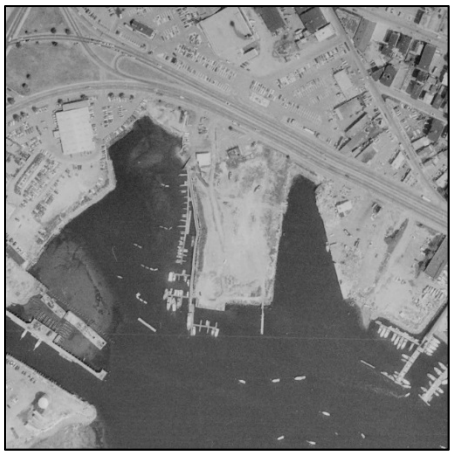


Figure 7: Lynn Waterfront Heritage Park Historical Image Dated 1971.

Observed Conditions:

The topside inspection indicated the structure to generally be in stable condition, with no observed indications of settlement. Given the structure's age, typical deterioration was observed throughout the structure. Areas of the decking and handrails also showed signs of deterioration throughout the structure *(Refer to Photographs 28 through 31)*. A visual inspection of the handrail system indicated that approximately 10% percent of the timber posts exhibited rotting, cracking and checking. The timber decking was observed to have rotting and loose boards. Overall, the decking & handrail system was found to be in Fair condition.

Of the 312, 12-inch diameter timber piles included in the inspection scope, approximately 268 were found to have minimal defects and were given a condition rating of "Minor". Typical "Minor" pile deterioration observed included light abrasions less than ½-inch deep, checks/splits less than ½-inch wide, and evidence of marine borer activity and/or fungal decay. At a few locations, piles with a "Minor" condition rating were also observed to have longitudinal check/splits (Splintering), mostly likely caused by ice damage. All of the timber piles inspected, with the exception of the fender piles, were observed to have an existing 12 gauge, zinc pile cover at the tops of the piles. This pile cover was observed to be intact, without any notable deterioration.

Seven (7) piles were observed to have a "Moderate" condition rating, representing approximately 2% of the total number of piles inspected. The "Moderate" rating was assigned to piles with abrasions up to 2-inches deep, checks/splits greater than ½-inch wide, section loss up to 25% and corroded hardware *(Refer to Photograph 32)*. Twenty-eight (28) piles were assigned a "Major" condition rating because there was no positive bearing between the pile cap and the pile. For fender piles, a condition rating of "Severe" was assigned to several fender piles due conditions related to dry rot at the tops of piles which resulted section loss and compromised connection to the timber bulkhead *(Refer to Photograph 33)*.

During the visual inspection of the timber pile caps and timber stringers, Foth-CLE observed typical minor defects, expected given the age of the structure. There were no deterioration or structural cracking. The condition of the timber stringers was minor as these elements appeared

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

to be newly installed. The timber cross bracing was observed to be in "Severe" condition. Conditions associated with this "Severe" rating included missing or broken bracing members, missing hardware, failed connections and advanced deterioration. .

Structural Assessment:

In general, the overall condition of the Pile Supported Timber Boardwalk was observed to be in ***"Satisfactory"*** condition, throughout its length. Primary areas of significant deterioration include decking, handrail and bracing.

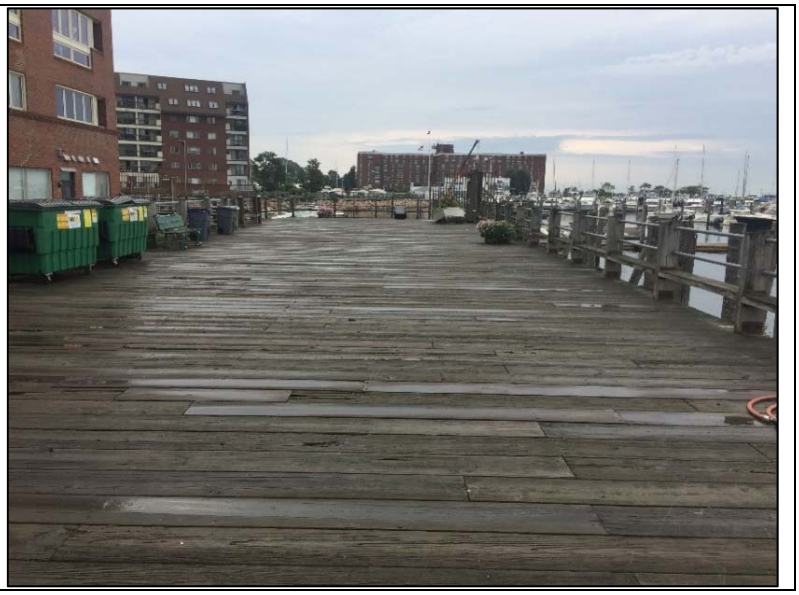
Recommendations:

Foth-CLE recommends that the handrail be replaced to meet ADA/AAB codes. Decking and bracing should be replaced as needed to ensure continued, function and aesthetics. Further structural evaluation is recommended for pile caps and piles. Foth-CLE will develop alternatives to restore bearing between pile caps and piles. Additionally, Foth-CLE will perform a structural evaluation determine capacity based on existing conditions as well as to determine service life remaining. Because fender piles are considered non-structural elements, originally installed to minimize damage from ice, replacement options will be evaluated assessing costs and aesthetics.

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 28	Date: 08/09/2018
Direction Photo Taken: Looking South	
Station: N/A	
Description: Typical Condition of the Pile Supported Timber Boardwalk Railings.	

Photo No. 29	Date: 08/09/2018
Direction Photo Taken: Looking East	
Station: 20+75	
Description: Typical Condition of the Pile Supported Timber Boardwalk (Topside).	



15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 30	Date: 08/09/2018
Direction Photo Taken: Looking East	
Station: 19+60	
Description: Typical Condition of the Pile Supported Timber Boardwalk (Topside).	

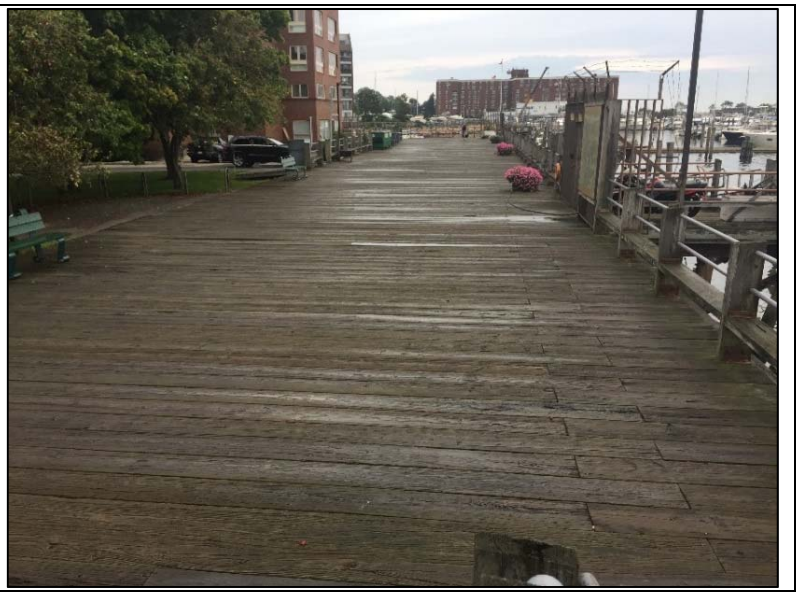
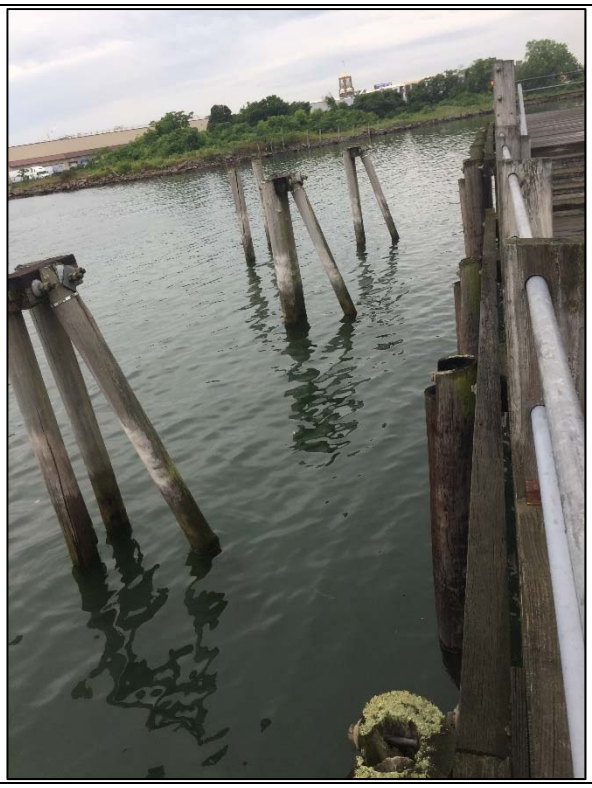


Photo No. 31	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: 20+60	
Description: Typical Condition of the Pile Supported Timber Boardwalk (Topside).	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 32	Date: 10/04/2018
Direction Photo Taken: N/A	
Station: N/A	
Description: Timber Pile Section Loss at Pile Location 1A (Plumb).	

Photo No. 33	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: 19+90	
Description: Typical Condition of the Timber Fender Piles & Dolphin Clusters.	



15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Grade Beam Supported Timber Boardwalk:#

Description of Structure:

The Grade Beam Supported Timber Boardwalk extends approximately 954 linear feet, beginning at Station 22+10 and ending at Station 31+64. The Grade Beam Supported Timber Boardwalk structure is comprised of 4-inch thick by 12-inch wide deck timbers set on 6-inch wide by 14-inch deep timber stringers, spaced approximately 7-feet on center. The stringers are supported by 12-inch wide by 54-inch deep concrete grade beams, spaced approximately 10-feet on center. The original design drawings indicate that the concrete grade beams bear on a 12-inch thick gravel bedding layer located approximately 4-feet below finish grade. Historical reports indicate that the site was used as a disposal area for material taken from the 1973 Chelsea fire. Foth-CLE opines that grade beams are fully or partially founded on this material.

All timber materials are southern yellow pine copper chromated arsenate (CCA) treated, and all of the hardware is hot dipped galvanized. Splice plate connections were observed at the perimeter stringers and are used to fasten the timber stringers to the wood nailers at the grade beam supports. A railing structure runs along the seaward edge of the Grade Beam Supported Timber Boardwalk and is comprised of 4-inch by 12-inch timber posts with a horizontal timber base rail/seat and two horizontal steel pipe rails.

As part of the inspection scope, Foth-CLE also inspected one (1) existing timber gangway platform. This timber platform is located along the southeastern side of the boardwalk at Station 22+36 and currently provides access to the floating dock system owned by the City of Lynn. The timber gangway platform appears to be of similar construction to the Grade Beam Supported Timber Boardwalk

Observed Conditions:

Foth-CLE observed that all six (6) 12-inch diameter timber piles that support the gangway platform were found to have minimal defects and as such were assigned a condition rating of "Minor". Typical observations included light abrasions less than ½-inch deep checks/splits less than ½-inch wide and evidence of marine borer activity and/ or fungal decay. All of the timber piles inspected were observed to have an existing 12 gauge, zinc pile cover at the tops of the piles. This pile cover was observed to be intact, without any notable deterioration. The inspection of the timber pile caps and timber stringers at the gangway platform revealed only minor typical expected defects, given the age of the timber, however, Foth-CLE did not observe any notable signs of deterioration or structural cracking The timber cross bracing was observed to be in "Moderate" condition, with only minor defects observed.

During the inspection of the Grade Beam Supported Timber Boardwalk, dry rot was observed on 15% of the timber decking in addition to loose deck boards *(Refer to Photographs 34 through 37)*. Similarly, a visual inspection of the handrail system indicated that approximately 10% percent of the timber posts exhibited significant cracking and checking in addition to rotting, allowing the steel pipe rail to come loose at some locations. Additionally, section loss and rotting was encountered on the bottom horizontal timber rail *(Refer to Photograph 38)*. At one location, Foth-CLE observed that the splice in top rail of the steel pipe rail was removed by cutting. The rail remaining is no longer functional and also presents a possible public safety hazard *(Refer to Photograph 39*. Overall the handrail system structure was assigned a "Severe "condition rating, as the existing conditions observed result in possible risk to public safety.

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Foth-CLE noted that the Grade Beam Supported Timber Boardwalk profile appeared to be undulating from Station 22+10 to Station 25+60 ***(Refer to Photograph 40)***. Additional investigation into the timber boardwalk found a significant amount of differential settlement and variation in boardwalk deck grades, as documented in Table 1 below and shown in Photographs 41 & 42 Refer to Attachment B for complete summary of boardwalk deck grade differential settlement and variation.

Foth-CLE opines that this settlement is a result of decomposition of the historical fill material. In many cases, the Grade Beam Supported Timber Boardwalk is sloped resulting in deformed decking boards causing an uneven walking surface and potential tripping hazards. Settlement of the Grade Beam Supported Timber Boardwalk at Station 25+00 has resulted in elevation differences between adjacent grade beams ***(Refer to Photograph 43)***. Additionally, individual grade beams were observed to have differential settlement from one end to the other, along the width of the boardwalk. Between Station 22+10 and Station 25+00 evidence of this settlement was seen by the slope of the walkway surface and also at locations where Foth-CLE observed that parts of the timber stringers were no longer bearing on the concrete grade beams, forming a gap between grade beams and stringers***(Refer to Photographs 44 through 47)***.

At some locations, this gap was large enough to cause the lag bolts, which secure the timber stringers to the grade beams, to pull out. Between Station 25+60 and Station 31+64, no significant grade beam settlement was observed. Grade beams in this area remain level from end to end and have also maintained their original vertical alignment. Because of the timber decking, he timber stringers and concrete grade beams had very limited accessibility, and therefore were not inspected.

Table 1: *General Deck Grade Differential Settlement & Variation*

Grade Beam Number	Deck Grade Variation Measurements (10^{ths} of 1-Foot)	Grade Beam Number	Deck Grade Variation Measurements (10^{ths} of 1-Foot)
1	0.035	54	0.156
6	0.738	56	0.077
10	0.771	64	0.015
15	0.597	66	0.117
17	0.758	70	0.202
18	0.271	76	0.192
25	0.319	85	0.000
29	1.212	95	0.002
48	0.017	105	0.083

Notes:

1.) Measurements represent the difference in grade beam/decking elevation (i.e. Δ-Delta) taken between waterside boardwalk edge & landside boardwalk edge within the same bent.

2.) Refer to Attachment B for complete summary of deck grade differential settlement and variation.

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

The Grade Beam Supported Timber Boardwalk settlement was documented in two directions. It was presumed that individual grade beams were originally set level. Based on this assumption, grade beam settlement along the length of the grade beam, from end to end, was documented to determine the current horizontal slope of the grade beams. Additionally, it was presumed that adjacent grade beams were also set at the same elevation, resulting in a flat walking surface. Settlement in this direction was measured as the difference in the top deck surface between adjacent grade beam bents, or the vertical slope along the length of the boardwalk. Measurements taken to document this settlement in both directions can be found on site inspection plans provided in Attachment A. Foth-CLE assigned the following condition ratings based on settlement documented during the inspection. Settlement in the range of, 0 to 1-inch was assigned a "Minor" condition rating, settlement in the range of 1 to 3-inches was assigned a "Moderate" condition rating, settlement in the range of 3 to 6-inches was assigned a "Major" condition rating and settlement in the range of 6-inches or greater was assigned a "Severe" condition rating.

Structural Assessment:

The topside visual conditions along the Grade Beam Supported Timber Boardwalk were observed to be in ***"Poor"*** condition. Primary areas of significant deterioration include the decking and handrail. Additionally, Foth-CLE noted significant differential grade beam settlement.

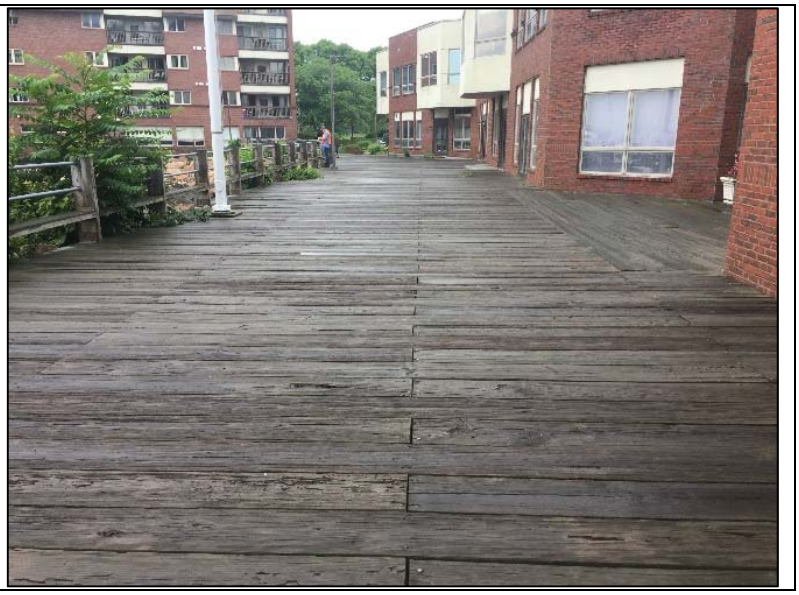
Recommendations:

Foth-CLE recommends alternatives be developed to provide options for full boardwalk replacement or retrofit to address settlement. These alternatives will incorporate ADA/AAB codes compliance and aesthetics.

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 34	Date: 08/09/2018
Direction Photo Taken: Looking North	
Station: 22+10	
Description: Typical Condition of the Grade Beam Supported Timber Boardwalk (Topside).	

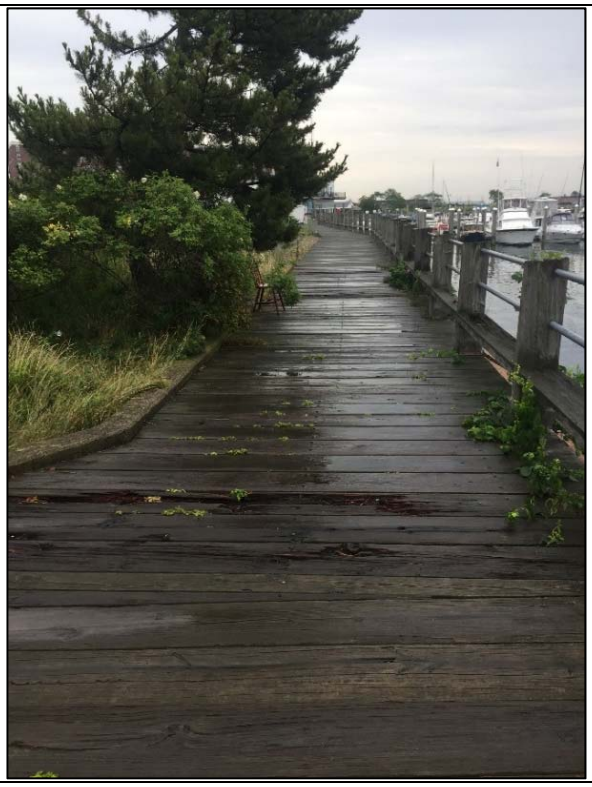
Photo No. 35	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: 26+50	
Description: Typical Condition of the Grade Beam Supported Timber Boardwalk (Topside).	



15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 36	Date: 08/09/2018
Direction Photo Taken: Looking South	
Station: 27+00	
Description: Typical Condition of the Grade Beam Supported Timber Boardwalk (Topside).	

Photo No. 37	Date: 08/09/2018
Direction Photo Taken: Looking East	
Station: 29+13	
Description: Typical Condition of the Grade Beam Supported Timber Boardwalk Decking.	



15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 38	Date: 08/09/2018
Direction Photo Taken: Looking Southwest	
Station: N/A	
Description: Typical Condition of the Grade Beam Supported Timber Boardwalk Railing System.	

Photo No. 39	Date: 08/09/2018
Direction Photo Taken: Looking South	
Station: N/A	
Description: Typical Condition of the Grade Beam Supported Timber Boardwalk Railing System.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 40	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: 24+00 to 25+00	
Description: Typical "Wavy" Condition of the Grade Beam Supported Timber Boardwalk.	

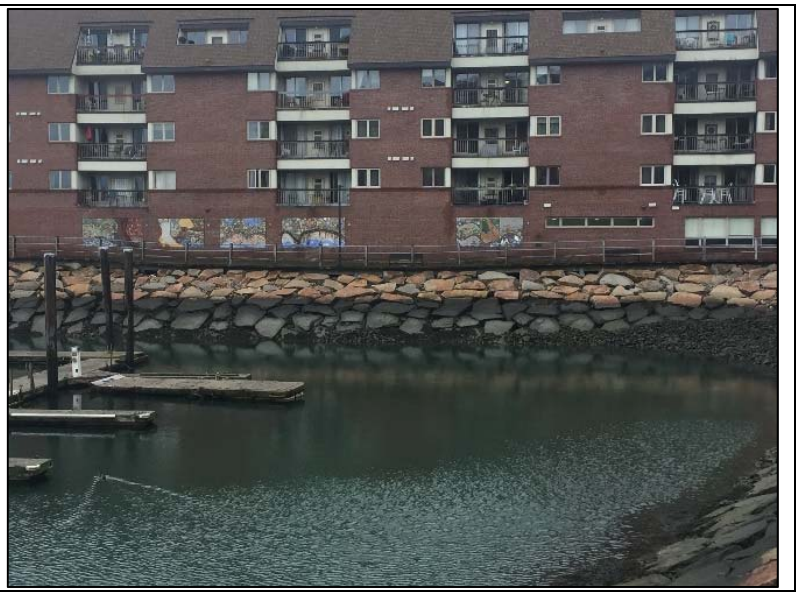


Photo No. 41	Date: 08/09/2018
Direction Photo Taken: Looking South	
Station: 24+50	
Description: Typical Deck Grade Differential Settlement & Variation.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 42	Date: 08/09/2018
Direction Photo Taken: Looking South	
Station: 25+00	
Description: Typical Deck Grade Differential Settlement & Variation Along with Deck Board Trip Hazards.	

Photo No. 43	Date: 08/09/2018
Direction Photo Taken: Looking South	
Station: 25+00	
Description: Separation of Boardwalk between Grade Beams.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 44	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: N/A	
Description: Typical Grade Beam & Stringer Connection Plate. Also, Bearing of Stringers to Grade Beam.	

Photo No. 45	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: N/A	
Description: Typical Grade Beam & Stringer Connection Plate. Also, Bearing of Stringers to Grade Beam.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

Photo No. 46	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: N/A	
Description: Typical Bearing of Stringers to Grade Beam.	

Photo No. 47	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: N/A	
Description: Typical Bearing of Stringers to Grade Beam.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

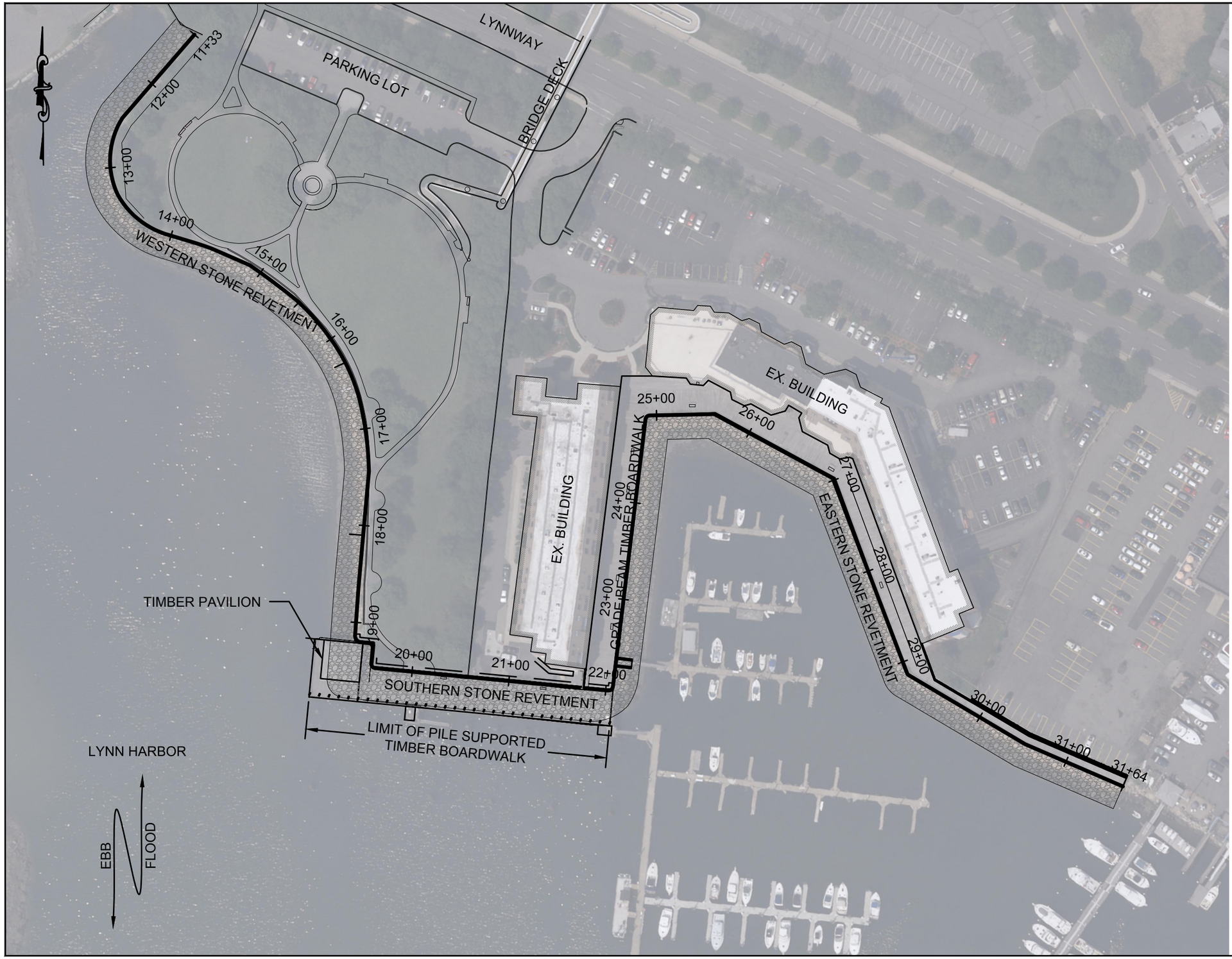
Photo No. 48	Date: 08/09/2018
Direction Photo Taken: Looking West	
Station: N/A	
Description: Typical Stringer Connection & Cracked Concrete Grade Beam.	

Photo No. 49	Date: 08/09/2018
Direction Photo Taken: N/A	
Station: 25+00	
Description: Missing Grade Beam & Stringer Connection Plate.	

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

ATTACHMENT A

WATERFRONT INFRASTRUCTURE INSPECTION PLAN
DATED 10/19/2018
PREPARED BY FOTH-CLE



GENERAL NOTES:

1. SITE INSPECTION PERFORMED BY FOTH-CLE ENGINEERING GROUP ON 08/09/2018 & 10/17/2018. DIVE INSPECTION FOR PILE SUPPORTED TIMBER BOARDWALK PERFORMED WITH FATHOM DIVING ON 10/04/2018.
2. ALL MEASUREMENTS DEPICTED ON THE DRAWINGS CAN ONLY BE CONSIDERED FOR INSPECTION PURPOSES AND NOT USED FOR CONSTRUCTION. FOTH-CLE DOES NOT WARRANT THE ACCURACY OF SAID PHYSICAL FEATURES.
3. NO SURVEYS WERE CONDUCTED TO LOCATE PROPERTY LINES, CHANNEL LIMITS, EASEMENTS, UTILITIES, GEOTECHNICAL FEATURES, OR ANY OTHER PHYSICAL FEATURES RELATING TO THE PROJECT SITE, NOR DOES FOTH-CLE WARRANT THE EXISTENCE OR LOCATION OF SAID PHYSICAL FEATURES.
4. EXISTING FEATURES & STRUCTURES OBTAINED FROM EXISTING PLANS BY COMMONWEALTH OF MASSACHUSETTS METROPOLITAN DISTRICT COMMISSION PARKS DIVISION ENTITLED "PROPOSED FISHING PIER NEAR GENERAL EDWARDS BRIDGE, LYNN" DATED MAY 1973 AND FROM SURVEY CONDUCTED BY STANTEC & SURVEY AND MAPPING CONSULTANTS.
5. POSSESSION AND USE OF THE MATERIAL CONTAINED ON THESE DRAWINGS IS GRANTED ONLY IN CONNECTION WITH ITS USE AS IT RELATES TO THE TITLED PROJECT, ANY OTHER USE, REPRODUCTION OR DISCLOSURE OF THE INFORMATION CONTAINED HEREON IS EXPRESSLY PROHIBITED WITHOUT THE WRITTEN CONSENT OF FOTH-CLE ENGINEERING GROUP.

© COPYRIGHT 2018, FOTH-CLE ENGINEERING GROUP.

GRAPHIC SCALE

0 50 100 200

(IN FEET)

1 INCH = 100 FEET

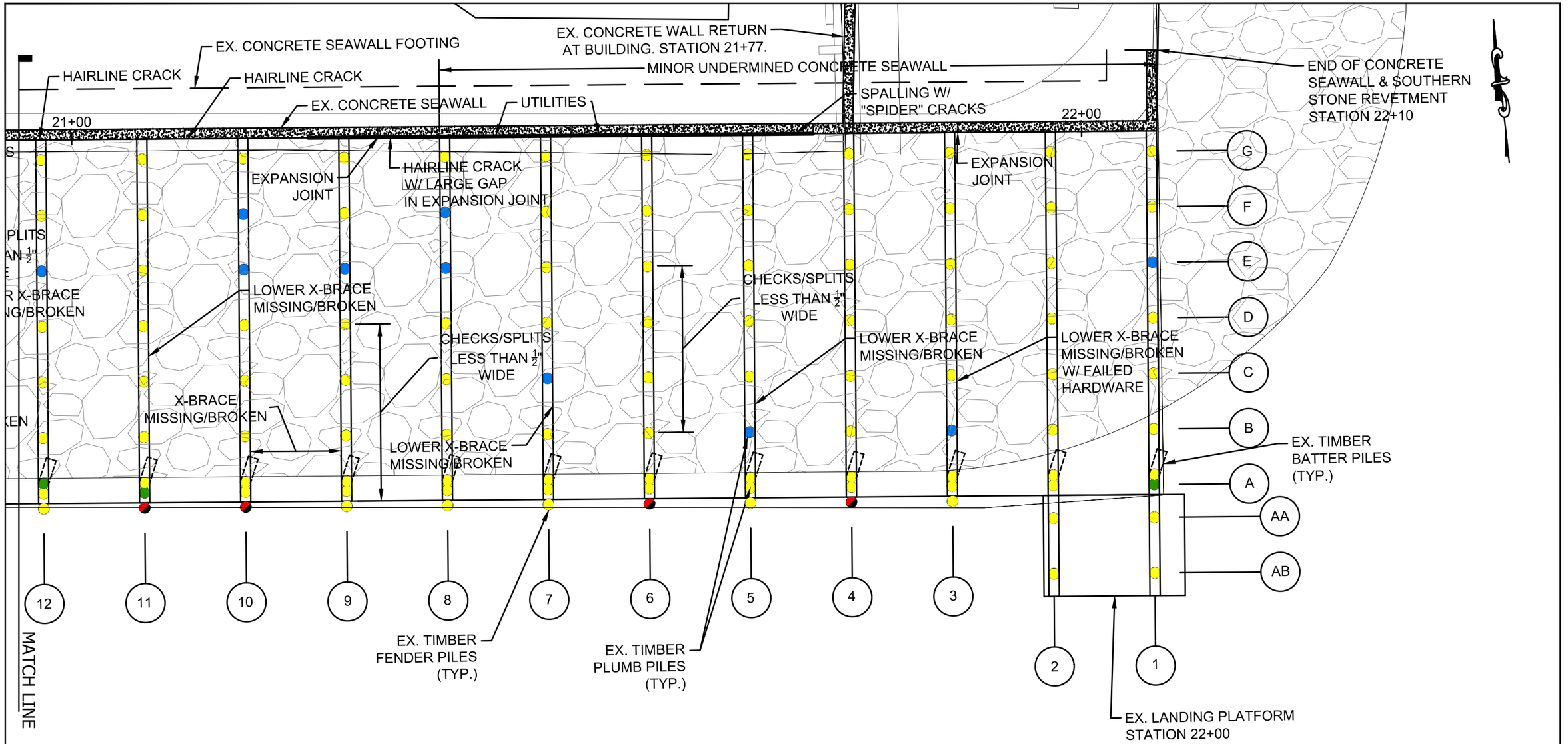
PROJECT: LYNN WATERFRONT HERITAGE STATE PARK
CONDITION FINDINGS
LYNN, MA 01901

CLIENT: DEPARTMENT OF CONSERVATION & RECREATION
251 CAUSEWAY STREET, 9TH FLOOR,
BOSTON, MA 02114

Foth cleengineering
15 Creek Road
Marion, Massachusetts 02743
t: 508.748.0937
www.cleengineering.com

OVERALL SITE PLAN

SCALE: AS NOTED	CHECKED	DATE: 10/19/2018	JOB No. 188008
DRAWN BY: JBD	BY: RWS/BKH		
REVISION No.	DATE	COMMENT	



LYNN HARBOR

EBB

FLOOD

GRAPHIC SCALE

0 5 10 20

(IN FEET)

1 INCH = 10 FEET

PILE SUPPORTED TIMBER BOARDWALK

SCALE: 1" = 10'

NOTES:

1. PILES GIVEN A CONDITION RATING OF "CONDITIONAL" SEVERE IS DUE TO END ROT AT TOPS OF PILES.
2. PILES GIVEN A CONDITION RATING OF "MAJOR" DUE TO BEARING BETWEEN PILE CAP AND PILES.
3. ALL PILE CAPS & STRINGERS GIVEN A CONDITION RATING OF MINOR (UNLESS OTHERWISE NOTED).
4. ALL X-BRACING GIVEN A CONDITION RATING OF SEVERE (UNLESS OTHERWISE NOTED).
5. NORTH TO SOUTH X-BRACING ON BENTS 1, 2, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 22, 23, 25, 26, 27, 29, & 31.
6. WEST TO EAST X-BRACING ON BENTS 1-2, 2-3, 6-7, 9-10, 13-14, 17-18, 21-22, 24-25, 27-28, 29-30, 30-31, & 31-32.

LEVEL 1 CONDITION LEGEND

- MINOR CONDITION
- MODERATE CONDITION
- MAJOR CONDITION
- SEVERE CONDITION
- "CONDITIONAL" SEVERE CONDITION

PROJECT: LYNN WATERFRONT HERITAGE STATE PARK
CONDITION FINDINGS
LYNN, MA 01901

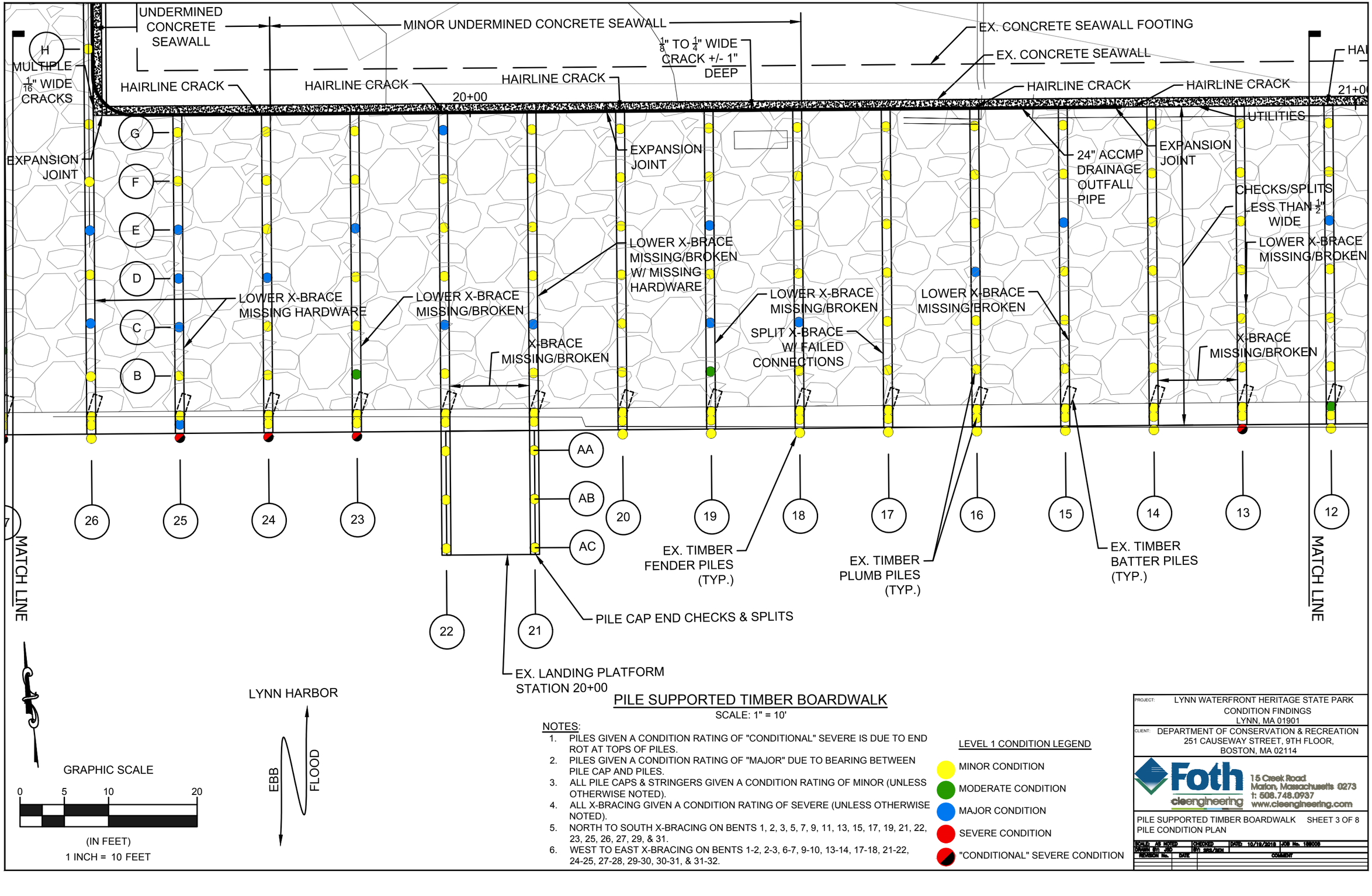
CLIENT: DEPARTMENT OF CONSERVATION & RECREATION
251 CAUSEWAY STREET, 9TH FLOOR,
BOSTON, MA 02114

Foth cleengineering
15 Creek Road
Marion, Massachusetts 02738
t: 508.748.0937
www.cleengineering.com

PILE SUPPORTED TIMBER BOARDWALK SHEET 2 OF 8
PILE CONDITION PLAN

SCALE: AS NOTED	CHECKED	DATE: 10/19/2018	JOB No. 180008
DRAWN BY: JSD	BY: MRS/BEN		

REVISION No.	DATE	COMMENT



PILE SUPPORTED TIMBER BOARDWALK

SCALE: 1" = 10'

NOTES:

1. PILES GIVEN A CONDITION RATING OF "CONDITIONAL" SEVERE IS DUE TO END ROT AT TOPS OF PILES.
2. PILES GIVEN A CONDITION RATING OF "MAJOR" DUE TO BEARING BETWEEN PILE CAP AND PILES.
3. ALL PILE CAPS & STRINGERS GIVEN A CONDITION RATING OF MINOR (UNLESS OTHERWISE NOTED).
4. ALL X-BRACING GIVEN A CONDITION RATING OF SEVERE (UNLESS OTHERWISE NOTED).
5. NORTH TO SOUTH X-BRACING ON BENTS 1, 2, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 22, 23, 25, 26, 27, 29, & 31.
6. WEST TO EAST X-BRACING ON BENTS 1-2, 2-3, 6-7, 9-10, 13-14, 17-18, 21-22, 24-25, 27-28, 29-30, 30-31, & 31-32.

LEVEL 1 CONDITION LEGEND

- MINOR CONDITION
- MODERATE CONDITION
- MAJOR CONDITION
- SEVERE CONDITION
- "CONDITIONAL" SEVERE CONDITION

PROJECT: LYNN WATERFRONT HERITAGE STATE PARK
CONDITION FINDINGS
LYNN, MA 01901

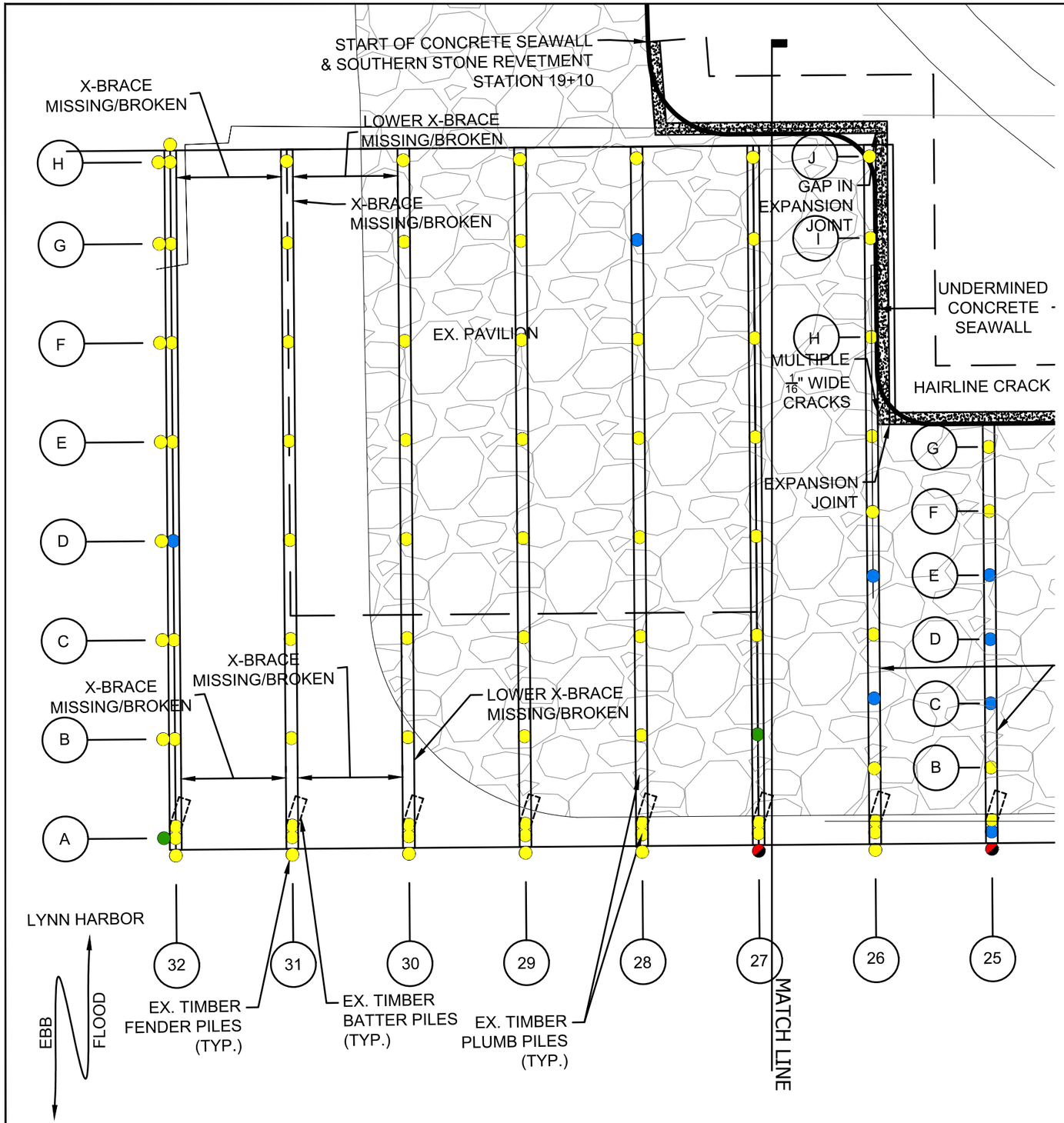
CLIENT: DEPARTMENT OF CONSERVATION & RECREATION
251 CAUSEWAY STREET, 9TH FLOOR,
BOSTON, MA 02114

Foth cleengineering
15 Creek Road
Marion, Massachusetts 02732
t: 508.748.0937
www.cleengineering.com

PILE SUPPORTED TIMBER BOARDWALK SHEET 3 OF 8
PILE CONDITION PLAN

SCALE: AS NOTED	CHECKED	DATE: 10/19/2018	JOB No. 180608
DESIGN BY: JSD	DRT: RES/BEN		

REVISION No.	DATE	COMMENT



PILE SUPPORTED TIMBER BOARDWALK

SCALE: 1" = 10'

NOTES:

1. PILES GIVEN A CONDITION RATING OF "CONDITIONAL" SEVERE IS DUE TO END ROT AT TOPS OF PILES.
2. PILES GIVEN A CONDITION RATING OF "MAJOR" DUE TO BEARING BETWEEN PILE CAP AND PILES.
3. ALL PILE CAPS & STRINGERS GIVEN A CONDITION RATING OF MINOR (UNLESS OTHERWISE NOTED).
4. ALL X-BRACING GIVEN A CONDITION RATING OF SEVERE (UNLESS OTHERWISE NOTED).
5. NORTH TO SOUTH X-BRACING ON BENTS 1, 2, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 22, 23, 25, 26, 27, 29, & 31.
6. WEST TO EAST X-BRACING ON BENTS 1-2, 2-3, 6-7, 9-10, 13-14, 17-18, 21-22, 24-25, 27-28, 29-30, 30-31, & 31-32.

GRAPHIC SCALE

0 5 10 20

(IN FEET)

1 INCH = 10 FEET

LEVEL 1 CONDITION LEGEND

- MINOR CONDITION
- MODERATE CONDITION
- MAJOR CONDITION
- SEVERE CONDITION
- "CONDITIONAL" SEVERE CONDITION

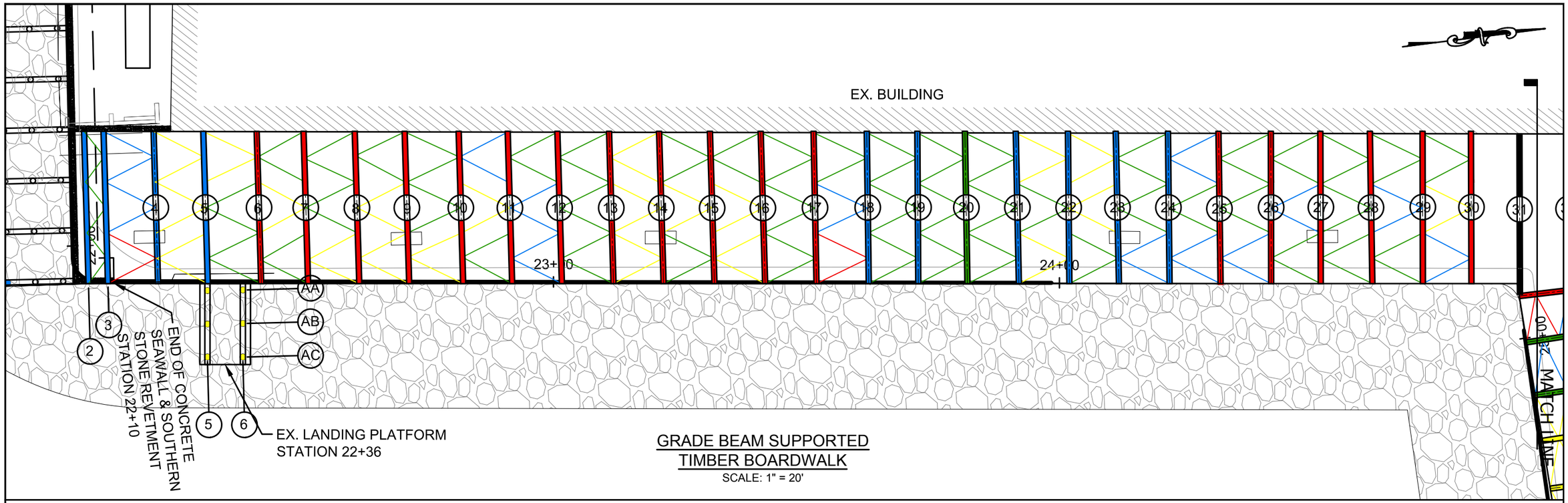
PROJECT: LYNN WATERFRONT HERITAGE STATE PARK
CONDITION FINDINGS
LYNN, MA 01901

CLIENT: DEPARTMENT OF CONSERVATION & RECREATION
251 CAUSEWAY STREET, 9TH FLOOR,
BOSTON, MA 02114

Foth cleengineering
15 Creek Road
Marion, Massachusetts 0273
t: 508.748.0937
www.cleengineering.com

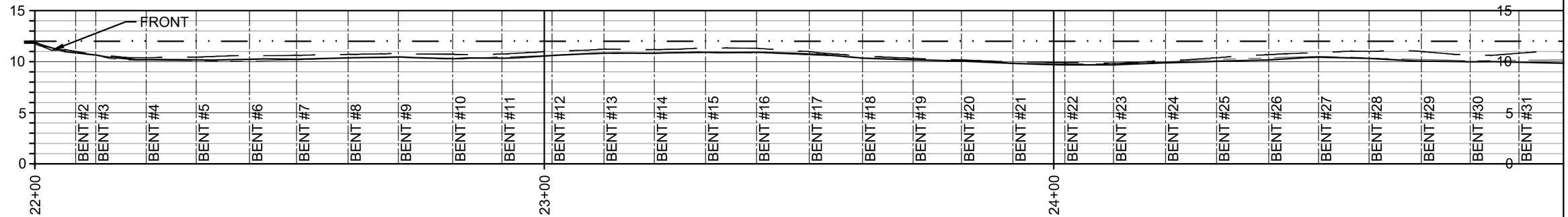
PILE SUPPORTED TIMBER BOARDWALK SHEET 4 OF 8
PILE CONDITION PLAN

SCALE: AS NOTED | CHECKED | DATE: 10/19/2018 | JOB No. 180008
DRAWN BY: JSD | BY: SRS/BEN
REVISION No. | DATE | COMMENT



GRADE BEAM SUPPORTED TIMBER BOARDWALK

SCALE: 1" = 20'



GRADE BEAM BOARDWALK PROFILE LEGEND:

- ORIGINAL CONSTRUCTED GRADE
- GRADE AT WATERSIDE EDGE OF BOARDWALK
- GRADE AT MIDDLE OF BOARDWALK
- GRADE AT LANDSIDE EDGE OF BOARDWALK

GRADE BEAM BOARDWALK LEGEND:

- DIRECTION OF SLOPE
- INDICATES EQUAL ELEVATION

GRADE BEAM SUPPORTED TIMBER BOARDWALK PROFILE

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

GRAPHIC SCALE

0 10 20 40

(IN FEET)

1 INCH = 20 FEET

GRADE BEAM BOARDWALK CONDITION LEGEND

- MINOR CONDITION (0" - 1")
- MODERATE CONDITION (1" - 3")
- MAJOR CONDITION (3" - 6")
- SEVERE CONDITION (>6")
- NO INFORMATION

LEVEL 1 CONDITION LEGEND

- MINOR CONDITION
- MODERATE CONDITION
- MAJOR CONDITION
- SEVERE CONDITION
- "CONDITIONAL" SEVERE CONDITION

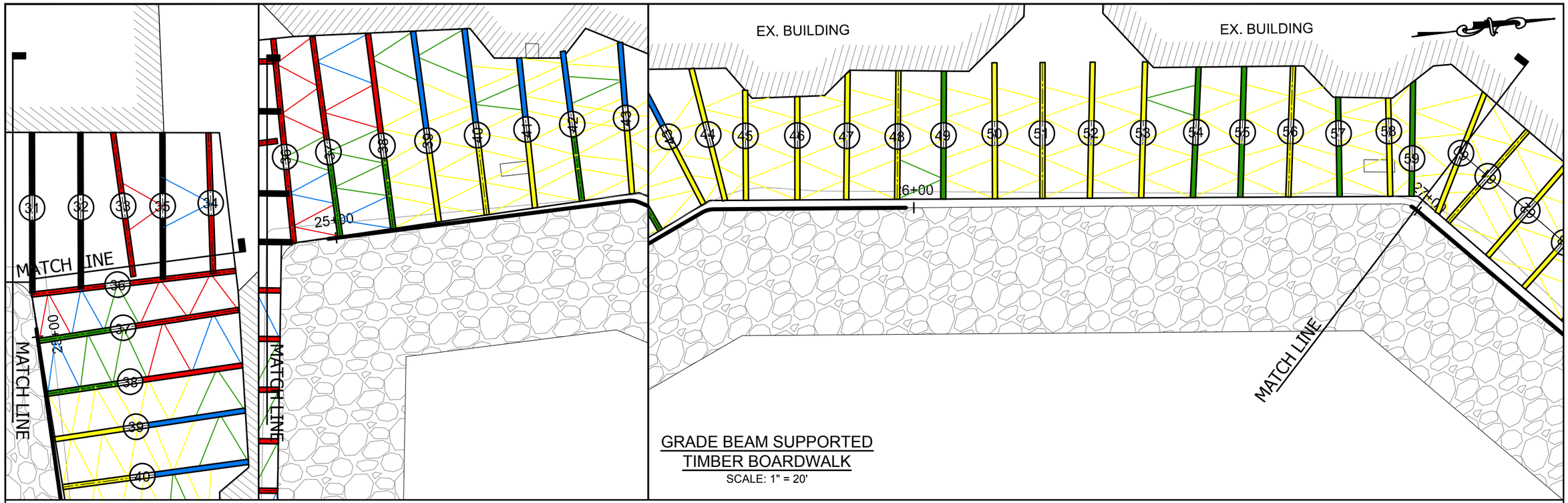
PROJECT: LYNN WATERFRONT HERITAGE STATE PARK
CONDITION FINDINGS
LYNN, MA 01901

CLIENT: DEPARTMENT OF CONSERVATION & RECREATION
251 CAUSEWAY STREET, 9TH FLOOR,
BOSTON, MA 02114

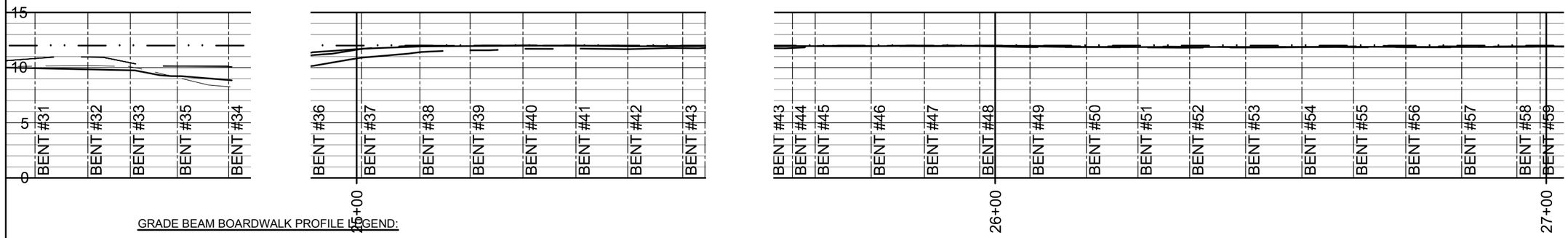
Foth cleengineering
15 Creek Road
Marion, Massachusetts 02738
t: 508.748.0937
www.cleengineering.com

GRADE BEAM SUPPORTED TIMBER BOARDWALK

SCALE: AS NOTED | CHECKED | DATE: 10/19/2018 | JOB No. 180009
DRAWN BY: JBD | APP. BRS/BEN
REVISION No. | DATE | COMMENT



GRADE BEAM SUPPORTED
TIMBER BOARDWALK
SCALE: 1" = 20'



GRADE BEAM BOARDWALK PROFILE LEGEND:

- ORIGINAL CONSTRUCTED GRADE
- GRADE AT WATERSIDE EDGE OF BOARDWALK
- GRADE AT MIDDLE OF BOARDWALK
- GRADE AT LANDSIDE EDGE OF BOARDWALK

GRADE BEAM BOARDWALK LEGEND:

- DIRECTION OF SLOPE
- INDICATES EQUAL ELEVATION

GRADE BEAM SUPPORTED TIMBER BOARDWALK PROFILE

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

GRAPHIC SCALE

0 10 20 40

(IN FEET)
1 INCH = 20 FEET

GRADE BEAM BOARDWALK CONDITION LEGEND

- MINOR CONDITION (0" - 1")
- MODERATE CONDITION (1" - 3")
- MAJOR CONDITION (3" - 6")
- SEVERE CONDITION (>6")
- NO INFORMATION

LEVEL 1 CONDITION LEGEND

- MINOR CONDITION
- MODERATE CONDITION
- MAJOR CONDITION
- SEVERE CONDITION
- "CONDITIONAL" SEVERE CONDITION

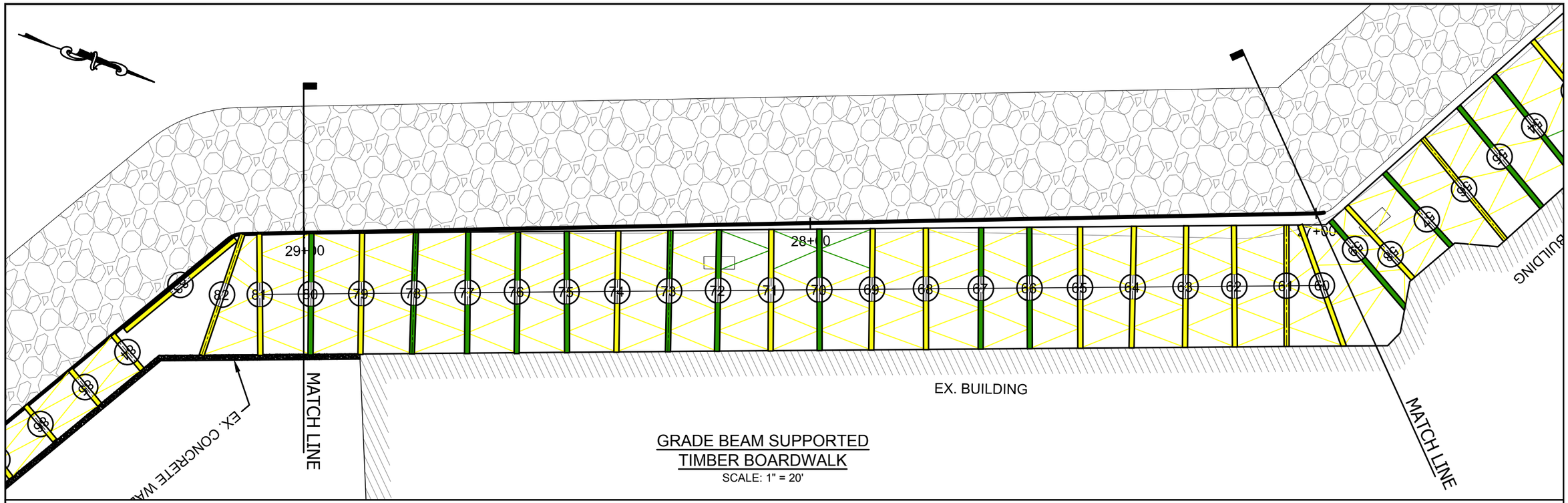
PROJECT: LYNN WATERFRONT HERITAGE STATE PARK
CONDITION FINDINGS
LYNN, MA 01901

CLIENT: DEPARTMENT OF CONSERVATION & RECREATION
251 CAUSEWAY STREET, 9TH FLOOR,
BOSTON, MA 02114

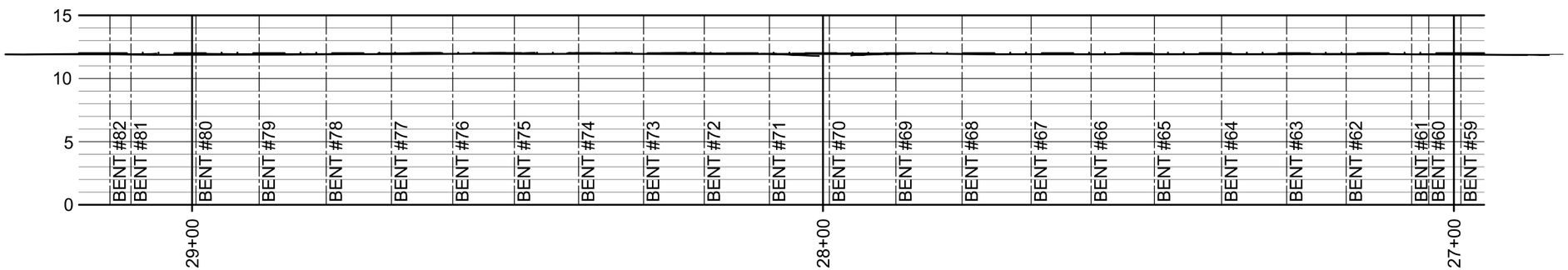
Foth cleengineering
15 Creek Road
Marion, Massachusetts 0273
t: 508.748.0937
www.cleengineering.com

GRADE BEAM SUPPORTED TIMBER BOARDWALK — SHEET 6 OF 8

SCALE: AS NOTED	CHECKED	DATE: 10/19/2018	JOB No. 180009
DRAWN BY: JBD	DET. BRS/BEN		
REVISION No.	DATE	COMMENT	



GRADE BEAM SUPPORTED
TIMBER BOARDWALK
SCALE: 1" = 20'



GRADE BEAM BOARDWALK PROFILE LEGEND:

- ORIGINAL CONSTRUCTED GRADE
- GRADE AT WATERSIDE EDGE OF BOARDWALK
- GRADE AT MIDDLE OF BOARDWALK
- GRADE AT LANDSIDE EDGE OF BOARDWALK

GRADE BEAM BOARDWALK LEGEND:

- DIRECTION OF SLOPE
- INDICATES EQUAL ELEVATION

GRADE BEAM SUPPORTED TIMBER BOARDWALK PROFILE

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

GRAPHIC SCALE

0 10 20 40

(IN FEET)
1 INCH = 20 FEET

GRADE BEAM BOARDWALK CONDITION LEGEND

- MINOR CONDITION (0" - 1")
- MODERATE CONDITION (1" - 3")
- MAJOR CONDITION (3" - 6")
- SEVERE CONDITION (>6")
- NO INFORMATION

LEVEL 1 CONDITION LEGEND

- MINOR CONDITION
- MODERATE CONDITION
- MAJOR CONDITION
- SEVERE CONDITION
- "CONDITIONAL" SEVERE CONDITION

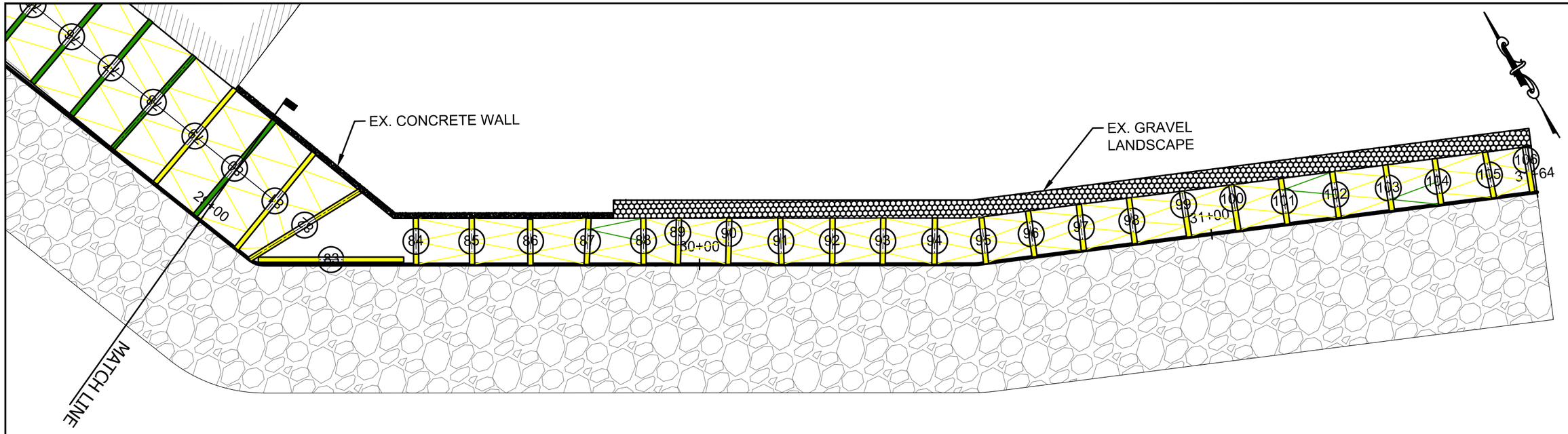
PROJECT: LYNN WATERFRONT HERITAGE STATE PARK
CONDITION FINDINGS
LYNN, MA 01901

CLIENT: DEPARTMENT OF CONSERVATION & RECREATION
251 CAUSEWAY STREET, 9TH FLOOR,
BOSTON, MA 02114

Foth cleengineering
15 Creek Road
Marion, Massachusetts 02738
t: 508.748.0937
www.cleengineering.com

GRADE BEAM SUPPORTED TIMBER BOARDWALK

SCALE: AS NOTED | CHECKED | DATE: 10/19/2018 | JOB No. 180009
DRAWN BY: JBD | APP. BRS/BEN
REVISION No. | DATE | COMMENT



GRADE BEAM SUPPORTED TIMBER BOARDWALK

SCALE: 1" = 20'

GRADE BEAM SUPPORTED TIMBER BOARDWALK PROFILE

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 2'

GRAPHIC SCALE

0 10 20 40

(IN FEET)

1 INCH = 20 FEET

GRADE BEAM BOARDWALK PROFILE LEGEND:

- ORIGINAL CONSTRUCTED GRADE
- GRADE AT WATERSIDE EDGE OF BOARDWALK
- GRADE AT MIDDLE OF BOARDWALK
- GRADE AT LANDSIDE EDGE OF BOARDWALK

GRADE BEAM BOARDWALK LEGEND:

- DIRECTION OF SLOPE
- INDICATES EQUAL ELEVATION

GRADE BEAM BOARDWALK CONDITION LEGEND

- MINOR CONDITION (0" - 1")
- MODERATE CONDITION (1" - 3")
- MAJOR CONDITION (3" - 6")
- SEVERE CONDITION (>6")
- NO INFORMATION

LEVEL 1 CONDITION LEGEND

- MINOR CONDITION
- MODERATE CONDITION
- MAJOR CONDITION
- SEVERE CONDITION
- "CONDITIONAL" SEVERE CONDITION

PROJECT: LYNN WATERFRONT HERITAGE STATE PARK
CONDITION FINDINGS
LYNN, MA 01901

CLIENT: DEPARTMENT OF CONSERVATION & RECREATION
251 CAUSEWAY STREET, 9TH FLOOR,
BOSTON, MA 02114

Foth cleengineering
15 Creek Road
Marion, Massachusetts 0273
t: 508.748.0937
www.cleengineering.com

GRADE BEAM SUPPORTED TIMBER BOARDWALK

SCALE: AS NOTED | CHECKED | DATE: 10/19/2018 | JOB No. 186009
DRAWN BY: JBD | APP. BRS/BEN
REVISION No. | DATE | COMMENT

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

ATTACHMENT B

GRADE BEAM SUPPORTED TIMBER BOARDWALK
DECKING GRADE DIFFERENTIAL SETTLEMENT & VARIATION

LYNN WATERFRONT - HERITAGE PARK									
Grade Beam Supported Timber Boardwalk Decking Grade Differential Settlement & Variation									
Grade Beam Number	**Spot Elev. Waterside**	**Spot Elev. Middle**	**Spot Elev. Landside**	**Deck Grade Variation Measurements (Bent to Bent)**			**Deck Grade Variation Measurements (Spot Elev. to Spot Elev. Within Same Bent)**		
				Δ (Delta) Waterside to Waterside	**Δ (Delta) Middle to Middle**	**Δ (Delta) Landside to Landside**	**Δ (Delta) Waterside to Middle**	**Δ (Delta) Landside to Middle**	**Δ (Delta) Waterside to Landside**
1	11.767	11.779	11.802				0.012	0.023	0.035
				0.507	0.890	0.984			
2	11.260	10.889	10.818				0.371	0.071	0.442
				0.228	0.205	0.212			
3	11.032	10.684	10.606				0.348	0.078	0.426
				0.563	0.436	0.485			
4	10.469	10.248	10.121				0.221	0.127	0.348
				0.082	0.026	0.062			
5	10.551	10.222	10.059				0.329	0.163	0.492
				0.196	0.099	0.050			
6	10.747	10.321	10.009				0.426	0.312	0.738
				0.100	0.063	0.156			
7	10.847	10.258	10.165				0.589	0.093	0.682
				0.069	0.141	0.179			
8	10.916	10.399	10.344				0.517	0.055	0.572
				0.058	0.062	0.109			
9	10.974	10.461	10.453				0.513	0.008	0.521
				0.002	0.142	0.248			
10	10.976	10.319	10.205				0.657	0.114	0.771
				0.093	0.030	0.286			
11	11.069	10.289	10.491				0.780	0.202	0.578
				0.270	0.322	0.167			
12	11.339	10.611	10.658				0.728	0.047	0.681
				0.119	0.248	0.104			
13	11.458	10.859	10.762				0.599	0.097	0.696
				0.047	0.033	0.051			
14	11.411	10.826	10.813				0.585	0.013	0.598
				0.193	0.064	0.194			
15	11.604	10.890	11.007				0.714	0.117	0.597
				0.083	0.049	0.162			
16	11.521	10.939	10.845				0.582	0.094	0.676
				0.148	0.159	0.230			
17	11.373	10.780	10.615				0.593	0.165	0.758
				0.706	0.456	0.219			
18	10.667	10.324	10.396				0.343	0.072	0.271
				0.224	0.171	0.160			
19	10.443	10.153	10.236				0.290	0.083	0.207
				0.185	0.109	0.112			
20	10.258	10.044	10.124				0.214	0.080	0.134
				0.172	0.234	0.231			
21	10.086	9.810	9.893				0.276	0.083	0.193
				0.046	0.154	0.071			
22	10.040	9.656	9.822				0.384	0.166	0.218
				0.087	0.006	0.003			
23	9.953	9.662	9.819				0.291	0.157	0.134
				0.318	0.186	0.219			
24	10.271	9.848	10.038				0.423	0.190	0.233
				0.341	0.117	0.255			
25	10.612	9.965	10.293				0.647	0.328	0.319
				0.355	0.139	0.128			
26	10.967	10.104	10.421				0.863	0.317	0.546

LYNN WATERFRONT - HERITAGE PARK									
Grade Beam Supported Timber Boardwalk Decking Grade Differential Settlement & Variation									
Grade Beam Number	**Spot Elev. Waterside**	**Spot Elev. Middle**	**Spot Elev. Landside**	**Deck Grade Variation Measurements (Bent to Bent)**			**Deck Grade Variation Measurements (Spot Elev. to Spot Elev. Within Same Bent)**		
				Δ (Delta) Waterside to Waterside	**Δ (Delta) Middle to Middle**	**Δ (Delta) Landside to Landside**	**Δ (Delta) Waterside to Middle**	**Δ (Delta) Landside to Middle**	**Δ (Delta) Waterside to Landside**
				0.162	0.306	0.126			
27	11.129	10.410	10.547				0.719	0.137	0.582
				0.205	0.106	0.140			
28	11.334	10.304	10.407				1.030	0.103	0.927
				0.143	0.292	0.142			
29	11.477	10.012	10.265				1.465	0.253	1.212
				0.439	0.059	0.134			
30	11.038	9.953	10.131				1.085	0.178	0.907
				-	-	-			
31	-	-	-				-	-	-
				-	-	-			
32	-	-	-				-	-	-
				-	-	-			
33	10.258	9.640	10.253				0.618	0.613	0.005
				-	0.538	-			
35	-	9.102	-				-	-	-
				-	0.435	-			
34	7.994	8.667	10.148				0.673	1.481	2.154
				-	-	-			
36.2	11.691	10.384	10.148				1.307	0.236	1.543
				0.116	0.733	0.682			
37.2	11.807	11.117	10.830				0.690	0.287	0.977
				0.162	0.699	0.473			
38.2	11.969	11.816	11.303				0.153	0.513	0.666
				0.008	0.034	0.218			
39.2	11.961	11.782	11.521				0.179	0.261	0.440
				0.024	0.066	0.196			
40.2	11.985	11.716	11.717				0.269	0.001	0.268
				0.038	0.119	0.012			
41.2	12.023	11.835	11.705				0.188	0.130	0.318
				0.044	0.032	0.051			
42.2	11.979	11.867	11.654				0.112	0.213	0.325
				0.000	0.101	0.055			
43.2	11.979	11.766	11.709				0.213	0.057	0.270
				-	-	-			
36.1	10.944	11.388	11.691				0.444	0.303	0.747
				0.768	0.322	0.116			
37.1	11.712	11.710	11.807				0.002	0.097	0.095
				0.338	0.207	0.162			
38.1	12.050	11.917	11.969				0.133	0.052	0.081
				0.034	0.041	0.008			
39.1	12.016	11.958	11.961				0.058	0.003	0.055
				0.013	0.035	0.024			
40.1	12.029	11.993	11.985				0.036	0.008	0.044
				0.013	0.009	0.038			
41.1	12.016	11.984	12.023				0.032	0.039	0.007
				0.011	0.051	0.044			
42.1	12.027	11.933	11.979				0.094	0.046	0.048
				0.056	0.017	0.000			
43.1	11.971	11.950	11.979				0.021	0.029	0.008
				0.001	0.008	0.014			

LYNN WATERFRONT - HERITAGE PARK									
Grade Beam Supported Timber Boardwalk Decking Grade Differential Settlement & Variation									
Grade Beam Number	**Spot Elev. Waterside**	**Spot Elev. Middle**	**Spot Elev. Landside**	**Deck Grade Variation Measurements (Bent to Bent)**			**Deck Grade Variation Measurements (Spot Elev. to Spot Elev. Within Same Bent)**		
				Δ (Delta) Waterside to Waterside	**Δ (Delta) Middle to Middle**	**Δ (Delta) Landside to Landside**	**Δ (Delta) Waterside to Middle**	**Δ (Delta) Landside to Middle**	**Δ (Delta) Waterside to Landside**
44	11.970	11.958	11.965				0.012	0.007	0.005
				0.003	0.015	0.041			
45	11.967	11.943	12.006				0.024	0.063	0.039
				0.010	0.025	0.034			
46	11.957	11.968	12.040				0.011	0.072	0.083
				0.004	0.011	0.055			
47	11.953	11.957	11.985				0.004	0.028	0.032
				0.005	0.005	0.010			
48	11.958	11.952	11.975				0.006	0.023	0.017
				0.106	0.070	0.030			
49	11.852	11.882	11.945				0.030	0.063	0.093
				0.005	0.025	0.005			
50	11.857	11.857	11.940				0.000	0.083	0.083
				0.035	0.017	0.063			
51	11.822	11.874	11.877				0.052	0.003	0.055
				0.027	0.006	0.052			
52	11.795	11.868	11.825				0.073	0.043	0.030
				0.025	0.001	0.032			
53	11.820	11.869	11.857				0.049	0.012	0.037
				0.069	0.023	0.188			
54	11.889	11.892	12.045				0.003	0.153	0.156
				0.048	0.019	0.076			
55	11.841	11.873	11.969				0.032	0.096	0.128
				0.010	0.012	0.041			
56	11.851	11.861	11.928				0.010	0.067	0.077
				0.006	0.005	0.038			
57	11.845	11.866	11.966				0.021	0.100	0.121
				0.078	0.036	0.008			
58	11.923	11.902	11.974				0.021	0.072	0.051
				0.005	0.003	0.026			
59	11.918	11.905	12.000				0.013	0.095	0.082
				0.005	0.040	0.001			
60	11.923	11.945	12.001				0.022	0.056	0.078
				0.002	0.022	0.036			
61	11.925	11.923	11.965				0.002	0.042	0.040
				0.021	0.009	0.006			
62	11.904	11.932	11.971				0.028	0.039	0.067
				0.006	0.010	0.004			
63	11.898	11.922	11.967				0.024	0.045	0.069
				0.028	0.003	0.026			
64	11.926	11.919	11.941				0.007	0.022	0.015
				0.031	0.002	0.023			
65	11.895	11.921	11.963				0.026	0.042	0.068
				0.006	0.006	0.055			
66	11.901	11.915	12.018				0.014	0.103	0.117
				0.020	0.049	0.022			
67	11.881	11.964	12.040				0.083	0.076	0.159
				0.072	0.022	0.033			
68	11.953	11.942	12.007				0.011	0.065	0.054
				0.032	0.004	0.043			
69	11.921	11.938	11.964				0.017	0.026	0.043

LYNN WATERFRONT - HERITAGE PARK									
Grade Beam Supported Timber Boardwalk Decking Grade Differential Settlement & Variation									
Grade Beam Number	**Spot Elev. Waterside**	**Spot Elev. Middle**	**Spot Elev. Landside**	**Deck Grade Variation Measurements (Bent to Bent)**			**Deck Grade Variation Measurements (Spot Elev. to Spot Elev. Within Same Bent)**		
				Δ (Delta) Waterside to Waterside	**Δ (Delta) Middle to Middle**	**Δ (Delta) Landside to Landside**	**Δ (Delta) Waterside to Middle**	**Δ (Delta) Landside to Middle**	**Δ (Delta) Waterside to Landside**
				0.179	0.001	0.020			
70	11.742	11.937	11.944				0.195	0.007	0.202
				0.207	0.006	0.014			
71	11.949	11.943	11.958				0.006	0.015	0.009
				0.089	0.014	0.031			
72	12.038	11.957	11.927				0.081	0.030	0.111
				0.012	0.009	0.003			
73	12.026	11.948	11.924				0.078	0.024	0.102
				0.001	0.016	0.026			
74	12.025	11.964	11.950				0.061	0.014	0.075
				0.005	0.029	0.059			
75	12.030	11.935	11.891				0.095	0.044	0.139
				0.034	0.009	0.019			
76	12.064	11.926	11.872				0.138	0.054	0.192
				0.047	0.029	0.004			
77	12.017	11.897	11.868				0.120	0.029	0.149
				0.055	0.012	0.004			
78	11.962	11.885	11.872				0.077	0.013	0.090
				0.019	0.004	0.004			
79	11.943	11.881	11.868				0.062	0.013	0.075
				0.054	0.063	0.040			
80	11.997	11.944	11.908				0.053	0.036	0.089
				0.064	0.043	0.033			
81	11.933	11.901	11.875				0.032	0.026	0.058
				0.010	0.017	0.055			
82	11.923	11.918	11.930				0.005	0.012	0.007
				-	-	-			
83	11.917	-	11.862				-	-	0.055
				-	-	-			
84	11.810	-	11.779				-	-	0.031
				0.060	-	0.029			
85	11.750	-	11.750				-	-	0.000
				0.015	-	0.049			
86	11.735	-	11.701				-	-	0.034
				0.073	-	0.079			
87	11.808	-	11.780				-	-	0.028
				0.018	-	0.109			
88	11.826	-	11.889				-	-	0.063
				0.068	-	0.030			
89	11.894	-	11.859				-	-	0.035
				0.013	-	0.015			
90	11.907	-	11.874				-	-	0.033
				0.017	-	0.010			
91	11.924	-	11.884				-	-	0.040
				0.030	-	0.060			
92	11.894	-	11.884				-	-	0.010
				0.012	-	0.015			
93	11.882	-	11.899				-	-	0.017
				0.011	-	0.056			
94	11.893	-	11.843				-	-	0.050
				0.027	-	0.025			

LYNN WATERFRONT - HERITAGE PARK									
Grade Beam Supported Timber Boardwalk Decking Grade Differential Settlement & Variation									
Grade Beam Number	**Spot Elev. Waterside**	**Spot Elev. Middle**	**Spot Elev. Landside**	**Deck Grade Variation Measurements (Bent to Bent)**			**Deck Grade Variation Measurements (Spot Elev. to Spot Elev. Within Same Bent)**		
				Δ (Delta) Waterside to Waterside	**Δ (Delta) Middle to Middle**	**Δ (Delta) Landside to Landside**	**Δ (Delta) Waterside to Middle**	**Δ (Delta) Landside to Middle**	**Δ (Delta) Waterside to Landside**
95	11.866	-	11.868				-	-	0.002
				0.048	-	0.032			
96	11.818	-	11.836				-	-	0.018
				0.017	-	0.034			
97	11.835	-	11.802				-	-	0.033
				0.031	-	0.077			
98	11.804	-	11.725				-	-	0.079
				0.049	-	0.049			
99	11.755	-	11.676				-	-	0.079
				0.022	-	0.060			
100	11.733	-	11.736				-	-	0.003
				0.022	-	0.011			
101	11.711	-	11.725				-	-	0.014
				0.040	-	0.096			
102	11.751	-	11.821				-	-	0.070
				0.048	-	0.044			
103	11.703	-	11.777				-	-	0.074
				0.094	-	0.021			
104	11.797	-	11.756				-	-	0.041
				0.061	-	0.019			
105	11.858	-	11.775				-	-	0.083
				0.015	-	0.072			
106	11.843	-	11.847				-	-	0.004

Condition Rating Notes:

Yellow — Indicates Minor Condition Rating. Deck Grade Variation between 0-inches to 1-inch.
Green — Indicates Moderate Condition Rating. Deck Grade Variation between 1-inch to 3-inches.
Blue — Indicates Major Condition Rating. Deck Grade Variation between 3-inches to 6-inches.
Red — Indicates Severe Condition Rating. Deck Grade Variation Greater than 6-inches.

15 Creek Road | Marion, Massachusetts 02738
t: 508.748.0937 | 800.668.3220 | f: 508.748.1363

ATTACHMENT C

Lynn Heritage State Park Condition Spreadsheets

LYNN WATERFRONT - HERITAGE PARK		
Grade Beam Supported Boardwalk Platform Timber Piles Station 22+36		
Structure	**Rating**	**Description**
5AA	Minor	
5AB	Minor	
5AC	Minor	
6AA	Minor	
6AB	Minor	
6AC	Minor	

LYNN WATERFRONT - HERITAGE PARK		
Pile Supported Timber Boardwalk Piles		
Notes:	FP Indicates Fender Pile	
	**Severe	Indicates a Conditional Severe Condition Due To End Rot at Top of Pile.
Structure	**Rating**	**Description**
1AA	Minor	
1AB	Minor	
1A-PLUMB	Moderate	Cross-Section Loss 2" wide by 2.5' high by 2" deep at Bottom of Pile. Diameter Loss 15% to 30%.
1A-BATTER	Minor	
1B	Minor	
1C	Minor	Diameter = 1.05'
1D	Minor	
1E	Major	Pile Cap Not Bearing on Pile
1F	Minor	
1G	Minor	
2AA	Minor	Splintering (Ice Damage) at Intertidal Zone
2AB	Minor	
2A-PLUMB	Minor	
2A-BATTER	Minor	
2B	Minor	Diameter = 1.05'
2C	Minor	
2D	Minor	
2E	Minor	
2F	Minor	
2G	Minor	
FP-3	Minor	Minor End Rot at Top of Pile
3A-PLUMB	Minor	Diameter = 1.05'
3A-BATTER	Minor	
3B	Major	Pile Cap Not Bearing on Pile
3C	Minor	
3D	Minor	
3E	Minor	
3F	Minor	
3G	Minor	
FP-4	**Severe	Severe due to End Rot Top +/- 1' of Pile. Splintering (Ice Damage) at Intertidal Zone
4A-PLUMB	Minor	
4A-BATTER	Minor	
4B	Minor	Diameter = 1.05'
4C	Minor	
4D	Minor	
4E	Minor	
4F	Minor	
4G	Minor	
FP-5	Minor	
5A-PLUMB	Minor	Diameter = 1.05'
5A-BATTER	Minor	
5B	Major	Pile Cap Not Bearing on Pile

LYNN WATERFRONT - HERITAGE PARK		
Pile Supported Timber Boardwalk Piles		
Notes:	FP Indicates Fender Pile	
	**Severe	Indicates a Conditional Severe Condition Due To End Rot at Top of Pile.
Structure	**Rating**	**Description**
5C	Minor	
5D	Minor	
5E	Minor	
5F	Minor	
5G	Minor	
FP-6	**Severe	Severe due to End Rot Top +/- 1' of Pile. Splintering (Ice Damage) at Intertidal Zone
6A-PLUMB	Minor	
6A-BATTER	Minor	
6B	Minor	Diameter = 1.05'
6C	Minor	
6D	Minor	
6E	Minor	
6F	Minor	
6G	Minor	
FP-7	Minor	
7A-PLUMB	Minor	
7A-BATTER	Minor	
7B	Minor	
7C	Major	Pile Cap Not Bearing on Pile
7D	Minor	
7E	Minor	
7F	Minor	
7G	Minor	
FP-8	Minor	
8A-PLUMB	Minor	
8A-BATTER	Minor	
8B	Minor	Diameter = 1.05'
8C	Minor	
8D	Minor	
8E	Major	Pile Cap Not Bearing on Pile
8F	Major	Pile Cap Not Bearing on Pile
8G	Minor	
FP-9	Minor	
9A-PLUMB	Minor	
9A-BATTER	Minor	
9B	Minor	Diameter = 1.05'
9C	Minor	
9D	Minor	
9E	Major	Pile Cap Not Bearing on Pile
9F	Minor	
9G	Minor	
FP-10	**Severe	Severe due to End Rot Top +/- 1' of Pile.
10A-PLUMB	Minor	

LYNN WATERFRONT - HERITAGE PARK		
Pile Supported Timber Boardwalk Piles		
Notes:	FP Indicates Fender Pile	
	**Severe	Indicates a Conditional Severe Condition Due To End Rot at Top of Pile.
Structure	**Rating**	**Description**
10A-BATTER	Minor	
10B	Minor	
10C	Minor	
10D	Minor	
10E	Major	Pile Cap Not Bearing on Pile
10F	Major	Pile Cap Not Bearing on Pile
10G	Minor	
FP-11	**Severe	Severe due to End Rot Top +/- 1' of Pile.
11A-PLUMB	Moderate	Diameter = 0.96'. 1" deep by 3' long Gouge.
11A-BATTER	Minor	
11B	Minor	
11C	Minor	
11D	Minor	
11E	Minor	
11F	Minor	
11G	Minor	
FP-12	Minor	
12A-PLUMB	Minor	
12A-BATTER	Moderate	1" wide by 1" deep by 3' long Gouge
12B	Minor	Diameter = 1.11'
12C	Minor	
12D	Minor	
12E	Major	Pile Cap Not Bearing on Pile
12F	Minor	
12G	Minor	
FP-13	**Severe	Severe due to End Rot Top +/- 1' of Pile.
13A-PLUMB	Minor	Diameter = 1.05'. 1/2" wide by 1/2" deep by 3' long Gouge.
13A-BATTER	Minor	
13B	Minor	
13C	Minor	
13D	Minor	
13E	Minor	
13F	Minor	
13G	Minor	
FP-14	Minor	
14A-PLUMB	Minor	
14A-BATTER	Minor	
14B	Minor	
14C	Minor	
14D	Minor	
14E	Minor	
14F	Minor	
14G	Minor	

LYNN WATERFRONT - HERITAGE PARK		
Pile Supported Timber Boardwalk Piles		
Notes:	FP Indicates Fender Pile	
	**Severe	Indicates a Conditional Severe Condition Due To End Rot at Top of Pile.
Structure	**Rating**	**Description**
FP-15	Minor	
15A-PLUMB	Minor	Diameter = 1.11'
15A-BATTER	Minor	
15B	Minor	
15C	Minor	1/8" to 1/4" wide Cracks Mid Pile, 2' long.
15D	Minor	
15E	Major	Pile Cap Not Bearing on Pile
15F	Minor	
15G	Minor	
FP-16	Minor	
16A-PLUMB	Minor	
16A-BATTER	Minor	
16B	Minor	Diameter = 1.11'
16C	Minor	
16D	Major	Pile Cap Not Bearing on Pile
16E	Minor	
16F	Minor	
16G	Minor	
FP-17	Minor	
17A-PLUMB	Minor	
17A-BATTER	Minor	
17B	Minor	
17C	Minor	
17D	Minor	
17E	Minor	
17F	Minor	
17G	Minor	
FP-18	Minor	
18A-PLUMB	Minor	
18A-BATTER	Minor	
18B	Minor	
18C	Major	Pile Cap Not Bearing on Pile
18D	Minor	
18E	Minor	
18F	Minor	
18G	Minor	
FP-19	Minor	
19A-PLUMB	Minor	
19A-BATTER	Minor	
19B	Moderate	Diameter = 0.96'
19C	Major	Pile Cap Not Bearing on Pile
19D	Minor	
19E	Major	Pile Cap Not Bearing on Pile

LYNN WATERFRONT - HERITAGE PARK		
Pile Supported Timber Boardwalk Piles		
Notes:	FP Indicates Fender Pile	
	**Severe	Indicates a Conditional Severe Condition Due To End Rot at Top of Pile.
Structure	**Rating**	**Description**
19F	Minor	
19G	Minor	
FP-20	Minor	
20A-PLUMB	Minor	
20A-BATTER	Minor	
20B	Minor	Diameter = 1.02'
20C	Minor	
20D	Minor	
20E	Minor	
20F	Minor	
20G	Minor	
21AA	Minor	
21AB	Minor	
21AC	Minor	
21A-PLUMB	Minor	Diameter = 1.05'
21A-BATTER	Minor	
21B	Minor	
21C	Major	Pile Cap Not Bearing on Pile
21D	Minor	
21E	Minor	
21F	Minor	
21G	Minor	
22AA	Minor	
22AB	Minor	
22AC	Minor	
22A-PLUMB	Minor	
22A-BATTER	Minor	1/8" to 1/4" wide Cracks Mid Pile, 2' long.
22B	Minor	
22C	Major	Pile Cap Not Bearing on Pile
22D	Minor	
22E	Minor	
22F	Minor	
22G	Major	Pile Cap Not Bearing on Pile
FP-23	**Severe	Severe Due To End Rot Top +/-1' of Pile.
23A-PLUMB	Minor	
23A-BATTER	Minor	
23B	Moderate	Diameter = 0.96'
23C	Minor	
23D	Minor	
23E	Major	Pile Cap Not Bearing on Pile
23F	Minor	
23G	Minor	
FP-24	**Severe	Severe Due To End Rot Top +/-1' of Pile.

LYNN WATERFRONT - HERITAGE PARK		
Pile Supported Timber Boardwalk Piles		
Notes:	FP Indicates Fender Pile	
	**Severe	Indicates a Conditional Severe Condition Due To End Rot at Top of Pile.
Structure	**Rating**	**Description**
24A-PLUMB	Minor	
24A-BATTER	Minor	
24B	Minor	
24C	Minor	
24D	Major	Pile Cap Not Bearing on Pile
24E	Minor	
24F	Minor	
24G	Minor	
FP-25	**Severe	Severe Due To End Rot Top +/-1' of Pile.
25A-PLUMB	Major	Pile Cap Not Bearing on Pile. Diameter = 1.05'
25A-BATTER	Minor	
25B	Minor	
25C	Major	Pile Cap Not Bearing on Pile
25D	Major	Pile Cap Not Bearing on Pile
25E	Major	Pile Cap Not Bearing on Pile
25F	Minor	
25G	Minor	
FP-26	Minor	
26A-PLUMB	Minor	
26A-BATTER	Minor	
26B	Minor	Diameter = 1.11'
26C	Major	Pile Cap Not Bearing on Pile
26D	Minor	1/4" wide Split 3' long at Top of Pile
26E	Major	Pile Cap Not Bearing on Pile
26F	Minor	
26G	Minor	
26H	Minor	
26I	Minor	
26J	Minor	
FP-27	**Severe	Severe Due To End Rot Top +/-1' of Pile.
27A-PLUMB	Minor	
27A-BATTER	Minor	
27B	Moderate	1" wide by 1" deep by 2' long Gouge
27C	Minor	
27D	Minor	
27E	Minor	
27F	Minor	
27G	Minor	
27H	Minor	
FP-28	Minor	
28A-PLUMB	Minor	
28A-BATTER	Minor	
28B	Minor	

LYNN WATERFRONT - HERITAGE PARK		
Pile Supported Timber Boardwalk Piles		
Notes:	FP Indicates Fender Pile	
	**Severe	Indicates a Conditional Severe Condition Due To End Rot at Top of Pile.
Structure	**Rating**	**Description**
28C	Minor	Diameter = 1.11'
28D	Minor	
28E	Minor	
28F	Minor	
28G	Major	Pile Cap Not Bearing on Pile
28H	Minor	
FP-29	Minor	
29A-PLUMB	Minor	
29A-BATTER	Minor	Minor Material Loss
29B	Minor	
29C	Minor	
29D	Minor	
29E	Minor	
29F	Minor	
29G	Minor	
29H	Minor	
FP-30	Minor	
30A-PLUMB	Minor	
30A-BATTER	Minor	
30B	Minor	
30C	Minor	
30D	Minor	
30E	Minor	Diameter = 1.11'
30F	Minor	
30G	Minor	
30H	Minor	
FP-31	Minor	
31A-PLUMB	Minor	
31A-BATTER	Minor	
31B	Minor	Diameter = 1.27'
31C	Minor	
31D	Minor	
31E	Minor	
31F	Minor	
31G	Minor	
31H	Minor	
FP-32	Minor	
FP-32A	Moderate	Crack 5' long by 1/2" to 1/4" wide by 1" deep
32A-PLUMB	Minor	
32A-BATTER	Minor	
FP-32B	Minor	
32B	Minor	
FP-32C	Minor	

LYNN WATERFRONT - HERITAGE PARK		
Pile Supported Timber Boardwalk Piles		
Notes:	FP Indicates Fender Pile	
	**Severe	Indicates a Conditional Severe Condition Due To End Rot at Top of Pile.
Structure	**Rating**	**Description**
32C	Minor	Diameter = 1.27'
FP-32D	Minor	
32D	Major	Pile Cap Not Bearing on Pile
FP-32E	Minor	
32E	Minor	
FP-32F	Minor	
32F	Minor	
FP-32G	Minor	
32G	Minor	
FP-32H	Minor	
FP-32H North	Minor	
32G	Minor	

APPENDIX G

Stantec Consulting Services Inc.
400 Crown Colony Drive Suite 200, Quincy MA 02169-0982

Memorandum

To: **Jennifer Ducey**

From: Joseph Salvetti and Andrew Martzolf

Date: November 2, 2018

RE: **Preliminary Review of Environmental Data**
Lynn Heritage State Park
Project # 179410750

Stantec Consulting Services, Inc. (Stantec) has performed this preliminary review of environmental data for the development of the Lynn Heritage State Park (the Site). The location of the Site is depicted on the attached Figure 1 Site Locus Map. This environmental data review was performed to determine if any reported release locations of oil and/or hazardous materials (OHM) present a potential to impact soil or groundwater at the Site. The identification of potential areas of impacts at the Site will aid in the determination of any special handling or management of impacted media which may be necessary during future construction activities at the Site. The City of Lynn anticipates the redevelopment of the Lynn State Heritage Park which includes installation of a paved parking lot with a subsurface drainage system, shade structures and lamp posts along the asphalt path, and a concrete pad in the middle of the park.

The Site is approximately 800 feet long from north to south and varies in width along the east-west axis from approximately 400 feet to 150 feet. The Site includes approximately 1,250 feet of boardwalk along the eastern coast. The Site is currently utilized as a public park including a paved parking lot, lawns, wooden boardwalk, and asphalt paths.

Stantec personnel performed a visual inspection of the Site on foot on August 23rd, 2018. Photographs are included as Attachment 1. The Site walk focused on the observation of current conditions and observable indications of past uses and conditions that may indicate the presence of a release of OHM that could impact proposed construction activities. Stantec was also inspecting to determine if a release of OHM existed which warranted potential notification to the Massachusetts Department of Environmental Protection (MADEP) in accordance with CMR 40.0000 of the Massachusetts Contingency Plan (MCP). Stantec observed no current conditions which indicate a reportable release at the Site has occurred.

The property consists of a park covered with grass and paved paths. There is a paved parking lot at the north end of the property and a boardwalk with a gazebo and docks to the south. The property is surrounded by the ocean to the west and south. Connected to the boardwalk adjacent to the gazebo is a dock used by recreational boaters to moor their boats. Stantec observed fuel lines running along the bottom of the dock out to a fuel pump located on the dock. A vent and fill pipe were observed on the landward side of the boardwalk near the gazebo and an underground storage tank (UST) suspected to be connected to the fuel lines is located beneath the asphalt road located between the park and the office/apartment building to the east. To the east of the park portion of the property, and surrounded by the boardwalk, is a five-story building that contains a mix of commercial businesses and residential apartments. East of that are more apartments and a restaurant. To the north of the property is the Lynnway and north of that is the campus for North Shore Community College. A large concrete

and metal walkway span the Lynnway connecting the North Shore Community College campus and the property.

ENVIRONMENTAL DATABASE REVIEW

Stantec reviewed a regulatory agency database search report obtained from Environmental Data Resources, Inc., a third-party environmental database search firm. A complete copy of the database search report is included as Attachment 2. Stantec evaluated the information listed within the database relative to any potential impact to the Site, assessing the potential for impacts based in part on the physical setting. Stantec reviewed additional information on release locations through MADEP's Waste Site/Reportable Releases online lookup. As part of this process, inferences have been made regarding the likely groundwater flow direction at or near the Site. Groundwater flow direction is inferred to be southerly towards the harbor.

Based on historical topographic maps and Sanborn maps, Stantec observed that approximately 70% of the Site was originally part of the harbor that has been filled. Reports indicate the fill includes harbor dredging's, soil, and debris from the great Lynn fire of 1889 (NSCC-McGee Building Additions Phase II CSA and PSS, 2017. See Attachment 3). Prior borings conducted at the Site indicate sequences of urban fill and dredge materials approximately 20 feet in depth.

The Site was identified as a release site in the environmental database report. On July 2nd, 2017 MADEP received a report that emulsified oil and sheen was floating on the surface of Broad Sound, scattered throughout the harbor adjacent to the Site. It is unknown where the oil came from. The oil was contained with booms, cleaned up and the release was assigned NRC report # 1183169. This release was not identified on the land section of the Site so is likely to have limited impact to subsurface soils and/or groundwater. However, emulsified oil may have migrated through the rock rip rap border along the harbor resulting in residual impacts.

The following releases are located within close proximity to the Site are summarized below and depicted on Figure 2 Reportable Release Sites.

Address:	Distance/Direction from Site:	RTN(s)	Nature of Release	Regulatory Status
282R Lynnway Vacant Parcel	**1000 feet east**	**3-0026703**	**Contaminated fill and potential offsite contamination migration**	**B-2 RAO**
325-327 Broad Street Vacant Parcel	**800 feet northeast**	**3-0029333**	**Petroleum release to soil**	**A2 RAO**
44 Suffolk Street Former Commercial Warehouse	**500 feet north-northeast**	**3-0030376**	**No. 2 heating oil released into basement and soil`**	**A-2 RAO**
205 Market Street Goodyear Auto Service	**1000 feet northeast**	**3-0004515**	**Petroleum to soil**	**A-2 RAO**
300 Broad Street North Shore	**400 feet north**	**3-0032907**	**Petroleum to soil**	**Permanent solution**

Community College				
254 Lynnway Former Beacon Chevrolet	**500 feet west**	**3-0015391**	**Hydrocarbons to soil**	**Permanent solution with AUL**

Following a review of the environmental database report, it is Stantec's opinion that the listings in the environmental database report would not pose significant impact to the subject Site due to one or more of the following reasons; the location or distance from the Site, the regulatory status of the release or nature of contaminants released. However, because several of these listings are potentially upgradient of the Site, residual impacts from these sites may have migrated with groundwater to the Site. If groundwater dewatering/management is required, appropriate testing should be performed to evaluate necessary management options.

SUBSURFACE INVESTIGATION

Between September 18, 2018 and October 12, 2018 New England Boring advanced 21 soil borings using an Acker Soil Scout Rig. Continuous soil samples were collected from grade to the termination of the boring, which varied in depth from 31 feet below surface grade to 61 feet below surface grade. Soils were described as medium to fine sands underlain by silty clay. Within these soils are trace amounts of brick, wood with creosote odor, charred wood, glass, wood ash, and coal. Soil boring logs are provided as attachment 4.

Based upon the boring locations and anticipated locations of soil disturbance during construction activities soil samples were collected. Samples from HP-14a, HP-16a, HP-18a, and HP-26a were selected and submitted to Phoenix Environmental Laboratory for volatile organic compounds (VOCs) and volatile petroleum hydrocarbons (VPH). Composite samples from HP-18a, HP-14a/HP-13a, HP-26a/HP-27a, and HP-15a/HP-16a/HP-17a were selected and submitted to Phoenix Environmental Laboratories for ignitability, extrable petroleum hydrocarbons (EPH), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, herbicides, MCP 14-metals, total petroleum hydrocarbons, ph, reactivity, and conductivity.

The analytical results indicate that in the HP-14A sample there were concentrations of naphthalene, acetone, carbon disulfide, p-isopropyltoluene, sec-butylbenzene, and toluene above laboratory detectable limits. In the HP-26a sample there were concentrations of C9-C12 Aliphatic hydrocarbons, naphthalene, 1,2,4 trimethylbenzene, 1,3,5 trimethylbenzene, carbon disulfide, ethylbenzene, isopopylbenzene, n-butylbenzene, n-propylbenzene, p-isopropyltoluene, and sec-butylbenzene above laboratory detectable limits. In the HP-16A sample there were detections of carbon disulfide above laboratory detectable limits. All the detected concentrations above are below the most stringent RCS-1 reportable concentrations (see table 1).

The analytical results indicate that concentrations of metals, pesticides, polychlorinated biphenyls, and volatile organic compound groups had analytes in all the composite samples above laboratory detectable concentrations, however all the detected analytes were below the most stringent Mass DEP RCS-1 standard. Details on the specific compounds and their concentrations can be found in Table 1. Concentrations of polycyclic aromatic hydrocarbons and semi-volatile organic hydrocarbons had analytes that exceeded RCS-1 reportable concentrations which include: phenanthrene, benz(a)anthracene, benzo(a)pyrene, benzo(a)fluoranthene, dibenz(a,h)anthracene, dibenzofuran in samples HP-18a, HP-14a/HP-13a, and HP-15a/HP-16a/HP-17a. additionally HP-15a/HP-16a/HP-17a

had concentrations of 2-methynaphthalene, acenaphthene, naphthalene, acenaphthylene, and indeno (1,2,3-cd) pyrene above RCS-1 reportable concentrations.

Although concentrations of polycyclic aromatic hydrocarbon and semi-volvatile organic compound analytes exceeded the applicable reportable concentrations, the site is exempt from reporting these exceedances due to the presence of historical fill as defined by the Historical Fill/ Anthropogenic Background draft technical update. As stated in the environmental database review section, Stantec observed approximately 70% of the site was built up with fill based on historical topographic and Sanborn maps. Prior reports indicate components of the fill used were from the Great Lynn Fire of 1889. The presence of fill was confirmed by the brick, glass, coal, wood ash, and burnt wood observed during the subsurface investigation.

CONCLUSIONS AND RECOMMENDATIONS

The Site is listed in the environmental database report due to reports of emulsified oil present on the water on Broad Sound. Although MADEP did not require any further action, the potential exists that emulsified oils may have accumulated on soils present behind the rip rap. If oily soils are encountered behind the rip rap, appropriate management of these materials will be required as referenced below.

As referenced above, approximately 70% of the Site was historically part of the harbor that was filled. with harbor dredging's, soil, and debris from the great Lynn fire of 1889. Areas of the Site with observed coal and coal ash are exempt from MADEP notification but will require appropriate soil handling and management as referenced below. In accordance with the MCP, detected compounds above applicable MCP RCS-1 Reportable Concentrations which are attributable to the presence of coal/coal ash at the Site are exempt from reporting requirements to the MADEP.

Because of the potential for on Site and off-site residual impacts, soils or groundwater associated with the proposed construction will require a Soil/Groundwater Management Plan and implementation of a Health and Safety Plan. Soils generated for off-Site disposal during construction activities will need to be characterized and properly disposed off-Site. Soil data is available, which can be utilized to evaluate disposal facility options and estimated disposal costs.

ATTACHMENTS:

-Figure 1: Site Locus Map and Reportable Releases
-Figure 2: Site Map and Boring Locations
-Table 1: Soil analytical data
-Attachment 1: Site Photograph Log
-Attachment 2: NSCC-McGee Building Addition Phase II CSA and PSS, Weston and Sampson, 2017.
-Attachment 3: Environmental Data Resources Environmental Database Report
-Attachment 4: Soil Boring Logs
-Attachment 5: Soil Laboratory Results
-Attachment 6: City Directory
-Attachment 7: Historical Topographic Maps
-Attachment 8: Sanborn Insurance Maps
-Attachemnt 9: Historic Aerial Photos

Lynn Heritage State Park Hazmat Memo

FIGURES

November 1, 2018

Figure 1 Site Locus Map and Reportable Releases

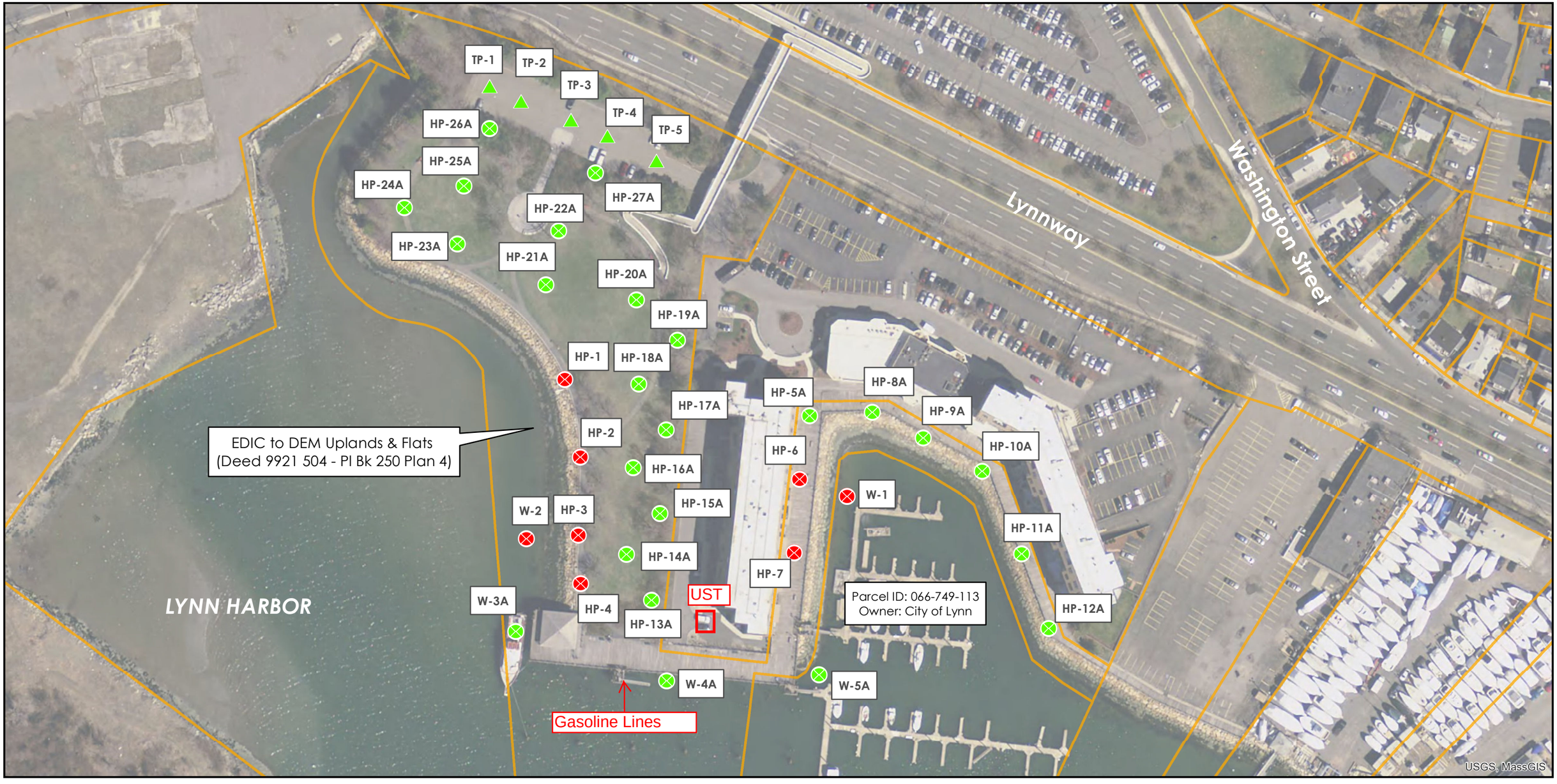
3-002237
3-0030376
3-0029333
3-0004515
3-003290
3-0032907
3-0034524
Target Property
3-0015391
3-0026703
North Shore Community College
Eastern Bank
Carroll Parkway
Seaport Landing Marina
Lynn Yacht Club
Volunteer Yacht Club
U-Haul Moving & Storage at Lynnway
Market St
Broad St
Lynnway
Liberty Square
Suffolk St
Suffolk Ct
Sagamore St
Newhall St
Hutchin Wharf
Amity St
Washington St
Pleasant St
Google
Imagery ©2018 Google, Map data ©2018 Google
United States

Lynn Heritage State Park Hazmat Memo

FIGURES

November 1, 2018

Figure 2 Site Map and Boring Locations



Geotechnical Exploratory Borings & Test Pits
Lynn Heritage State Park

Lynn Waterfront Master Plan
08/02/2018

Legend

- Proposed 2018 Borings
- Proposed 2018 Test Pits
- 2017 Borings
- Level 3 Assessors' Tax Parcels

Map Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs. 2013 Orthophotography.

Scale: 0 250 500 Feet

N

Lynn Heritage State Park Hazmat Memo

FIGURES

November 1, 2018

Table 1 Site Soil Analysis Summary

Table 1
Soil Analysis Summary
Lynn Heritage State Park

	Sample ID	HP-18A		HP-14A		HP-14A/13A		HP-26A		HP-26A/27A		HP-16A		HP-15A/16A/17A		HP-21A		DEP Reportable Category
	Date collected	10/12/2018		10/12/2018		10/12/2018		10/12/2018		10/12/2018		10/12/2018		10/12/2018		10/12/2018		
		Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	RCS-1 Standards
Miscellaneous/Inorganics	**Units**																	
Conductivity - Soil Matrix	mg/kg	2.97	0.5			7.19	0.5			1.35	0.005			2.83	0.5	1.62	0.005	
Percent Solid	mg/kg	0.075				0.059				0.08				0.05		0.082		
pH at 25C - Soil	mg/kg	0.00697	0.001			0.00685	0.001			0.00775	0.001			0.00708	0.001	0.00716	0.001	
Reactivity Sulfide	mg/kg	< 0.02	0.02			< 0.02	0.02			< 0.02	0.02			< 0.02	0.02	0.066	0.02	
Metals Total																		
Arsenic	mg/kg	0.00926	0.00091			0.0183	0.0011			0.0115	0.00082			0.0519	0.0013	0.015	0.00086	20
Barium	mg/kg	0.218	0.00046			0.0638	0.00056			0.0653	0.00041			0.32	0.00065	0.0548	0.00043	1000
Beryllium	mg/kg	0.0006	0.00037			0.00062	0.00045			0.0006	0.00033			< 0.00052	0.00052	0.00049	0.00034	90
Cadmium	mg/kg	0.00107	0.00046			< 0.00056	0.00056			0.00072	0.00041			0.00218	0.00065	0.00092	0.00043	70
Chromium	mg/kg	0.214	0.0046			0.042	0.00056			0.0308	0.00041			0.0518	0.00065	0.0873	0.00043	100
Lead	mg/kg	0.613	0.0046			0.141	0.00056			0.209	0.0041			5.15	0.065	0.122	0.00043	200
Mercury	mg/kg	0.00054	0.00003			0.00027	0.00004			0.00012	0.00003			0.00048	0.00005	0.00013	0.00003	20
Nickel	mg/kg	0.0265	0.00046			0.0251	0.00056			0.0242	0.00041			0.0247	0.00065	0.0213	0.00043	600
Vanadium	mg/kg	0.0466	0.00046			0.0284	0.00056			0.0362	0.00041			0.0434	0.00065	0.0298	0.00043	400
Zinc	mg/kg	0.344	0.0091			0.113	0.0011			0.151	0.0008			0.832	0.013	0.1	0.0009	1000
EPH Diesel PAH Target Analytes - MA EPH 5/2004																		
2-Methylnaphthalene	mg/kg	0.47	0.3			0.48	0.38			< 0.29	0.29			4.5	0.46	< 0.28	0.28	0.7
Acenaphthene	mg/kg	1.7	0.3			1.6	0.38			< 0.29	0.29			9.1	0.46	< 0.28	0.28	4
Naphthalene	mg/kg	0.7	0.3			0.75	0.38			< 0.29	0.29			6.5	0.46	< 0.28	0.28	4
Phenanthrene	mg/kg	32	1.5			19	1.9			0.36	0.29			95	4.6	0.75	0.28	10
EPH Other PAH Target Analytes - MA EPH 5/2004																		
Acenaphthylene	mg/kg	0.86	0.3			0.6	0.38			< 0.29	0.29			2.7	0.46	< 0.28	0.28	1
Anthracene	mg/kg	6	0.3			5	0.38			< 0.29	0.29			22	4.6	< 0.28	0.28	1000
Benz(a)anthracene	mg/kg	17	1.5			16	1.9			0.3	0.29			41	4.6	0.45	0.28	7
Benzo(a)pyrene	mg/kg	13	1.5			12	1.9			< 0.29	0.29			32	4.6	0.41	0.28	2
Benzo(b)fluoranthene	mg/kg	12	1.5			11	1.9			< 0.29	0.29			27	4.6	0.4	0.28	7
Benzo(ghi)perylene	mg/kg	5.8	0.3			5.7	0.38			< 0.29	0.29			13	4.6	< 0.28	0.28	1000
Benzo(k)fluoranthene	mg/kg	12	1.5			9.1	0.38			< 0.29	0.29			25	4.6	0.35	0.28	70
Chrysene	mg/kg	18	1.5			15	1.9			0.3	0.29			41	4.6	0.49	0.28	70
Dibenz(a,h)anthracene	mg/kg	1.6	0.3			1.8	0.38			< 0.29	0.29			4.1	0.46	< 0.28	0.28	0.7
Fluoranthene	mg/kg	43	1.5			34	1.9			0.63	0.29			97	4.6	0.97	0.28	1000
Fluorene	mg/kg	2.5	0.3			2.1	0.38			< 0.29	0.29			12	0.46	< 0.28	0.28	1000
Indeno(1,2,3-cd)pyrene	mg/kg	7	0.3			6.6	0.38			< 0.29	0.29			15	4.6	< 0.28	0.28	7
Pyrene	mg/kg	38	1.5			31	1.9			0.61	0.29			89	4.6	0.95	0.28	1000
MA EPH Aliphatic/Aromatic Ranges - MA EPH 5/2004																		
C11-C22 Aromatic Hydrocarbons 1,2*	mg/kg	0.07	0.0044			0.21	0.0055			0.019	0.0041			0.57	0.0066	0.0087	0.004	
Total TPH 1,2*	mg/kg	0.07	0.0044			0.21	0.0055			0.019	0.0041			0.58	0.0066	0.0087	0.004	
MA Volatile Petroleum Hydrocarbons (VPH) - MA VPH 5/2004																		
C9-C12 Aliphatic Hydrocarbons *1,3	mg/kg	< 0.0085	0.0085	< 0.0075	0.0075			0.0072	0.0064			< 0.0074	0.0074					
Naphthalene	mg/kg	< 0.00043	0.00043	0.00041	0.00037			0.00044	0.00032			< 0.00037	0.00037					4
Unadjusted C9-C12 Aliphatics (*1)	mg/kg	< 0.0085	0.0085	< 0.0075	0.0075			0.0096	0.0064			< 0.0074	0.0074					
Oxygenates & Dioxane - SW8260C (OXY)																		
1,4-Dioxane	mg/kg	< 0.13	0.13	< 0.14	0.14			< 0.12	0.12			< 0.1	0.1					0.02

Result Detected

RL Exceeds Criteria

Result Exceeds Criteria

Notes:

< indicates concentration below detectable limits

Only detected compounds shown

Table 1
Soil Analysis Summary
Lynn Heritage State Park

	Sample ID	HP-18A		HP-14A		HP-14A/13A		HP-26A		HP-26A/27A		HP-16A		HP-15A/16A/17A		HP-21A		DEP Reportable Category
	Date collected	10/12/2018		10/12/2018		10/12/2018		10/12/2018		10/12/2018		10/12/2018		10/12/2018		10/12/2018		
		Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	Result	RL	RCS-1 Standards
Pesticides - SW8081B																		
4,4' -DDD	mg/kg	0.036	0.0088			0.014	0.011			0.036	0.0081			< 0.13	0.13	< 0.008	0.008	8
4,4' -DDE	mg/kg	0.012	0.0088			< 0.011	0.011			0.012	0.0081			< 0.13	0.13	< 0.008	0.008	6
4,4' -DDT	mg/kg	0.0091	0.0088			0.014	0.011			< 0.0081	0.0081			< 0.13	0.13	< 0.008	0.008	6
Dieldrin	mg/kg	< 0.0044	0.0044			0.02	0.0056			0.0057	0.0041			< 0.066	0.066	< 0.004	0.004	0.08
Endrin aldehyde	mg/kg	< 0.0088	0.0088			< 0.011	0.011			< 0.0081	0.0081			0.81	0.13	< 0.008	0.008	10
g-BHC	mg/kg	< 0.0018	0.0018			< 0.0022	0.0022			< 0.0016	0.0016			< 0.026	0.026	< 0.0016	0.0016	0.003
Polychlorinated Biphenyls - SW8082A																		
PCB-1254	mg/kg	0.17	0.088			< 0.11	0.11			0.13	0.081			0.46	0.13	< 0.08	0.08	1
Semivolatiles - SW8270D																		
2-Methylnaphthalene	mg/kg	0.47	0.3			0.48	0.38			< 0.29	0.29			4.5	0.46	< 0.28	0.28	0.7
Acenaphthene	mg/kg	1.7	0.3			1.6	0.38			< 0.29	0.29			9.1	0.46	< 0.28	0.28	4
Acenaphthylene	mg/kg	0.86	0.3			0.6	0.38			< 0.29	0.29			2.7	0.46	< 0.28	0.28	1
Anthracene	mg/kg	6	0.3			5	0.38			< 0.29	0.29			22	4.6	< 0.28	0.28	1000
Benz(a)anthracene	mg/kg	17	1.5			16	1.9			0.3	0.29			41	4.6	0.45	0.28	7
Benzo(a)pyrene	mg/kg	13	1.5			12	1.9			< 0.29	0.29			32	4.6	0.41	0.28	2
Benzo(b)fluoranthene	mg/kg	12	1.5			11	1.9			< 0.29	0.29			27	4.6	0.4	0.28	7
Benzo(ghi)perylene	mg/kg	5.8	0.3			5.7	0.38			< 0.29	0.29			13	4.6	< 0.28	0.28	1000
Benzo(k)fluoranthene	mg/kg	12	1.5			9.1	0.38			< 0.29	0.29			25	4.6	0.35	0.28	70
Bis(2-ethylhexyl)phthalate	mg/kg	< 0.3	0.3			3.1	0.38			< 0.29	0.29			< 0.46	0.46	< 0.28	0.28	90
Carbazole	mg/kg	1.6	0.44			2	0.55			< 0.42	0.42			8.9	0.65	< 0.4	0.4	
Chrysene	mg/kg	18	1.5			15	1.9			0.3	0.29			41	4.6	0.49	0.28	70
Dibenz(a,h)anthracene	mg/kg	1.6	0.3			1.8	0.38			< 0.29	0.29			4.1	0.46	< 0.28	0.28	0.7
Dibenzofuran	mg/kg	1.4	0.3			1.2	0.38			< 0.29	0.29			7.6	0.46	< 0.28	0.28	100
Fluoranthene	mg/kg	43	1.5			34	1.9			0.63	0.29			97	4.6	0.97	0.28	1000
Fluorene	mg/kg	2.5	0.3			2.1	0.38			< 0.29	0.29			12	0.46	< 0.28	0.28	1000
Indeno(1,2,3-cd)pyrene	mg/kg	7	0.3			6.6	0.38			< 0.29	0.29			15	4.6	< 0.28	0.28	7
Naphthalene	mg/kg	0.7	0.3			0.75	0.38			< 0.29	0.29			6.5	0.46	< 0.28	0.28	4
Phenanthrene	mg/kg	32	1.5			19	1.9			0.36	0.29			95	4.6	0.75	0.28	10
Pyrene	mg/kg	38	1.5			31	1.9			0.61	0.29			89	4.6	0.95	0.28	1000
TPH by GC (Extractable Products) - SW8015D DRO																		
Unidentified	mg/kg	< 0.33	0.33			< 0.082	0.082			0.14	0.062			6.3	0.49	< 0.061	0.061	
Volatiles - SW8260C																		
1,2,4-Trimethylbenzene	mg/kg	< 0.0067	0.0067	< 0.0068	0.0068			0.2	0.0062			< 0.0051	0.0051					1000
1,3,5-Trimethylbenzene	mg/kg	< 0.0067	0.0067	< 0.0068	0.0068			0.06	0.0062			< 0.0051	0.0051					10
Acetone	mg/kg	< 0.34	0.34	0.51	0.48			< 0.31	0.31			< 0.26	0.26					6
Carbon Disulfide	mg/kg	< 0.0067	0.0067	0.011	0.0068			0.016	0.0062			0.0058	0.0051					100
Ethylbenzene	mg/kg	< 0.0067	0.0067	< 0.0068	0.0068			0.0067	0.0062			< 0.0051	0.0051					40
Isopropylbenzene	mg/kg	< 0.0067	0.0067	< 0.0068	0.0068			0.0082	0.0062			< 0.0051	0.0051					1000
m&p-Xylene	mg/kg	< 0.0067	0.0067	< 0.0068	0.0068			0.023	0.0062			< 0.0051	0.0051					
n-Butylbenzene	mg/kg	< 0.0067	0.0067	< 0.0068	0.0068			0.017	0.0062			< 0.0051	0.0051					
n-Propylbenzene	mg/kg	< 0.0067	0.0067	< 0.0068	0.0068			0.019	0.0062			< 0.0051	0.0051					100
Naphthalene	mg/kg	< 0.0067	0.0067	0.14	0.12			0.054	0.0062			< 0.0051	0.0051					4
o-Xylene	mg/kg	< 0.0067	0.0067	< 0.0068	0.0068			0.026	0.0062			< 0.0051	0.0051					500
p-Isopropyltoluene	mg/kg	< 0.0067	0.0067	0.13	0.12			0.053	0.0062			< 0.0051	0.0051					100
sec-Butylbenzene	mg/kg	< 0.0067	0.0067	0.044	0.0068			0.05	0.0062			< 0.0051	0.0051					
Toluene	mg/kg	< 0.0067	0.0067	0.0089	0.0068			< 0.0062	0.0062			< 0.0051	0.0051					30
Total Xylenes	mg/kg	< 0.0067	0.0067	< 0.0068	0.0068			0.049	0.0062			< 0.0051	0.0051					100

Result Detected

RL Exceeds Criteria

Result Exceeds Criteria

Notes:

< indicates concentration below detectable limits

Only detected compounds shown

ATTACHMENT 1

PHOTOGRAPHS OF THE PROPERTY AND VICINITY

Looking southeast at the park from the parking lot

Looking from the western side of the park northeast at the parking lot

Lynn Heritage State Park
Lynn, MA

Inspection Date: 8/23/18

The western side of the park with the gazebo and boardwalk in the distance

The gazebo in the park

Mechanic Street
Bellingham, MA

Inspection Date: 8/23/18

The vent and fill pipes along the boardwalk. Behind them is the concrete pad above the UST

The gas lines coming off the dock.

Lynn Heritage State Park
Lynn, MA

Inspection Date: 8/23/18

The boardwalk east of the park

A monitoring well installed in the boardwalk

Lynn Heritage State Park
Lynn, MA

Inspection Date: 8/23/18

The eastern end of the boardwalk

Lynn Heritage State Park
Lynn, MA

Inspection Date: 8/23/18

ATTACHMENT 2

NSCC-McGee Building Addition Phase II
CSA and PSS, Weston and Sampson, 2017

Weston & Sampson SM

westonandsampson.com

5 Centennial Drive
Peabody, MA 01960 (HQ)
tel: 978.532.1900

REPORT

June 2017

NSCC – McGee Building Addition

300 BROAD STREET
LYNN, MASSACHUSETTS 01901

Phase II CSA and PSS

Division of Capital Asset Management and Maintenance

Photo: https://www.flickr.com/photos/ethomsen/7841893264

TABLE OF CONTENTS

Page

EXECUTIVE SUMMARY ES-1

TABLE OF CONTENTS i

LIST OF FIGURES ii

LIST OF TABLES iii

LIST OF APPENDICES iv

1.0 INTRODUCTION 1-2
1.1 General 1-2
1.2 Objective and Phase II Scope of Work 1-2

2.0 GENERAL DISPOSAL SITE INFORMATION 2-1
2.1 Site Location and Description 2-1
2.2 Land Use of Surrounding Area 2-1
2.3 Natural Resources Areas 2-1
2.4 MCP Soil and Groundwater Classification 2-2
2.4.1 Soil 2-2
2.4.2 Groundwater 2-2

3.0 DISPOSAL SITE HISTORY, DISCOVERY, ABATEMENT, & INVESTIGATION 3-1
3.1 Site History 3-1
3.2 Release Discovery & Abatement 3-1
3.2.1 Release Discovery 3-1
3.2.2 Release Notification 3-2
3.2.3 Release Abatement Measure 3-2
3.3 Previous Investigations 3-2
3.3.1 Soil Stockpiling, Characterization, and Disposal 3-2
3.3.2 Post-RAM Subsurface Investigations 3-3
3.4 Current Phase II Investigation 3-3
3.4.1 Soil Boring/Monitoring Well Installation 3-3
3.4.2 Groundwater Monitoring 3-3
3.4.3 Soil Gas Monitoring 3-4

4.0 SITE HYDROGEOLOGIC CHARACTERIZATION 4-1
4.1 Surficial and Bedrock Geology 4-1
4.2 Hydrogeology 4-1
4.2.1 General 4-1

5.0 NATURE AND EXTENT OF IMPACTS 5-1
5.1 Soil Field Screening 5-1
5.2 Soil Analytical Results 5-1
5.3 Groundwater Analytical Results 5-1

5.4 Nature and Extent of Oil and/or Hazardous Materials Summary 5-1
5.4.1 Soil 5-1
5.4.2 Identification of Background Conditions 5-1
5.4.3 Groundwater 5-2
5.4.4 Surface Water / Sediment 5-3
5.4.5 Soil Gas / Indoor Air 5-3

6.0 CONCEPTUAL SITE MODEL 6-4

7.0 EXPOSURE ASSESSMENT 7-1
7.1 Receptor Information 7-1
7.2 Fate and Transport of Oil and Hazardous Materials 7-1
7.3 Migration Pathways and Exposure Potential 7-1
7.3.1 Soil 7-1
7.3.2 Groundwater 7-2
7.3.3 Surface Water / Sediment 7-2
7.3.4 Soil Gas / Indoor Air 7-2
7.3.5 Underground Utilities 7-2

8.0 METHOD 1 RISK CHARACTERIZATION 8-1
8.1 Introduction 8-1
8.2 Exposure Scenarios 8-1
8.3 Exposure Points 8-1
8.4 Exposure Point Concentrations 8-1
8.4.1 Soil 8-1
8.4.2 Groundwater 8-2
8.5 Imminent Hazard Evaluation 8-2
8.6 Risk of Harm to Safety and Public Welfare 8-2
8.7 Risk Characterization Conclusions 8-2

9.0 DATA USABILITY ASSESSMENT 9-1
9.1 Representativeness Evaluation 9-1
9.1.1 Conceptual Site Model 9-1
9.1.2 Use of Field Screening Data 9-1
9.1.3 Sampling Rationale 9-1
9.1.4 Number, Spatial Distribution, and Handling of Samples 9-1
9.1.5 Temporal Distribution of Samples 9-1
9.1.6 Completeness 9-2
9.1.7 Inconsistency and Uncertainty 9-2
9.1.8 Information Considered Unrepresentative 9-2
9.2 Data Usability Assessment 9-2
9.2.1 PARCCS Evaluation 9-2
9.2.2 Precision 9-3
9.2.3 Accuracy 9-3
9.2.4 Representativeness 9-3
9.2.5 Completeness 9-3
9.2.6 Comparability 9-3
9.2.7 Sensitivity 9-3

10.0 PHASE II CSA CONCLUSIONS 10-1

11.0 PHASE II CSA REPORT REQUIREMENTS 11-1

12.0 PHASE II COMPLETION STATEMENT 12-1

13.0 PERMANENT SOLUTION STATEMENT 13-1
13.1 Permanent Solution Statement 13-1

14.0 LIMITATIONS 14-1

LIST OF FIGURES

Figure 1 ..... Locus Map

Figure 2 ..... Site Plan

Figure 3 ..... Area Receptors Map

Figure 4 ..... Soil Boring and Monitoring Well Locations

Figure 5 ..... Groundwater Contour Map

LIST OF TABLES

Table 1 .....EBI 2015 Investigation – Soil Data

Table 2 .....EBI 2015 Investigation Comparison To Background Values

Table 3 .....Soil Analytical Results - Total Petroleum Hydrocarbons

Table 4 .....Groundwater Elevation

Table 5 ..... Soil Analytical Results

Table 6 .....Groundwater Analytical Results

Table 7 .....Summary of MCP Risk Assessment

LIST OF APPENDICES

Appendix A..... Public Notification Letters

Appendix B .....Soil Boring Logs

Appendix C ..... Monitoring Well Completion Logs

Appendix D ..... Groundwater Sampling Purge Reports

Appendix E..... Laboratory Analytical Results

Appendix F.....REDUA

EXECUTIVE SUMMARY

Weston & Sampson Engineers, Inc. (Weston & Sampson) has prepared this Phase II Comprehensive Site Assessment (CSA) Report and Permanent Solution Statement (PSS) for Release Tracking Number (RTN) 3-32907. This RTN is associated with the presence of petroleum hydrocarbons in soil and groundwater at the North Shore Community College Lynn Campus (the Site). This Phase II CSA Report and PSS has been prepared in accordance with the Massachusetts Contingency Plan (MCP), 310 CMR 40.0835 and 40.1056 for Massachusetts Division of Capital Asset Management and Maintenance (DCAMM), on behalf of the Commonwealth of Massachusetts, the owner of the Site.

The Site is located at the North Shore Community College campus at 300 Broad Street in Lynn, Massachusetts (Figure 1). The Site consists of the McGee Building and its addition, which serves various functions for operation of the college. Downtown Lynn business and residential developments exist within a 1 mile radius (Figures 2 and 3).

In January 2015, soil impacted by petroleum hydrocarbons was discovered during the excavation of test pits prior to construction of the addition to the McGee Building. In March 2015, nine soil borings were advanced to assess the lateral extent of impacts near TP-7 and in June 2015, a Release Abatement Measure (RAM) was implemented for excavation and disposal of approximately 150 cubic yards of petroleum impacted historic fill. Following completion of RAM activities, a Phase I Initial Site Investigation was conducted, which included soil sampling and the installation and monitoring of four groundwater monitoring wells (MW-1 through MW-4). Exceedances of the Method 1 GW-2 cleanup standard for C9-C18 aliphatic extractable petroleum hydrocarbons (EPH) and the Method 1 GW-3 cleanup standard for C11-C22 aromatic EPH were detected at one location (MW-3). These monitoring wells were appropriately abandoned during construction of the McGee Building addition.

As part of the Phase II CSA, six soil borings (each completed as a groundwater monitoring well) were advanced in December 2016 to evaluate the spatial extent and seasonal effects of petroleum impacts on groundwater and to assess the vapor intrusion pathway with respect to the original McGee Building and the new addition. Monitoring well MW-103 was installed to replace well MW-3, where exceedances were detected in 2015. One soil exceedance of Method 1 S-1 cleanup standards (C11 to C22 aromatic fractions) was identified at one location (MW-105, below 10 ft bgs). No groundwater exceedances were identified.

Extractable petroleum hydrocarbons (EPH) are the Site COCs. The primary source of EPH (approximately 150 cubic yards of localized historic fill) was removed from the Site during the Site RAM in 2015. Fill material is found throughout the Site to a maximum depth of approximately 15 ft bgs. Groundwater is a potential migration pathway, however analysis of groundwater samples in January 2017 did not identify concentrations of EPH above GW-2 or GW-3 standards. Based on the absence of groundwater impacts in 2017, the potential impact to indoor air at the Site buildings is not considered a potential migration pathway.

Weston & Sampson performed a Method 1 Risk Characterization to establish whether a level of No Significant Risk (NSR) for human health exists or can be achieved at the Site. The Method 1 Risk Characterization considered both current and reasonably foreseeable future Site activities and uses. Soil was conservatively categorized as S-1 and groundwater was classified as GW-2 and GW-3.

Based on the results of the risk assessment, the Site was found to pose no unacceptable human health risks or risk to the environment, public welfare, or safety and the Site meets a level of NSR.

1.0 INTRODUCTION

1.1 General

Weston & Sampson has prepared this Phase II Comprehensive Site Assessment (CSA) Report and Permanent Solution Statement (PSS) for Release Tracking Number (RTN) 3-32907 on behalf of the Massachusetts Division of Capital Asset Management and Maintenance (DCAMM) at the North Shore Community College (NSCC) campus in Lynn, Massachusetts (the Site).

RTN 3-32907 is associated with the detection of petroleum hydrocarbons in soil and groundwater above the applicable Massachusetts Department of Environmental Protection (MassDEP) Method 1 cleanup standards. This Phase II CSA Report and PSS has been prepared in accordance with the Massachusetts Contingency Plan (MCP) 310 CMR 40.0835 and 40.1056. The applicable Bureau of Waste Site Cleanup (BWSC) forms have been submitted electronically and copies of public notification letters and legal notice are provided in **Appendix A**.

1.2 Objective and Phase II Scope of Work

This Phase II CSA Report and PSS includes data necessary to support opinions regarding the source, nature, extent, and fate of potential contaminant releases; the risk of harm posed by the disposal site to health, safety, public welfare, and the environment; and the need to conduct remedial actions. In addition, the Phase II CSA Report and PSS describes Response Actions completed to date, documents the nature and extent of contamination and includes a Method 1 Risk Characterization. The following required information for a Phase II CSA Report and PSS are provided below:

- Disposal Site Name, Location, and Locus Map
- Detailed Disposal Site Map
- Disposal Site History
- Site Hydrologic and Hydrogeologic Characteristics
- Environmental Fate and Transport of Oil and/or Hazardous Material
- Nature and Extent of Contamination
- Exposure Assessment
- Risk Characterization
- Representativeness Evaluation and Data Usability Assessment (REDUA)
- Conclusions

2.0 GENERAL DISPOSAL SITE INFORMATION

2.1 Site Location and Description

The Site is a 10.85-acre parcel located within the NSCC's Lynn Campus at 300 Broad Street in Lynn, Massachusetts. The building on the Site is the McGee building which is used for classrooms and administrative offices for the college. A new addition to the McGee Building was completed in 2016. The remainder of the parcel consists of grass, landscaped areas, paved walkways, and paved parking areas.

The approximate geographical coordinates for the Site are as follows:

UTM Coordinates:	N 4,702,827 m E 340,105 m
Latitude/Longitude:	42°27'40.6" N 70°56'41.1" W

See **Figure 1 – Locus Map** and **Figure 2 – Site Plan** for a depiction of the Site and vicinity.

2.2 Land Use of Surrounding Area

The Site is located south of Broad Street in the southeast portion of the City of Lynn; Route 1A forms the southern Site boundary. The abutting properties to the Site include the following:

- Residential properties and the Central Square-Lynn train station to the north;
- Residential properties and small businesses to the east;
- The Lynnway (Route 1A) and the Seaport Landing Marina to the south; and
- Market Street and Carroll Parkway Park to the west.

No schools or institutions, as defined in the MCP, were identified onsite or within 500 feet of the Site.

2.3 Natural Resources Areas

Review of Massachusetts Geographic Information Systems (MassGIS) data shown in **Figure 3 - Area Receptors Map**, provides the following information regarding environmental receptors:

- The Site is not located within a medium or high yield aquifer, interim wellhead protection area (IWPA), or MassDEP approved Zone II.
- The Site is not located within an Area of Critical Environmental Concern (ACEC).
- There are no Habitats of Species of Special Concern or Threatened or Endangered Species located within 500 feet of the Site.
- There are no wetlands or surface water bodies at the Site. The closest water body to the Site is Lynn Harbor, located approximately 500 feet to the southwest and Nahant Bay, located approximately 1,500 feet to the southeast.
- There are three areas designated as Protected Open Space within 500 feet of the Site, located to the south and west.

Additionally, there are no private drinking water wells listed within 500 feet of the Site according to the MassDEP's online SearchWell program.

2.4 MCP Soil and Groundwater Classification

The applicable MCP soil and groundwater classifications for the Site are identified below and were based on the criteria in the MCP at 310 CMR 40.0933 for soil, and 310 CMR 40.0932 for groundwater.

2.4.1 Soil

Three soil categories for use in risk characterization have been developed by MassDEP based on current and future exposure potential. Soils are classified as Category S-1, S-2, or S-3. Category S-1 applies to soil with the greatest exposure potential while Category S-3 applies to soil with the lowest exposure potential. Categorization is dependent upon the frequency and intensity of Site use by both children and adults, and the accessibility of the Site soil.

The following human exposure potential and receptor characteristics were evaluated to assess the appropriate soil category for the Site. The Site is not secure; therefore, access is unrestricted. Site soil is considered accessible in the landscaped (i.e., unpaved) areas of the Site. Frequency of use by adults is considered high; however frequency by children is considered low. Intensity of use is considered low by both adults and children; activities conducted at the Site are not expected to disturb soil and result in direct contact with the soil or inhalation of soil derived dust. Based on these characteristics of the Site, the current applicable soil category is S-2 for soils located 0 to 3 feet below ground surface (bgs) in unpaved areas, S-3 for soils located 0 to 3 feet bgs in paved areas, and S-3 for soils located greater than 3 feet bgs throughout the Site.

While categories S-2 and S-3 are appropriate for the Site, category S-1 cleanup standards (considered to be protective of the most sensitive receptors including residential use of the property) were used for possible future use as a conservative measure. If Site soil meets Method 1 S-1 cleanup standards, it may be concluded that a condition of no significant risk (NSR) exists for unrestricted use, and no further risk characterization or remedial response actions are required.

2.4.2 Groundwater

The groundwater categories for the Site were developed pursuant to the MCP, 310 CMR 40.0932. Based on potential exposures, the DEP has defined three categories of groundwater for risk characterization as follows:

- Groundwater category GW-1 applies to groundwater located within current or potential drinking water sources areas;
- Groundwater category GW-2 includes groundwater where the average annual depth to the water table is less than 15 feet bgs and where groundwater is located within 30 feet of an existing or planned building or structure that is or will be occupied; and
- Groundwater category GW-3 applies to all groundwater in Massachusetts due to its potential to discharge to surface water bodies.

As presented in Figure 3 - Area Receptors Map, the Site is not located within a current or potential drinking water source area as defined in the MCP (310 CMR 40.0006), a MassDEP-approved Zone II Area, a Water Supply Protection Area (WPA), or within 500 feet of a public or private drinking water well. As such, groundwater category GW-1 does not apply to the Site. Depth to groundwater at the Site is less than 15 feet bgs (i.e., generally ranges from approximately 5 to 10 feet bgs) and is located within 30 feet of an occupied building (i.e., McGee Building and addition); thus, the applicable groundwater categories for the Site are GW-2 and GW-3.

3.0 DISPOSAL SITE HISTORY, DISCOVERY, ABATEMENT, & INVESTIGATION

3.1 Site History

Information available from previous reports, historical mapping, and aerial photographs suggests that the Site was formerly a marsh within Lynn Harbor. Between 1829 and the mid-1900's the Site was filled with soil, harbor dredging material, and rubble from the "Great Lynn Fire of 1889." Historical uses of the Site include commercial businesses such as shoe factories, a steam laundry, a woodworking shop, a transformer manufacturer, a power house, and a lumber yard. A former firehouse and petroleum service station were also reportedly once located in the vicinity. Most, or all, of these businesses were destroyed in the "Great Lynn Fire of 1981" and subsequently the Site was re-graded and redeveloped as the NSCC Lynn Campus.

3.2 Release Discovery & Abatement

3.2.1 Release Discovery

On January 14 and 15, 2015, EBI Consulting of Burlington, Massachusetts oversaw the excavation of eight test pits at the Site (TP-1 through TP-8) to gather subsurface information in support of a campus expansion and renovation project. Test pit locations are shown on Figure 4. Historic fill material was identified throughout the Site and hydrocarbon odors were present in one test pit (TP-7). One soil sample from each test pit was submitted for laboratory analysis of Extractable Petroleum Hydrocarbons (EPH), Volatile Petroleum Hydrocarbons (VPH), Total Petroleum Hydrocarbons (TPH), metals (arsenic, cadmium, chromium, chromium +6, mercury, and lead), and polychlorinated biphenyls (PCBs). Analytical results indicated exceedances of Reportable Concentrations for petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs) and metals (lead). Analytical results for the EBI investigation are provided in Table 1. Exceedances of the Reportable Concentrations for EPH and VPH occurred only at test pit TP-7. Lead and PAH concentrations at the Site were attributed to the presence of historic fill material throughout the subsurface as the result of two separate filling episodes, one after the Great Lynn Fire of 1889 and one after the Great Lynn Fire of 1981. Lead and PAH concentrations were also generally within background concentrations for anthropogenic fill, as shown in Table 2.

Based on the limited exceedances for EPH and VPH at TP-7, DCAMM requested O'Reilly, Talbot & Okun (OTO) to implement a one-day Geoprobe® exploration program to evaluate the extent of petroleum-impacted soil in the vicinity of TP-7.

On March 20, 2015, OTO advanced nine soil borings in the vicinity of TP-7 (SB-1 through SB-9). Soil boring locations are shown on Figure 4. Soil borings were advanced to depths between 12 and 16 feet bgs. Up to eight feet of historic fill material was observed, and consisted of silt, sand and gravel with brick, concrete, glass, metal debris, ash, and trace asphalt. Soil was field screened for visual and olfactory indications of contamination (e.g. odor, sheen, or staining) as well as for total volatile organic compounds (TVOCs) using a photoionization detector (PID) and the jar headspace soil screening method. Field screening identified TVOCs in soil samples ranging from less than 0.1 ppmv to 790 ppmv (at boring SB-3). Elevated PID readings (above 3 ppmv) were noted at borings SB-1 through SB-4.

One soil sample was collected from each boring at 10-12 feet bgs, and one additional sample was collected at boring SB-1 at 12-14 feet bgs. Soil samples were submitted to Con-Test Analytical

Laboratory (Con-Test) in East Longmeadow, Massachusetts for analysis of Total Petroleum Hydrocarbons (TPH). Analytical results indicated an exceedance of S-1 soil standards at boring SB-1 (which is in close proximity to TP-7), but at no other locations. Analytical results for the OTO investigation are provided in **Table 3**.

3.2.2 Release Notification

On May 20, 2015, OTO, on behalf of DCAMM, notified MassDEP of the "120-day" notification condition associated with the petroleum impacted soil in TP-7. A Limited Removal Action (LRA) was initiated on-site on May 20, 2015 because it was anticipated that the volume of soil to be excavated would be less than 100 yards. However, as excavation progressed, the contractor advised that the total volume would likely exceed 100 yards. The 120-day release notification was submitted to MassDEP and the LRA was converted to a Release Abatement Measure (RAM) Plan, as described below.

3.2.3 Release Abatement Measure

A Release Abatement Measure (RAM) Plan was submitted on May 26, 2015 describing the planned soil excavation/disposal activities. In June 2015, RAM activities were implemented at the Site by Triumvirate Environmental for the proper excavation, management, transportation, and disposal of approximately 150 cubic yards of petroleum impacted historic fill in the vicinity of TP-7. This excavation included former boring locations SB-1 through SB-4, as well as SB-8 and SB-9.

Following excavation, confirmatory sampling was conducted for laboratory analysis at the limits of the excavation. Analytical results indicated that these samples contained concentrations less than S-1 cleanup standards, with the exception of benzo(a)pyrene (related to historic ash fill). Analytical results were provided in Table 2 in Appendix F in the Phase I ISI submitted to MassDEP in May 2016.

Test pit logs, soil boring logs, monitoring well logs, and associated analytical laboratory reports were provided in the Phase I ISI submitted to MassDEP in May 2016.

3.3 Previous Investigations

3.3.1 Soil Stockpiling, Characterization, and Disposal

Petroleum impacted soil excavated from the vicinity of TP-7 was stockpiled on 60-millimeter (mil) high density polyethylene (HDPE) liner and covered with 10 mil polyethylene liner at the end of each work day. Approximately 150 cubic yards of petroleum-impacted soil was excavated and stockpiled on site.

On May 20, 2015, Triumvirate collected a representative composite sample from the stockpiled impacted soil and submitted the sample to Alpha Analytical laboratory in Westborough, Massachusetts for analysis of: RCRA 8 metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver) and Toxicity Characteristic Leaching Procedure (TCLP) RCRA 8 metals. The disposal characterization results were provided in Appendix G of the Phase I ISI submitted to MassDEP in May 2016.

On June 1, 2015, the impacted soil was transported under a Bill-of-Lading to Aggregate Recycling Corporation in Elliot, Maine. Disposal documentation was included in Appendix F of the Phase I ISI submitted to MassDEP in May 2016.

3.3.2 Post-RAM Subsurface Investigations

On August 4, 2015, OTO observed the installation of four groundwater monitoring wells in the immediate vicinity of the RAM excavation, as shown on Figure 4.

On August 17, 2015, OTO conducted one groundwater monitoring event. Groundwater samples were analyzed for EPH and VPH with target analytes. One sample, at monitoring well MW-3 had exceedances of the GW-2 cleanup standard for C9-C18 aliphatic EPH and exceedances of the GW-3 cleanup standard for C11-C22 aromatic EPH. No exceedances were reported at the remaining wells. All four monitoring wells were removed during construction of the McGee Building addition.

3.4 Current Phase II Investigation

In December 2016, Phase II activities were completed at the Site to evaluate the extent and seasonal (i.e., temporal) effects of petroleum impacts on groundwater and to assess the potential vapor intrusion pathway with respect to the original McGee Building and the nearly completed addition. While a vapor barrier was installed beneath the new McGee building addition, no vapor barrier is present under the original McGee building. Phase II activities included the completion of six soil borings (each completed as a groundwater monitoring well), soil sampling, and one round of groundwater monitoring.

3.4.1 Soil Boring/Monitoring Well Installation

On December 22 and 23, 2016, six soil borings were completed at the Site with Geoprobe® direct-push drilling techniques to between 15 and 17 feet bgs. Boring locations are shown on Figure 4. Soil boring logs are included in Appendix B. Soil was field screened for visual and olfactory indications of contamination (e.g. odor, sheen, or staining) as well as for total volatile organic compounds (TVOCs) using a PID and the jar headspace soil screening method. One soil sample was collected from each boring at the depth with the highest PID reading and a second sample was collected at each boring at the water table interface. Soil samples were submitted under standard chain-of-custody procedures to Con-Test Analytical Laboratory in East Longmeadow, Massachusetts for analysis of EPH with MassDEP Method MADEP-EPH-04.

Each of the six soil borings was completed with a groundwater monitoring well (wells MW-101 through MW-106), screened across the groundwater interface, with bottom depths ranging from 15 to 17 feet bgs. Monitoring well locations are shown on Figure 4. Monitoring well completion logs are included in Appendix C. Wells were constructed in general accordance with the MassDEP Standard References for Monitoring Wells, WSC-310-91. Wells were constructed with Schedule 40 PVC, with a ten-foot section of 0.010" slotted well screen. Filter sand was placed in the annular space around the well screen to approximately two feet above the top of the well screen. At least one foot of bentonite slurry was placed above the filter sand to seal the well. Well cuttings were used to backfill the remaining annular space to within approximately one foot bgs. A standard monitoring well roadbox, secured in concrete, was installed to protect the wells. Each of the new wells was developed by purging at least three well volumes, which was discharged to the ground surface.

3.4.2 Groundwater Monitoring

On January 6, 2017, Weston & Sampson personnel conducted one round of groundwater monitoring. Groundwater samples were collected from monitoring wells MW-101 through MW-106 using standard low-flow procedures. Groundwater sample collection forms are included in Appendix D. Groundwater samples were submitted under standard chain-of-custody procedures to Con-Test Analytical

Laboratory in East Longmeadow, Massachusetts for analysis of EPH with MassDEP Method MADEP-EPH-04.

3.4.3 Soil Gas Monitoring

Based upon the results of the groundwater monitoring (analytical results are presented in Section 5.3), soil gas monitoring was determined to be unnecessary and was not performed as part of this scope of work.

4.0 SITE HYDROGEOLOGIC CHARACTERIZATION

4.1 Surficial and Bedrock Geology

In general, the following geologic units were encountered during the subsurface exploration programs in vertical stratigraphic succession:

Topsoil: Dark brown silts to fine to medium sands, ranging in thickness from 1 inch to 2 feet.

Historic Fill: Brown, fine to medium sands, with trace amounts of silt; some gravel, ranging in thickness from 8.5 to 15 feet. Fill contains varying amount of brick, concrete, glass, metals, ash and trace asphalt

Silts and Sands: Brown-gray to black, sandy silt, containing trace amounts of gravel, and black, fine to coarse sand with clay, and silty sands with gravel ranging from 2 to 17 feet bgs.

Peat: A peat layer, approximately 2 feet thick, was encountered at locations SB-1 through SB-9 between the brown-gray to black silts/sands and the gray to gray/blue silts and clays

Silt and Clay: Gray silt and clay and gray/blue clay, up 7 feet thick at one location (MW-101)

According to the Bedrock Geologic Map of Massachusetts prepared by the Department of Public Works Published by E-an Zen in 1983, the Site is underlain by the Lynn Volcanic Complex (Lower Devonian, Silurian, or Proterozoic), which includes rhyolite, agglomerate, and volcanic tuff. Bedrock was not encountered during soil boring activities.

4.2 Hydrogeology

4.2.1 General

Depth to groundwater measurements collected during the January 2017 groundwater monitoring event (between 5 and 10 feet bgs) were converted to groundwater elevations and are shown on **Figure 5**. Groundwater measurements are provided in **Table 4**. Groundwater flow is to the south/southwest in the southern portion of the Site and to the north in the northern portion of the Site.

The horizontal hydraulic gradient in the overburden towards the southwest ranges from approximately 0.02 to 0.03 feet per foot (ft/ft). This horizontal gradient is similar to that seen in 2015. The horizontal gradient towards the north, in the northern portion of the Site is approximately 0.01 ft/ft. These gradients are considered to be fairly shallow.

The seepage velocity (v_s) is the actual velocity of the water as it travels around individual particles of soil. The seepage velocity (v_s) is used to assess how fast a dissolved contaminant plume may travel. The estimated seepage velocity across the Site is calculated with the following relationship established by Darcy (1856):

$$v_s = \frac{Ki}{n_e}$$

where:

v_s = seepage velocity (ft/day)

i_{avg} = 0.024 ft/feet

$K_{(low)}$ = 0.01 ft/day

$K_{(high)}$ = 1 ft/day

n_e = 0.35 (effective porosity average from Fetter, 1994)

Using the high and low hydraulic conductivity values (1 ft/day and 0.01 ft/day) and the highest calculated hydraulic gradient (0.03 ft/ft) the estimated groundwater velocity across the Site was calculated to range from approximately 0.0009 to 0.09 feet/day, or up to 31 ft/year. This value is less than the 200 feet/year threshold for Substantial Release Migration (SRM) as defined in 310 CMR 40.0413(2).

5.0 NATURE AND EXTENT OF IMPACTS

As detailed in Section 3.0, Weston & Sampson performed additional Site investigation in December 2016 and January 2017 to supplement existing Site data and generate additional information for the overall Phase II CSA and PSS. The following discussion includes data from historical investigations performed at the Site (where appropriate) and summarizes the current nature and extent of contamination at the Site. Soil removed as part of the RAM in 2015 is not included in this discussion.

5.1 Soil Field Screening

Three of the initial nine boring locations were located in areas not removed during excavation activities. Field screening at these locations (SB-5, SB-6, and SB-7) did not identify visual or olfactory evidence of contamination or elevated PID readings (above 0.6 ppmv). During soil boring activities associated with the installation of the six new wells, elevated PID readings were identified at one location, MW-103. PID readings at this location ranged from 0.2 ppmv in the upper five feet, to 75 ppmv between 5 and 10 feet bgs, and 50 ppmv between 10 and 15 feet bgs. No other elevated PID readings (greater than 4 ppmv) were identified. A slight petroleum odor was noted between 10 and 15 ft bgs at MW-105, though PID readings were not elevated.

5.2 Soil Analytical Results

As shown in **Table 3**, analytical results for borings SB-5, SB-6, and SB-7 did not identify TPH concentrations in excess of the S-1 cleanup standard (1,000 mg/kg). Analytical results for the six borings completed in 2016 (MW-101 through MW-106) identified only one exceedance of the S-1 cleanup standards, concentrations of C11-C22 aromatic EPH at MW-105 (between 10 and 15 ft bgs). Soil analytical results for the six borings completed in 2016 are provided in **Table 5**. Laboratory packages are provided in **Appendix E**.

5.3 Groundwater Analytical Results

In August 2015, shortly after the excavation of the source material (petroleum impacted historic fill near TP-7), groundwater at one well location (MW-3) had exceedances of C9-C18 aliphatic and C11-C22 aromatic EPH cleanup standards. Wells MW-1 through MW-4 were removed during construction of the McGee Building addition. In January 2017, EPH concentrations at the six new Site wells (including the replacement well for MW-3, MW-103) were either non-detect, or were below the GW-2 and GW-3 standards. Groundwater analytical results are provided in **Table 6**. Laboratory packages are provided in **Appendix E**.

5.4 Nature and Extent of Oil and/or Hazardous Materials Summary

5.4.1 Soil

One soil exceedance has been identified remaining at the Site, an exceedance of the S-1 standard for C11-C22 aromatic EPH at location MW-105 (10 ft bgs). Soil contamination near the former test pit TP-7 was removed as part of the RAM in 2015.

5.4.2 Identification of Background Conditions

Background conditions, defined in the MCP (310 CMR 40.0006), are those levels of oil and hazardous material that would exist in the absence of the disposal site of concern, including both Natural Background and Anthropogenic Background.

As assessed from previous reports, historical mapping, and aerial photographs, the Site was formerly a marsh within Lynn Harbor. Between 1829 and the mid-1900's the Site was filled with soil, harbor dredging material, and rubble from the "Great Lynn Fire of 1889." A second fire, the "Great Fire of 1981" also completely destroyed all buildings that were on the property in 1981. During Site exploration and RAM activities evidence of anthropogenic fill including brick, concrete, glass, metal debris, ash, asphalt, etc.) was observed in soil across the subsurface of Site to depths of 15 feet. Therefore, the PAHs and lead that were detected in Site soil are due to anthropogenic fill that is present on the property.

Maximum concentrations of PAHs and lead detected in Site soil were compared to 90th percentile background concentrations in "soil associated with fill material", as shown in Table 2. The maximum concentrations of the majority of PAHs were less than 90th percentile background concentrations. While concentrations of chrysene, fluoranthene, fluorene, and phenanthrene were greater than the 90th percentile background concentrations, a review of the data used to calculate the 90th percentile background concentration indicates that the maximum concentrations of chrysene (8.3 mg/kg), fluoranthene (19 mg/kg), fluorene (4.9 mg/kg), and phenanthrene (25 mg/kg) detected at the Site are within the 95th percentile background concentrations and are therefore well within the typical range of background concentrations in anthropogenic fill.

Similarly, lead was detected in Site soil at concentrations ranging from 57 and 3,300 mg/kg. Only the maximum concentration of lead was greater than the 90th percentile background concentration in anthropogenic fill. While the highest detected concentration, 3,300 mg/kg, is greater than the 90th percentile background concentration, this concentration is well within the lead concentrations typically observed in pre-1983 fill material.

According to the Draft Historic Fill Technical Update (MassDEP, 2016), the fingerprint of pre-1983 fill that may have originated in whole or in part from lead-based paints that were either used on-site or at the site from where the soil originated includes:

- highly variable lead concentrations throughout the site;
- higher concentrations near buildings and in shallow soils (presuming undisturbed)
- an average lead concentration of 500 to 1000 mg/kg; and
- a few lead values as high as 5000 to 10,000 mg/kg

Because the Site was filled in with material from the "Great Fire of 1889" and a second fire occurred on the Site in 1981, lead paint from the buildings was interred within the fill. The lead concentrations observed in Site soil, match this signature. Based upon this analysis, the PAHs and lead observed in Site soil were attributed to anthropogenic fill material observed at the Site.

5.4.3 Groundwater

Groundwater exceedances of C9-C18 aliphatic and C11-C22 aromatic EPH were identified at MW-3, shortly after the excavation of the source material in 2015. During the most recent groundwater monitoring conducted at the Site, groundwater samples were submitted for analysis of EPH. No EPH

exceedances of the GW-2 or GW-3 standards were identified at the Site wells, including the replacement well for MW-3 (MW-103).

5.4.4 Surface Water / Sediment

The closest surface water bodies to the Site are Lynn Harbor and Nahant Bay, located approximately 500 and 1,500 feet south and west of the Site, respectively. Current groundwater monitoring results indicate that EPH in groundwater does not exceed the GW-2 or GW-3 standards. Therefore, surface water and/or sediment are not anticipated to be impacted and as such, no surface water or sediment sampling was performed as part of the Site investigations.

5.4.5 Soil Gas / Indoor Air

The McGee Building and new addition are currently occupied. During construction of the new addition, a vapor barrier was installed beneath the foundation as a conservative mitigation measure based upon the earlier soil and groundwater exceedances. After removal of the impacted soil during the RAM, only one exceedance of the S-1 standards (for C11-C22 aromatic EPH) was identified, and no exceedances of GW-2 or GW-3 standards were identified at the Site. Therefore, no soil gas or indoor air monitoring was conducted.

6.0 CONCEPTUAL SITE MODEL

The findings of the prior sections were used to refine the Conceptual Site Model (CSM) which presents the current understanding of contaminant sources and distributions, impacted media, release mechanisms, contaminant migration pathways, and potential receptors.

The Disposal Site is part of a 10.85-acre lot developed with a three-story educational building surrounded by landscaped and paved parking areas. The soils at the Site include a surficial loam and brown silt underlain by historic fill consisting of silt, sand, and gravel with brick, concrete, glass, metal debris, ash, and trace asphalt. The fill material is partly the result of two city-wide historic fires which occurred in 1889 and 1981. The underlying material is sandy silts and silty sands containing trace amounts of gravel. In the vicinity of TP-7, an approximately 2 ft thick layer of peat was identified. Beneath the peat or sandy silts/silty sands is a silt and clay layer.

No public or private drinking water wells exist on the Site and the Site does not lie within a current or potential drinking water source area, a MassDEP approved Zone II Area, or an IWPA. There are no private, potable water (i.e., drinking water) wells listed within 500 feet of the Site. The closest surface water bodies to the Site are Lynn Harbor and Nahant Bay, located approximately 500 and 1,500 feet south and west of the Site, respectively.

Extractable petroleum hydrocarbons (EPH) are the Site contaminants of concern (COCs). The primary source of EPH is historic fill that was removed from the Site during the Site RAM in 2015 (150 cubic yards of fill removed). During the December 2016 follow-up Site investigation, the identification of one soil exceedance (location MW-105, between 10 and 15 ft bgs) suggests that there may be minor localized source material elsewhere in historic fill. However, average seasonal groundwater concentrations were not identified above Method 1 standards during the groundwater monitoring events conducted at the Site.

Impacted media at the Site is limited to soil. While minor groundwater impacts were identified in one location shortly after the removal of the primary source material, seasonal groundwater concentration were not identified at the Site during the 2017 groundwater monitoring. Since no ongoing groundwater impacts have been identified, and limited soil contamination was identified (at depths greater than 10 ft bgs), soil gas vapor intrusion is also not considered a potential contaminant migration pathway. Based upon the absence of groundwater impacts at the Site and the distance to the nearest surface water (Lynn Harbor), neither surface water nor sediment are considered potential contaminant migration pathways.

Under current and future use risk scenarios, potentially affected human receptors include students, visitors, and staff of the College, as well as construction/utility workers, who may be involved in future construction activities at the Site. Potentially risk scenarios during excavation include exposure to contaminated soil via inhalation, ingestion and/or dermal adsorption.

The disposal Site boundaries for the Site correspond to the property boundary. Site COCs (petroleum hydrocarbons) appear to be limited to impacts from historic fill at the Site. The primary source material has been removed from the Site.

7.0 EXPOSURE ASSESSMENT

7.1 Receptor Information

The Site is located within the NSCC's Lynn Campus at 300 Broad Street in Lynn, Massachusetts. The building on the Site is the McGee building (which has a newly completed addition), used for classrooms and administrative offices for the college. The remainder of the parcel consists of grass, landscaped areas, paved walkways, and paved parking areas.

Potential current include students and staff of the College, as well as visitors. Because there are no restrictions on Site use, potential future receptors include hypothetical on-Site residents. Potential future receptors also include construction/utility workers, who may be involved in future construction activities at the Site.

7.2 Fate and Transport of Oil and Hazardous Materials

Review of fate and transport processes at the Site provides insight into migration characteristics of the COCs (petroleum hydrocarbons) and potential risks to human health and the environment. This section provides a brief summary of the fate and transport processes for the constituents detected and their potential for contaminant migration.

The primary source of petroleum hydrocarbons (EPH) was approximately 150 cubic yards of localized historic fill that was removed from the Site in 2015. Historic fill is found throughout the Site to a maximum depth of approximately 15 ft bgs.

During the December 2016 follow-up investigation, the identification of one soil EPH exceedance (location MW-105, between 10 and 15 ft bgs) suggests that there may be other minor localized source material at the Site. However, petroleum hydrocarbons have low aqueous solubility and have a strong tendency to sorb onto aquifer materials. No groundwater exceedances were identified during the January 2017 groundwater monitoring event, and is anticipated that any other petroleum hydrocarbon sources are minor. Since groundwater impacts were not identified in the January 2017 monitoring event, the potential for vapor intrusion at the Site is considered low.

Weston & Sampson evaluated the potential risk from the Site in a Method 1 Risk Characterization, as summarized in Section 7.0.

7.3 Migration Pathways and Exposure Potential

7.3.1 Soil

During the December 2016 follow-up investigation, the identification of one soil EPH exceedance (location MW-105, between 10 and 15 ft bgs) suggests that there may be other minor localized soil exceedances within historic fill at the Site.

Under current Site conditions, use by NSCC employees and students is expected to be high frequency and low intensity. Activities conducted at the Site are not expected to disturb soil and result in direct contact with the soil or inhalation of soil derived dust. However, if any area of the Site is

redeveloped in the future, employees, students, or construction/utility workers may have a low frequency and high intensity of soil exposure during excavation activities.

Potential exposure to Site soils through ingestion, inhalation, absorption and dermal contact by employees, students, or construction/utility workers during future construction is considered a potential exposure pathway.

7.3.2 Groundwater

Site assessment in 2015 identified exceedances of C9-C18 aliphatic and C11-C22 aromatic EPH GW-2 or GW-3 standards at one location. No groundwater exceedances were identified during the January 2017 groundwater monitoring event. For the purposes of further evaluation, however, groundwater was considered a potential migration pathway for the risk assessment.

Potential exposure to groundwater through ingestion, inhalation, absorption and dermal contact by construction/utility workers during potential future construction within the groundwater table is considered a potential exposure pathway.

7.3.3 Surface Water / Sediment

The closest surface water bodies to the Site are Lynn Harbor and Nahant Bay, located approximately 500 and 1,500 feet south and west of the Site, respectively. Current groundwater monitoring results indicate that EPH in groundwater does not exceed the GW-2 or GW-3 standards. Therefore, due to the distance to the nearest surface water and the recent groundwater monitoring results, surface water and sediment are not considered potential migration pathways at the Site.

7.3.4 Soil Gas / Indoor Air

Analysis of groundwater samples in January 2017 did not identify concentrations of EPH above GW-1 standards. Therefore, the potential impact to indoor air at the Site buildings is not considered a potential migration pathway.

7.3.5 Underground Utilities

If subsurface utilities are present at the Site, the groundwater table (between 5 and 10 ft bgs) may intersect utility trenches. Therefore, subsurface utilities may present a preferential pathway for groundwater migration at this Site.

8.0 METHOD 1 RISK CHARACTERIZATION

8.1 Introduction

A Method 1 Risk Characterization was performed to establish whether a level of No Significant Risk (NSR) for human health exists or can be achieved at the Site. The Method 1 Risk Characterization considered both current and reasonably foreseeable future Site activities and uses. Soil is conservatively categorized as S-1. The S-1 standards are the most stringent and considered to be protective of human health for residential use, which has the highest exposure potential and the most sensitive receptors (young children, elderly, pregnant females). Consequently, if concentrations are below S-1 standards, it may be concluded that a condition of NSR exists for unrestricted use, and no further risk characterization or remedial response actions are required.

Groundwater at the Site is currently classified as GW-2 and GW-3. The GW-2 classification pertains to groundwater where the average annual depth to the water table is less than 15 feet bgs and where groundwater is located within 30 feet of an existing or planned building or structure that is or will be occupied. The GW-3 classification pertains to groundwater that may potentially impact surface water and applies to all groundwater in Massachusetts.

8.2 Exposure Scenarios

Under existing conditions, there exists potential for exposure to contaminants at the Site by employees, students, or construction/utility workers during future construction. It was also conservatively assumed that the Site may be redeveloped in the future and that residents may live on-Site. Exposure may be associated with ingestion, absorption, and dermal contact of impacted soils and inhalation of fugitive dust during construction. Potential human exposure to groundwater would most likely be limited to construction/utility workers during construction within the groundwater table.

8.3 Exposure Points

For soil, the Exposure Point is defined by the horizontal and vertical distribution of the contaminated soil in combination with the soil category determined to be applicable. For groundwater, the Exposure Point is the groundwater resource itself, as measured at each wellhead.

8.4 Exposure Point Concentrations

In accordance with 310 CMR 40.0926 of the MCP, the Exposure Point Concentrations (EPCs) for each compound in each medium in each exposure point must be identified and documented. The EPC may then be compared to the applicable Method 1 Standards to determine if a condition of No Significant Risk has been achieved.

8.4.1 Soil

The EPCs for the COCs identified in soil (EPH: C9-C18 aliphatics, C19-C36 aliphatics, and C11-C22 aromatics) were based upon the arithmetic mean concentrations. The arithmetic mean concentrations were determined to be applicable for EPCs because greater than 75% of the data points used in the averaging procedure were less than the applicable standard and no data point used in the averaging process was greater than ten times the applicable standard. The results of the Method 1 Risk Assessment for Site soils are presented in Table 7. EPCs in soil are below the applicable Method 1 S-1/GW-2 and S-1/GW-3 standards.

8.4.2 Groundwater

The EPCs for C9-C18 aliphatic and C11-C22 aromatic EPH compounds at well MW-3 (replaced by MW-103 in 2016) were determined based upon the temporal average of the results collected at MW-3 in August 2015 (C9-C18: 9.8 mg/L and C11-C22: 6.2 mg/L) and at MW-103 in January 2017 (C9-C18: <0.10 mg/L and C11-C22: 0.51 mg/L). Since C9-C18 aliphatic EPH was not detected at MW-103 in 2017, one-half the detection limit (0.05 mg/L) was used to calculate the C9-C18 aliphatic EPH. The EPCs in groundwater for C9-C18 aliphatic EPH (4.9 mg/L) and C11-C22 aromatic EPH (3.4 mg/L) at MW-3/MW-103 do not exceed the lowest of the Method 1 GW-2 or GW-3 standards (5 mg/L).

8.5 Imminent Hazard Evaluation

The need to conduct an Imminent Hazard (IH) Evaluation was evaluated pursuant to 310 CMR 40.0951(1) and in accordance with 310 CMR 40.0191. Based on the nature and extent of contamination, and surrounding receptors, an IH evaluation is not warranted.

8.6 Risk of Harm to Safety and Public Welfare

Risk of harm to public welfare was characterized in accordance with 310 CMR 40.0994. For current and reasonably foreseeable conditions, no public welfare conditions of concern listed in 310 CMR 40.0994(4) were identified at the Site. Petroleum concentrations identified in soil and groundwater are well below Upper Concentration Limits (UCLs) listed in 310 CMR 40.0996(2). Therefore, a condition of No Significant Risk of harm to public welfare exists at the Site.

Based on our evaluation, conditions at the Site do not currently and will not in the foreseeable future pose a threat of physical harm or bodily injury to people; therefore, a condition of No Significant Risk of harm to safety has been achieved at the Site.

8.7 Risk Characterization Conclusions

The results of the Method 1 Risk Characterization indicate that a condition of NSR to human health exists at the Site and that closure can be achieved without conducting remedial actions. A numerical summary of the Method 1 Risk Characterization for soil is included as **Table 7**.

9.0 DATA USABILITY ASSESSMENT

The Representativeness Evaluation and Data Usability Assessment (REDUA) presented in this section were prepared in general accordance with MassDEP Policy WSC-07-350, dated September 2007.

9.1 Representativeness Evaluation

The purpose of the Representativeness Evaluation is to demonstrate the following:

- The spatial and temporal data sets used to support this PSS are adequate considering the Site's historical use, hydrogeological and physical characteristics, and field observations;
- The data set in total sufficiently characterizes conditions at the Site and supports a coherent CSM;
- The cumulative data used to characterize the nature and extent of contamination at the Site, the risk to health, safety, public welfare and the environment, and the elimination/control of OHM sources is adequate; and,
- The use of the data to support this PSS is justified considering any inconsistent and incomplete information, and potential sources of uncertainty.

Sections 9.1.1 through 9.1.8 below describe the elements that were evaluated in the Representativeness Evaluation in support of this PSS.

9.1.1 Conceptual Site Model

The CSM for the Site is provided in Section 6.0.

9.1.2 Use of Field Screening Data

During the course of investigative activities associated with this PSS, field data were recorded during sample collection activities. Field observations and field screening data were reviewed together with the associated analytical data as part of the data quality assessment. In general, the field screening results correlated with the laboratory analytical results. The data sets collected during the course of the investigation are considered appropriate for the data quality objectives of this PSS.

9.1.3 Sampling Rationale

The sampling rationale of the subsurface investigations was to assess the nature and extent of contamination at the Site. The type of medium sampled and parameters evaluated for each location were based on previous investigations and experience evaluating contaminant conditions at similar sites.

9.1.4 Number, Spatial Distribution, and Handling of Samples

Weston & Sampson determined the number, spatial distribution, and handling of samples based on similar project experience and an initial site reconnaissance. The number and spatial distribution of samples is adequate to support the conclusions of this PSS.

9.1.5 Temporal Distribution of Samples

Adequate characterization should include consecutive seasonal rounds of gauging to provide an understanding of the magnitude of water table fluctuations and their potential effect on groundwater

concentrations. Historic assessment activities, including Weston & Sampson's completed investigation activities involved collection of groundwater samples over cumulative seasons. The Site assessments have provided sufficient temporal evaluation to support the findings of this PSS.

9.1.6 Completeness

There were no data gaps identified in the sampling locations and analytical data collected during the subsurface investigations. The target completeness for critical samples for data set validity was established as 100% and achieved.

9.1.7 Inconsistency and Uncertainty

No inconsistencies were identified with analytical results, field screening measurements, or field observations. Potential uncertainty exists for specific soil and sediment samples, however justifications are provided in the REDUA in Appendix F.

9.1.8 Information Considered Unrepresentative

No analytical data collected was considered unrepresentative for purposes of risk characterization and the data usability assessment. The sample results from the field assessments are considered to be representative of current conditions at the Site.

9.2 Data Usability Assessment

The Data Usability Assessment evaluates the validity of the data being used for MCP risk characterization and/or other response actions, focusing on actual quality assurance/quality control (QA/QC) procedures used in the field during sample collection, and laboratory analytical methods. The broad performance standards for the acquisition, analysis, and reporting of the analytical and environmental monitoring data used to support MCP response actions are specified in 310 CMR 40.0017 and 40.0191(2)(c).

To facilitate the application of these MCP performance standards, MassDEP published a Compendium of Analytical Methods (CAM), a series of recommended protocols for the acquisition, analysis, and reporting of MCP-related analytical data. The minimum criteria and performance standards for the collection and analysis of data to be used in MCP risk assessments, background determinations, and/or site closure are outlined in the current MassDEP publications WSC-CAM-VIIA (revised January, 2015) and WSC-10-320 (effective July 1, 2010). Samples collected and analyzed in compliance with CAM have achieved "Presumptive Certainty", which assures that the precision, accuracy, and sensitivity have been adequately determined.

9.2.1 PARCCS Evaluation

Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements. Thus, data usability is also evaluated by the following parameters: precision, accuracy, representativeness, comparability, completeness and sensitivity (referred to as PARCCS). With the exception of representativeness, the PARCCS parameters are controlled by the laboratory through strict QA/QC procedures, and any issues that might affect data usability are identified and described in the case narrative of each laboratory report. Data usability tables summarizing the case narrative for each soil and groundwater laboratory report that included qualifiers are included in Appendix F.

9.2.2 Precision

Precision is a measure of mutual agreement among individual measurements of the same property and is generally expressed as the reproducibility of the analytical result between initial sample and field duplicate as expressed by the relative percent difference (RPD). Precision is a measure of the reproducibility of sampling technique, matrix homogeneity, and analytical method. A review of laboratory control sample/laboratory control sample duplicate (LCS/LCSD) information indicates that the data appear to be consistent from sample to sample, and consistent with field observations. The data are considered suitably precise to support this PSS, and no further action was taken. Samples that displayed variability are discussed in the REDUA provided in Appendix F.

9.2.3 Accuracy

Accuracy is the degree of agreement of a measurement with an accepted reference or true value. Accuracy is reported as the percent recovery of known concentrations added to the matrix sample to assess the influence of matrix on the analytical method. The data are considered suitably accurate to support this PSS. Samples that displayed low or high biases are discussed in the REDUA provided in Appendix F.

9.2.4 Representativeness

Representativeness expresses the degree to which data accurately and precisely represent a characteristic of the population, parameter variation, or environmental condition. Weston & Sampson designed the sampling protocol to ensure representativeness by incorporating factors such as site history, visual and olfactory observations, physical features, proper sample collection and preservation procedures, appropriate testing methodology, and field screening data. The samples collected at the Site are considered representative based on the known subsurface conditions.

9.2.5 Completeness

Completeness is a measure of whether enough data has been collected to support an LSP opinion and is expressed as a percent representing the ratio of valid data to expected data. Data may be considered invalid for reasons such as exceeding the holding time, poor calibration of analytical instruments, and poor surrogate or matrix spike recoveries. Based on a review of the case narratives and lab QA/QC samples, the data collected for this Site is complete and sufficient to support an LSP opinion.

9.2.6 Comparability

Comparability refers to the level of confidence with the correlation of data collected during separate events or by different persons, or analyzed by different methods. This may be measured qualitatively based on a review of sampling and testing procedures or quantitatively by comparison of sample data collected at the same location using the same sampling and testing procedures. All sampling and testing procedures were followed utilizing accepted standards for quality assurance and quality control, and data among separate sampling events and by different staff are comparable.

9.2.7 Sensitivity

Sensitivity is a measure of whether the laboratory method was sufficient to report detected contaminants at concentrations at or below the applicable MCP cleanup criteria. For example, if a contaminant is reported as “not detected”, but the laboratory method detection limit was higher than the MCP cleanup criteria, we would be unable to state unequivocally that the tested medium was free

of impact consistent with a level of NSR. In general, sampling results were adequately sensitive to evaluate whether NSR exists at the Site. Weston & Sampson considers the data to be at a sufficient level of sensitivity to support the conclusions in this PSS.

In summary, the results of the PARCCS evaluation indicate that data quality indicators are acceptable. The sample data obtained during the Weston & Sampson subsurface investigations are adequate for characterizing Site conditions and risk.

10.0 PHASE II CSA CONCLUSIONS

In January 2015, soil impacted by petroleum hydrocarbons was discovered during the excavation of test pits prior to construction of an addition to the McGee Building. In March 2015, nine soil borings were advanced to define the lateral extent of impacts near TP-7 and in June 2015 a RAM was implemented for excavation and disposal of approximately 150 cubic yards of petroleum impacted historic fill. Following completion of RAM activities, a Phase I Initial Site Investigation was conducted, which included soil sampling and the installation and monitoring of four groundwater monitoring wells (MW-1 through MW-4). Exceedances of the Method 1 GW-2 cleanup standard for C9-C18 aliphatic extractable petroleum hydrocarbons (EPH) and the Method 1 GW-3 cleanup standard for C11-C22 aromatic EPH were detected at one location (MW-3). These monitoring wells were removed during construction of the McGee Building addition.

As part of the Phase II CSA, in December 2016 six soil borings (each completed as a groundwater monitoring well) were advanced to evaluate the spatial extent and seasonal effects of petroleum impacts on groundwater and to assess the vapor intrusion pathway with respect to the original McGee Building and the new addition. One monitoring well (MW-103) was installed to replace well MW-3, where exceedances were detected in 2015. One soil exceedance was identified at one location (MW-105, below 10 ft bgs). No groundwater exceedances were identified.

Extractable petroleum hydrocarbons (EPH) are the Site COCs. The primary source of EPH (approximately 150 cubic yards of localized historic fill) was removed from the Site during the Site RAM in 2015. Historic fill is found throughout the Site to a maximum depth of approximately 15 ft bgs. Groundwater is a potential migration pathway, however analysis of additional seasonal groundwater samples in 2017 did not identify concentrations of EPH above GW-2 or GW-3 standards. Based on the absence of groundwater impacts in 2017, the potential impact to indoor air at the Site buildings is not considered a potential migration pathway.

Weston & Sampson performed a Method 1 Risk Characterization to establish whether a level of No Significant Risk (NSR) for human health exists or can be achieved at the Site. The Method 1 Risk Characterization considered both current and reasonably foreseeable future Site activities and uses. Soil was conservatively categorized as S-1 and groundwater was classified as GW-2 and GW-3. Based on the results of the risk assessment, the Site was found to pose no significant risk of of harm to human health, environment, public welfare, and safety.

11.0 PHASE II CSA REPORT REQUIREMENTS

The MCP requirements for a Phase II CSA (310 CMR 40.0835(4)) are presented below in ***bold italicized*** text along with the responses in plain text. Public Notification letters are included in Appendix A of this report.

(a) Disposal site name, location, and locus map;

North Shore Community College – McGee Building
300 Broad Street
Lynn, Massachusetts 01901

The Locus Map for the Site showing its location is provided as Figure 1.

(b) Detailed disposal site map(s);
Detailed maps depicting the disposal site map are provided in the Figures section of this report.

(c) Disposal site history;
A summary of the Site history is provided in Section 3.0 of this report.

(d) Site hydrogeological characteristics;
A summary of Site hydrogeological characteristics are provided in Section 4.0 of this report.

(e) Environmental fate and transport of oil and/or hazardous material;
Details regarding the fate and transport of oil and/or hazardous material processes for the constituents identified at the Site are provided in Section 7.0 of this report.

(f) Nature and extent of contamination;
The nature and extent of contamination is provided in Section 5.0 of this report.

(g) Exposure assessment;
The identification and characteristics of all potential human and environmental receptors that could be impacted from the Site is provided in Section 7.0 of this report.

(h) Risk characterization;
The Method 1 Risk Characterization is summarized in Section 8.0 of this report.

(i) Conclusions;
A summary of the Phase II CSA findings is provided in Section 9.0.

12.0 PHASE II COMPLETION STATEMENT

In accordance with 310 CMR 40.836, a Phase II Completion Statement is submitted with this Phase II CSA Report.

This Phase II CSA Report was based on an assessment performed by Weston & Sampson, and on historical information provided by DCAMM, and was prepared in accordance with the applicable requirements specified in 310 CMR 40.835. The Phase II CSA conforms with applicable Phase II requirements of the MCP and meets the Phase II performance standard.

In accordance with 310 CMR 40.0836(3)(a)(3), Weston & Sampson has evaluated the current Tier II Classification of the Site based on the findings of the Phase II CSA detailed in this report. Based on this evaluation, Weston & Sampson concludes that this Phase II CSA does not identify new or additional information which would change the current NRS Score or Tier II Classification for the Site.

Based on the findings of the above mentioned Phase II CSA Report the current knowledge of the Site and surrounding area conditions, it is the opinion of the Licensed Site Professional (LSP)-of-Record that the requirements of a Permanent Solution under 310 CMR 40.1000 have been met, and a Permanent Solution Statement supported by information provided in the Phase II report shall be submitted to the Department.

As specified in 310 CMR 40.836 and 40.0009 of the MCP, a Certification of the Submittal is included with this Phase II CSA Report. The Certification of the Submittal is included in Section J of the Comprehensive Response Action Transmittal Form (BWSC-108) submitted concurrently with this report.

13.0 PERMANENT SOLUTION STATEMENT

13.1 Permanent Solution Statement

The MCP requirements for the Permanent Solution Statement 310 CMR 40.1056 are shown below in ***bold italic text*** and the responses are shown in normal text. A PSS shall include, at a minimum, the following:

(a) the site or disposal site name, address and DEP Release Tracking Number(s);

Site Name:	North Shore Community College - Lynn
Address:	300 Broad Street Lynn, Massachusetts
Release Tracking Number:	3-32907
UTM Coordinates:	N 4,702,827 m E 340,105 m

(b) whether it is a Permanent Solution with No Conditions or a Permanent Solution with Conditions;

The Permanent Solution is with no Conditions per 310 CMR 40.1041.

(c) except where the concentrations of oil and/or hazardous material are consistent with or have been reduced to Background or where a threat of release has been abated, the Method(s) (Methods 1, 2, or 3) used to characterize the risk of harm posed by the disposal site to health, safety, public welfare and the environment, pursuant to 310 CMR 40.0900;

A Method 1 Human Health Risk Characterization, as discussed in Section 8.0, was used to characterize the risk of harm posed by the disposal site to health, safety, public welfare and the environment, pursuant to 310 CMR 40.0900.

(d) the relationship of the Permanent Solution Statement to any other Permanent or Temporary Solution Statements that have been filed for the disposal site, if applicable, together with a statement as to whether any additional response actions are needed for any other portions of the disposal site;

No prior Temporary or Permanent Solution Statements have been filed for the Site.

(e) indication as to whether the Permanent Solution includes the implementation of an Activity and Use Limitation, and if so, the type of Activity and Use limitation implemented at the at the disposal site;

This Permanent Solution does not include the implementation of an AUL.

(f) indication as to whether the Permanent Solution is based upon assumptions about the current or future site activities, uses or conditions that do not require an Activity and Use Limitation pursuant to 310 CMR 40.1013 and a description of those assumptions;

The Permanent Solution is based upon assumptions about the current and future site activities, uses or conditions that do not require an Activity and Use Limitation pursuant to 310 CMR 40.1013. Under current and future use risk scenarios, potentially affected human receptors include students, visitors, staff of the College, hypothetical on-Site residents, as well as construction/utility workers, who may be involved in future construction activities at the Site. Best management practices (BMPs) should be used during future construction activities to avoid potentially risk scenarios during excavation, which include exposure to contaminated soil via inhalation, ingestion and/or dermal adsorption. Because a Condition of No Significant Risk exists for evaluated exposure scenarios, an Imminent Hazard Condition is also determined to not exist.

(g) indication as to whether the Permanent Solution is based upon the effective operation of one or more Active Exposure Pathway Mitigation Measures pursuant to 310 CMR 40.1025;

No Active Exposure Pathway Mitigation Measures are anticipated to be implemented for this Permanent Solution.

(h) except where specifically exempted by the Department based upon the Department's level of involvement in the oversight of response actions at the site or disposal site, an Opinion from a Licensed Site Professional as to whether the requirements of the applicable category of Permanent Solution specified in 310 CMR 40.1000 have been met;

The data supporting the Permanent Solution with Conditions is provided in the body of this report. By stamping this report, the LSP-of-Record, Mr. Frank Ricciardi, has provided the Opinion that the Permanent Solution has met the requirements of the 310 CMR 40.1000.

(i) a certification of the Permanent Solution Statement and all documents submitted with the Permanent Solution Statement as required by 310 CMR 40.0009;

The certification of this Permanent Solution is provided in the MassDEP Bureau of Waste Site Cleanup (BWSC) Form 104 and associated eDEP submittal.

Public notification letters to the Medfield Board of Health and Chief Administrative Officer are provided in Appendix A.

(j) indication as to whether oil and/or hazardous material exceed one or more applicable Upper Concentration Limits in Soil or Groundwater, as described in 310 CMR 40.0996; and

No oil and/or hazardous material exceeds UCLs.

(k) indication as to whether the analytical data used to support the Permanent Solution was generated pursuant to the Department's Compendium of Analytical Methods.

A review of the analytical data usability is provided in Section 9.0 – Data Usability Assessment of this Report and the data used to prepare this Permanent Solution is pursuant to the MassDEP's Compendium of Analytical Methods.

14.0 LIMITATIONS

This report was prepared for the use of DCAMM, exclusively. The findings provided by Weston & Sampson in this report are based solely on the information reported in this document. Future sampling, and/or information that was not available to Weston & Sampson at the time of the study, may result in a modification of the findings stated in this report.

Should additional information become available concerning this Site or neighboring properties, which could directly impact the Site in the future, that information should be made available to Weston & Sampson for review so that, if necessary, conclusions presented in this report may be modified. The conclusions of this report are based on Site conditions observed by Weston & Sampson personnel at the time of the study, information provided by DCAMM and samples collected and analyzed on the dates shown or stated in this report. This report has been prepared in accordance with generally accepted engineering and geological practices. No other warranty, express or implied, is made.

FIGURES

FIGURE 1
North Shore Community College
300 Broad Street
Lynn, Massachusetts

LOCUS MAP

3,000 0 3,000

Scale In Feet

Weston & Sampson

Path: \\gisdatasrv\gis\DataStore\Client\DCAM\Project\21507.40 NSCC Lynn\Locus.mxd User: GannonR Saved: 1/5/2017 10:54:51 AM Opened: 1/5/2017 10:55:34 AM

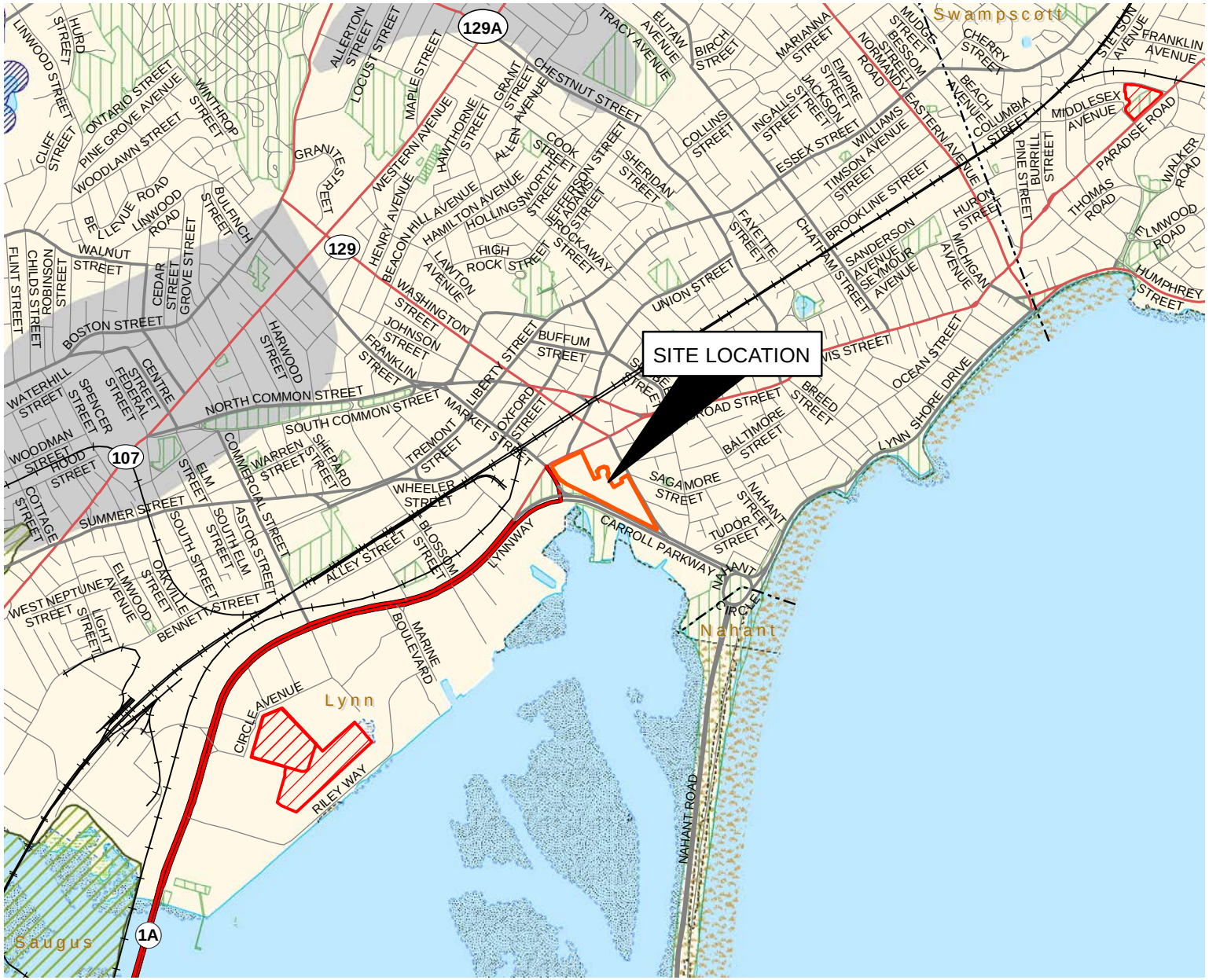
FIGURE 2
North Shore Community College
300 Broad Street
Lynn, Massachusetts

SITE PLAN

200 0 200
Scale In Feet

Weston & Sampson

Path: \\gisdatasrv\GIS\DataStore\Client\DCAM\Project\21507.40 NSCC Lynn\Site Plan.mxd User: OzerekoZ Saved: 3/20/2017 9:49:06 AM Opened: 3/20/2017 9:49:29 AM



Data Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs

FIGURE 3
AREA RECEPTORS MAP

North Shore Community College
300 Broad Street
Lynn, Massachusetts

Weston & Sampson

O:\DCAMM\NSCC McGee Building Addition MCP\CAD\Phase II\SAMPLING LOCATIONS.dwg

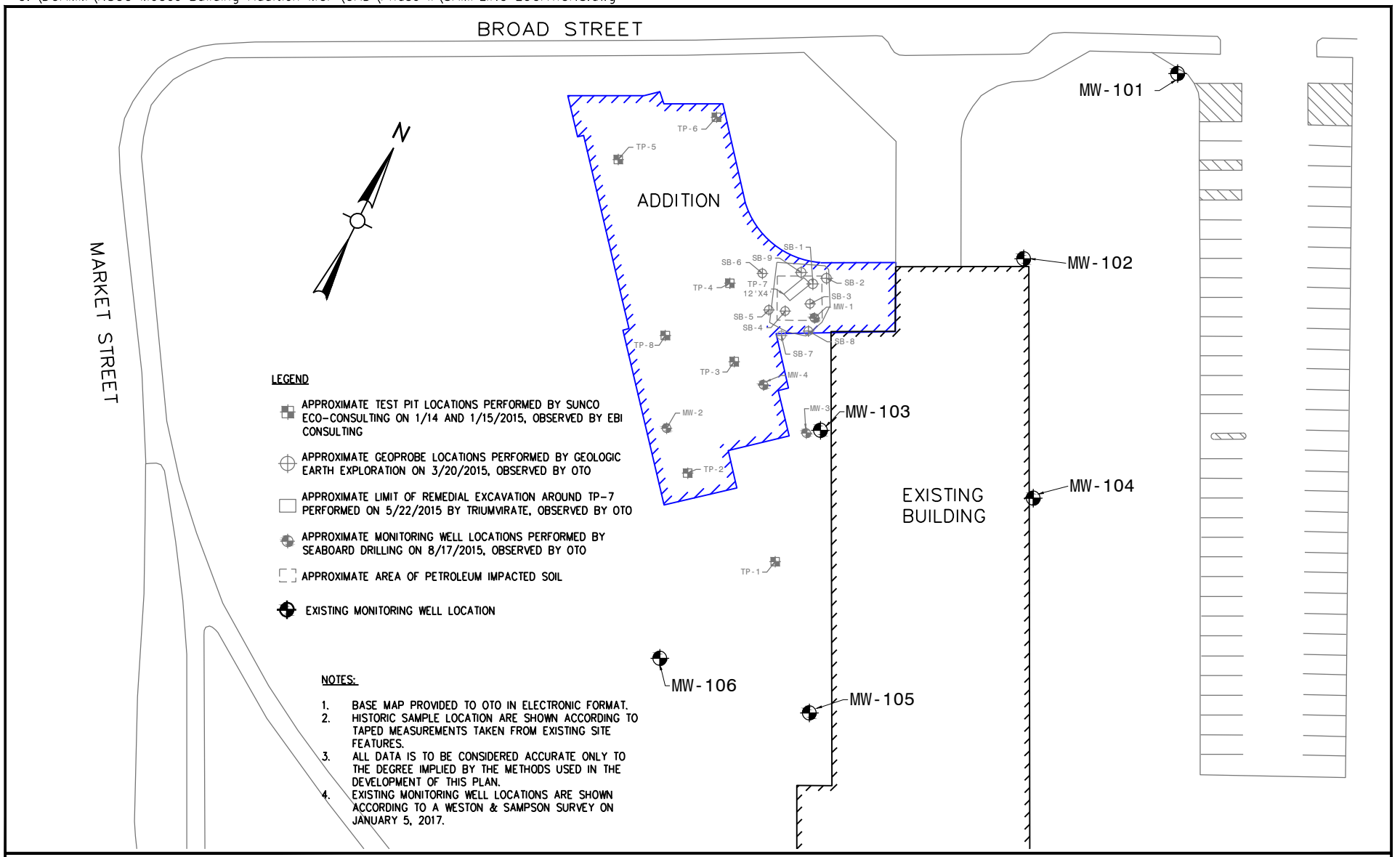


FIGURE 4

NORTH SHORE COMMUNITY COLLEGE – 300 BROAD ST., LYNN, MA

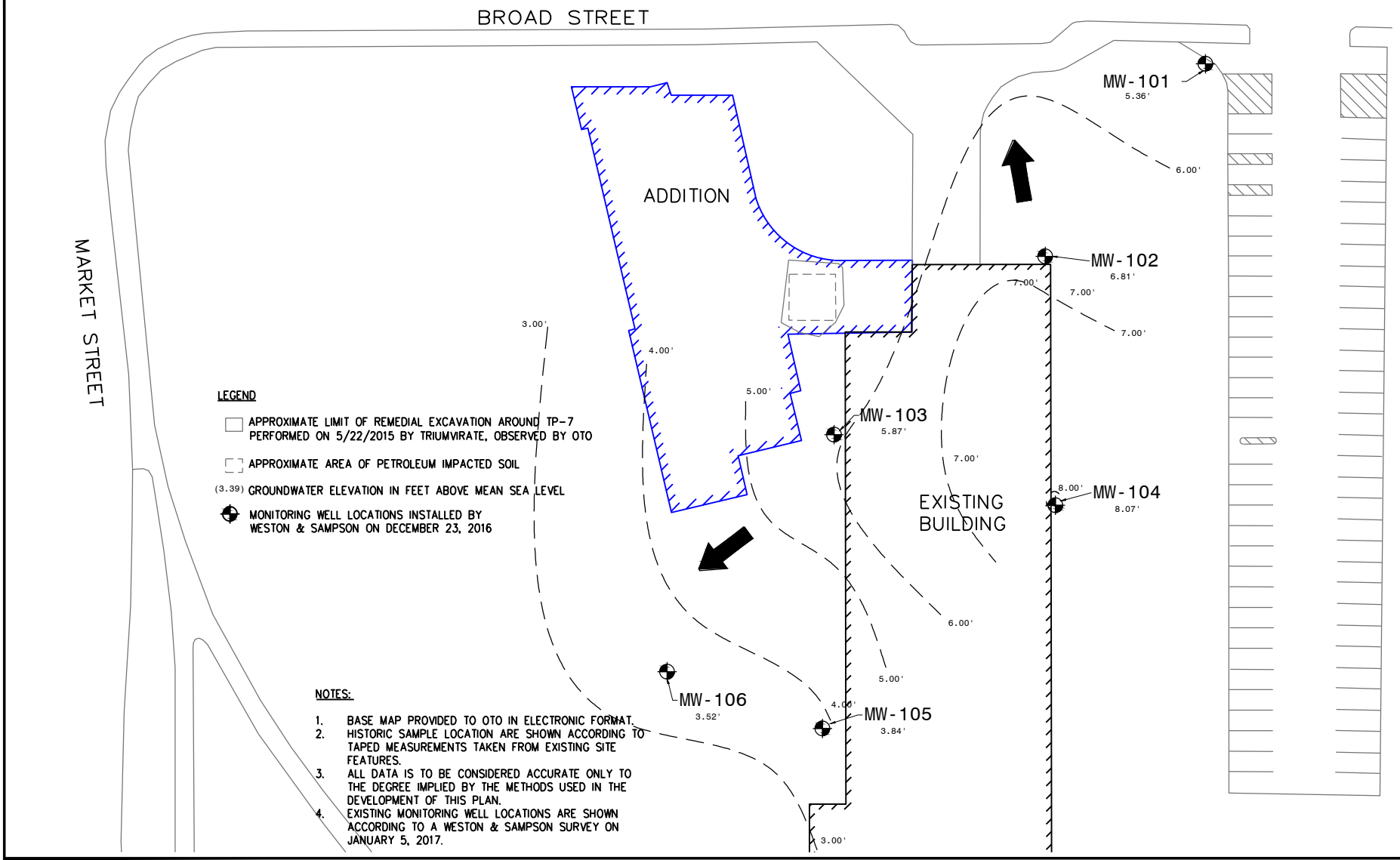
SAMPLING LOCATIONS

SCALE: 1"=60'

0 60 120

Weston & Sampson

O:\DCAMM\NSCC McGee Building Addition MCP\CAD\Phase II\SAMPLING LOCATIONS.dwg



LEGEND:

GROUNDWATER CONTOUR LINE

INFERRED GROUNDWATER FLOW DIRECTION

FIGURE 5

NORTH SHORE COMMUNITY COLLEGE – 300 BROAD ST., LYNN, MA

EXCAVATION BOUNDS AND SAMPLING

GROUNDWATER CONTOUR MAP

SCALE: 1"=60'

0 60 120

Weston & Sampson

TABLES

TABLE 1
SOIL DATA - EBI 2015 INVESTIGATION
DCAMM
NSCC -MCGEE BUILDING ADDITION

Parameter	Reportable		SAMPLING LOCATION							
	RCS-1	RCS-2	TP-1	TP-2	TP-3	TP-4	TP-5	TP-6	TP-7	TP-8
Sampling Date			1/14/2015	1/14/2015	1/14/2015	1/14/2015	1/15/2015	1/15/2015	1/15/2015	1/15/2015
Sample Depth			2-6 Feet	3-8 Feet	7-9.5 Feet	7-9.5 Feet	9-10 Feet	9-10 Feet	8-10 Feet	9-10 Feet
MADEP-EPH-04-1.1 (mg/Kg dry)										
C9-C18 ALIPHATICS	1000	3000	13	ND (12)	ND (12)	ND (13)	ND (12)	ND (12)	87	ND (13)
C19-C36 ALIPHATICS	3000	5000	89	33	20	32	39	ND (12)	ND (26)	15
C11-C22 AROMATICS	1000	3000	180	130	90	190	84	37	460	250
ACENAPHTHENE	4	3000	1.3	1.2	0.28	0.67	0.34	0.24	**4.3**	3.7
ACENAPHTHYLENE	1	10	0.14	0.13	0.19	0.23	ND (0.12)	ND (0.12)	0.77	0.25
ANTHRACENE	1000	3000	2.8	2.7	0.95	2	0.86	0.5	11	7.7
BENZO(A)ANTHRACENE	7	40	5.4	3.7	2.6	5.4	1.9	0.61	**17**	**8.2**
BENZO(A)PYRENE	2	7	**4.4**	**3.2**	**2.6**	**4.9**	1.7	0.49	**12**	**5.8**
BENZO(B)FLUORANTHENE	7	40	6.7	4	3.4	6.1	2.3	0.6	**15**	**7.1**
BENZO(G,H,I)PERYLENE	1000	3000	2.1	1.6	1.3	2.1	0.99	0.16	3.7	2.1
BENZO(K)FLUORANTHENE	70	400	2.1	1.4	1.3	2.1	0.75	0.21	6.1	2.5
CHRYSENE	70	400	6.5	4.2	3.2	6.5	2.4	0.73	18	8.3
DIBENZ(A,H)ANTHRACENE	0.7	4	**0.76**	0.48	0.41	0.67	0.26	ND (0.12)	**1.6**	**0.78**
FLUORANTHENE	1000	3000	13	8.2	5.4	12	4.3	1.5	38	19
FLUORENE	1000	3000	1.5	1.5	0.54	0.95	0.54	0.25	6.8	4.9
INDENO(1,2,3-CD)PYRENE	7	40	2.6	1.6	1.4	2.4	0.93	0.24	5.2	2.5
2-METHYLNAPHTHALENE	0.7	80	0.28	0.43	0.17	0.3	0.21	ND (0.12)	**1.5**	**0.73**
NAPHTHALENE	4	20	0.39	0.58	0.31	0.73	0.37	ND (0.12)	2.1	1.1
PHENANTHRENE	10	1000	**11**	9.4	3.6	10	3.3	1.5	**35**	**25**
PYRENE	1000	3000	12	8.5	5.3	13	4.7	1.5	37	19
MADEP-VPH-04-1.1 (mg/Kg dry)										
C5-C8 ALIPHATICS	100	500	ND (16)	ND (15)	ND (14)	ND (19)	ND (15)	ND (13)	**240**	ND (19)
C9-C12 ALIPHATICS	1000	3000	ND (16)	ND (15)	ND (14)	ND (19)	ND (15)	ND (13)	ND (170)	ND (19)
C9-C10 AROMATICS	100	500	ND (16)	ND (15)	ND (14)	ND (19)	ND (15)	ND (13)	**170**	ND (19)
BENZENE	2	200	ND (0.082)	ND (0.075)	ND (0.072)	ND (0.095)	ND (0.076)	0.12	ND (0.84)	ND (0.095)
ETHYLBENZENE	40	1000	ND (0.082)	ND (0.075)	ND (0.072)	ND (0.095)	ND (0.076)	ND (0.066)	ND (0.84)	ND (0.095)
METHYL TERT-BUTYL ETHER (MTBE)	0.1	100	ND (0.082)	ND (0.075)	ND (0.072)	ND (0.095)	ND (0.076)	ND (0.066)	**ND (0.84) ***	ND (0.095)
NAPHTHALENE	4	20	ND (0.41)	ND (0.38)	ND (0.36)	ND (0.47)	ND (0.38)	ND (0.33)	**ND (4.2) ***	ND (0.47)
TOLUENE	30	1000	ND (0.082)	ND (0.075)	ND (0.072)	ND (0.095)	ND (0.076)	ND (0.066)	ND (0.84)	ND (0.095)
M/P-XYLENE	100	100	ND (0.16)	ND (0.15)	ND (0.14)	ND (0.19)	ND (0.15)	ND (0.13)	ND (1.7)	ND (0.19)
O-XYLENE	100	100	ND (0.082)	ND (0.075)	ND (0.072)	ND (0.095)	ND (0.076)	ND (0.066)	1.8	ND (0.095)
SW-846 6010C (mg/Kg dry)										
Metals										
ARSENIC	20	20	8.5	5.9	ND (2.7)	11	7.3	ND (2.8)	6.6	5.9
CADMIUM	70	100	1.9	0.84	0.46	1	1.2	0.44	0.6	0.52
CHROMIUM	100	200	34	19	17	29	22	19	20	17
LEAD	200	600	**240**	**390**	**3300**	**390**	**230**	57	**200**	**200**
SW-846 7196A (mg/Kg dry)										
CHROMIUM +6	100	200	ND (0.18)	ND (0.19)	ND (0.18)	ND (0.21)	ND (0.19)	ND (0.19)	ND (0.21)	ND (0.20)
SW-846 7471B (mg/Kg dry)										
Metals										
MERCURY	20	30	0.49	0.77	0.9	0.99	0.87	0.93	1	1.1

TABLE 1
SOIL DATA - EBI 2015 INVESTIGATION
DCAMM
NSCC -MCGEE BUILDING ADDITION

Parameter	Reportable		SAMPLING LOCATION							
	RCS-1	RCS-2	TP-1	TP-2	TP-3	TP-4	TP-5	TP-6	TP-7	TP-8
Sampling Date			1/14/2015	1/14/2015	1/14/2015	1/14/2015	1/15/2015	1/15/2015	1/15/2015	1/15/2015
Sample Depth			2-6 Feet	3-8 Feet	7-9.5 Feet	7-9.5 Feet	9-10 Feet	9-10 Feet	8-10 Feet	9-10 Feet
SW-846 8082A (mg/Kg dry)										
PCB 1016	1	4	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.12)	0.21	ND (0.13)	ND (0.13)
PCB 1221	1	4	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.13)
PCB 1232	1	4	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.13)
PCB 1242	1	4	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.13)
PCB 1248	1	4	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.13)
PCB 1254	1	4	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.13)
PCB 1260	1	4	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.13)
PCB 1262	1	4	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.13)
PCB 1268	1	4	ND (0.12)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.12)	ND (0.12)	ND (0.13)	ND (0.13)
SW-846 8100 Modified (mg/Kg dry)										
TPH	1000	3000	660	230	160	900	140	59	620	950

NOTES:
1.An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
2.ND = Not detected above the lab reporting limits shown in parenthesis.
3.NT = Not tested.
4.~ = No Method 1 Standard or UCL available
5.Shaded values exceed the MCP Reportable Concentrations (RCs).
6.Bolded values exceed the Method 1 Cleanup Standards.

TABLE 2
SOIL DATA - EBI 2015 INVESTIGATION
COMPARISON TO BACKGROUND VALUES
DCAMM
NSCC -MCGEE BUILDING ADDITION

Parameter	*Concentration in Soil Associated With Fill Material mg/kg*	SAMPLING LOCATION						
		TP-1	TP-2	TP-3	TP-4	TP-5	TP-6	TP-8
Sampling Date		1/14/2015	1/14/2015	1/14/2015	1/14/2015	1/15/2015	1/15/2015	1/15/2015
Sample Depth		2-6 Feet	3-8 Feet	7-9.5 Feet	7-9.5 Feet	9-10 Feet	9-10 Feet	9-10 Feet
MADEP-EPH-04-1.1 (mg/Kg dry)								
ACENAPHTHENE	*2*	1.3	1.2	0.28	0.67	0.34	0.24	3.7
ACENAPHTHYLENE	*1*	0.14	0.13	0.19	0.23	ND (0.12)	ND (0.12)	0.25
ANTHRACENE	*4*	2.8	2.7	0.95	2	0.86	0.5	7.7
BENZO(A)ANTHRACENE	*9*	5.4	3.7	2.6	5.4	1.9	0.61	8.2
BENZO(A)PYRENE	*7*	4.4	3.2	2.6	4.9	1.7	0.49	5.8
BENZO(B)FLUORANTHENE	*8*	6.7	4	3.4	6.1	2.3	0.6	7.1
BENZO(G,H,I)PERYLENE	*3*	2.1	1.6	1.3	2.1	0.99	0.16	2.1
BENZO(K)FLUORANTHENE	*4*	2.1	1.4	1.3	2.1	0.75	0.21	2.5
CHRYSENE	*7*	6.5	4.2	3.2	6.5	2.4	0.73	**8.3**
DIBENZ(A,H)ANTHRACENE	*1*	0.76	0.48	0.41	0.67	0.26	ND (0.12)	0.78
FLUORANTHENE	*10*	**13**	8.2	5.4	**12**	4.3	1.5	**19**
FLUORENE	*2*	1.5	1.5	0.54	0.95	0.54	0.25	**4.9**
INDENO(1,2,3-CD)PYRENE	*3*	2.6	1.6	1.4	2.4	0.93	0.24	2.5
2-METHYLNAPHTHALENE	*1*	0.28	0.43	0.17	0.3	0.21	ND (0.12)	0.73
NAPHTHALENE	*1*	0.39	0.58	0.31	0.73	0.37	ND (0.12)	1.1
PHENANTHRENE	*20*	11	9.4	3.6	10	3.3	1.5	**25**
PYRENE	*20*	12	8.5	5.3	13	4.7	1.5	19
SW-846 6010C (mg/Kg dry) Metals								
LEAD	*600*	240	390	**3300**	390	230	57	200

NOTES:
1.An asterisk (*) following a detection limit indicates that the minimum laboratory reporting limit exceeds one or more of the regulatory criteria.
2.ND = Not detected above the lab reporting limits shown in parenthesis.
3.Bolded values exceed background concentrations
4. Results for test pit TP-7 are not presented as this soil was removed as part of remediation activities.

Table 3
Soil Analytical Results
Total Petroleum Hydrocarbons (TPH)
Concentrations in mg/Kg
300 Broad Street
Lynn, Massachusetts

Sample No.:	SB-1	SB-1	SB-2	SB-3	SB-4	SB-5	SB-6	SB-7	SB-8	SB-9	**Reportable Conc. RCS-1**	**Reportable Conc. RCS-2**	**MCP Method 1 Standards**						**UCLs**
Depth (feet):	10-12	12-14	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12			**S-1 / GW-2**	**S-1 / GW-3**	**S-2 / GW-2**	**S-2 / GW-3**	**S-3 / GW-2**	**S-3 / GW-3**	
Date Collected:	3/20/15	3/20/15	3/20/15	3/20/15	3/20/15	3/20/15	3/20/15	3/20/15	3/20/15	3/20/15									
PID Reading (ppmv):	20.8	116.8	3.4	790	343	0.4	0	0	0	0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
TPH Concentration:	**7,400**	790	470	100	850	86	840	200	45	14	1,000	3,000	1,000	1,000	3,000	3,000	5,000	5,000	10,000

NOTES:
1.Concentrations in mg/Kg (parts per million) on a dry weight basis.
2."<" indicates not detected; value is sample-specific quantitation limit.
3."RCS" = Reportable concentration from 310 CMR 40.1600.
4.MCP Method 1 soil standards from 310 CMR 40.0975(6).
5."UCLs" = Upper Concentration Limits, from 310 CMR 40.0996(7). "NS" indicates no standard.
6."PID"=Photoionization detector soil headspace measurement in parts per million by volume.
7.Values shown in **bold** exceed Method 1 standards.

TABLE 4
GROUNDWATER ELEVATION
DCAMM
NSCC -MCGEE BUILDING ADDITION

Well ID	PVC Elevation (ft)	Depth To Water (DTW) (ft)	Groundwater Elevation (ft)
MW-101	14.65	9.29	5.36
MW-102	13.12	6.31	6.81
MW-103	13.31	7.44	5.87
MW-104	13.19	5.12	8.07
MW-105	13.15	9.31	3.84
MW-106	13.41	9.89	3.52

O:\DCAMM\NSCC McGee Building Addition MCP\Phase II CSA and PSS\Tables\[Table 4 GW Elevation.xlsx]Sheet1

TABLE 5
SOIL ANALYTICAL RESULTS
DCAMM
NSCC -MCGEE BUILDING ADDITION

Parameter	MCP - Method 1 Cleanup Standards		SAMPLING LOCATION											
			MW-101 (PID)	MW-101 (WT)	MW-102 (PID)	MW-102 WT	MW-103-PID	MW-103-WT	MW-104-PID	MW-104-WT	MW-105-PID	MW-105-WT	MW-106-PID	MW-106-WT
Sampling Date	S-1/GW-2	S-1/GW-3	12/23/2016	12/23/2016	12/23/2016	12/23/2016	12/22/2016	12/22/2016	12/22/2016	12/22/2016	12/22/2016	12/22/2016	12/22/2016	12/22/2016
Sample Depth			5-10 ft	17 ft	10-15 ft	9 ft	5-10 ft	10-15 ft	5-10 ft	10-15 ft	10-15 ft	10 ft	10-15 ft	15 ft
PID (ppm)			1	ND	2	0.2	75	50	1.2	0.2	0.8	ND	4	4
MADEP-EPH-04-1.1 (mg/Kg dry)														
C9-C18 ALIPHATICS	1000	1000	< 11	< 11	**120**	< 11	**280**	< 12	**15**	< 12	**62**	< 11	< 24	< 11
C19-C36 ALIPHATICS	3000	3000	< 11	< 11	**830**	**18**	**49**	< 12	**98**	**53**	**120**	**72**	< 24	< 11
UNADJUSTED C11-C22 AROMATICS	~	~	**13**	**52**	**900**	**57**	**180**	**20**	**90**	**40**	**6800**	**170**	**99**	**31**
C11-C22 AROMATICS	1000	1000	**13**	**33**	**680**	**41**	**170**	**16**	**68**	**32**	**3300**	**120**	**67**	**21**

QC by SMM 1/6/17

O:\DCAMM\NSCC McGee Building Addition MCP\Phase II CSA and PSS\Tables\[Table 5 - Soil Analytical Results.xlsx]soil_results

NOTES:

< = Not detected above the lab reporting limits shown
mg/kg = milligram per kilogram
EPH = Extractable Petroleum Hydrocarbon
WT = Sample Taken at the Water Table
PID = Sample Taken at Highest PID Reading
MCP = Massachusetts Contingency Plan
Analytical results compared to the MCP Method 1 Cleanup Standards 310 CMR 40.0000, revised January 2015.

Bold Exceeds laboratory method detection limit.
Bold Exceeds applicable MCP standards.

TABLE 6
GROUNDWATER ANALYTICAL RESULTS
DCAMM
NSCC -MCGEE BUILDING ADDITION

Well ID	MCP Method 1 Cleanup Standards		OTO Historical Data				Weston & Sampson Data						
			MW-1	MW-2	MW-4	MW-3 / MW-103 *			MW-101	MW-102	MW-104	MW-105	MW-106
Sample Date	GW-2	GW-3	8/17/2015	8/17/2015	8/17/2015	8/17/2015	1/6/2017	DUP	1/6/2017	1/6/2017	1/6/2017	1/6/2017	1/6/2017
VPH Fractions (mg/L)													
C9-C10 Aromatics	4	50	ND	ND	ND	**0.32**	-	-	-	-	-	-	-
VPH Target Compounds (ug/L)													
Naphthalene	700	20,000	ND	ND	ND	**5.7**	-	-	-	-	-	-	-
EPH Fractions (mg/L)													
C9-C18 Aliphatics	5	50	ND	ND	**1.1**	**9.8**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
C19-C36 Aliphatics	~	50	ND	ND	**0.27**	**1.4**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
C11-C22 Aromatics	50	5	ND	ND	**0.79**	**6.2**	**0.51**	**0.5**	<0.10	<0.10	<0.10	**0.14**	<0.10
EPH Target Compounds (ug/L)													
Fluorene	~	40	ND	ND	ND	**29**	-	-	-	-	-	-	-
2-Methylnaphthalene	2,000	20,000	ND	ND	ND	**34**	-	-	-	-	-	-	-
Naphthalene	700	20,000	ND	ND	ND	**24**	-	-	-	-	-	-	-
Phenanthrene	~	10,000	ND	ND	ND	**19**	-	-	-	-	-	-	-

QC: RMH 1/20/17

Notes

mg/L = milligrams per liter

ug/L = micrograms per liter

VPH = Volatile Petroleum Hydrocarbons

EPH = Extractable Petroleum Hydrocarbons

ND = Non Detect

~ = no standard

- = Not Sampled

*MW-3 was destroyed, MW-103 was installed in its location

Analytical results compared to the Massachusetts Contingency Plan (MCP) Method 1 Cleanup Standards 310 CMR 40.0000, revised January 2015.

Bold	Exceeds laboratory method detection limit.
Bold	Exceeds applicable MCP standards.

TABLE 7
SUMMARY OF MCP RISK ASSESSMENT - SOIL
DCAMM
NSCC -MCGEE BUILDING ADDITION

LOCATION	DATE	DEPTH	C9-C18 ALIPHATICS	C19-C36 ALIPHATICS	C11-C22 AROMATICS
TP-1	1/14/2015	2-6	**13**	**89**	**180**
TP-2	1/14/2015	3-8	<12	**33**	**130**
TP-3	1/14/2015	7-9.5	<12	**20**	**90**
TP-4	1/14/2015	7-9.5	<13	**32**	**190**
TP-5	1/15/2015	9-10	<12	**39**	**84**
TP-6	1/15/2015	9-10	<12	<12	**37**
TP-8	1/15/2015	9-10	<13	15	**250**
MW-101 (PID)	12/23/2016	5-10	<11	<11	**13**
MW-101 (WT)	12/23/2016	17	<11	<11	**33**
MW-102 (PID)	12/23/2016	10-15	**120**	**830**	**680**
MW-102 WT	12/23/2016	9	<11	**18**	**41**
MW-103-PID	12/22/2016	5-10	**280**	**49**	**170**
MW-103-WT	12/22/2016	10-15	<12	<12	**16**
MW-104-PID	12/22/2016	5-10	**15**	**98**	**68**
MW-104-WT	12/22/2016	10-15	<12	**53**	**32**
MW-105-PID	12/22/2016	10-15	**62**	**120**	**3300**
MW-105-WT	12/22/2016	10	<11	**72**	**120**
MW-106-PID	12/22/2016	10-15	<24	<24	**67**
MW-106-WT	12/22/2016	15	<11	<11	**21**
% Less Than Standard			*100%*	*100%*	*95%*
Max			*280*	*830*	*3300*
Exposure Point Concentration (arithmetic mean)			*35*	*82*	*291*
S-1/GW-2			*1000*	*3000*	*1000*
S-1/GW-3			*1000*	*3000*	*1000*

Notes:

BOLD	Parameter detected above laboratory detection limit
BOLD	Parameter exceeds the applicable MCP Method 1, S-1 standard

All concentrations in milligrams per kilogram

APPENDIX A

Public Notification Letters

5 Centennial Drive, Peabody, MA 01960 (HQ)
Tel: 978.532.1900

June 5, 2017

Ms. Michele Desmarais
Director of Public Heath
Lynn Board of Health
3 City Hall Square
Lynn, MA 01901

Re: **Phase II Comprehensive Site Assessment (CSA) Report and Permanent Solution Statement**
North Shore Community College
300 Broad Street
Lynn, Massachusetts
Release Tracking Number (RTN): 3-32907

Dear Ms. Desmarais,

Weston & Sampson, on behalf of the Division of Capital Asset Management and Maintenance (DCAMM), is hereby notifying your office that a Phase II Comprehensive Site Assessment (CSA) Report and Permanent Solution Statement (PSS) has been submitted to the Massachusetts Department of Environmental Protection (MassDEP) for the above-referenced location ("the Site"). The Phase II CSA Report and PSS has been prepared based on the results of the assessment of the Site. In accordance with 310 CMR 40.0830 and 40.1056 of the Massachusetts Contingency Plan (MCP), the Site has been classified as a Tier II site. Detected constituents are related to petroleum hydrocarbons found in soil and groundwater following test pitting activities at the Site.

This notification is provided in accordance with the public involvement requirements of the Massachusetts Contingency Plan (MCP), 310 CMR 40.0839. The Phase II CSA Report and PSS is on file and available for public review at online at the MassDEP's website (http://public.dep.state.ma.us/SearchableSites2/Search.aspx).

If you have any questions or concerns regarding this notice, please do not hesitate to contact the undersigned at (978) 532-1900.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.

Frank Ricciardi, P.E., LSP
Vice President, EG&G Program Manager

cc: DEP-NERO, Wilmington, MA
John O'Donnell, DCAMM
Richard Reney, NSCC

June 5, 2017

5 Centennial Drive, Peabody, MA 01960 (HQ)
Tel: 978.532.1900

Ms. Judith Flanagan Kennedy, City Mayor
Town of Lynn City Hall
3 City Hall Square
Lynn, MA 01901

Re: **Phase II Comprehensive Site Assessment (CSA) Report and Permanent Solution Statement**
North Shore Community College
300 Broad Street
Lynn, Massachusetts
Release Tracking Number (RTN): 3-32907

Dear Ms. Kennedy:

Weston & Sampson, on behalf of the Division of Capital Asset Management and Maintenance (DCAMM), is hereby notifying your office that a Phase II Comprehensive Site Assessment (CSA) Report and Permanent Solution Statement (PSS) has been submitted to the Massachusetts Department of Environmental Protection (MassDEP) for the above-referenced location ("the Site"). The Phase II CSA Report and PSS has been prepared based on the results of the assessment of the Site. In accordance with 310 CMR 40.0830 and 40.1056 of the Massachusetts Contingency Plan (MCP), the Site has been classified as a Tier II site. Detected constituents are related to petroleum hydrocarbons found in soil and groundwater following test pitting activities at the Site.

This notification is provided in accordance with the public involvement requirements of the Massachusetts Contingency Plan (MCP), 310 CMR 40.0839. The Phase II CSA Report and PSS is available for public review online at the MassDEP's website (http://public.dep.state.ma.us/SearchableSites2/Search.aspx).

If you have any questions or concerns regarding this notice, please do not hesitate to contact the undersigned at (978) 532-1900.

Sincerely,

WESTON & SAMPSON ENGINEERS, INC.

Frank Ricciardi, P.E., LSP
Vice President, EG&E Program Manager

cc: DEP-NERO, Wilmington, MA
John O'Donnell, DCAMM
Richard Reney, NSCC

NOTICE OF A PERMANENT SOLUTION STATEMENT

North Shore Community College
300 Broad Street
Lynn, Massachusetts

RELEASE TRACKING NUMBER (RTN) 3-32907

Pursuant to the Massachusetts Contingency Plan, (310 CMR 40.1000) a Permanent Solution Statement has been submitted to the Massachusetts Department of Environmental Protection at the above-referenced location.

A release of oil and/or hazardous materials has occurred at this location, which is a disposal site as defined by M.G.L. c. 21E, Section 2. This site has been classified as Tier II, pursuant to 310 CMR 40.0500. Response actions at this site were conducted in accordance with the Massachusetts Contingency Plan (310 CMR 40.0000). The Permanent Solution Statement has been prepared by Weston & Sampson Engineers, Inc. based on the results of a review of historic reports, response actions, and site investigation.

M.G.L. c. 21E and the Massachusetts Contingency Plan provided additional opportunities for public notice of and involvement in decisions regarding response actions at disposal sites. The Chief Municipal Official and Board of Health of the community in which the site is located were notified of major milestones and events, pursuant to 310 CMR 40.1403.

To obtain more information on this disposal site, please contact: Frank Ricciardi, P.E., LSP, of Weston & Sampson Engineers, Inc., Five Centennial Drive, Peabody, Massachusetts 01960 (1-978-532-1900).

APPENDIX B

Soil Boring Logs

Weston & Sampson℠

PROJECT
300 Broad Street
NSCC

REPORT OF BORING No. MW-101
SHEET 1 OF 1
Project No.
CHKD BY

BORING Co. New England Geotech
FOREMAN
WSE GEOLOGIST: PTK & CRG

BORING LOCATION 300 Broad Street Lynn MA
GROUND SURFACE ELEV. DATUM
DATE START 12/23/16 DATE END

SAMPLER: SAMPLER CONSISTS OF 1.375" ID SPLIT SPOON DRIVEN USING A 140-LB AUTOMATIC HAMMER
CASING: HSA with cutter head
CASING SIZE: 2 3/4" ID Method

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (lb/ft)	SAMPLE No.	SAMPLE PEN/REC (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION Burmister Classification	NOTES	STRATUM DESCRIPTION
			35/60"	0-5		ND	Top soil to 5"		
							5" - 5' = Urban fill with brown fine to coarse sand and gravel		Urban Fill
							with concrete asphalt and red brick fragments		
5			30/36"	5-10		1	Urban fill with fine to coarse sand some silty sand with gravel and blue clay		
10			60/60"	10-15		ND	Gray/blue clay Well set at 17'		
15									
20									
25									
30									
35									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

REMARKS:

NOTES:
1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No.

Weston & Sampson℠

PROJECT	REPORT OF BORING No.	MW-102
300 Broad Street NSCC	SHEET 1 OF 1	
	Project No.	
	CHKD BY	

BORING Co.	New England Geotech	BORING LOCATION	300 Broad Street Lynn MA
FOREMAN		GROUND SURFACE ELEV.	DATUM
WSE GEOLOGIST:	PTK & CRG	DATE START 12/23/16	DATE END

SAMPLER: SAMPLER CONSISTS OF 1.375" ID SPLIT SPOON DRIVEN USING A 140-LB AUTOMATIC HAMMER

CASING: HSA with cutter head

CASING SIZE: 2 3/4" ID Method

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (lb/ft)	SAMPLE No.	SAMPLE PEN/REC (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION Burmister Classification	NOTES	STRATUM DESCRIPTION
			27/60"	0-5		0.1	Top soil 5"		
							5" - 5' = Urban fill with brown fine to coarse sand and gravel		Urban Fill
							with brick and concrete fragments		
5			32/60"	5-10		0.2	Urban fill with red brick, asphalt and gravel fragments		
							Brown fine silty sand and clay		
							Wet at 9'		
10			45/60"	10-15		2	Urban fill with gray fine to coarse sand and gravel (saturated)		
15									
20									
25									
30									
35									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

REMARKS:

NOTES:
1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No.

Weston & Sampson℠

PROJECT	REPORT OF BORING No.	MW-103
300 Broad Street NSCC	SHEET 1 OF 1	
	Project No.	
	CHKD BY	

BORING Co.	New England Geotech	BORING LOCATION	300 Broad Street Lynn MA
FOREMAN		GROUND SURFACE ELEV.	DATUM
WSE GEOLOGIST:	PTK & CRG	DATE START 12/22/16	DATE END

SAMPLER: SAMPLER CONSISTS OF 1.375" ID SPLIT SPOON DRIVEN USING A 140-LB AUTOMATIC HAMMER

CASING: HSA with cutter head

CASING SIZE: 2 3/4" ID Method

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (lb/ft)	SAMPLE No.	SAMPLE PEN/REC (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION Burmister Classification	NOTES	STRATUM DESCRIPTION
			40/60	0-5		0.2	Top soil 8"		
							8" - 5' = Brown fine to medium sand		Urban Fill
5				5-10		75	Gray fine silty sand with fine to medium sand, concrete fragments		
							Organic material		
10			36/60	10-15		50	Gray fine to coarse sand with wood fragments, ash, organic material		
							Saturated		
15									
20									
25									
30									
35									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

REMARKS:

NOTES:
1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No.

Weston & Sampson℠

PROJECT: 300 Broad Street NSCC

REPORT OF BORING No. MW-104

SHEET 1 OF 1

Project No.

CHKD BY

BORING Co. New England Geotech

FOREMAN

WSE GEOLOGIST: PTK & CRG

BORING LOCATION 300 Broad Street Lynn MA

GROUND SURFACE ELEV. DATUM

DATE START 12/22/16 DATE END

SAMPLER: SAMPLER CONSISTS OF 1.375" ID SPLIT SPOON DRIVEN USING A 140-LB AUTOMATIC HAMMER

CASING: HSA with cutter head

CASING SIZE: 2 3/4" ID Method

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (lb/ft)	SAMPLE No.	SAMPLE PEN/REC (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION Burmister Classification	NOTES	STRATUM DESCRIPTION
			14/60	0-5		0.2	Top soil to 4"		
							4"-5' brown fine to coarse sand and gravel with urban fill, some red brick, asphalt fragments		Urban Fill
5			40/60"	5-10		1.2	Urban fill brown to gray fine to coarse sand with red brick, concrete, coal ash and cinder and blue clay at 10'		
10			36/60	10-15		0.2	Black fine to coarse sand with blue clay		
15							Well set at 15'		
20									
25									
30									
35									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

REMARKS:

NOTES:

1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No.

Weston & Sampson℠

PROJECT
300 Broad Street
NSCC

REPORT OF BORING No. MW-105
SHEET 1 OF 1
Project No.
CHKD BY

BORING Co. New England Geotech
FOREMAN
WSE GEOLOGIST: PTK & CRG

BORING LOCATION 300 Broad Street Lynn MA
GROUND SURFACE ELEV. DATUM
DATE START 12/22/16 DATE END

SAMPLER: SAMPLER CONSISTS OF 1.375" ID SPLIT SPOON DRIVEN USING A 140-LB AUTOMATIC HAMMER
CASING: HSA with cutter head
CASING SIZE: 2 3/4" ID Method

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (lb/ft)	SAMPLE No.	SAMPLE PEN/REC (in)	SAMPLE DEPTH (ft)	SAMPLE BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION Burmister Classification	NOTES	STRATUM DESCRIPTION
			50/60	0-5		ND	Top soil to 5"		
							5"-5' = Brown fine to coarse sand with some gravel and gray fine		Urban Fill
							silty sand and clay with bricks, ash		
5									
			30/60	5-10		ND	Urban fill with gray fine silty sand clay, brick fragments, asphalt and wood fragments		
							Wet at 10'		
10									
			36/60	10-15		0.8	Urban fill with gray to black fine to to coarse sand and silty sand with with clay (soft)		
							Ash cinder, coal, minor odor		
15									
20									
25									
30									
35									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

REMARKS:

NOTES:
1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No.

Weston & Sampson℠

PROJECT	REPORT OF BORING No.	MW-106
300 Broad Street NSCC	SHEET 1 OF 1	
	Project No.	
	CHKD BY	

BORING Co.	New England Geotech	BORING LOCATION	300 Broad Street Lynn MA
FOREMAN		GROUND SURFACE ELEV.	DATUM
WSE GEOLOGIST:	PTK & CRG	DATE START 12/22/16	DATE END

SAMPLER: SAMPLER CONSISTS OF 1.375" ID SPLIT SPOON DRIVEN USING A 140-LB AUTOMATIC HAMMER

CASING: HSA with cutter head

CASING SIZE: 2 3/4" ID Method

GROUNDWATER READINGS

DATE	TIME	WATER AT	CASING AT	STABILIZATION TIME

DEPTH (feet)	CASING (lb/ft)	SAMPLE No.	PEN/REC (in)	DEPTH (ft)	BLOWS/6"	PID (ppm)	SAMPLE DESCRIPTION Burmister Classification	NOTES	STRATUM DESCRIPTION
			50/60	0-5		0.2	Top soil to 6" with urban fill with brown fine to coarse sand and gravel		Urban Fill
5			50/60	5-10		1.1	Urban fill with gray fine silty sand and brick fragments Organic material		
10			36/60	10-15		4	Gray fine to coarse sand with wood fragments, ash, organic material Saturated		
15									
20									
25									
30									
35									

GRANULAR SOILS		COHESIVE SOILS	
BLOWS/FT	DENSITY	BLOWS/FT	DENSITY
0-4	V. LOOSE	0-2	V. SOFT
4-10	LOOSE	2-4	SOFT
10-30	M. DENSE	4-8	M. STIFF
30-50	DENSE	8-15	STIFF
> 50	V. DENSE	15-30	V. STIFF
		> 30	HARD

REMARKS:

NOTES:
1) THE STRATIFICATION LINES REPRESENT THE APPROXIMATE BOUNDARY BETWEEN SOIL TYPES. TRANSITIONS MAY BE GRADUAL.
2) WATER LEVEL READINGS HAVE BEEN MADE IN THE DRILL HOLES AT TIMES AND UNDER CONDITIONS STATED ON THIS BORING LOG. FLUCTUATIONS IN THE LEVEL OF GROUNDWATER MAY OCCUR DUE TO OTHER FACTORS THAN THOSE PRESENT AT THE TIME MEASUREMENTS ARE MADE.

BORING No.

APPENDIX C

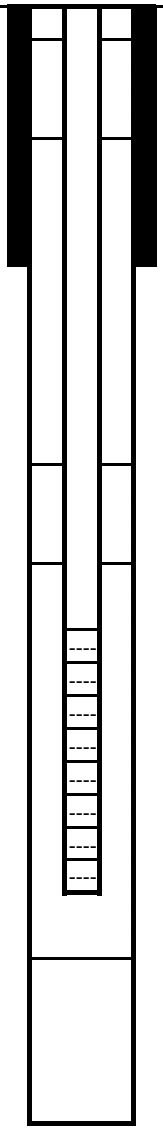
Monitoring Well Completion Logs

GROUNDWATER MONITORING WELL INSTALLATION REPORT

PROJECT NAME/NO.	NSCC			**MONITORING WELL NO.**	
LOCATION	300 Broad Street Lynn MA			**MW-101**	
CLIENT	DCAMM			ELEVATION	
CONTRACTOR	NE Geotech.	DRILLER	Maynard	TOP OF PVC	
OBSERVED BY	PTK	DATE	12/23/16	DEPTH TO GROUNDWATER FROM	
CHECKED BY		DATE		TOP OF PVC	

GROUND ELEVATION

GENERAL SOIL CONDITIONS (NOT TO SCALE)



<---------	FLUSH-MOUNTED ROADBOX	(GROUND SURFACE)
	THICKNESS OF SURFACE SEAL(S)	1'
<---------	TYPE OF SURFACE SEAL(S)	Concrete
	TYPE OF SURFACE CASING	Aluminum
<---------	ID OF SURFACE CASING	5"
<---------	DEPTH BOTTOM OF CASING	1'
	ID OF RISER PIPE	2"
<---------	TYPE OF RISER PIPE	Schedule 40 PVC
<---------	TYPE OF BACKFILL AROUND RISER PIPE	Native Fill
	DEPTH TOP OF SEAL	3'
<---------	TYPE OF SEAL	Bentonite
	DEPTH BOTTOM OF SEAL/TOP OF SAND COLUMN	5'
<---------	DEPTH TOP OF SCREEN	7'
	TYPE OF SCREEN	Schedule 40 PVC
<---------	SIZE OPENINGS	0.010"
	ID OF SCREEN	2"
<---------	TYPE OF BACKFILL AROUND SCREEN	Filter Sand
<---------	DEPTH BOTTOM OF SCREEN	17'
<---------	DEPTH BOTTOM OF SAND COLUMN	17'
<---------	TYPE OF BACKFILL BELOW SCREEN	Filter Sand
<---------	DIAMETER OF BOREHOLE	4"
<---------	DEPTH BOTTOM OF BOREHOLE	17'

NOTES:
native fill to 1'

MONITORING WELL NO.
MW-101

WESTON & SAMPSON
ENGINEERS, INC.

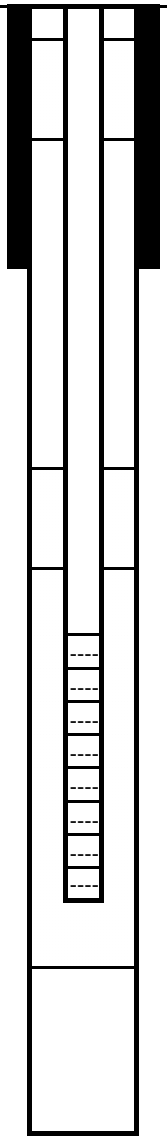
O:\DCAMM\NSCC McGee Building Addition MCP\Phase II Field Data and Information\Well Installation 12-22-16\[NSCC Well Installation Logs.xls]MW-101

GROUNDWATER MONITORING WELL INSTALLATION REPORT

PROJECT NAME/NO.	NSCC			**MONITORING WELL NO.**	
LOCATION	300 Broad Street Lynn MA			**MW-102**	
CLIENT	DCAMM			ELEVATION	
CONTRACTOR	NE Geotech.	DRILLER	Maynard	TOP OF PVC	
OBSERVED BY	PTK	DATE	12/22/16	DEPTH TO GROUNDWATER FROM	
CHECKED BY		DATE		TOP OF PVC	

GROUND ELEVATION

GENERAL SOIL CONDITIONS (NOT TO SCALE)



<---------	FLUSH-MOUNTED ROADBOX	(GROUND SURFACE)
	THICKNESS OF SURFACE SEAL(S)	1'
<---------	TYPE OF SURFACE SEAL(S)	Concrete
	TYPE OF SURFACE CASING	Aluminum
<---------	ID OF SURFACE CASING	5"
<---------	DEPTH BOTTOM OF CASING	1'
	ID OF RISER PIPE	2"
<---------	TYPE OF RISER PIPE	Schedule 40 PVC
<---------	TYPE OF BACKFILL AROUND RISER PIPE	Native Fill
	DEPTH TOP OF SEAL	1'
<---------	TYPE OF SEAL	Bentonite
	DEPTH BOTTOM OF SEAL/TOP OF SAND COLUMN	3'
<---------	DEPTH TOP OF SCREEN	5'
	TYPE OF SCREEN	Schedule 40 PVC
<---------	SIZE OPENINGS	0.010"
	ID OF SCREEN	2"
<---------	TYPE OF BACKFILL AROUND SCREEN	Filter Sand
<---------	DEPTH BOTTOM OF SCREEN	15'
<---------	DEPTH BOTTOM OF SAND COLUMN	15'
<---------	TYPE OF BACKFILL BELOW SCREEN	Filter Sand
<---------	DIAMETER OF BOREHOLE	4"
<---------	DEPTH BOTTOM OF BOREHOLE	15'

NOTES:

MONITORING WELL NO.
MW-102

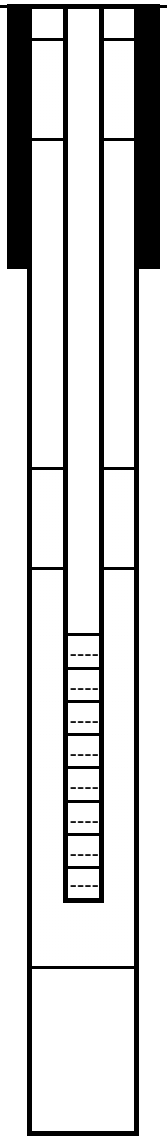
WESTON & SAMPSON ENGINEERS, INC.

GROUNDWATER MONITORING WELL INSTALLATION REPORT

PROJECT NAME/NO.	NSCC			**MONITORING WELL NO.**	
LOCATION	300 Broad Street Lynn MA			**MW-103**	
CLIENT	DCAMM			ELEVATION	
CONTRACTOR	NE Geotech.	DRILLER	Maynard	TOP OF PVC	
OBSERVED BY	PTK	DATE	12/22/16	DEPTH TO GROUNDWATER FROM	
CHECKED BY		DATE		TOP OF PVC	

GROUND ELEVATION

GENERAL SOIL CONDITIONS (NOT TO SCALE)



<---------	FLUSH-MOUNTED ROADBOX	(GROUND SURFACE)
	THICKNESS OF SURFACE SEAL(S)	1'
<---------	TYPE OF SURFACE SEAL(S)	Concrete
	TYPE OF SURFACE CASING	Aluminum
<---------	ID OF SURFACE CASING	5"
<---------	DEPTH BOTTOM OF CASING	1'
	ID OF RISER PIPE	2"
<---------	TYPE OF RISER PIPE	Schedule 40 PVC
<---------	TYPE OF BACKFILL AROUND RISER PIPE	Native Fill
	DEPTH TOP OF SEAL	1'
<---------	TYPE OF SEAL	Bentonite
	DEPTH BOTTOM OF SEAL/TOP OF SAND COLUMN	3'
<---------	DEPTH TOP OF SCREEN	5'
	TYPE OF SCREEN	Schedule 40 PVC
<---------	SIZE OPENINGS	0.010"
	ID OF SCREEN	2"
<---------	TYPE OF BACKFILL AROUND SCREEN	Filter Sand
<---------	DEPTH BOTTOM OF SCREEN	15'
<---------	DEPTH BOTTOM OF SAND COLUMN	15'
<---------	TYPE OF BACKFILL BELOW SCREEN	Filter Sand
<---------	DIAMETER OF BOREHOLE	4"
<---------	DEPTH BOTTOM OF BOREHOLE	15'

NOTES:

MONITORING WELL NO.
MW-103

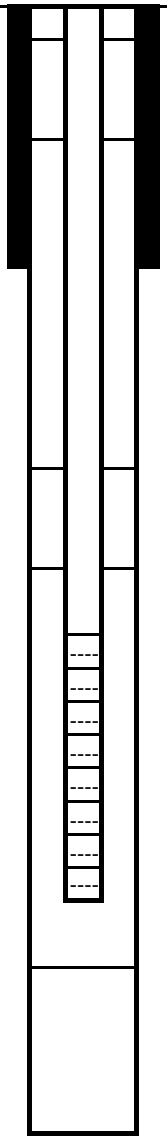
WESTON & SAMPSON ENGINEERS, INC.

GROUNDWATER MONITORING WELL INSTALLATION REPORT

PROJECT NAME/NO.	NSCC			**MONITORING WELL NO.**	
LOCATION	300 Broad Street Lynn MA			**MW-104**	
CLIENT	DCAMM			ELEVATION	
CONTRACTOR	NE Geotech.	DRILLER	Maynard	TOP OF PVC	
OBSERVED BY	PTK	DATE	12/22/16	DEPTH TO GROUNDWATER FROM	
CHECKED BY		DATE		TOP OF PVC	

GROUND ELEVATION

GENERAL SOIL CONDITIONS (NOT TO SCALE)



<---------	FLUSH-MOUNTED ROADBOX	(GROUND SURFACE)
	THICKNESS OF SURFACE SEAL(S)	1'
<---------	TYPE OF SURFACE SEAL(S)	Concrete
	TYPE OF SURFACE CASING	Aluminum
<---------	ID OF SURFACE CASING	5"
<---------	DEPTH BOTTOM OF CASING	1'
	ID OF RISER PIPE	2"
<---------	TYPE OF RISER PIPE	Schedule 40 PVC
<---------	TYPE OF BACKFILL AROUND RISER PIPE	Native Fill
	DEPTH TOP OF SEAL	1'
<---------	TYPE OF SEAL	Bentonite
	DEPTH BOTTOM OF SEAL/TOP OF SAND COLUMN	3'
<---------	DEPTH TOP OF SCREEN	5'
	TYPE OF SCREEN	Schedule 40 PVC
<---------	SIZE OPENINGS	0.010"
	ID OF SCREEN	2"
<---------	TYPE OF BACKFILL AROUND SCREEN	Filter Sand
<---------	DEPTH BOTTOM OF SCREEN	15'
<---------	DEPTH BOTTOM OF SAND COLUMN	15'
<---------	TYPE OF BACKFILL BELOW SCREEN	Filter Sand
<---------	DIAMETER OF BOREHOLE	4"
<---------	DEPTH BOTTOM OF BOREHOLE	15'

NOTES:

MONITORING WELL NO.
MW-104

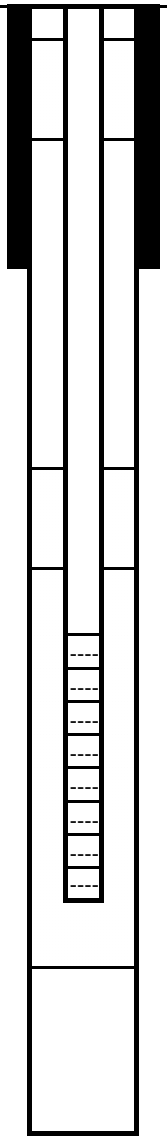
WESTON & SAMPSON ENGINEERS, INC.

GROUNDWATER MONITORING WELL INSTALLATION REPORT

PROJECT NAME/NO.	NSCC			**MONITORING WELL NO.**	
LOCATION	300 Broad Street Lynn MA			**MW-105**	
CLIENT	DCAMM			ELEVATION	
CONTRACTOR	NE Geotech.	DRILLER	Maynard	TOP OF PVC	
OBSERVED BY	PTK	DATE	12/22/16	DEPTH TO GROUNDWATER FROM	
CHECKED BY		DATE		TOP OF PVC	

GROUND ELEVATION

GENERAL SOIL CONDITIONS (NOT TO SCALE)



<---------	FLUSH-MOUNTED ROADBOX	(GROUND SURFACE)
	THICKNESS OF SURFACE SEAL(S)	1'
<---------	TYPE OF SURFACE SEAL(S)	Concrete
	TYPE OF SURFACE CASING	Aluminum
<---------	ID OF SURFACE CASING	5"
<---------	DEPTH BOTTOM OF CASING	1'
	ID OF RISER PIPE	2"
<---------	TYPE OF RISER PIPE	Schedule 40 PVC
<---------	TYPE OF BACKFILL AROUND RISER PIPE	Native Fill
	DEPTH TOP OF SEAL	1'
<---------	TYPE OF SEAL	Bentonite
	DEPTH BOTTOM OF SEAL/TOP OF SAND COLUMN	3'
<---------	DEPTH TOP OF SCREEN	5'
	TYPE OF SCREEN	Schedule 40 PVC
<---------	SIZE OPENINGS	0.010"
	ID OF SCREEN	2"
<---------	TYPE OF BACKFILL AROUND SCREEN	Filter Sand
<---------	DEPTH BOTTOM OF SCREEN	15'
<---------	DEPTH BOTTOM OF SAND COLUMN	15'
<---------	TYPE OF BACKFILL BELOW SCREEN	Filter Sand
<---------	DIAMETER OF BOREHOLE	4"
<---------	DEPTH BOTTOM OF BOREHOLE	20'

NOTES:

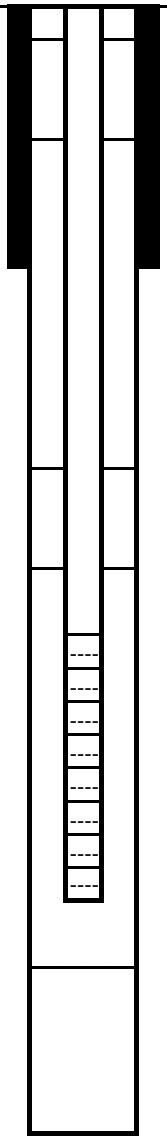
MONITORING WELL NO.
MW-105

WESTON & SAMPSON ENGINEERS, INC.

GROUNDWATER MONITORING WELL INSTALLATION REPORT

PROJECT NAME/NO.	NSCC			**MONITORING WELL NO.**	
LOCATION	300 Broad Street Lynn MA			**MW-106**	
CLIENT	DCAMM			ELEVATION	
CONTRACTOR	NE Geotech.	DRILLER	Maynard	TOP OF PVC	
OBSERVED BY	PTK	DATE	12/22/16	DEPTH TO GROUNDWATER FROM	
CHECKED BY		DATE		TOP OF PVC	

GROUND ELEVATION



GENERAL SOIL CONDITIONS
(NOT TO SCALE)

	THICKNESS OF SURFACE SEAL(S)	1'
<---------	TYPE OF SURFACE SEAL(S)	Concrete
	TYPE OF SURFACE CASING	Aluminum
<---------	ID OF SURFACE CASING	5"
<---------	DEPTH BOTTOM OF CASING	1'
	ID OF RISER PIPE	2"
<---------	TYPE OF RISER PIPE	Schedule 40 PVC
<---------	TYPE OF BACKFILL AROUND RISER PIPE	Native Fill
	DEPTH TOP OF SEAL	6'
<---------	TYPE OF SEAL	Bentonite
	DEPTH BOTTOM OF SEAL/TOP OF SAND COLUMN	8'
<---------	DEPTH TOP OF SCREEN	6'
	TYPE OF SCREEN	Schedule 40 PVC
<---------	SIZE OPENINGS	0.010"
	ID OF SCREEN	2"
<---------	TYPE OF BACKFILL AROUND SCREEN	Filter Sand
<---------	DEPTH BOTTOM OF SCREEN	16'
<---------	DEPTH BOTTOM OF SAND COLUMN	16'
<---------	TYPE OF BACKFILL BELOW SCREEN	Filter Sand
<---------	DIAMETER OF BOREHOLE	4"
<---------	DEPTH BOTTOM OF BOREHOLE	16.00

NOTES:

MONITORING WELL NO.
MW-106

WESTON & SAMPSON
ENGINEERS, INC.

APPENDIX D

Groundwater Sampling Purge Reports

Low-Flow Well Sampling Report

Master Record Id: 1

DCAMM NSCC
300 Broad Street, Lynn, MA
January 2017
Project Number 2150740

Sampled Padriac Kavanaugh

Well Details **Well Record Id:** 16

Well ID	Well	Riser Diameter	Screen Length	Total Depth (Feet)	Initial DTW (Feet)	Intake Set At	Purge Water Initial Condition
MW-101	Flush	2" PVC	10.0	17.0	9.29	14.0	

Purge Details

Time	Flow (mL/min)	DTW (Feet)	Turbidity (NTU)	ORP (mV)	Temp (C)	SPC(µS/cm)	DO (mg/L)	pH (Unitless)
08:14:00	200	10.5						
08:20:00	120	10.85						
08:23:00	120	11.15						
08:28:00	110	11.73						
08:32:00	200	12.6						

Purge Results

Purge Water Final Conditions	Clear	**Total Purge Volume**	
Sample Collected	EPH	**Field Filtered**	No
Sample Date and Time	01/05/2017 1:09 PM		

Notes

Run well dry and allow to recharge

Low-Flow Well Sampling Report

Master Record Id: 1

DCAMM NSCC
300 Broad Street, Lynn, MA
January 2017
Project Number 2150740

Sampled Padriac Kavanaugh

Well Details **Well Record Id:** 1

Well ID	Well	Riser Diameter	Screen Length	Total Depth (Feet)	Initial DTW (Feet)	Intake Set At	Purge Water Initial Condition
MW-102	Flush	2" PVC	10.0	15.0	6.31	13.0	

Purge Details

Time	Flow (mL/min)	DTW (Feet)	Turbidity (NTU)	ORP (mV)	Temp (C)	SPC(µS/cm)	DO (mg/L)	pH (Unitless)
09:47:00	200	6.9						
09:50:00	200	7.24						
09:53:00	200	7.59						
10:00:00	120	7.7						
10:02:00	120	7.73						
10:06:00	110	7.75	29.3	-0.7	9.08	1	1.9	7.13
10:11:00	100	7.8	21.1	-25.0	9.34	1	1.55	7.36
10:17:00	100	7.8	19.3	-35.0	9.17	1	1.62	7.36
10:21:00	100	7.81	15.1	-36.5	9.26	1	0.36	7.42
10:25:00	100	7.82	15.2	-43.5	10.31	1	0.34	7.39
10:29:00	100	7.85	14.8	-54.9	12.36	1	-3.0	7.39
10:39:00								
10:57:00	100	7.82	7.53	-88.0	8.86	1	1.18	7.48
11:05:00	100	7.82	6.5	-92.0	8.78	1	1.03	7.5
11:09:00	100	7.82		-95.0	9.17	1	1.12	7.52

Purge Results

Purge Water Final Conditions		**Total Purge Volume**	
Sample Collected	EPH	**Field Filtered**	No
Sample Date and Time	01/05/2017 2:43 PM		
Notes			

Low-Flow Well Sampling Report

Master Record Id: 4

DCAMM NSCC
300 Broad Street, Lynn, MA
January 2017
Project Number 2150740

Sampled Christine Ganser

Well Details **Well Record Id:** 7

Well ID	Well	Riser Diameter	Screen Length	Total Depth (Feet)	Initial DTW (Feet)	Intake Set At	Purge Water Initial Condition
MW-103	Flush	2" PVC	10.0	14.3	7.44	5.0	Petro odor, no sheen, clear

Purge Details

Time	Flow (mL/min)	DTW (Feet)	Turbidity (NTU)	ORP (mV)	Temp (C)	SPC(µS/cm)	DO (mg/L)	pH (Unitless)
14:56:00	180	7.46	5.21	-72.1	10.29	1	0.41	6.62
15:04:00	180	7.46	3.7	-77.7	10.31	1	0.25	6.51
15:09:00	180	7.46	3.34	-79.4	9.92	1	0.24	6.51
15:14:00	180	7.46	3.12	-79.6	9.92	1	0.21	6.51
15:22:00	180	7.46	2.79	-81.3	10.36	1	0.18	6.51

Purge Results

Purge Water Final Conditions	Clear, petro odor, no sheen	**Total Purge Volume**	2 gal
Sample Collected	EPH	**Field Filtered**	No
Sample Date and Time	01/05/2017 7:32 PM		
Notes			

Low-Flow Well Sampling Report

Master Record Id: 4

DCAMM NSCC
300 Broad Street, Lynn, MA
January 2017
Project Number 2150740

Sampled Christine Ganser

Well Details **Well Record Id:** 4

Well ID	Well	Riser Diameter	Screen Length	Total Depth (Feet)	Initial DTW (Feet)	Intake Set At	Purge Water Initial Condition
MW-104	Flush	2" PVC	10.0	15.0	5.12	5.0	Cloudy, visible suspended solids, slightly orange

Purge Details

Time	Flow (mL/min)	DTW (Feet)	Turbidity (NTU)	ORP (mV)	Temp (C)	SPC(µS/cm)	DO (mg/L)	pH (Unitless)
13:00:00	100	6.25	21.3	-73.4	6.73	1	0.71	6.93
13:13:00	120	6.64	13.7	-120.2	9.82	1	0.36	7.13
13:18:00	120	6.64	15.4	-123.1	9.4	1	0.29	7.16
13:25:00	120	6.65	12.4	-118.7	9.36	1	0.25	7.17
13:30:00	120	6.65	12.0	-121.6	9.51	1	0.21	7.17
13:35:00	120	6.65	10.99	-124.8	9.59	1	0.2	7.18
13:41:00	120	6.66	11.5	-131.4	9.52	1	0.2	7.21
13:46:00	120	6.66	11.9	-125.6	9.16	1	0.21	7.2
13:51:00	120	6.66	11.5	-131.2	9.2	1	0.22	7.23

Purge Results

Purge Water Final Conditions	Cloudy, orange	**Total Purge Volume**	3.5 gallons
Sample Collected	EPH	**Field Filtered**	No
Sample Date and Time	01/05/2017 6:55 PM		
Notes			

Low-Flow Well Sampling Report

Master Record Id: 1

DCAMM NSCC
300 Broad Street, Lynn, MA
January 2017
Project Number 2150740

Sampled Padriac Kavanaugh

Well Details **Well Record Id:** 10

Well ID	Well	Riser Diameter	Screen Length	Total Depth (Feet)	Initial DTW (Feet)	Intake Set At	Purge Water Initial Condition
MW-105	Flush	2" PVC	10.0	15.0	9.31	12.5	

Purge Details

Time	Flow (mL/min)	DTW (Feet)	Turbidity (NTU)	ORP (mV)	Temp (C)	SPC(µS/cm)	DO (mg/L)	pH (Unitless)
12:42:00	250	9.32						
12:50:00	150	9.31	9.97	27.3	12.34	0	2.18	6.82
12:58:00	150	9.31	6.38	40.0	11.67	0	1.42	6.81
13:03:00	150	9.31	4.97	48.3	12.07	0	1.37	6.79
13:09:00	150	9.31	6.67	53.7	12.07	0	1.18	6.79
13:12:00	150	9.31	5.55	56.1	12.04	0	1.15	6.79

Purge Results

Purge Water Final Conditions		**Total Purge Volume**	
Sample Collected	EPH	**Field Filtered**	No
Sample Date and Time	01/05/2017 5:40 PM		
Notes			

Low-Flow Well Sampling Report

Master Record Id: 1

DCAMM NSCC
300 Broad Street, Lynn, MA
January 2017
Project Number 2150740

Sampled Padriac Kavanaugh

Well Details **Well Record Id:** 13

Well ID	Well	Riser Diameter	Screen Length	Total Depth (Feet)	Initial DTW (Feet)	Intake Set At	Purge Water Initial Condition
MW-106	Flush	2" PVC	10.0	16.0	9.89	13.0	

Purge Details

Time	Flow (mL/min)	DTW (Feet)	Turbidity (NTU)	ORP (mV)	Temp (C)	SPC(µS/cm)	DO (mg/L)	pH (Unitless)
13:47:00	225	9.6						
13:57:00	150	9.89	12.4	-53.0	10.63	1	1.26	7.05
14:01:00	150	9.89	11.6	-29.0	10.5	1	1.17	6.97
14:06:00	150	9.89	5.7	-7.6	10.83	0	1.03	6.9
14:10:00	150	9.89	4.69	-5.9	10.2	0	1.23	6.91
14:18:00	150	9.89	4.3	-4.3	10.46	0	1.1	6.91

Purge Results

Purge Water Final Conditions		**Total Purge Volume**	
Sample Collected	EPH	**Field Filtered**	No
Sample Date and Time	01/05/2017 6:31 PM		
Notes			

APPENDIX E

Laboratory Analytical Report

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

January 5, 2017

Christine Ganser
Weston & Sampson Engineers MA
5 Centennial Drive
Peabody, MA 01960

Project Location: Lynn, MA
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 16L1128

Enclosed are results of analyses for samples received by the laboratory on December 22, 2016. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

16L1128-01 5

16L1128-02 7

16L1128-03 9

16L1128-04 11

16L1128-05 13

16L1128-06 15

16L1128-07 17

16L1128-08 19

Sample Preparation Information 21

QC Data 22

Petroleum Hydrocarbons Analyses - EPH 22

B166837 22

B167010 23

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) 25

B166941 25

Flag/Qualifier Summary 26

Certifications 27

Chain of Custody/Sample Receipt 28

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Weston & Sampson Engineers MA
5 Centennial Drive
Peabody, MA 01960
ATTN: Christine Ganser

REPORT DATE: 1/5/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 16L1128

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Lynn, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-106-WT	16L1128-01	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
MW-106-PID	16L1128-02	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
MW-103-WT	16L1128-03	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
MW-103-PID	16L1128-04	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
MW-105-WT	16L1128-05	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
MW-105-PID	16L1128-06	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
MW-104-PID	16L1128-07	Soil		MADEP-EPH-04-1.1	
				SM 2540G	
MW-104-WT	16L1128-08	Soil		MADEP-EPH-04-1.1	
				SM 2540G	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT - 1/5/2017 - Per clients requset, only report EPH ranges.

MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C 11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Tod E. Kopyscinski
Laboratory Director

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-106-WT | Sampled: 12/22/2016 11:30

Sample ID: 16L1128-01

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:02	SCS
C19-C36 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:02	SCS
Unadjusted C11-C22 Aromatics	31	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:02	SCS
C11-C22 Aromatics	21	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:02	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	58.2	40-140		12/30/16 12:02
o-Terphenyl (OTP)	63.7	40-140		12/30/16 12:02
2-Bromonaphthalene	66.9	40-140		12/30/16 12:02
2-Fluorobiphenyl	74.2	40-140		12/30/16 12:02

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-106-WT | Sampled: 12/22/2016 11:30

Sample ID: 16L1128-01

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	89.5		% Wt	1		SM 2540G	12/30/16	1/3/17 7:53	MRL

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-106-PID | Sampled: 12/22/2016 11:30

Sample ID: 16L1128-02

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	24	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:22	SCS
C19-C36 Aliphatics	ND	24	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:22	SCS
Unadjusted C11-C22 Aromatics	99	24	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:22	SCS
C11-C22 Aromatics	67	24	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:22	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	56.2	40-140		12/30/16 12:22
o-Terphenyl (OTP)	59.2	40-140		12/30/16 12:22
2-Bromonaphthalene	68.8	40-140		12/30/16 12:22
2-Fluorobiphenyl	79.3	40-140		12/30/16 12:22

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-106-PID | Sampled: 12/22/2016 11:30

Sample ID: 16L1128-02

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	81.7		% Wt	1		SM 2540G	12/30/16	1/3/17 7:53	MRL

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-103-WT | Sampled: 12/22/2016 09:45

Sample ID: 16L1128-03

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:42	SCS
C19-C36 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:42	SCS
Unadjusted C11-C22 Aromatics	20	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:42	SCS
C11-C22 Aromatics	16	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 12:42	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	52.7	40-140		12/30/16 12:42
o-Terphenyl (OTP)	58.9	40-140		12/30/16 12:42
2-Bromonaphthalene	66.6	40-140		12/30/16 12:42
2-Fluorobiphenyl	74.5	40-140		12/30/16 12:42

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-103-WT | Sampled: 12/22/2016 09:45

Sample ID: 16L1128-03

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	85.0		% Wt	1		SM 2540G	12/30/16	1/3/17 7:53	MRL

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-103-PID | Sampled: 12/22/2016 09:45

Sample ID: 16L1128-04

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	280	24	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 13:03	SCS
C19-C36 Aliphatics	49	24	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 13:03	SCS
Unadjusted C11-C22 Aromatics	180	24	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 13:03	SCS
C11-C22 Aromatics	170	24	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 13:03	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	55.0	40-140		12/30/16 13:03
o-Terphenyl (OTP)	59.5	40-140		12/30/16 13:03
2-Bromonaphthalene	62.5	40-140		12/30/16 13:03
2-Fluorobiphenyl	72.0	40-140		12/30/16 13:03

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-103-PID | Sampled: 12/22/2016 09:45

Sample ID: 16L1128-04

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.4		% Wt	1		SM 2540G	12/30/16	1/3/17 7:53	MRL

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-105-WT | Sampled: 12/22/2016 13:45

Sample ID: 16L1128-05

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 13:23	SCS
C19-C36 Aliphatics	72	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 13:23	SCS
Unadjusted C11-C22 Aromatics	170	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 13:23	SCS
C11-C22 Aromatics	120	11	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 13:23	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	50.1	40-140		12/30/16 13:23
o-Terphenyl (OTP)	56.6	40-140		12/30/16 13:23
2-Bromonaphthalene	74.5	40-140		12/30/16 13:23
2-Fluorobiphenyl	82.0	40-140		12/30/16 13:23

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-105-WT | Sampled: 12/22/2016 13:45

Sample ID: 16L1128-05

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	88.5		% Wt	1		SM 2540G	12/30/16	1/3/17 7:53	MRL

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-105-PID | Sampled: 12/22/2016 13:45

Sample ID: 16L1128-06

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	62	48	mg/Kg dry	1		MADEP-EPH-04-1.1	1/3/17	1/4/17 14:30	SCS
C19-C36 Aliphatics	120	48	mg/Kg dry	1		MADEP-EPH-04-1.1	1/3/17	1/4/17 14:30	SCS
Unadjusted C11-C22 Aromatics	6800	480	mg/Kg dry	10		MADEP-EPH-04-1.1	1/3/17	1/4/17 15:02	SCS
C11-C22 Aromatics	3300	480	mg/Kg dry	10		MADEP-EPH-04-1.1	1/3/17	1/4/17 15:02	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	54.3	40-140		1/4/17 14:30
o-Terphenyl (OTP)	65.7	40-140		1/4/17 14:30
2-Bromonaphthalene	69.7	40-140		1/4/17 14:30
2-Fluorobiphenyl	85.6	40-140		1/4/17 14:30

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-105-PID | Sampled: 12/22/2016 13:45

Sample ID: 16L1128-06

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	83.1		% Wt	1		SM 2540G	12/30/16	1/3/17 7:53	MRL

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-104-PID | Sampled: 12/22/2016 15:00

Sample ID: 16L1128-07

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	15	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 14:04	SCS
C19-C36 Aliphatics	98	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 14:04	SCS
Unadjusted C11-C22 Aromatics	90	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 14:04	SCS
C11-C22 Aromatics	68	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 14:04	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	51.2	40-140		12/30/16 14:04
o-Terphenyl (OTP)	58.1	40-140		12/30/16 14:04
2-Bromonaphthalene	71.9	40-140		12/30/16 14:04
2-Fluorobiphenyl	80.3	40-140		12/30/16 14:04

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-104-PID | Sampled: 12/22/2016 15:00

Sample ID: 16L1128-07

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	82.9		% Wt	1		SM 2540G	12/30/16	1/3/17 7:53	MRL

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-104-WT | Sampled: 12/22/2016 15:00

Sample ID: 16L1128-08

Sample Matrix: Soil

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 14:24	SCS
C19-C36 Aliphatics	53	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 14:24	SCS
Unadjusted C11-C22 Aromatics	40	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 14:24	SCS
C11-C22 Aromatics	32	12	mg/Kg dry	1		MADEP-EPH-04-1.1	12/29/16	12/30/16 14:24	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	52.0	40-140		12/30/16 14:24
o-Terphenyl (OTP)	56.1	40-140		12/30/16 14:24
2-Bromonaphthalene	67.7	40-140		12/30/16 14:24
2-Fluorobiphenyl	78.3	40-140		12/30/16 14:24

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA | Sample Description: | Work Order: 16L1128

Date Received: 12/22/2016

Field Sample #: MW-104-WT | Sampled: 12/22/2016 15:00

Sample ID: 16L1128-08

Sample Matrix: Soil

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
% Solids	84.4		% Wt	1		SM 2540G	12/30/16	1/3/17 7:53	MRL

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3546-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16L1128-01 [MW-106-WT]	B166837	20.1	2.00	12/29/16
16L1128-02 [MW-106-PID]	B166837	10.0	2.00	12/29/16
16L1128-03 [MW-103-WT]	B166837	20.2	2.00	12/29/16
16L1128-04 [MW-103-PID]	B166837	10.0	2.00	12/29/16
16L1128-05 [MW-105-WT]	B166837	20.2	2.00	12/29/16
16L1128-07 [MW-104-PID]	B166837	20.2	2.00	12/29/16
16L1128-08 [MW-104-WT]	B166837	20.0	2.00	12/29/16

Prep Method: SW-846 3546-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [g]	Final [mL]	Date
16L1128-06RE1 [MW-105-PID]	B167010	5.00	2.00	01/03/17

Prep Method: % Solids-SM 2540G

Lab Number [Field ID]	Batch	Date
16L1128-01 [MW-106-WT]	B166941	12/30/16
16L1128-02 [MW-106-PID]	B166941	12/30/16
16L1128-03 [MW-103-WT]	B166941	12/30/16
16L1128-04 [MW-103-PID]	B166941	12/30/16
16L1128-05 [MW-105-WT]	B166941	12/30/16
16L1128-06 [MW-105-PID]	B166941	12/30/16
16L1128-07 [MW-104-PID]	B166941	12/30/16
16L1128-08 [MW-104-WT]	B166941	12/30/16

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B166837 - SW-846 3546										
Blank (B166837-BLK1)				Prepared & Analyzed: 12/29/16						
C9-C18 Aliphatics	ND	10	mg/Kg wet							
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
n-Decane	ND	0.10	mg/Kg wet							
n-Docosane	ND	0.10	mg/Kg wet							
n-Dodecane	ND	0.10	mg/Kg wet							
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	*2.83*		mg/Kg wet	5.00		56.7	40-140			
Surrogate: o-Terphenyl (OTP)	*2.98*		mg/Kg wet	5.00		59.6	40-140			
Surrogate: 2-Bromonaphthalene	*3.96*		mg/Kg wet	5.00		79.2	40-140			
Surrogate: 2-Fluorobiphenyl	*4.25*		mg/Kg wet	5.00		85.1	40-140			
LCS (B166837-BS1)				Prepared & Analyzed: 12/29/16						
n-Decane	2.34	0.10	mg/Kg wet	5.00		46.8	40-140			
n-Docosane	3.31	0.10	mg/Kg wet	5.00		66.2	40-140			
n-Dodecane	2.80	0.10	mg/Kg wet	5.00		56.0	40-140			
n-Eicosane	3.38	0.10	mg/Kg wet	5.00		67.7	40-140			
n-Hexacosane	3.20	0.10	mg/Kg wet	5.00		64.1	40-140			
n-Hexadecane	3.53	0.10	mg/Kg wet	5.00		70.7	40-140			
n-Hexatriacontane	3.28	0.10	mg/Kg wet	5.00		65.6	40-140			
n-Nonadecane	3.35	0.10	mg/Kg wet	5.00		67.0	40-140			
n-Nonane	1.87	0.10	mg/Kg wet	5.00		37.5	30-140			
n-Octacosane	3.11	0.10	mg/Kg wet	5.00		62.2	40-140			
n-Octadecane	3.63	0.10	mg/Kg wet	5.00		72.6	40-140			
n-Tetracosane	3.31	0.10	mg/Kg wet	5.00		66.2	40-140			
n-Tetradecane	3.31	0.10	mg/Kg wet	5.00		66.2	40-140			
n-Triacontane	3.15	0.10	mg/Kg wet	5.00		63.0	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	*3.05*		mg/Kg wet	5.00		60.9	40-140			
Surrogate: o-Terphenyl (OTP)	*3.35*		mg/Kg wet	5.00		67.0	40-140			
Surrogate: 2-Bromonaphthalene	*4.25*		mg/Kg wet	5.00		84.9	40-140			
Surrogate: 2-Fluorobiphenyl	*4.49*		mg/Kg wet	5.00		89.9	40-140			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B166837 - SW-846 3546										
LCS Dup (B166837-BSD1)				Prepared & Analyzed: 12/29/16						
n-Decane	2.43	0.10	mg/Kg wet	5.00		48.5	40-140	3.64	25	
n-Docosane	3.57	0.10	mg/Kg wet	5.00		71.3	40-140	7.50	25	
n-Dodecane	2.86	0.10	mg/Kg wet	5.00		57.2	40-140	2.16	25	
n-Eicosane	3.62	0.10	mg/Kg wet	5.00		72.5	40-140	6.87	25	
n-Hexacosane	3.46	0.10	mg/Kg wet	5.00		69.2	40-140	7.64	25	
n-Hexadecane	3.75	0.10	mg/Kg wet	5.00		75.1	40-140	6.07	25	
n-Hexatriacontane	3.50	0.10	mg/Kg wet	5.00		70.0	40-140	6.52	25	
n-Nonadecane	3.58	0.10	mg/Kg wet	5.00		71.6	40-140	6.62	25	
n-Nonane	2.01	0.10	mg/Kg wet	5.00		40.1	30-140	6.78	25	
n-Octacosane	3.36	0.10	mg/Kg wet	5.00		67.3	40-140	7.74	25	
n-Octadecane	3.89	0.10	mg/Kg wet	5.00		77.7	40-140	6.84	25	
n-Tetracosane	3.56	0.10	mg/Kg wet	5.00		71.3	40-140	7.35	25	
n-Tetradecane	3.43	0.10	mg/Kg wet	5.00		68.5	40-140	3.44	25	
n-Triacontane	3.41	0.10	mg/Kg wet	5.00		68.2	40-140	7.86	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	*3.19*		mg/Kg wet	5.00		63.9	40-140			
Surrogate: o-Terphenyl (OTP)	*3.24*		mg/Kg wet	5.00		64.7	40-140			
Surrogate: 2-Bromonaphthalene	*3.51*		mg/Kg wet	5.00		70.2	40-140			
Surrogate: 2-Fluorobiphenyl	*3.77*		mg/Kg wet	5.00		75.3	40-140			
Batch B167010 - SW-846 3546										
Blank (B167010-BLK1)				Prepared: 01/03/17 Analyzed: 01/04/17						
C9-C18 Aliphatics	ND	10	mg/Kg wet							
C19-C36 Aliphatics	ND	10	mg/Kg wet							
Unadjusted C11-C22 Aromatics	ND	10	mg/Kg wet							
C11-C22 Aromatics	ND	10	mg/Kg wet							
n-Decane	ND	0.10	mg/Kg wet							
n-Docosane	ND	0.10	mg/Kg wet							
n-Dodecane	ND	0.10	mg/Kg wet							
n-Eicosane	ND	0.10	mg/Kg wet							
n-Hexacosane	ND	0.10	mg/Kg wet							
n-Hexadecane	ND	0.10	mg/Kg wet							
n-Hexatriacontane	ND	0.10	mg/Kg wet							
n-Nonadecane	ND	0.10	mg/Kg wet							
n-Nonane	ND	0.10	mg/Kg wet							
n-Octacosane	ND	0.10	mg/Kg wet							
n-Octadecane	ND	0.10	mg/Kg wet							
n-Tetracosane	ND	0.10	mg/Kg wet							
n-Tetradecane	ND	0.10	mg/Kg wet							
n-Triacontane	ND	0.10	mg/Kg wet							
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet							
Surrogate: Chlorooctadecane (COD)	*2.70*		mg/Kg wet	5.00		54.1	40-140			
Surrogate: o-Terphenyl (OTP)	*3.38*		mg/Kg wet	5.00		67.7	40-140			
Surrogate: 2-Bromonaphthalene	*3.51*		mg/Kg wet	5.00		70.1	40-140			
Surrogate: 2-Fluorobiphenyl	*3.79*		mg/Kg wet	5.00		75.8	40-140			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B167010 - SW-846 3546										
LCS (B167010-BS1)				Prepared: 01/03/17 Analyzed: 01/04/17						
n-Decane	2.52	0.10	mg/Kg wet	5.00		50.4	40-140			
n-Docosane	3.38	0.10	mg/Kg wet	5.00		67.6	40-140			
n-Dodecane	2.98	0.10	mg/Kg wet	5.00		59.6	40-140			
n-Eicosane	3.42	0.10	mg/Kg wet	5.00		68.4	40-140			
n-Hexacosane	3.30	0.10	mg/Kg wet	5.00		66.0	40-140			
n-Hexadecane	3.55	0.10	mg/Kg wet	5.00		71.0	40-140			
n-Hexatriacontane	3.34	0.10	mg/Kg wet	5.00		66.7	40-140			
n-Nonadecane	3.41	0.10	mg/Kg wet	5.00		68.2	40-140			
n-Nonane	2.04	0.10	mg/Kg wet	5.00		40.7	30-140			
n-Octacosane	3.21	0.10	mg/Kg wet	5.00		64.2	40-140			
n-Octadecane	3.63	0.10	mg/Kg wet	5.00		72.7	40-140			
n-Tetracosane	3.40	0.10	mg/Kg wet	5.00		68.0	40-140			
n-Tetradecane	3.41	0.10	mg/Kg wet	5.00		68.3	40-140			
n-Triacontane	3.25	0.10	mg/Kg wet	5.00		64.9	40-140			
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	*2.64*		mg/Kg wet	5.00		52.8	40-140			
Surrogate: o-Terphenyl (OTP)	*3.67*		mg/Kg wet	5.00		73.4	40-140			
Surrogate: 2-Bromonaphthalene	*4.01*		mg/Kg wet	5.00		80.2	40-140			
Surrogate: 2-Fluorobiphenyl	*4.17*		mg/Kg wet	5.00		83.4	40-140			
LCS Dup (B167010-BSD1)				Prepared: 01/03/17 Analyzed: 01/04/17						
n-Decane	2.38	0.10	mg/Kg wet	5.00		47.5	40-140	5.97	25	
n-Docosane	3.44	0.10	mg/Kg wet	5.00		68.7	40-140	1.62	25	
n-Dodecane	2.83	0.10	mg/Kg wet	5.00		56.6	40-140	5.09	25	
n-Eicosane	3.46	0.10	mg/Kg wet	5.00		69.2	40-140	1.12	25	
n-Hexacosane	3.35	0.10	mg/Kg wet	5.00		67.0	40-140	1.54	25	
n-Hexadecane	3.58	0.10	mg/Kg wet	5.00		71.7	40-140	0.951	25	
n-Hexatriacontane	3.16	0.10	mg/Kg wet	5.00		63.2	40-140	5.47	25	
n-Nonadecane	3.45	0.10	mg/Kg wet	5.00		69.1	40-140	1.31	25	
n-Nonane	1.91	0.10	mg/Kg wet	5.00		38.2	30-140	6.53	25	
n-Octacosane	3.24	0.10	mg/Kg wet	5.00		64.8	40-140	1.01	25	
n-Octadecane	3.68	0.10	mg/Kg wet	5.00		73.7	40-140	1.38	25	
n-Tetracosane	3.46	0.10	mg/Kg wet	5.00		69.1	40-140	1.64	25	
n-Tetradecane	3.34	0.10	mg/Kg wet	5.00		66.7	40-140	2.32	25	
n-Triacontane	3.27	0.10	mg/Kg wet	5.00		65.3	40-140	0.559	25	
Naphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	0.10	mg/Kg wet	5.00			0-5			
Surrogate: Chlorooctadecane (COD)	*2.44*		mg/Kg wet	5.00		48.9	40-140			
Surrogate: o-Terphenyl (OTP)	*3.32*		mg/Kg wet	5.00		66.5	40-140			
Surrogate: 2-Bromonaphthalene	*3.73*		mg/Kg wet	5.00		74.7	40-140			
Surrogate: 2-Fluorobiphenyl	*4.01*		mg/Kg wet	5.00		80.3	40-140			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B166941 - % Solids										
Duplicate (B166941-DUP6)	**Source: 16L1128-04**			Prepared: 12/30/16 Analyzed: 01/03/17						
% Solids	79.9		% Wt		82.4			3.08	20	

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Soil	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017

CHAIN OF CUSTODY RECORD

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

Page ____ of ____

Rev 04.05.12

~~16L1128~~ EB 16L1128

Company Name: Weston & Sampson
Telephone: 9785875830
Address: 5 Centennial Drive Peabody, MA
Project #
Client PO#
Attention:
Project Location: Lynn, MA NSCC
Sampled By: PTK & CRG

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

DATA DELIVERY (check all that apply)
○ FAX ○ EMAIL ○ WEBSITE
Fax #
Email:
Format: ○ PDF ○ EXCEL ○ GIS ○ OTHER _____
○ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/~~Time~~	Collection ~~Ending~~ Date/Time	Composite	Grab	*Matrix Code	Conc Code	# of Containers	** Preservation	***Container Code	ANALYSIS REQUESTED: EPH
01	MW-106-WT	12/22	1130		√	S		8	E	A	√
02	MW-106-PID		1130		√	S					√
03	MW-103-WT		0945		√	S					√
04	MW-103-PID		0945		√	S					√
05	MW-105-WT		1345		√	S					√
06	MW-105-PID		1345		√	S					
07	MW-104-PID		1500		√	S					
08	MW-104-WT	↓	1500		√	S					

Dissolved Metals
○ Field Filtered
○ Lab to Filter

***Cont. Code:**
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

****Preservation**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other _____

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other _____

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Comments:

Relinquished by: (signature)	Date/Time:
Christin Hansen	3:15 12/22
Received by: (signature)	Date/Time:
Tom Mair 12/22/16	1515
Relinquished by: (signature)	Date/Time:
Tom Mair 12/22/16	1830
Received by: (signature)	Date/Time:
4.3 12/22/16	1830

Turnaround ††
☑ 7-Day
☐ 10-Day
☐ Other ____
RUSH †
☐ †24-Hr ☐ †48-Hr
☐ †72-Hr ☐ †4-Day
† Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certifie

†† TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: Weston & Sampson **RECEIVED BY:** EB **DATE:** 12/22/16

1) **Was the chain(s) of custody relinquished and signed?** **Yes** ✓ **No** ____ **No COC Incl.**

2) **Does the chain agree with the samples?** **Yes** ✓ **No** ____
If not, explain:

3) **Are all the samples in good condition?** **Yes** ✓ **No** ____
If not, explain:

4) **How were the samples received:**
On Ice ✓ Direct from Sampling ____ Ambient ____ In Cooler(s) ✓
Were the samples received in Temperature Compliance of (2-6°C)? **Yes** ✓ **No** ____ **N/A** ____
Temperature °C by Temp blank ____ Temperature °C by Temp gun 4.3

5) **Are there Dissolved samples for the lab to filter?** **Yes** ____ **No** ✓
Who was notified ____ Date ____ Time ____

6) **Are there any RUSH or SHORT HOLDING TIME samples?** **Yes** ____ **No** ✓
Who was notified ____ Date ____ Time ____

7) **Location where samples are stored:** Log In

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

8) **Do all samples have the proper Acid pH:** **Yes** ____ **No** ____ **N/A** ✓

9) **Do all samples have the proper Base pH:** **Yes** ____ **No** ____ **N/A** ✓

10) **Was the PC notified of any discrepancies with the CoC vs the samples:** **Yes** ____ **N/A** ✓

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber		16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	9
1 Liter Plastic		2 oz amber/clear jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		SOC Kit	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials: # HCl ____ # Methanol ____ **Time and Date Frozen:**
Bisulfate ____ # DI Water ____
Thiosulfate ____ Unpreserved ____

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	N/A	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	4.3 with gun
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	N/A	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	N/A	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	N/A	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** EB **Date/Time:** 12/22/16 1830

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 16L1128
Project Location: Lynn, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

16L1128-01 thru 16L1128-08

Matrices: Soil

CAM Protocol (check all that below)

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	

Affirmative response to Questions A throughF is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☑ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]
	A response to questions G, H and I below is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes	☐ No[1]
	***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**		
H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☑ Yes	☐ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☑ Yes	☐ No[1]

[1] *All Negative responses must be addressed in an attached Environmental Laboratory case narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Tod Kopyscinski Position: Laboratory Director

Printed Name: Tod E. Kopyscinski Date: 01/04/17

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

January 17, 2017

Frank Ricciardi
Weston & Sampson Engineers MA
5 Centennial Drive
Peabody, MA 01960

Project Location: Lynn, MA, NSCC
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 17A0206

Enclosed are results of analyses for samples received by the laboratory on January 6, 2017. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Meghan E. Kelley
Project Manager

Table of Contents

Sample Summary 3

Case Narrative 4

Sample Results 5

17A0206-01 5

17A0206-02 6

17A0206-03 7

17A0206-04 8

17A0206-05 9

17A0206-06 10

17A0206-07 11

Sample Preparation Information 12

QC Data 13

Petroleum Hydrocarbons Analyses - EPH 13

B167581 13

Flag/Qualifier Summary 16

Certifications 17

Chain of Custody/Sample Receipt 18

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Weston & Sampson Engineers MA
5 Centennial Drive
Peabody, MA 01960
ATTN: Frank Ricciardi

REPORT DATE: 1/17/2017

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 17A0206

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Lynn, MA, NSCC

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-101	17A0206-01	Ground Water		MADEP-EPH-04-1.1	
MW-102	17A0206-02	Ground Water		MADEP-EPH-04-1.1	
MW-103	17A0206-03	Ground Water		MADEP-EPH-04-1.1	
MW-104	17A0206-04	Ground Water		MADEP-EPH-04-1.1	
MW-105	17A0206-05	Ground Water		MADEP-EPH-04-1.1	
MW-106	17A0206-06	Ground Water		MADEP-EPH-04-1.1	
MW-107	17A0206-07	Ground Water		MADEP-EPH-04-1.1	

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Project Manager

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA, NSCC | Sample Description: | Work Order: 17A0206

Date Received: 1/6/2017

Field Sample #: MW-101 | Sampled: 1/5/2017 14:50

Sample ID: 17A0206-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:19	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:19	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:19	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:19	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	70.8	40-140		1/12/17 21:19
o-Terphenyl (OTP)	73.5	40-140		1/12/17 21:19
2-Bromonaphthalene	69.1	40-140		1/12/17 21:19
2-Fluorobiphenyl	80.7	40-140		1/12/17 21:19

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA, NSCC | Sample Description: | Work Order: 17A0206

Date Received: 1/6/2017

Field Sample #: MW-102 | Sampled: 1/5/2017 11:15

Sample ID: 17A0206-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:39	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:39	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:39	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:39	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	66.5	40-140		1/12/17 21:39
o-Terphenyl (OTP)	70.3	40-140		1/12/17 21:39
2-Bromonaphthalene	73.3	40-140		1/12/17 21:39
2-Fluorobiphenyl	85.0	40-140		1/12/17 21:39

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA, NSCC | Sample Description: | Work Order: 17A0206

Date Received: 1/6/2017

Field Sample #: MW-103 | Sampled: 1/5/2017 15:30

Sample ID: 17A0206-03

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:58	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:58	SCS
Unadjusted C11-C22 Aromatics	530	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:58	SCS
C11-C22 Aromatics	510	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 21:58	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	69.2	40-140		1/12/17 21:58
o-Terphenyl (OTP)	73.3	40-140		1/12/17 21:58
2-Bromonaphthalene	74.2	40-140		1/12/17 21:58
2-Fluorobiphenyl	86.3	40-140		1/12/17 21:58

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA, NSCC | Sample Description: | Work Order: 17A0206

Date Received: 1/6/2017

Field Sample #: MW-104 | Sampled: 1/5/2017 13:55

Sample ID: 17A0206-04

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:17	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:17	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:17	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:17	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	77.9	40-140		1/12/17 22:17
o-Terphenyl (OTP)	81.4	40-140		1/12/17 22:17
2-Bromonaphthalene	76.5	40-140		1/12/17 22:17
2-Fluorobiphenyl	87.0	40-140		1/12/17 22:17

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA, NSCC | Sample Description: | Work Order: 17A0206

Date Received: 1/6/2017

Field Sample #: MW-105 | Sampled: 1/5/2017 13:20

Sample ID: 17A0206-05

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:36	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:36	SCS
Unadjusted C11-C22 Aromatics	230	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:36	SCS
C11-C22 Aromatics	140	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:36	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	75.1	40-140		1/12/17 22:36
o-Terphenyl (OTP)	82.6	40-140		1/12/17 22:36
2-Bromonaphthalene	78.3	40-140		1/12/17 22:36
2-Fluorobiphenyl	88.3	40-140		1/12/17 22:36

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA, NSCC | Sample Description: | Work Order: 17A0206

Date Received: 1/6/2017

Field Sample #: MW-106 | Sampled: 1/5/2017 14:30

Sample ID: 17A0206-06

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:55	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:55	SCS
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:55	SCS
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 22:55	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	73.0	40-140		1/12/17 22:55
o-Terphenyl (OTP)	74.8	40-140		1/12/17 22:55
2-Bromonaphthalene	70.8	40-140		1/12/17 22:55
2-Fluorobiphenyl	84.9	40-140		1/12/17 22:55

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Lynn, MA, NSCC | Sample Description: | Work Order: 17A0206

Date Received: 1/6/2017

Field Sample #: MW-107 | Sampled: 1/5/2017 12:30

Sample ID: 17A0206-07

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 23:14	SCS
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 23:14	SCS
Unadjusted C11-C22 Aromatics	520	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 23:14	SCS
C11-C22 Aromatics	500	100	µg/L	1		MADEP-EPH-04-1.1	1/10/17	1/12/17 23:14	SCS

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Chlorooctadecane (COD)	70.8	40-140		1/12/17 23:14
o-Terphenyl (OTP)	74.0	40-140		1/12/17 23:14
2-Bromonaphthalene	77.6	40-140		1/12/17 23:14
2-Fluorobiphenyl	90.1	40-140		1/12/17 23:14

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Sample Extraction Data

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
17A0206-01 [MW-101]	B167581	1000	2.00	01/10/17
17A0206-02 [MW-102]	B167581	1000	2.00	01/10/17
17A0206-03 [MW-103]	B167581	1000	2.00	01/10/17
17A0206-04 [MW-104]	B167581	1000	2.00	01/10/17
17A0206-05 [MW-105]	B167581	1000	2.00	01/10/17
17A0206-06 [MW-106]	B167581	1000	2.00	01/10/17
17A0206-07 [MW-107]	B167581	1000	2.00	01/10/17

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B167581 - SW-846 3510C										
Blank (B167581-BLK1)				Prepared: 01/10/17 Analyzed: 01/12/17						
C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
n-Decane	ND	2.0	µg/L							
n-Docosane	ND	2.0	µg/L							
n-Dodecane	ND	2.0	µg/L							
n-Eicosane	ND	2.0	µg/L							
n-Hexacosane	ND	2.0	µg/L							
n-Hexadecane	ND	2.0	µg/L							
n-Hexatriacontane	ND	2.0	µg/L							
n-Nonadecane	ND	2.0	µg/L							
n-Nonane	ND	2.0	µg/L							
n-Octacosane	ND	2.0	µg/L							
n-Octadecane	ND	2.0	µg/L							
n-Tetracosane	ND	2.0	µg/L							
n-Tetradecane	ND	2.0	µg/L							
n-Triacontane	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	*74.0*		µg/L	100		74.0	40-140			
Surrogate: o-Terphenyl (OTP)	*76.1*		µg/L	100		76.1	40-140			
Surrogate: 2-Bromonaphthalene	*76.4*		µg/L	100		76.4	40-140			
Surrogate: 2-Fluorobiphenyl	*88.0*		µg/L	100		88.0	40-140			
LCS (B167581-BS1)				Prepared: 01/10/17 Analyzed: 01/12/17						
Acenaphthene	63.8	2.0	µg/L	100		63.8	40-140			
Acenaphthylene	61.7	2.0	µg/L	100		61.7	40-140			
Anthracene	71.9	2.0	µg/L	100		71.9	40-140			
Benzo(a)anthracene	78.2	2.0	µg/L	100		78.2	40-140			
Benzo(a)pyrene	76.0	2.0	µg/L	100		76.0	40-140			
Benzo(b)fluoranthene	79.0	2.0	µg/L	100		79.0	40-140			
Benzo(g,h,i)perylene	78.0	2.0	µg/L	100		78.0	40-140			
Benzo(k)fluoranthene	72.9	2.0	µg/L	100		72.9	40-140			
Chrysene	74.3	2.0	µg/L	100		74.3	40-140			

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B167581 - SW-846 3510C										
LCS (B167581-BS1)				Prepared: 01/10/17 Analyzed: 01/12/17						
Dibenz(a,h)anthracene	80.2	2.0	µg/L	100		80.2	40-140			
Fluoranthene	75.8	2.0	µg/L	100		75.8	40-140			
Fluorene	68.1	2.0	µg/L	100		68.1	40-140			
Indeno(1,2,3-cd)pyrene	81.1	2.0	µg/L	100		81.1	40-140			
2-Methylnaphthalene	61.0	2.0	µg/L	100		61.0	40-140			
Naphthalene	53.2	2.0	µg/L	100		53.2	40-140			
Phenanthrene	73.7	2.0	µg/L	100		73.7	40-140			
Pyrene	77.0	2.0	µg/L	100		77.0	40-140			
n-Decane	43.2	2.0	µg/L	100		43.2	40-140			
n-Docosane	79.2	2.0	µg/L	100		79.2	40-140			
n-Dodecane	51.9	2.0	µg/L	100		51.9	40-140			
n-Eicosane	77.9	2.0	µg/L	100		77.9	40-140			
n-Hexacosane	80.7	2.0	µg/L	100		80.7	40-140			
n-Hexadecane	73.7	2.0	µg/L	100		73.7	40-140			
n-Hexatriacontane	87.5	2.0	µg/L	100		87.5	40-140			
n-Nonadecane	77.6	2.0	µg/L	100		77.6	40-140			
n-Nonane	33.7	2.0	µg/L	100		33.7	30-140			
n-Octacosane	80.6	2.0	µg/L	100		80.6	40-140			
n-Octadecane	79.3	2.0	µg/L	100		79.3	40-140			
n-Tetracosane	80.5	2.0	µg/L	100		80.5	40-140			
n-Tetradecane	62.5	2.0	µg/L	100		62.5	40-140			
n-Triacontane	83.2	2.0	µg/L	100		83.2	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	*77.2*		µg/L	100		77.2	40-140			
Surrogate: o-Terphenyl (OTP)	*76.0*		µg/L	100		76.0	40-140			
Surrogate: 2-Bromonaphthalene	*75.9*		µg/L	100		75.9	40-140			
Surrogate: 2-Fluorobiphenyl	*87.3*		µg/L	100		87.3	40-140			
LCS Dup (B167581-BSD1)				Prepared: 01/10/17 Analyzed: 01/12/17						
Acenaphthene	69.3	2.0	µg/L	100		69.3	40-140	8.40	25	
Acenaphthylene	67.0	2.0	µg/L	100		67.0	40-140	8.26	25	
Anthracene	79.3	2.0	µg/L	100		79.3	40-140	9.69	25	
Benzo(a)anthracene	86.2	2.0	µg/L	100		86.2	40-140	9.70	25	
Benzo(a)pyrene	84.0	2.0	µg/L	100		84.0	40-140	10.0	25	
Benzo(b)fluoranthene	87.0	2.0	µg/L	100		87.0	40-140	9.65	25	
Benzo(g,h,i)perylene	85.6	2.0	µg/L	100		85.6	40-140	9.33	25	
Benzo(k)fluoranthene	80.2	2.0	µg/L	100		80.2	40-140	9.49	25	
Chrysene	81.9	2.0	µg/L	100		81.9	40-140	9.74	25	
Dibenz(a,h)anthracene	88.8	2.0	µg/L	100		88.8	40-140	10.2	25	
Fluoranthene	83.2	2.0	µg/L	100		83.2	40-140	9.35	25	
Fluorene	74.2	2.0	µg/L	100		74.2	40-140	8.64	25	
Indeno(1,2,3-cd)pyrene	89.5	2.0	µg/L	100		89.5	40-140	9.78	25	
2-Methylnaphthalene	66.2	2.0	µg/L	100		66.2	40-140	8.09	25	
Naphthalene	57.5	2.0	µg/L	100		57.5	40-140	7.75	25	
Phenanthrene	80.7	2.0	µg/L	100		80.7	40-140	9.09	25	
Pyrene	84.7	2.0	µg/L	100		84.7	40-140	9.52	25	
n-Decane	47.6	2.0	µg/L	100		47.6	40-140	9.53	25	
n-Docosane	84.2	2.0	µg/L	100		84.2	40-140	6.12	25	
n-Dodecane	55.8	2.0	µg/L	100		55.8	40-140	7.19	25	
n-Eicosane	82.8	2.0	µg/L	100		82.8	40-140	6.04	25	
n-Hexacosane	85.9	2.0	µg/L	100		85.9	40-140	6.18	25	

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B167581 - SW-846 3510C										
LCS Dup (B167581-BSD1)				Prepared: 01/10/17 Analyzed: 01/12/17						
n-Hexadecane	77.6	2.0	µg/L	100		77.6	40-140	5.13	25	
n-Hexatriacontane	91.8	2.0	µg/L	100		91.8	40-140	4.80	25	
n-Nonadecane	82.3	2.0	µg/L	100		82.3	40-140	5.97	25	
n-Nonane	37.8	2.0	µg/L	100		37.8	30-140	11.3	25	
n-Octacosane	85.6	2.0	µg/L	100		85.6	40-140	5.98	25	
n-Octadecane	84.0	2.0	µg/L	100		84.0	40-140	5.86	25	
n-Tetracosane	85.7	2.0	µg/L	100		85.7	40-140	6.21	25	
n-Tetradecane	66.4	2.0	µg/L	100		66.4	40-140	6.12	25	
n-Triacontane	88.3	2.0	µg/L	100		88.3	40-140	5.94	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	*81.1*		µg/L	100		81.1	40-140			
Surrogate: o-Terphenyl (OTP)	*81.7*		µg/L	100		81.7	40-140			
Surrogate: 2-Bromonaphthalene	*78.6*		µg/L	100		78.6	40-140			
Surrogate: 2-Fluorobiphenyl	*90.6*		µg/L	100		90.6	40-140			

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit
DL	Method Detection Limit
MCL	Maximum Contaminant Level

Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.

No results have been blank subtracted unless specified in the case narrative section.

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
MADEP-EPH-04-1.1 in Water	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	02/1/2018
MA	Massachusetts DEP	M-MA100	06/30/2017
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2017
NY	New York State Department of Health	10899 NELAP	04/1/2017
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2017
RI	Rhode Island Department of Health	LAO00112	12/30/2016
NC	North Carolina Div. of Water Quality	652	12/31/2017
NJ	New Jersey DEP	MA007 NELAP	06/30/2017
FL	Florida Department of Health	E871027 NELAP	06/30/2017
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2017
ME	State of Maine	2011028	06/9/2017
VA	Commonwealth of Virginia	460217	12/14/2017
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2017

CHAIN OF CUSTODY RECORD

Hold - 17A0206

Rev 04.05.12

con-test® ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
www.contestlabs.com
39 Spruce Street
East longmeadow, MA 01028

Company Name: Weston & Sampson
Telephone: 9785875830
Address: 5 Centennial Drive Peabody MA
Project #:
Client PO#:
Attention:
Project Location: Lynn MA, NSCC
Sampled By: PTK & CRG

Project Proposal Provided? (for billing purposes)
○ yes _____ proposal date

DATA DELIVERY (check all that apply)
○ FAX ☒ EMAIL ○ WEBSITE
Fax #:
Email: ganserc@weinc.com
Format: ☒ PDF ☒ EXCEL ○ GIS
○ OTHER
○ "Enhanced Data Package"

Con-Test Lab ID (laboratory use only)	Client Sample ID / Description	Collection Beginning Date/Time	Collection Ending Date/Time	Composite	Grab	*Matrix Code	Cons Code	# of Containers (14)	** Preservation (H)	***Container Code (A)	ANALYSIS REQUESTED: EPH only
01	MW-101	1/5/17	1450		X	GW		X			
02	MW-102		1115		X			X			
03	MW-103		1530		X			X			
04	MW-104		1355		X			X			
05	MW-105		1320		X			X			
06	MW-106		1430		X			X			
07	MW-107		1230		X			X			

Comments:

Please use the following codes to let Con-Test know if a specific sample may be high in concentration in Matrix/Conc. Code Box:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

***Container Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

**Preservation
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
X = Na hydroxide
T = Na thiosulfate
O = Other _____

*Matrix Code:
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other _____

Dissolved Metals
○ Field Filtered
○ Lab to Filter

Relinquished by: (signature)	Date/Time:
Christen P Hansen	0700 1/6/17
Received by: (signature)	Date/Time:
	1-6-17 1100
Relinquished by: (signature)	Date/Time:
	1-6-17 1610
Received by: (signature) 2.0°C & 4.4%	Date/Time:
1/6/17	1610

Turnaround [1]
☒ 7-Day
☐ 10-Day
☐ Other
RUSH [1]
☐ [1]24-Hr ☐ [1]48-Hr
☐ [1]72-Hr ☐ [1]4-Day
[1] Require lab approval

Detection Limit Requirements
Massachusetts:
Connecticut:
Other:

Is your project MCP or RCP ?
○ MCP Form Required
○ RCP Form Required
○ MA State DW Form Required PWSID # _____

NELAC & AIHA-LAP, LLC Accredited
WBE/DBE Certified

TURNAROUND TIME STARTS AT 9:00 A.M. THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON YOUR CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR INCORRECT, TURNAROUND TIME WILL NOT START UNTIL ALL QUESTIONS ARE ANSWERED BY OUR CLIENT.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

39 Spruce St.
East Longmeadow, MA. 01028
P: 413-525-2332
F: 413-525-6405
www.contestlabs.com

con-test® ANALYTICAL LABORATORY

Sample Receipt Checklist

CLIENT NAME: Western + Sampson **RECEIVED BY:** CM **DATE:** 1/6/17

1) **Was the chain(s) of custody relinquished and signed?** Yes ✓ No ____ No COC Incl.

2) **Does the chain agree with the samples?** Yes ✓ No ____
If not, explain:

3) **Are all the samples in good condition?** Yes ✓ No ____
If not, explain:

4) **How were the samples received:**
On Ice ✓ Direct from Sampling ____ Ambient ____ In Cooler(s) ✓ (2)

Were the samples received in Temperature Compliance of (2-6°C)? Yes ✓ No ____ N/A ____

Temperature °C by Temp blank ____ Temperature °C by Temp gun 2.0 + 4.4°C

5) **Are there Dissolved samples for the lab to filter?** Yes ____ No ✓
Who was notified ____ Date ____ Time ____

6) **Are there any RUSH or SHORT HOLDING TIME samples?** Yes ____ No ✓
Who was notified ____ Date ____ Time ____

7) **Location where samples are stored:** Log in

Permission to subcontract samples? Yes No
(Walk-in clients only) if not already approved
Client Signature: ____

8) **Do all samples have the proper Acid pH:** Yes ✓ No ____ N/A ____

9) **Do all samples have the proper Base pH:** Yes ____ No ____ N/A ✓

10) **Was the PC notified of any discrepancies with the CoC vs the samples:** Yes ____ N/A ✓

Containers received at Con-Test

	# of containers		# of containers
1 Liter Amber	14	16 oz amber	
500 mL Amber		8 oz amber/clear jar	
250 mL Amber (8oz amber)		4 oz amber/clear jar	
1 Liter Plastic		2 oz amber/clear jar	
500 mL Plastic		Plastic Bag / Ziploc	
250 mL plastic		SOC Kit	
40 mL Vial - type listed below		Perchlorate Kit	
Colisure / bacteria bottle		Flashpoint bottle	
Dissolved Oxygen bottle		Other glass jar	
Encore		Other	

40 mL vials: # HCl ____ # Methanol ____
Bisulfate ____ # DI Water ____
Thiosulfate ____ Unpreserved ____

Time and Date Frozen:

Login Sample Receipt Checklist

(Rejection Criteria Listing - Using Sample Acceptance Policy)

Any False statement will be brought to the attention of Client

Question	Answer (True/False) T/F/NA	Comment
1) The cooler's custody seal, if present, is intact.	NA	
2) The cooler or samples do not appear to have been compromised or tampered with.	T	
3) Samples were received on ice.	T	
4) Cooler Temperature is acceptable.	T	
5) Cooler Temperature is recorded.	T	2.0°C + 4.4°C
6) COC is filled out in ink and legible.	T	
7) COC is filled out with all pertinent information.	T	
8) Field Sampler's name present on COC.	T	
9) There are no discrepancies between the sample IDs on the container and the COC.	T	
10) Samples are received within Holding Time.	T	
11) Sample containers have legible labels.	T	
12) Containers are not broken or leaking.	T	
13) Air Cassettes are not broken/open.	NA	
14) Sample collection date/times are provided.	T	
15) Appropriate sample containers are used.	T	
16) Proper collection media used.	T	
17) No headspace sample bottles are completely filled.	T	
18) There is sufficient volume for all requsted analyses, including any requested MS/MSDs.	T	
19) Trip blanks provided if applicable.	NA	
20) VOA sample vials do not have head space or bubble is <6mm (1/4") in diameter.	NA	
21) Samples do not require splitting or compositing.	T	

Who notified of False statements? **Date/Time:**

Doc #277 Rev. 4 August 2013 **Log-In Technician Initials:** CM **Date/Time:** 1/6/17 1610

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 17A0206
Project Location: Lynn, MA, NSCC	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]

17A0206-01 thru 17A0206-07

Matrices: Water

CAM Protocol (check all that below)

8260 VOC CAM II A ( )	7470/7471 Hg CAM IIIB ( )	MassDEP VPH CAM IV A ( )	8081 Pesticides CAM V B ( )	7196 Hex Cr CAM VI B ( )	MassDEP APH CAM IX A ( )
8270 SVOC CAM II B ( )	7010 Metals CAM III C ( )	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ( )	8330 Explosives CAM VIII A ( )	TO-15 VOC CAM IX B ( )
6010 Metals CAM III A ( )	6020 Metals CAM III D ( )	8082 PCB CAM V A ( )	9014 Total Cyanide/PAC CAM VI A ( )	6860 Perchlorate CAM VIII B ( )	

Affirmative response to Questions A throughF is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☑ Yes	☐ No[1]
B	Were the analytical method(s) and all associated QC requirements specificed in the selected CAM protocol(s) followed?	☑ Yes	☐ No[1]
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☑ Yes	☐ No[1]
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidlines for the Acquisition and Reporting of Analytical Data?	☑ Yes	☐ No[1]
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☑ Yes	☐ No[1]
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes	☐ No[1]
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Qestions A through E)?	☑ Yes	☐ No[1]

A response to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☑ Yes	☐ No[1]

***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were all QC perfomance standards specified in the CAM protocol(s) achieved?	☑ Yes	☐ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes	☑ No[1]

[1] *All Negative responses must be addressed in an attached Environmental Laboratory case narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Position: Project Manager

Printed Name: Lisa A. Worthington Date: 01/17/17

APPENDIX F

REDUA

North Shore Community College - Lynn
Data Usability REDUA

LIMS Number	CAM Protocol	Lab and Sample ID	Site Area	Date Collected	Sample Type	CAM Compliant	Analyte(s) Qualified	Lab Flag/Qualifier ID	Data Bias	Resolution	Data Usability Issue
16L1128	EPH-04-1.1	All Samples*	NSCC - Lynn	12/22/2016	Soil and Lab QA/QC Samples	Yes	None	None	All reported results are within defined laboratory quality control objectives	All analytical QC performance standards and recommendations for the specified method were achieved, and performed without significant modifications. No further action was taken.	No
17A0206	EPH-04-1.1	All Samples*	NSCC - Lynn	1/5/2017	Groundwater and Lab QA/QC Samples	Yes	None	None	All reported results are within defined laboratory quality control objectives	All analytical QC performance standards and recommendations for the specified method were achieved, and performed without significant modifications. No further action was taken.	No

Notes and Laboratory Flag/Qualifier Summary:
* - The selected samples on the chain of custody that were analyzed for the listed parameters
QA/QC - Quality Assurance/Quality Control

Attachment 3
ENVIRONMENTAL AGENCY DATABASE SEARCH REPORT
November 1, 2018

ATTACHMENT 3

ENVIRONMENTAL Data Resources Environmental Database Report

Lynn Heritage State Park
154 Lynnway
Lynn, MA 01902

Inquiry Number: 5393000.2s
August 15, 2018

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	999
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-7
Physical Setting Source Map Findings	A-9
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2018 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

154 LYNNWAY
LYNN, MA 01902

COORDINATES

Latitude (North):	42.4587330 - 42° 27' 31.43''
Longitude (West):	70.9436500 - 70° 56' 37.14''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	340185.6
UTM Y (Meters):	4702327.0
Elevation:	2 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5642638 LYNN, MA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140712
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
154 LYNNWAY
LYNN, MA 01902

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	SEAPORT MARINA	154 LYNNWAY	MA HW GEN		TP
A2		154 LYNNWAY SUITE 16	ERNS		TP
A3	CITY OF LYNN SEAPORT	154 LYNNWAY	MA UST, MA Financial Assurance		TP
4	BEST PETROLEUM INC	152 LYNNWAY STE 2F	EDR Hist Auto	Lower	181, 0.034, ENE
5	FMR BEACON CHEVROLET	254 LYNNWAY	MA SHWS, MA INST CONTROL, MA RELEASE, MA ENF	Higher	308, 0.058, NW
B6	NORTH SHORE COMMUNIT	300 BROAD STREET	NY MANIFEST	Higher	309, 0.059, North
B7	COMM OF MASS COMUNIT	300 BROAD ST	MA SHWS, MA UST, MA RELEASE, MA Financial...	Higher	309, 0.059, North
C8	LYNNWAY AMOCO	130 LYNNWAY	EDR Hist Auto	Higher	334, 0.063, East
D9	AUTOMOTIVE SPECIALIS	805 WASHINGTON STREE	EDR Hist Auto	Higher	444, 0.084, NE
D10	AUTOMOTIVE SPECIALIS	801 WASHINGTON STREE	EDR Hist Auto	Higher	447, 0.085, NE
C11	GIOVANNI AUTO BODY	892 WASHINGTON ST	MA HW GEN	Higher	480, 0.091, ENE
D12	826 WASHINGTON STREE	826 WASHINGTON STREE	MA SHWS, MA RELEASE	Higher	510, 0.097, NE
E13	CONNORS JENNY SERVIC	418 BROAD ST	EDR Hist Auto	Higher	598, 0.113, WNW
F14	WARDS GEORGE MOBILE	355 BROAD ST	EDR Hist Auto	Higher	624, 0.118, NW
G15	OXFORD HOPKINS CO	278 BROAD ST	RCRA NonGen / NLR, FINDS, ECHO	Higher	657, 0.124, NNW
F16	GOODYEAR AUTO SERVIC	205 MARKET ST	RCRA-CESQG, MA LUST, MA RELEASE, FINDS, ECHO, MA...	Higher	691, 0.131, NW
H17	DALY BUILDING	678 WASHINGTON STREE	MA SHWS, MA RELEASE	Higher	709, 0.134, NNE
E18	FMR SHELL SERVICE ST	411 BROAD ST	MA SHWS, MA LUST, MA RELEASE	Higher	720, 0.136, WNW
E19	MEINEKE CAR CARE CEN	411-429 BROAD ST	MA HW GEN	Higher	720, 0.136, WNW
E20	SHELL OIL CO	411 BROAD ST	MA UST, MA Financial Assurance	Higher	720, 0.136, WNW
F21	PROPOSED MBTA STATIO	MARKET STREET UNION	MA SHWS, MA LUST, MA RELEASE	Higher	740, 0.140, NNW
H22	COMMERCIAL PROPERTY	44 SUFFOLK STREET	MA LAST, MA RELEASE, MA ASBESTOS	Higher	758, 0.144, NNE
E23	451 BROAD STREET	451 BROAD STREET	MA SHWS, MA INST CONTROL, MA SPILLS, MA RELEASE,...	Higher	793, 0.150, WNW
I24	U-HAUL CENTER OF LYN	282 LYNNWAY	MA SHWS, MA UST, MA INST CONTROL, MA RELEASE, MA...	Higher	795, 0.151, West
I25	UHAUL CENTER	282 LYNNWAY RTE 1A	MA SHWS, MA RELEASE	Higher	795, 0.151, West
J26	LANDMARK SITE	WASHINGTON AT BROAD	MA SHWS, MA INST CONTROL, MA RELEASE, MA ENF	Higher	809, 0.153, North
K27	BOSTON AUTO PAINTING	461 BROAD ST	MA LUST, MA RELEASE, MA HW GEN	Higher	816, 0.155, WNW
G28	AKA 239-295 BROAD ST	7 LIBERTY SQ	MA LUST, MA RELEASE	Higher	868, 0.164, North
29	BELL ATLANTIC INFO R	195 MARKET ST	MA SHWS, MA UST, MA RELEASE, MA ASBESTOS, MA...	Higher	885, 0.168, NW
30	NO LOCATION AID	325-327 BROAD ST	MA SHWS, MA LUST, MA RELEASE	Higher	913, 0.173, NNW
I31	PIZZERIA REGINA	295 LYNNWAY	MA SHWS, MA RELEASE, MA SPILLS	Higher	932, 0.177, West
J32	FMR GASOLINE STATION	WASHINGTON STREET SP	MA SHWS, MA RELEASE	Higher	972, 0.184, North
L33	NO LOCATION AID	212 BROAD ST	MA SHWS, MA INST CONTROL, MA RELEASE	Higher	1034, 0.196, NNE
K34	TRADITIONAL BREADS	161 PLEASANT ST	MA SHWS, MA RELEASE, MA AIRS, MA ASBESTOS	Higher	1043, 0.198, WNW
J35	BROAD AND WASHINGTON	217 BROAD ST	MA LUST, MA RELEASE	Higher	1049, 0.199, North
M36	BETWEEN #23 & #26 FA	26 FARRAR ST	MA SHWS, MA INST CONTROL, MA RELEASE	Higher	1058, 0.200, NNE
37	299 LYNNWAY LLC	299-309 LYNNWAY	MA SHWS, MA RELEASE, MA ENF	Higher	1065, 0.202, West
L38	C&C INDUSTRY	210 BROAD ST	MA SHWS, MA RELEASE	Higher	1067, 0.202, NNE
M39	LEISURE TOWER APARTM	10 FARRAR ST	MA UST, MA ASBESTOS, MA Financial Assurance	Higher	1166, 0.221, NE

MAPPED SITES SUMMARY

Target Property Address:
154 LYNNWAY
LYNN, MA 01902

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
M40	NO LOCATION AID	23 FARRAR ST	MA SHWS, MA INST CONTROL, MA RELEASE, MA ENF	Higher	1173, 0.222, NNE
M41	STERLING MACHINE CO	23 FARRAR ST	RCRA NonGen / NLR, FINDS, ECHO, NJ MANIFEST, NY...	Higher	1173, 0.222, NNE
L42	SPRING STREET LOT	39-45 SPRING ST	MA LUST, MA RELEASE	Higher	1180, 0.223, North
L43	CARROLL ST	190-192 BROAD ST	MA SHWS, MA INST CONTROL, MA RELEASE, MA ENF	Higher	1193, 0.226, NNE
44	CAKE CO FMR	2 STATE ST	MA SHWS, MA RELEASE	Higher	1229, 0.233, NW
N45	501 WASHINGTON STREE	501 WASHINGTON STREE	MA SHWS, MA RELEASE, MA ENF	Higher	1243, 0.235, NNW
O46	OLYMPIC AUTO BODY IN	174 BROAD ST	MA HW GEN	Higher	1246, 0.236, NNE
O47	OLYMPIC AUTO BODY IN	174 BROAD ST	RCRA-CESQG, FINDS, ECHO	Higher	1246, 0.236, NNE
O48	OLYMPIC AUTO BODY	174 BROAD STREET AND	MA SHWS, MA RELEASE	Higher	1246, 0.236, NNE
N49	PEVEAR BUILDING INCO	113 MUNROE STREET	NY MANIFEST	Higher	1247, 0.236, NNW
P50	DCR NAHANT LABOR YAR	1 NAHANT RD	MA UST	Higher	1274, 0.241, ESE
P51	DCR MAINTENANCE FACI	1 NAHANT CAUSEWAY	MA ASBESTOS, MA HW GEN	Higher	1274, 0.241, ESE
Q52	NO LOCATION AID	70 MUNROE ST	MA SHWS, MA LUST, MA INST CONTROL, MA RELEASE	Higher	1291, 0.245, NNW
R53	PUDGYS	135 PLEASANT ST	RCRA-CESQG, FINDS, ECHO	Higher	1311, 0.248, WNW
R54	PUDGYS	135 PLEASANT ST	MA HW GEN	Higher	1311, 0.248, WNW
55	METAL IMPROVEMENT CO	26 ALLEY ST	MA SHWS, MA INST CONTROL, MA RELEASE, RCRA NonGen	Higher	1334, 0.253, WNW
S56	NORTH AMERICAN PHILL	100 WESTERN AVENUE	SEMS, CORRACTS, RCRA NonGen / NLR, RAATS, NY...	Higher	1335, 0.253, WSW
S57	KETTLE CUISINE	330 LYNNWAY	MA SHWS, MA LUST, MA INST CONTROL, MA RELEASE, MA...	Higher	1335, 0.253, WSW
Q58	WASHINGTON STREET	80-112 MUNROE ST 124	MA SHWS, MA RELEASE	Higher	1342, 0.254, NNW
59	NO LOCATION AID	319 LYNNWAY	MA SHWS, MA INST CONTROL, MA RELEASE, MA ENF	Higher	1366, 0.259, West
N60	NO LOCATION AID	130 MUNROE ST	MA LAST, MA RELEASE	Higher	1393, 0.264, NNW
61	COSGROVE SQUARE	39 EXCHANGE ST	MA SHWS, MA RELEASE, MA ASBESTOS	Higher	1402, 0.266, North
Q62	NO LOCATION AID	128 OXFORD ST	MA LUST, MA INST CONTROL, MA RELEASE	Higher	1437, 0.272, NNW
T63	EASTERN SMELTING & R	37-39 BUBIER ST	SEMS-ARCHIVE, MA SHWS, MA RELEASE, RCRA NonGen /...	Higher	1458, 0.276, WSW
T64	NO LOCATION AID	37 TO 39 BUBIER ST	MA SHWS, MA RELEASE	Higher	1458, 0.276, WSW
U65	SUBMERSIBLE ELEC TRA	12 - 30 CENTRAL AVEN	MA SHWS, MA RELEASE	Higher	1493, 0.283, NNW
U66	NO LOCATION AID	12-30 CENTRAL AVE	MA SHWS, MA INST CONTROL, MA RELEASE	Higher	1493, 0.283, NNW
S67	NO LOCATION AID	9-15 BUBIER ST	MA SHWS, MA INST CONTROL, MA RELEASE, MA ENF	Higher	1524, 0.289, WSW
S68	AT BLOSSOM ST	370 LYNNWAY	MA SHWS, MA RELEASE	Higher	1585, 0.300, WSW
V69	MCGINN BUS GARAGE	39 ALLEY ST	MA SHWS, MA RELEASE	Higher	1595, 0.302, West
V70	MCGINN BUS	39 ALLEY ST	MA LUST, MA SPILLS, MA RELEASE	Higher	1595, 0.302, West
U71	PROPERTY	429 WASHINGTON ST	MA SHWS, MA RELEASE	Higher	1627, 0.308, NNW
W72	BASEMENT REAR	312 UNION ST	MA LAST, MA RELEASE, MA ASBESTOS	Higher	1645, 0.312, North
73	LYNN SHORE DRIVE	101-121 NAHANT ST	MA LUST, MA RELEASE	Higher	1646, 0.312, ENE
74	ALL TUNE AND LUBE	361 LYNNWAY	MA LUST, MA INST CONTROL, MA RELEASE, MA ASBESTOS	Higher	1670, 0.316, WSW
T75	FORMER LYNN GAS & EL	252 BLOSSOM ST	MA SHWS, MA RELEASE	Higher	1681, 0.318, SW
X76	NO LOCATION AID	0 ANDREW 32-36 ANDRE	MA SHWS, MA INST CONTROL, MA RELEASE	Higher	1708, 0.323, NNW
77	JB BLOOD BLDG TANK R	20 WHEELER ST	MA SHWS, MA LUST, MA LAST, MA INST CONTROL, MA...	Higher	1731, 0.328, WNW
W78	MULBERRY ST	305-311 UNION ST	MA SHWS, MA INST CONTROL, MA RELEASE	Higher	1755, 0.332, North

MAPPED SITES SUMMARY

Target Property Address:
154 LYNNWAY
LYNN, MA 01902

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
Y79	WALNUT STREET PUMP S	64 MARKET ST	US BROWNFIELDS, FINDS	Higher	1769, 0.335, NW
Y80	FORMER BEACON CHEVRO	64 MARKET ST	US BROWNFIELDS, FINDS	Higher	1769, 0.335, NW
81	EARLHAM REALTY	103-111 BROAD ST	MA LUST, MA RELEASE	Higher	1786, 0.338, NNE
X82	PARKING LOT	380 WASHINGTON ST	MA SHWS, MA RELEASE	Higher	1804, 0.342, NNW
83	LYNN COMMUNITY HEALT	269 UNION ST	MA SHWS, MA RELEASE, MA ASBESTOS	Higher	1878, 0.356, North
Z84	NORTH SHORE NEWS COM	150 BLOSSOM ST	MA LUST, MA UST, MA RELEASE, MA Financial...	Higher	1888, 0.358, West
Y85	SUTTON STREET	52-62 MARKET STREET	MA SHWS, MA RELEASE	Higher	1896, 0.359, NW
AA86	SPEEDWAY #2502	122 LIBERTY ST	MA SHWS, MA LUST, MA UST, MA RELEASE, MA Financial...	Higher	1905, 0.361, NNW
AB87	NO LOCATION AID	83 WILLOW ST	MA SHWS, MA LUST, MA BROWNFIELDS, MA SPILLS, MA...	Higher	1963, 0.372, NNW
Z88	GLOBE TESTING LAB	77 ALLEY ST	SEMS-ARCHIVE, RCRA NonGen / NLR	Higher	2007, 0.380, West
AC89	PROPERTY NEAR INTER.	33 SUTTON ST	MA SHWS, MA RELEASE	Higher	2017, 0.382, NW
AD90	THE 395 LYNNWAY PROJ	394 LYNNWAY	MA BROWNFIELDS	Higher	2055, 0.389, WSW
AB91	WALSH GARAGE	105 WILLOW ST	MA SHWS, MA RELEASE, MA HW GEN	Higher	2057, 0.390, NNW
AD92	NO LOCATION AID	395 LYNNWAY	MA SHWS, MA LUST, MA INST CONTROL, MA RELEASE, MA...	Higher	2078, 0.394, WSW
93	COMMERCIAL PROPERTY	69-73 BUFFUM STREET	MA SHWS, MA RELEASE	Higher	2107, 0.399, North
AB94	US POSTAL SERVICE	96 BUFFUM ST	MA SHWS, MA LUST, MA RELEASE, MA SPILLS	Higher	2120, 0.402, NNW
AA95	NO LOCATION AID	315 WASHINGTON ST	MA LUST, MA RELEASE	Higher	2121, 0.402, NNW
96	COMMERCIAL PROPERTY	69-81 BALDWIN STREET	MA SHWS, MA INST CONTROL, MA RELEASE	Higher	2135, 0.404, North
AE97	NO LOCATION AID	96 ALLEY ST	MA LAST, MA RELEASE	Higher	2179, 0.413, West
AE98	LYNNWAY	96 ALLEY ST	MA SHWS, MA LAST, MA RELEASE	Higher	2179, 0.413, West
AC99	LYNN POLICE STATION	18 SUTTON ST	MA LUST, MA RELEASE, MA ASBESTOS	Higher	2201, 0.417, NW
100	ELDER SERVICE PLAN O	37 FRIEND ST	MA SHWS, MA RELEASE, MA HW GEN	Higher	2221, 0.421, NNE
AE101	RESIDENTIAL PROPERTY	102 ALLEY ST	MA LAST, MA RELEASE	Higher	2284, 0.433, West
102	NO LOCATION AID	110 BLOSSOM ST	MA LUST, MA RELEASE	Higher	2286, 0.433, WNW
103	NO LOCATION AID	286 WASHINGTON ST	MA SHWS, MA RELEASE, MA ASBESTOS	Higher	2307, 0.437, NNW
AF104	NO LOCATION AID	411-417 LYNNWAY	MA SHWS, MA RELEASE	Higher	2324, 0.440, WSW
AG105	LYNN POLICE STA COUR	580 ESSEX ST	MA SHWS, MA RELEASE, MA SPILLS, MA ASBESTOS	Higher	2396, 0.454, NW
106	WALL PLAZA HOUSING D	18 BOND ST	MA SHWS, MA LUST, MA UST, MA RELEASE, MA ASBESTOS...	Higher	2396, 0.454, WNW
107	COMMERCIAL PROPERTY	16 CITY HALL SQUARE	MA SHWS, MA RELEASE	Higher	2450, 0.464, NW
AG108	BOMAR REALTY TRUST	597 ESSEX ST	MA SHWS, MA RELEASE, MA ENF	Higher	2508, 0.475, NW
AF109	RTE 1A RIGHT OF WAY	RTE 1A AT MARINE BLV	MA SHWS, MA RELEASE	Higher	2517, 0.477, WSW
AH110	NO LOCATION AID	183 SHEPPARD ST	MA LUST, MA RELEASE	Higher	2533, 0.480, WSW
111	REF TRUCKING AT NRT	41 STEWART STREET	MA SHWS, MA RELEASE, MA HW GEN	Higher	2555, 0.484, NNW
112	PROPERTY	181 UNION ST	MA SHWS, MA RELEASE, MA ASBESTOS	Higher	2556, 0.484, North
AG113	BILL WOODS TOWING SE	585 ESSEX ST	MA SHWS, MA RELEASE	Higher	2567, 0.486, NW
AI114	BOSTON GAS CO	436 LYNNWAY	EDR MGP	Higher	2604, 0.493, WSW
AI115	BOSTON GAS CO OPERAT	436 LYNNWAY	SEMS-ARCHIVE, RCRA NonGen / NLR, NY MANIFEST	Higher	2604, 0.493, WSW
AH116	NO LOCATION AID	GAS WHARF RD	MA LUST, MA RELEASE	Higher	2612, 0.495, WSW
AH117	FORCE MAIN PROJECT	GAS WHARF RD	MA SHWS, MA RELEASE	Higher	2652, 0.502, WSW

MAPPED SITES SUMMARY

Target Property Address:
154 LYNNWAY
LYNN, MA 01902

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
118	RESIDENTIAL PROPERTY	11 BALTIMORE ST	MA SHWS, MA RELEASE	Higher	2659, 0.504, ENE
119	LYNN GAS & ELECTRIC	MARINE BOULEVARD AND	MA SHWS, MA INST CONTROL, MA RELEASE	Higher	2731, 0.517, SW
120	NO LOCATION AID	451 LYNNWAY	MA SHWS, MA RELEASE, MA SPILLS	Higher	2921, 0.553, WSW
AJ121	POLE #203	7 CHESTNUT STREET	MA SHWS	Higher	2962, 0.561, NE
122	NO LOCATION AID	15-17 ROGERS AVE	MA SHWS, MA LAST, MA RELEASE, MA ENF	Higher	2990, 0.566, NNW
AJ123	NO LOCATION AID	208 LEWIS ST	MA SHWS, MA RELEASE	Higher	3129, 0.593, NE
124	NO LOCATION AID	34-36 RILEY WAY	MA SHWS, MA RELEASE	Higher	3160, 0.598, SW
125	WRIGHT, LYSANDER	18 LANDER STREET	MA SHWS, MA LAST, MA RELEASE, MA ENF	Higher	3193, 0.605, NE
126	PRIVATE RESIDENCE	10 DEER COVE ST	MA SHWS, MA RELEASE	Higher	3346, 0.634, ENE
AK127	LYNNWAY BOWL	497 LYNNWAY	MA SHWS, MA RELEASE	Higher	3382, 0.641, WSW
128	NO LOCATION AID	73 HANOVER ST	MA SHWS, MA LUST, MA RELEASE	Higher	3488, 0.661, NW
129	APT BLDG	26-28 ESSEX CIR	MA SHWS, MA RELEASE	Higher	3515, 0.666, North
AK130	NEAR COMMERCIAL ST	517 LYNNWAY	MA SHWS, MA RELEASE, MA SPILLS	Higher	3572, 0.677, WSW
AK131	SHELL STATION FMR	514-516 LYNNWAY	MA SHWS, MA RELEASE, MA SPILLS	Higher	3574, 0.677, WSW
AK132	SHELL OIL CO	514 LYNNWAY	MA SHWS, MA UST, MA RELEASE, MA Financial...	Higher	3574, 0.677, WSW
AL133	GE RIVER WORKS SOUTH	COMMERCIAL ST	MA SHWS, MA RELEASE	Higher	3655, 0.692, WSW
AM134	DPW	250 COMMERCIAL ST	MA SHWS, MA SWF/LF, MA LUST, MA INST CONTROL, MA...	Higher	3676, 0.696, WSW
AM135	LYNN TRANSFER STATIO	247A COMMERCIAL ST	MA SHWS, MA SWF/LF, MA RELEASE	Higher	3761, 0.712, WSW
AL136	188 COMMERCIAL ST	525 LYNNWAY	MA SHWS, MA RELEASE, MA SPILLS, MA HW GEN	Higher	3810, 0.722, WSW
AL137	NO LOCATION AID	525 LYNNWAY 188 COMM	MA SHWS, MA INST CONTROL, MA RELEASE	Higher	3810, 0.722, WSW
138	SAID, MASUDI	139 CHESTNUT ST	MA SHWS, MA LAST, MA RELEASE, MA ENF	Higher	3827, 0.725, NNE
139	NO LOCATION AID	72 HIGHLAND AVE	MA SHWS, MA RELEASE	Higher	3853, 0.730, North
AL140	NOURIA #04032	535 LYNNWAY	MA SHWS, MA UST, MA RELEASE, MA Financial...	Higher	3860, 0.731, WSW
AL141	SHELL STATION	535-545 LYNNWAY	MA SHWS, MA LUST, MA RELEASE, MA SPILLS	Higher	3860, 0.731, WSW
142	PROPERTY	310 ESSEX ST	MA SHWS, MA RELEASE, MA SPILLS	Higher	3880, 0.735, NNE
AN143	MCMANUS PARK	90 COMMERCIAL STREET	MA SHWS, MA INST CONTROL, MA RELEASE	Higher	3895, 0.738, West
AN144	MARSHALLS WHARF 2	NEPTUNE BLVD	MA SHWS, MA RELEASE	Higher	3895, 0.738, West
145	CEFALO INC	159 COMMERCIAL ST	MA SHWS, MA RELEASE, MA SPILLS, MA ENF, MA HW GEN	Higher	3899, 0.738, West
AO146	KELLY HONDA	540 LYNNWAY	MA SHWS, MA RELEASE, MA ASBESTOS, MA ENF, MA HW...	Higher	3914, 0.741, WSW
AO147	540 LYNNWAY	PERLOW FRD DEALERSHI	MA SHWS, MA RELEASE	Higher	4018, 0.761, WSW
148	VELCAR TOOL & DIE CO	22 BENNETT ST	MA SHWS, MA RELEASE, RCRA NonGen / NLR, FINDS,...	Higher	4146, 0.785, West
149	NO LOCATION AID	19 SHERIDAN ST	MA SHWS, MA LAST, MA RELEASE	Higher	4170, 0.790, NNE
150	7-11 CONVENIENCE STO	264 ESSEX ST	MA SHWS, MA LUST, MA RELEASE	Higher	4255, 0.806, NNE
151	ROSE MARY TRUST	41 CAROLYN RD	MA SHWS, MA LUST, MA UST, MA RELEASE, MA Financial...	Higher	4294, 0.813, WSW
152	APARTMENT BUILDING	110 FRANKLIN STREET	MA SHWS, MA RELEASE	Higher	4356, 0.825, NW
153	NO LOCATION AID	37 BENNETT ST	MA SHWS, MA LUST, MA RELEASE	Higher	4378, 0.829, West
154	LYNN HOUSING AUTHORI	MEADOW CT	MA SHWS, MA RELEASE	Higher	4439, 0.841, WNW
155	CORNER OF LYNNWAY &	577-591 LYNNWAY	MA SHWS, MA INST CONTROL, MA RELEASE	Higher	4472, 0.847, WSW
AP156	NO LOCATION AID	599 LYNNWAY	MA SHWS, MA INST CONTROL, MA RELEASE, MA HW GEN	Higher	4803, 0.910, WSW

MAPPED SITES SUMMARY

Target Property Address:
154 LYNNWAY
LYNN, MA 01902

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
AQ157	J STONE & SON INC	86 BENNETT ST	MA SHWS, MA UST, MA INST CONTROL, MA RELEASE, MA...	Higher	4843, 0.917, WSW
AQ158	OIL DEPOT FMR	84 BENNETT ST	MA SHWS, MA RELEASE, MA SPILLS, MA ENF	Higher	4864, 0.921, West
AP159	613-623 LYNNWAY	613-623 LYNNWAY	MA SHWS, MA INST CONTROL, MA RELEASE	Higher	4883, 0.925, WSW
160	LYNN APARTMENT BUILD	438 WESTERN AVE	MA SHWS, MA LAST, MA RELEASE, MA ASBESTOS	Higher	4887, 0.926, NW
161	NO LOCATION AID	477 WESTERN AVE	MA SHWS, MA RELEASE	Higher	4912, 0.930, NW
AR162	JOHN J NISSEN BAKING	118 BROOKLINE ST	MA SHWS, MA UST, MA INST CONTROL, MA RELEASE, MA...	Higher	4968, 0.941, NE
AS163	NO LOCATION AID	626 LYNNWAY	MA SHWS, MA LUST, MA RELEASE	Higher	4996, 0.946, WSW
AS164	GARELICK FARMS	626 LYNNWAY	MA SHWS, MA SWF/LF, MA LUST, MA RELEASE, MA...	Higher	4996, 0.946, WSW
165	CHATHAM ST	196 ESSEX ST	MA SHWS, MA RELEASE	Higher	5025, 0.952, NNE
166	LYNN COMMON	189-195 NORTH COMMON	MA SHWS, MA RELEASE	Higher	5041, 0.955, WNW
AT167	QUICKMART CITGO	625 WESTERN AVE	MA SHWS, MA LUST, MA UST, MA RELEASE, MA Financial...	Higher	5132, 0.972, WNW
AT168	CUMBERLAND FARMS	625-631 WESTERN AVE	MA SHWS, MA RELEASE	Higher	5132, 0.972, WNW
169	DRY CLEANERS FMR	167-169 FRANKLIN ST	MA SHWS, MA RELEASE	Higher	5142, 0.974, NW
AR170	FORMER NISSEN BAKERY	104 BROOKLINE ST	MA SHWS, MA RELEASE	Higher	5156, 0.977, NE
171	LOT 28 & 75 OF BLOCK	HARDING ST LC 7	MA SHWS, MA RELEASE	Higher	5214, 0.988, WSW

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 8 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
SEAPORT MARINA 154 LYNNWAY LYNN, MA 01905	MA HW GEN State Generator Status: SQG-MA EPA Id: MV7815925821	N/A
154 LYNNWAY SUITE 16 154 LYNNWAY SUITE 16 LYNN, MA 01902	ERNS NRC Report #: 1183169	N/A
CITY OF LYNN SEAPORT 154 LYNNWAY LYNN, MA 01902	MA UST Tank Status: In Use Facility Id: 8338 MA Financial Assurance Database: Financial Assurance 2, Date of Government Version: 10/21/2011 Facility Id: 8338	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

EXECUTIVE SUMMARY

Federal RCRA generators list

RCRA-LQG ..... RCRA - Large Quantity Generators
RCRA-SQG ..... RCRA - Small Quantity Generators

Federal institutional controls / engineering controls registries

LUCIS ..... Land Use Control Information System
US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROL ..... Sites with Institutional Controls

State and tribal leaking storage tank lists

INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ..... Underground Storage Tank Listing
MA AST ..... Aboveground Storage Tank Database
INDIAN UST ..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
ODI ..... Open Dump Inventory
IHS OPEN DUMPS ..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ..... Delisted National Clandestine Laboratory Register
US CDL ..... National Clandestine Laboratory Register

Local Land Records

MA LIENS ..... Liens Information Listing
LIENS 2 ..... CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
MA SPILLS 90 ..... SPILLS 90 data from FirstSearch
MA SPILLS 80 ..... SPILLS 80 data from FirstSearch

Other Ascertainable Records

FUDS ..... Formerly Used Defense Sites

DOD Department of Defense Sites
SCRD DRYCLEANERS State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR Financial Assurance Information
EPA WATCH LIST EPA WATCH LIST
2020 COR ACTION 2020 Corrective Action Program List
TSCA Toxic Substances Control Act
TRIS Toxic Chemical Release Inventory System
SSTS Section 7 Tracking Systems
ROD Records Of Decision
RMP Risk Management Plans
PRP Potentially Responsible Parties
PADS PCB Activity Database System
ICIS Integrated Compliance Information System
FTTS FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS Material Licensing Tracking System
COAL ASH DOE Steam-Electric Plant Operation Data
COAL ASH EPA Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER PCB Transformer Registration Database
RADINFO Radiation Information Database
HIST FTTS FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS Incident and Accident Data
CONSENT Superfund (CERCLA) Consent Decrees
INDIAN RESERV Indian Reservations
FUSRAP Formerly Utilized Sites Remedial Action Program
UMTRA Uranium Mill Tailings Sites
US AIRS Aerometric Information Retrieval System Facility Subsystem
US MINES Mines Master Index File
ABANDONED MINES Abandoned Mines
UXO Unexploded Ordnance Sites
DOCKET HWC Hazardous Waste Compliance Docket Listing
FUELS PROGRAM EPA Fuels Program Registered Listing
MA DRYCLEANERS Regulated Drycleaning Facilities
MA GWDP Ground Water Discharge Permits
MA MERCURY Mercury Product Recyling Drop-Off Locations Listing
MA NPDES NPDES Permit Listing
MA TSD TSD Facility

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR Hist Cleaner EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

MA RGA HWS Recovered Government Archive State Hazardous Waste Facilities List
MA RGA LUST Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS list

SEMS: SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the SEMS list, as provided by EDR, and dated 05/18/2018 has revealed that there is 1 SEMS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NORTH AMERICAN PHILL	***100 WESTERN AVENUE***	***WSW 1/4 - 1/2 (0.253 mi.)***	***S56***	***302***

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

A review of the SEMS-ARCHIVE list, as provided by EDR, and dated 05/18/2018 has revealed that there are 3 SEMS-ARCHIVE sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EASTERN SMELTING & R	***37-39 BUBIER ST***	***WSW 1/4 - 1/2 (0.276 mi.)***	***T63***	***368***
GLOBE TESTING LAB	***77 ALLEY ST***	***W 1/4 - 1/2 (0.380 mi.)***	***Z88***	***498***
BOSTON GAS CO OPERAT	***436 LYNNWAY***	***WSW 1/4 - 1/2 (0.493 mi.)***	***AI115***	***636***

EXECUTIVE SUMMARY

Federal RCRA CORRACTS facilities list

CORRACTS: CORRACTS is a list of handlers with RCRA Corrective Action Activity. This report shows which nationally-defined corrective action core events have occurred for every handler that has had corrective action activity.

A review of the CORRACTS list, as provided by EDR, and dated 03/01/2018 has revealed that there is 1 CORRACTS site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NORTH AMERICAN PHILL	***100 WESTERN AVENUE***	***WSW 1/4 - 1/2 (0.253 mi.)***	***S56***	***302***

Federal RCRA generators list

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 03/01/2018 has revealed that there are 3 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GOODYEAR AUTO SERVIC	***205 MARKET ST***	***NW 1/8 - 1/4 (0.131 mi.)***	***F16***	***32***
OLYMPIC AUTO BODY IN	***174 BROAD ST***	***NNE 1/8 - 1/4 (0.236 mi.)***	***O47***	***271***
PUDGYS	***135 PLEASANT ST***	***WNW 1/8 - 1/4 (0.248 mi.)***	***R53***	***291***

State- and tribal - equivalent CERCLIS

MA SHWS: Contains information on releases of oil and hazardous materials that have been reported to DEP.

A review of the MA SHWS list, as provided by EDR, and dated 04/18/2018 has revealed that there are 120 MA SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FMR BEACON CHEVROLET	***254 LYNNWAY***	***NW 0 - 1/8 (0.058 mi.)***	***5***	***10***
Release Tracking Number / Current Status: 3-0015391 / PSC				
COMM OF MASS COMUNIT	***300 BROAD ST***	***N 0 - 1/8 (0.059 mi.)***	***B7***	***20***
Release Tracking Number / Current Status: 3-0032907 / PSNC				
826 WASHINGTON STREE	***826 WASHINGTON STREE***	***NE 0 - 1/8 (0.097 mi.)***	***D12***	***27***
Release Tracking Number / Current Status: 3-0034624 / UNCLSS				
DALY BUILDING	***678 WASHINGTON STREE***	***NNE 1/8 - 1/4 (0.134 mi.)***	***H17***	***36***
Release Tracking Number / Current Status: 3-0034726 / UNCLSS				
FMR SHELL SERVICE ST	***411 BROAD ST***	***WNW 1/8 - 1/4 (0.136 mi.)***	***E18***	***41***

Release Tracking Number / Current Status: 3-0003635 / RAO

PROPOSED MBTA STATIO	***MARKET STREET UNION***	***NNW 1/8 - 1/4 (0.140 mi.)***	***F21***	***57***

Release Tracking Number / Current Status: 3-0000053 / DEPNFA

451 BROAD STREET	***451 BROAD STREET***	***WNW 1/8 - 1/4 (0.150 mi.)***	***E23***	***64***

Release Tracking Number / Current Status: 3-0033419 / PSC

U-HAUL CENTER OF LYN	***282 LYNNWAY***	***W 1/8 - 1/4 (0.151 mi.)***	***I24***	***69***

Release Tracking Number / Current Status: 3-0026703 / RAO

UHAUL CENTER	***282 LYNNWAY RTE 1A***	***W 1/8 - 1/4 (0.151 mi.)***	***I25***	***80***

Release Tracking Number / Current Status: 3-0015595 / RAO

LANDMARK SITE	***WASHINGTON AT BROAD***	***N 1/8 - 1/4 (0.153 mi.)***	***J26***	***83***

Release Tracking Number / Current Status: 3-0000360 / RAO

BELL ATLANTIC INFO R	***195 MARKET ST***	***NW 1/8 - 1/4 (0.168 mi.)***	***29***	***96***

Release Tracking Number / Current Status: 3-0019787 / RAO

NO LOCATION AID	***325-327 BROAD ST***	***NNW 1/8 - 1/4 (0.173 mi.)***	***30***	***109***

Release Tracking Number / Current Status: 3-0029808 / RAONR
Release Tracking Number / Current Status: 3-0029333 / RAO

PIZZERIA REGINA	***295 LYNNWAY***	***W 1/8 - 1/4 (0.177 mi.)***	***I31***	***126***

Release Tracking Number / Current Status: 3-0000185 / DEPNFA

FMR GASOLINE STATION	***WASHINGTON STREET SP***	***N 1/8 - 1/4 (0.184 mi.)***	***J32***	***128***

Release Tracking Number / Current Status: 3-0010078 / URAM

NO LOCATION AID	***212 BROAD ST***	***NNE 1/8 - 1/4 (0.196 mi.)***	***L33***	***129***

Release Tracking Number / Current Status: 3-0022880 / RAO

TRADITIONAL BREADS	***161 PLEASANT ST***	***WNW 1/8 - 1/4 (0.198 mi.)***	***K34***	***133***

Release Tracking Number / Current Status: 3-0032151 / PSNC

BETWEEN #23 & #26 FA	***26 FARRAR ST***	***NNE 1/8 - 1/4 (0.200 mi.)***	***M36***	***141***

Release Tracking Number / Current Status: 3-0027272 / PSC

299 LYNNWAY LLC	***299-309 LYNNWAY***	***W 1/8 - 1/4 (0.202 mi.)***	***37***	***149***

Release Tracking Number / Current Status: 3-0015695 / RAONR
Release Tracking Number / Current Status: 3-0013533 / RAONR
Release Tracking Number / Current Status: 3-0001579 / RAO

C&C INDUSTRY	***210 BROAD ST***	***NNE 1/8 - 1/4 (0.202 mi.)***	***L38***	***163***

Release Tracking Number / Current Status: 3-0000105 / RAO

NO LOCATION AID	***23 FARRAR ST***	***NNE 1/8 - 1/4 (0.222 mi.)***	***M40***	***208***

Release Tracking Number / Current Status: 3-0026885 / DPS
Release Tracking Number / Current Status: 3-0025664 / PSC

CARROLL ST	***190-192 BROAD ST***	***NNE 1/8 - 1/4 (0.226 mi.)***	***L43***	***247***

Release Tracking Number / Current Status: 3-0021432 / RAO

CAKE CO FMR	***2 STATE ST***	***NW 1/8 - 1/4 (0.233 mi.)***	***44***	***255***

Release Tracking Number / Current Status: 3-0000714 / LSPNFA

501 WASHINGTON STREE	***501 WASHINGTON STREE***	***NNW 1/8 - 1/4 (0.235 mi.)***	***N45***	***256***

Release Tracking Number / Current Status: 3-0032762 / TIERII
Release Tracking Number / Current Status: 3-0033301 / RAONR

OLYMPIC AUTO BODY	***174 BROAD STREET AND***	***NNE 1/8 - 1/4 (0.236 mi.)***	***O48***	***273***

Release Tracking Number / Current Status: 3-0024836 / DPS

NO LOCATION AID	***70 MUNROE ST***	***NNW 1/8 - 1/4 (0.245 mi.)***	***Q52***	***281***

Release Tracking Number / Current Status: 3-0019214 / RAO

METAL IMPROVEMENT CO	***26 ALLEY ST***	***WNW 1/4 - 1/2 (0.253 mi.)***	***55***	***293***

Release Tracking Number / Current Status: 3-0015389 / PSC

KETTLE CUISINE	***330 LYNNWAY***	***WSW 1/4 - 1/2 (0.253 mi.)***	***S57***	***312***
Release Tracking Number / Current Status: 3-0020461 / RAO				
Release Tracking Number / Current Status: 3-0018565 / RAO				
Release Tracking Number / Current Status: 3-0018837 / RAO				
Release Tracking Number / Current Status: 3-0001680 / RAO				
WASHINGTON STREET	***80-112 MUNROE ST 124***	***NNW 1/4 - 1/2 (0.254 mi.)***	***Q58***	***344***
Release Tracking Number / Current Status: 3-0014342 / RAO				
NO LOCATION AID	***319 LYNNWAY***	***W 1/4 - 1/2 (0.259 mi.)***	***59***	***346***
Release Tracking Number / Current Status: 3-0015354 / RAO				
COSGROVE SQUARE	***39 EXCHANGE ST***	***N 1/4 - 1/2 (0.266 mi.)***	***61***	***356***
Release Tracking Number / Current Status: 3-0019462 / RAO				
EASTERN SMELTING & R	***37-39 BUBIER ST***	***WSW 1/4 - 1/2 (0.276 mi.)***	***T63***	***368***
NO LOCATION AID	***37 TO 39 BUBIER ST***	***WSW 1/4 - 1/2 (0.276 mi.)***	***T64***	***378***
Release Tracking Number / Current Status: 3-0018150 / RAO				
SUBMERSIBLE ELEC TRA	***12 - 30 CENTRAL AVEN***	***NNW 1/4 - 1/2 (0.283 mi.)***	***U65***	***380***
Release Tracking Number / Current Status: 3-0033130 / PSNC				
NO LOCATION AID	***12-30 CENTRAL AVE***	***NNW 1/4 - 1/2 (0.283 mi.)***	***U66***	***383***
Release Tracking Number / Current Status: 3-0030098 / DPS				
NO LOCATION AID	***9-15 BUBIER ST***	***WSW 1/4 - 1/2 (0.289 mi.)***	***S67***	***390***
Release Tracking Number / Current Status: 3-0022778 / RAO				
AT BLOSSOM ST	***370 LYNNWAY***	***WSW 1/4 - 1/2 (0.300 mi.)***	***S68***	***396***
Release Tracking Number / Current Status: 3-0018413 / RAO				
MCGINN BUS GARAGE	***39 ALLEY ST***	***W 1/4 - 1/2 (0.302 mi.)***	***V69***	***399***
Release Tracking Number / Current Status: 3-0006007 / RAO				
PROPERTY	***429 WASHINGTON ST***	***NNW 1/4 - 1/2 (0.308 mi.)***	***U71***	***404***
Release Tracking Number / Current Status: 3-0004376 / RAO				
FORMER LYNN GAS & EL	***252 BLOSSOM ST***	***SW 1/4 - 1/2 (0.318 mi.)***	***T75***	***419***
Release Tracking Number / Current Status: 3-0027531 / URAM				
NO LOCATION AID	***0 ANDREW 32-36 ANDRE***	***NNW 1/4 - 1/2 (0.323 mi.)***	***X76***	***421***
Release Tracking Number / Current Status: 3-0028221 / RAO				
JB BLOOD BLDG TANK R	***20 WHEELER ST***	***WNW 1/4 - 1/2 (0.328 mi.)***	***77***	***426***
Release Tracking Number / Current Status: 3-0025838 / RAO				
MULBERRY ST	***305-311 UNION ST***	***N 1/4 - 1/2 (0.332 mi.)***	***W78***	***440***
Release Tracking Number / Current Status: 3-0013920 / RAO				
PARKING LOT	***380 WASHINGTON ST***	***NNW 1/4 - 1/2 (0.342 mi.)***	***X82***	***453***
Release Tracking Number / Current Status: 3-0030829 / DPS				
LYNN COMMUNITY HEALT	***269 UNION ST***	***N 1/4 - 1/2 (0.356 mi.)***	***83***	***455***
Release Tracking Number / Current Status: 3-0029263 / RAO				
SUTTON STREET	***52-62 MARKET STREET***	***NW 1/4 - 1/2 (0.359 mi.)***	***Y85***	***464***
Release Tracking Number / Current Status: 3-0034636 / PSNC				
SPEEDWAY #2502	***122 LIBERTY ST***	***NNW 1/4 - 1/2 (0.361 mi.)***	***AA86***	***467***
Release Tracking Number / Current Status: 3-0034496 / UNCLSS				
NO LOCATION AID	***83 WILLOW ST***	***NNW 1/4 - 1/2 (0.372 mi.)***	***AB87***	***475***
Release Tracking Number / Current Status: 3-0020896 / TIERI				
Release Tracking Number / Current Status: 3-0027704 / RAONR				
PROPERTY NEAR INTER.	***33 SUTTON ST***	***NW 1/4 - 1/2 (0.382 mi.)***	***AC89***	***500***

Release Tracking Number / Current Status: 3-0023218 / RAO				
WALSH GARAGE	***105 WILLOW ST***	***NNW 1/4 - 1/2 (0.390 mi.)***	***AB91***	***505***
Release Tracking Number / Current Status: 3-0017371 / RAO				
NO LOCATION AID	***395 LYNNWAY***	***WSW 1/4 - 1/2 (0.394 mi.)***	***AD92***	***509***
Release Tracking Number / Current Status: 3-0018919 / RAO				
COMMERCIAL PROPERTY	***69-73 BUFFUM STREET***	***N 1/4 - 1/2 (0.399 mi.)***	***93***	***528***
Release Tracking Number / Current Status: 3-0033931 / TIER1D				
Release Tracking Number / Current Status: 3-0032660 / TIERII				
US POSTAL SERVICE	***96 BUFFUM ST***	***NNW 1/4 - 1/2 (0.402 mi.)***	***AB94***	***534***
Release Tracking Number / Current Status: 3-0003618 / RAO				
Release Tracking Number / Current Status: 3-0013275 / RAO				
COMMERCIAL PROPERTY	***69-81 BALDWIN STREET***	***N 1/4 - 1/2 (0.404 mi.)***	***96***	***544***
Release Tracking Number / Current Status: 3-0032657 / PSC				
LYNNWAY	***96 ALLEY ST***	***W 1/4 - 1/2 (0.413 mi.)***	***AE98***	***550***
Release Tracking Number / Current Status: 3-0022454 / RAO				
ELDER SERVICE PLAN O	***37 FRIEND ST***	***NNE 1/4 - 1/2 (0.421 mi.)***	***100***	***565***
Release Tracking Number / Current Status: 3-0027730 / RAO				
NO LOCATION AID	***286 WASHINGTON ST***	***NNW 1/4 - 1/2 (0.437 mi.)***	***103***	***575***
Release Tracking Number / Current Status: 3-0023302 / RAO				
NO LOCATION AID	***411-417 LYNNWAY***	***WSW 1/4 - 1/2 (0.440 mi.)***	***AF104***	***579***
Release Tracking Number / Current Status: 3-0026290 / RAONR				
LYNN POLICE STA COUR	***580 ESSEX ST***	***NW 1/4 - 1/2 (0.454 mi.)***	***AG105***	***582***
Release Tracking Number / Current Status: 3-0006025 / RAO				
WALL PLAZA HOUSING D	***18 BOND ST***	***WNW 1/4 - 1/2 (0.454 mi.)***	***106***	***589***
Release Tracking Number / Current Status: 3-0026116 / RAO				
COMMERCIAL PROPERTY	***16 CITY HALL SQUARE***	***NW 1/4 - 1/2 (0.464 mi.)***	***107***	***611***
Release Tracking Number / Current Status: 3-0034754 / UNCLSS				
BOMAR REALTY TRUST	***597 ESSEX ST***	***NW 1/4 - 1/2 (0.475 mi.)***	***AG108***	***613***
Release Tracking Number / Current Status: 3-0000970 / RAO				
RTE 1A RIGHT OF WAY	***RTE 1A AT MARINE BLV***	***WSW 1/4 - 1/2 (0.477 mi.)***	***AF109***	***617***
Release Tracking Number / Current Status: 3-0027306 / URAM				
REF TRUCKING AT NRT	***41 STEWART STREET***	***NNW 1/4 - 1/2 (0.484 mi.)***	***111***	***624***
Release Tracking Number / Current Status: 3-0029906 / RAO				
PROPERTY	***181 UNION ST***	***N 1/4 - 1/2 (0.484 mi.)***	***112***	***627***
Release Tracking Number / Current Status: 3-0001851 / RAO				
BILL WOODS TOWING SE	***585 ESSEX ST***	***NW 1/4 - 1/2 (0.486 mi.)***	***AG113***	***631***
Release Tracking Number / Current Status: 3-0026221 / RAO				
FORCE MAIN PROJECT	***GAS WHARF RD***	***WSW 1/2 - 1 (0.502 mi.)***	***AH117***	***641***
Release Tracking Number / Current Status: 3-0003592 / URAM				
RESIDENTIAL PROPERTY	***11 BALTIMORE ST***	***ENE 1/2 - 1 (0.504 mi.)***	***118***	***642***
Release Tracking Number / Current Status: 3-0015455 / RAO				
LYNN GAS & ELECTRIC	***MARINE BOULEVARD AND***	***SW 1/2 - 1 (0.517 mi.)***	***119***	***644***
Release Tracking Number / Current Status: 3-0001308 / RAO				
NO LOCATION AID	***451 LYNNWAY***	***WSW 1/2 - 1 (0.553 mi.)***	***120***	***688***
Release Tracking Number / Current Status: 3-0017639 / RAO				
POLE #203	7 CHESTNUT STREET	NE 1/2 - 1 (0.561 mi.)	AJ121	692
Release Tracking Number / Current Status: 3-0034816 / UNCLSS				
NO LOCATION AID	***15-17 ROGERS AVE***	***NNW 1/2 - 1 (0.566 mi.)***	***122***	***693***

Release Tracking Number / Current Status: 3-0016827 / RAO

NO LOCATION AID	***208 LEWIS ST***	***NE 1/2 - 1 (0.593 mi.)***	***AJ123***	***702***
Release Tracking Number / Current Status: 3-0017121 / RAO				
NO LOCATION AID	***34-36 RILEY WAY***	***SW 1/2 - 1 (0.598 mi.)***	***124***	***704***
Release Tracking Number / Current Status: 3-0030122 / URAM				
WRIGHT, LYSANDER	***18 LANDER STREET***	***NE 1/2 - 1 (0.605 mi.)***	***125***	***706***
Release Tracking Number / Current Status: 3-0029594 / RAO				
PRIVATE RESIDENCE	***10 DEER COVE ST***	***ENE 1/2 - 1 (0.634 mi.)***	***126***	***719***
Release Tracking Number / Current Status: 3-0025757 / RAO				
LYNNWAY BOWL	***497 LYNNWAY***	***WSW 1/2 - 1 (0.641 mi.)***	***AK127***	***722***
Release Tracking Number / Current Status: 3-0019086 / RAO				
NO LOCATION AID	***73 HANOVER ST***	***NW 1/2 - 1 (0.661 mi.)***	***128***	***724***
Release Tracking Number / Current Status: 3-0011456 / RAO				
APT BLDG	***26-28 ESSEX CIR***	***N 1/2 - 1 (0.666 mi.)***	***129***	***729***
Release Tracking Number / Current Status: 3-0012328 / RAO				
NEAR COMMERCIAL ST	***517 LYNNWAY***	***WSW 1/2 - 1 (0.677 mi.)***	***AK130***	***732***
Release Tracking Number / Current Status: 3-0011837 / RAO				
SHELL STATION FMR	***514-516 LYNNWAY***	***WSW 1/2 - 1 (0.677 mi.)***	***AK131***	***734***
Release Tracking Number / Current Status: 3-0002146 / DEPNDS				
SHELL OIL CO	***514 LYNNWAY***	***WSW 1/2 - 1 (0.677 mi.)***	***AK132***	***736***
Release Tracking Number / Current Status: 3-0013963 / RAO				
GE RIVER WORKS SOUTH	***COMMERCIAL ST***	***WSW 1/2 - 1 (0.692 mi.)***	***AL133***	***742***
Release Tracking Number / Current Status: 3-0002160 / LSPNFA				
DPW	***250 COMMERCIAL ST***	***WSW 1/2 - 1 (0.696 mi.)***	***AM134***	***744***
Release Tracking Number / Current Status: 3-0021126 / RAO				
Release Tracking Number / Current Status: 3-0018171 / RAO				
LYNN TRANSFER STATIO	***247A COMMERCIAL ST***	***WSW 1/2 - 1 (0.712 mi.)***	***AM135***	***766***
Release Tracking Number / Current Status: 3-0021477 / RAO				
188 COMMERCIAL ST	***525 LYNNWAY***	***WSW 1/2 - 1 (0.722 mi.)***	***AL136***	***770***
Release Tracking Number / Current Status: 3-0020622 / RAO				
NO LOCATION AID	***525 LYNNWAY 188 COMM***	***WSW 1/2 - 1 (0.722 mi.)***	***AL137***	***773***
Release Tracking Number / Current Status: 3-0016542 / RAO				
SAID, MASUDI	***139 CHESTNUT ST***	***NNE 1/2 - 1 (0.725 mi.)***	***138***	***776***
Release Tracking Number / Current Status: 3-0026993 / TIER1D				
NO LOCATION AID	***72 HIGHLAND AVE***	***N 1/2 - 1 (0.730 mi.)***	***139***	***784***
Release Tracking Number / Current Status: 3-0016961 / RAO				
NOURIA #04032	***535 LYNNWAY***	***WSW 1/2 - 1 (0.731 mi.)***	***AL140***	***787***
Release Tracking Number / Current Status: 3-0029899 / RAO				
SHELL STATION	***535-545 LYNNWAY***	***WSW 1/2 - 1 (0.731 mi.)***	***AL141***	***795***
Release Tracking Number / Current Status: 3-0013477 / RAO				
PROPERTY	***310 ESSEX ST***	***NNE 1/2 - 1 (0.735 mi.)***	***142***	***799***
Release Tracking Number / Current Status: 3-0004698 / DEPNFA				
MCMANUS PARK	***90 COMMERCIAL STREET***	***W 1/2 - 1 (0.738 mi.)***	***AN143***	***801***
Release Tracking Number / Current Status: 3-0016896 / DPS				
Release Tracking Number / Current Status: 3-0034079 / TIERII				
Release Tracking Number / Current Status: 3-0016898 / RAO				
MARSHALLS WHARF 2	***NEPTUNE BLVD***	***W 1/2 - 1 (0.738 mi.)***	***AN144***	***811***

Release Tracking Number / Current Status: 3-0001425 / DEPNDS

CEFALO INC	***159 COMMERCIAL ST***	***W 1/2 - 1 (0.738 mi.)***	***145***	***812***

Release Tracking Number / Current Status: 3-0003505 / TIERII

KELLY HONDA	***540 LYNNWAY***	***WSW 1/2 - 1 (0.741 mi.)***	***AO146***	***818***

Release Tracking Number / Current Status: 3-0000048 / RAO
Release Tracking Number / Current Status: 3-0024113 / RAO
Release Tracking Number / Current Status: 3-0025044 / RAO

540 LYNNWAY	***PERLOW FRD DEALERSHI***	***WSW 1/2 - 1 (0.761 mi.)***	***AO147***	***827***

Release Tracking Number / Current Status: 3-0012518 / RAO

VELCAR TOOL & DIE CO	***22 BENNETT ST***	***W 1/2 - 1 (0.785 mi.)***	***148***	***830***

Release Tracking Number / Current Status: 3-0000893 / DEPNDS

NO LOCATION AID	***19 SHERIDAN ST***	***NNE 1/2 - 1 (0.790 mi.)***	***149***	***832***

Release Tracking Number / Current Status: 3-0010024 / RAO

7-11 CONVENIENCE STO	***264 ESSEX ST***	***NNE 1/2 - 1 (0.806 mi.)***	***150***	***838***

Release Tracking Number / Current Status: 3-0004023 / RAO

ROSE MARY TRUST	***41 CAROLYN RD***	***WSW 1/2 - 1 (0.813 mi.)***	***151***	***843***

Release Tracking Number / Current Status: 3-0023330 / RAO

APARTMENT BUILDING	***110 FRANKLIN STREET***	***NW 1/2 - 1 (0.825 mi.)***	***152***	***847***

Release Tracking Number / Current Status: 3-0032043 / PSNC

NO LOCATION AID	***37 BENNETT ST***	***W 1/2 - 1 (0.829 mi.)***	***153***	***849***

Release Tracking Number / Current Status: 3-0004325 / RAO

LYNN HOUSING AUTHORI	***MEADOW CT***	***WNW 1/2 - 1 (0.841 mi.)***	***154***	***854***

Release Tracking Number / Current Status: 3-0003718 / DEPNDS

CORNER OF LYNNWAY &	***577-591 LYNNWAY***	***WSW 1/2 - 1 (0.847 mi.)***	***155***	***855***

Release Tracking Number / Current Status: 3-0013409 / RAO

NO LOCATION AID	***599 LYNNWAY***	***WSW 1/2 - 1 (0.910 mi.)***	***AP156***	***861***

Release Tracking Number / Current Status: 3-0011034 / RAO

J STONE & SON INC	***86 BENNETT ST***	***WSW 1/2 - 1 (0.917 mi.)***	***AQ157***	***868***

Release Tracking Number / Current Status: 3-0029746 / RAO

OIL DEPOT FMR	***84 BENNETT ST***	***W 1/2 - 1 (0.921 mi.)***	***AQ158***	***875***

Release Tracking Number / Current Status: 3-0002567 / PSNC

613-623 LYNNWAY	***613-623 LYNNWAY***	***WSW 1/2 - 1 (0.925 mi.)***	***AP159***	***882***

Release Tracking Number / Current Status: 3-0033121 / PSC

LYNN APARTMENT BUILD	***438 WESTERN AVE***	***NW 1/2 - 1 (0.926 mi.)***	***160***	***885***

Release Tracking Number / Current Status: 3-0030374 / RAO

NO LOCATION AID	***477 WESTERN AVE***	***NW 1/2 - 1 (0.930 mi.)***	***161***	***890***

Release Tracking Number / Current Status: 3-0018514 / RAO

JOHN J NISSEN BAKING	***118 BROOKLINE ST***	***NE 1/2 - 1 (0.941 mi.)***	***AR162***	***893***

Release Tracking Number / Current Status: 3-0001273 / RAO

NO LOCATION AID	***626 LYNNWAY***	***WSW 1/2 - 1 (0.946 mi.)***	***AS163***	***901***

Release Tracking Number / Current Status: 3-0031401 / ADQREG
Release Tracking Number / Current Status: 3-0032594 / PSNC

GARELICK FARMS	***626 LYNNWAY***	***WSW 1/2 - 1 (0.946 mi.)***	***AS164***	***913***

Release Tracking Number / Current Status: 3-0020367 / RAO
Release Tracking Number / Current Status: 3-0027819 / RAO
Release Tracking Number / Current Status: 3-0017871 / RAO
Release Tracking Number / Current Status: 3-0013079 / TMPS

Release Tracking Number / Current Status: 3-0033437 / PSNC
**Additional key fields are available in the Map Findings section*

CHATHAM ST	***196 ESSEX ST***	***NNE 1/2 - 1 (0.952 mi.)***	***165***	***974***
Release Tracking Number / Current Status: 3-0020607 / RAO				
LYNN COMMON	***189-195 NORTH COMMON***	***WNW 1/2 - 1 (0.955 mi.)***	***166***	***976***
Release Tracking Number / Current Status: 3-0022299 / RAO				
QUICKMART CITGO	***625 WESTERN AVE***	***WNW 1/2 - 1 (0.972 mi.)***	***AT167***	***978***
Release Tracking Number / Current Status: 3-0034088 / PSNC				
CUMBERLAND FARMS	***625-631 WESTERN AVE***	***WNW 1/2 - 1 (0.972 mi.)***	***AT168***	***991***
Release Tracking Number / Current Status: 3-0002388 / RAO				
DRY CLEANERS FMR	***167-169 FRANKLIN ST***	***NW 1/2 - 1 (0.974 mi.)***	***169***	***992***
Release Tracking Number / Current Status: 3-0001498 / LSPNFA				
FORMER NISSEN BAKERY	***104 BROOKLINE ST***	***NE 1/2 - 1 (0.977 mi.)***	***AR170***	***994***
Release Tracking Number / Current Status: 3-0032201 / PSNC				
LOT 28 & 75 OF BLOCK	***HARDING ST LC 7***	***WSW 1/2 - 1 (0.988 mi.)***	***171***	***996***
Release Tracking Number / Current Status: 3-0012511 / RAO				

State and tribal leaking storage tank lists

MA LAST: The Leaking Aboveground Storage Tanks database

A review of the MA LAST list, as provided by EDR, and dated 04/18/2018 has revealed that there are 7 MA LAST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COMMERCIAL PROPERTY	***44 SUFFOLK STREET***	***NNE 1/8 - 1/4 (0.144 mi.)***	***H22***	***59***
Release Tracking Number / Current Status: 3-0030376 / RAO				
NO LOCATION AID	***130 MUNROE ST***	***NNW 1/4 - 1/2 (0.264 mi.)***	***N60***	***353***
Release Tracking Number / Current Status: 3-0018075 / RAO				
BASEMENT REAR	***312 UNION ST***	***N 1/4 - 1/2 (0.312 mi.)***	***W72***	***405***
Release Tracking Number / Current Status: 3-0024445 / RAO				
JB BLOOD BLDG TANK R	***20 WHEELER ST***	***WNW 1/4 - 1/2 (0.328 mi.)***	***77***	***426***
Release Tracking Number / Current Status: 3-0025838 / RAO				
NO LOCATION AID	***96 ALLEY ST***	***W 1/4 - 1/2 (0.413 mi.)***	***AE97***	***547***
Release Tracking Number / Current Status: 3-0023295 / RAO				
LYNNWAY	***96 ALLEY ST***	***W 1/4 - 1/2 (0.413 mi.)***	***AE98***	***550***
Release Tracking Number / Current Status: 3-0022454 / RAO				
RESIDENTIAL PROPERTY	***102 ALLEY ST***	***W 1/4 - 1/2 (0.433 mi.)***	***AE101***	***569***
Release Tracking Number / Current Status: 3-0023282 / RAO				

MA LUST: Sites within the Releases Database that have a UST listed as its source.

A review of the MA LUST list, as provided by EDR, and dated 04/18/2018 has revealed that there are 27 MA LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GOODYEAR AUTO SERVIC	***205 MARKET ST***	***NW 1/8 - 1/4 (0.131 mi.)***	***F16***	***32***

Release Tracking Number / Current Status: 3-0004515 / RAO

FMR SHELL SERVICE ST	***411 BROAD ST***	***WNW 1/8 - 1/4 (0.136 mi.)***	***E18***	***41***
Release Tracking Number / Current Status: 3-0011436 / RAO				
Release Tracking Number / Current Status: 3-0010039 / RAO				
PROPOSED MBTA STATIO	***MARKET STREET UNION***	***NNW 1/8 - 1/4 (0.140 mi.)***	***F21***	***57***
Release Tracking Number / Current Status: 3-0000053 / DEPNFA				
BOSTON AUTO PAINTING	***461 BROAD ST***	***WNW 1/8 - 1/4 (0.155 mi.)***	***K27***	***89***
Release Tracking Number / Current Status: 3-0028089 / RAO				
AKA 239-295 BROAD ST	***7 LIBERTY SQ***	***N 1/8 - 1/4 (0.164 mi.)***	***G28***	***94***
Release Tracking Number / Current Status: 3-0022370 / RAO				
NO LOCATION AID	***325-327 BROAD ST***	***NNW 1/8 - 1/4 (0.173 mi.)***	***30***	***109***
Release Tracking Number / Current Status: 3-0029808 / RAONR				
Release Tracking Number / Current Status: 3-0029333 / RAO				
BROAD AND WASHINGTON	***217 BROAD ST***	***N 1/8 - 1/4 (0.199 mi.)***	***J35***	***138***
Release Tracking Number / Current Status: 3-0026022 / RAO				
SPRING STREET LOT	***39-45 SPRING ST***	***N 1/8 - 1/4 (0.223 mi.)***	***L42***	***244***
Release Tracking Number / Current Status: 3-0025865 / RAO				
NO LOCATION AID	***70 MUNROE ST***	***NNW 1/8 - 1/4 (0.245 mi.)***	***Q52***	***281***
Release Tracking Number / Current Status: 3-0019788 / RAONR				
KETTLE CUISINE	***330 LYNNWAY***	***WSW 1/4 - 1/2 (0.253 mi.)***	***S57***	***312***
Release Tracking Number / Current Status: 3-0001680 / RAO				
NO LOCATION AID	***128 OXFORD ST***	***NNW 1/4 - 1/2 (0.272 mi.)***	***Q62***	***360***
Release Tracking Number / Current Status: 3-0019084 / RAO				
MCGINN BUS	***39 ALLEY ST***	***W 1/4 - 1/2 (0.302 mi.)***	***V70***	***401***
Release Tracking Number / Current Status: 3-0011484 / RAO				
LYNN SHORE DRIVE	***101-121 NAHANT ST***	***ENE 1/4 - 1/2 (0.312 mi.)***	***73***	***409***
Release Tracking Number / Current Status: 3-0011614 / RAO				
ALL TUNE AND LUBE	***361 LYNNWAY***	***WSW 1/4 - 1/2 (0.316 mi.)***	***74***	***413***
Release Tracking Number / Current Status: 3-0015264 / RAO				
JB BLOOD BLDG TANK R	***20 WHEELER ST***	***WNW 1/4 - 1/2 (0.328 mi.)***	***77***	***426***
Release Tracking Number / Current Status: 3-0025838 / RAO				
EARLHAM REALTY	***103-111 BROAD ST***	***NNE 1/4 - 1/2 (0.338 mi.)***	***81***	***451***
Release Tracking Number / Current Status: 3-0011901 / RAO				
NORTH SHORE NEWS COM	***150 BLOSSOM ST***	***W 1/4 - 1/2 (0.358 mi.)***	***Z84***	***460***
Release Tracking Number / Current Status: 3-0017611 / RAO				
SPEEDWAY #2502	***122 LIBERTY ST***	***NNW 1/4 - 1/2 (0.361 mi.)***	***AA86***	***467***
Release Tracking Number / Current Status: 3-0034496 / UNCLSS				
NO LOCATION AID	***83 WILLOW ST***	***NNW 1/4 - 1/2 (0.372 mi.)***	***AB87***	***475***
Release Tracking Number / Current Status: 3-0027704 / RAONR				
NO LOCATION AID	***395 LYNNWAY***	***WSW 1/4 - 1/2 (0.394 mi.)***	***AD92***	***509***
Release Tracking Number / Current Status: 3-0018919 / RAO				
US POSTAL SERVICE	***96 BUFFUM ST***	***NNW 1/4 - 1/2 (0.402 mi.)***	***AB94***	***534***
Release Tracking Number / Current Status: 3-0003618 / RAO				
NO LOCATION AID	***315 WASHINGTON ST***	***NNW 1/4 - 1/2 (0.402 mi.)***	***AA95***	***541***
Release Tracking Number / Current Status: 3-0016660 / RAO				
Release Tracking Number / Current Status: 3-0004008 / LSPNFA				
LYNN POLICE STATION	***18 SUTTON ST***	***NW 1/4 - 1/2 (0.417 mi.)***	***AC99***	***559***

Release Tracking Number / Current Status: 3-0017942 / RAONR

NO LOCATION AID	***110 BLOSSOM ST***	***WNW 1/4 - 1/2 (0.433 mi.)***	***102***	***573***
Release Tracking Number / Current Status: 3-0017955 / RAO				
WALL PLAZA HOUSING D	***18 BOND ST***	***WNW 1/4 - 1/2 (0.454 mi.)***	***106***	***589***
Release Tracking Number / Current Status: 3-0026116 / RAO				
NO LOCATION AID	***183 SHEPPARD ST***	***WSW 1/4 - 1/2 (0.480 mi.)***	***AH110***	***620***
Release Tracking Number / Current Status: 3-0016814 / RAO				
NO LOCATION AID	***GAS WHARF RD***	***WSW 1/4 - 1/2 (0.495 mi.)***	***AH116***	***640***
Release Tracking Number / Current Status: 3-0018100 / TIER1D				

State and tribal registered storage tank lists

MA UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Protection's Summary Listing of all the Tanks Registered in the State of Massachusetts.

A review of the MA UST list, as provided by EDR, and dated 04/18/2018 has revealed that there are 6 MA UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COMM OF MASS COMUNIT	***300 BROAD ST***	***N 0 - 1/8 (0.059 mi.)***	***B7***	***20***
Tank Status: Tank Removed				
Facility Id: 263				
SHELL OIL CO	***411 BROAD ST***	***WNW 1/8 - 1/4 (0.136 mi.)***	***E20***	***55***
Tank Status: Tank Removed				
Facility Id: 5430				
U-HAUL CENTER OF LYN	***282 LYNNWAY***	***W 1/8 - 1/4 (0.151 mi.)***	***I24***	***69***
Tank Status: Tank Removed				
Facility Id: 5415				
BELL ATLANTIC INFO R	***195 MARKET ST***	***NW 1/8 - 1/4 (0.168 mi.)***	***29***	***96***
Tank Status: Tank Removed				
Facility Id: 5401				
LEISURE TOWER APARTM	***10 FARRAR ST***	***NE 1/8 - 1/4 (0.221 mi.)***	***M39***	***166***
Tank Status: Tank Removed				
Facility Id: 5394				
DCR NAHANT LABOR YAR	1 NAHANT RD	ESE 1/8 - 1/4 (0.241 mi.)	P50	277
Tank Status: In Use				
Facility Id: 22738				

State and tribal institutional control / engineering control registries

MA INST CONTROL: Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.

A review of the MA INST CONTROL list, as provided by EDR, and dated 04/18/2018 has revealed that

there are 21 MA INST CONTROL sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FMR BEACON CHEVROLET Release Tracking Number: 3-0015391	***254 LYNNWAY***	***NW 0 - 1/8 (0.058 mi.)***	***5***	***10***
451 BROAD STREET Release Tracking Number: 3-0033419	***451 BROAD STREET***	***WNW 1/8 - 1/4 (0.150 mi.)***	***E23***	***64***
U-HAUL CENTER OF LYN Release Tracking Number: 3-0026703	***282 LYNNWAY***	***W 1/8 - 1/4 (0.151 mi.)***	***I24***	***69***
LANDMARK SITE Release Tracking Number: 3-0000360	***WASHINGTON AT BROAD***	***N 1/8 - 1/4 (0.153 mi.)***	***J26***	***83***
NO LOCATION AID Release Tracking Number: 3-0022880	***212 BROAD ST***	***NNE 1/8 - 1/4 (0.196 mi.)***	***L33***	***129***
BETWEEN #23 & #26 FA Release Tracking Number: 3-0027272	***26 FARRAR ST***	***NNE 1/8 - 1/4 (0.200 mi.)***	***M36***	***141***
NO LOCATION AID Release Tracking Number: 3-0025664	***23 FARRAR ST***	***NNE 1/8 - 1/4 (0.222 mi.)***	***M40***	***208***
CARROLL ST Release Tracking Number: 3-0021432	***190-192 BROAD ST***	***NNE 1/8 - 1/4 (0.226 mi.)***	***L43***	***247***
NO LOCATION AID Release Tracking Number: 3-0019214	***70 MUNROE ST***	***NNW 1/8 - 1/4 (0.245 mi.)***	***Q52***	***281***
METAL IMPROVEMENT CO Release Tracking Number: 3-0015389	***26 ALLEY ST***	***WNW 1/4 - 1/2 (0.253 mi.)***	***55***	***293***
KETTLE CUISINE Release Tracking Number: 3-0001680	***330 LYNNWAY***	***WSW 1/4 - 1/2 (0.253 mi.)***	***S57***	***312***
NO LOCATION AID Release Tracking Number: 3-0015354	***319 LYNNWAY***	***W 1/4 - 1/2 (0.259 mi.)***	***59***	***346***
NO LOCATION AID Release Tracking Number: 3-0019084	***128 OXFORD ST***	***NNW 1/4 - 1/2 (0.272 mi.)***	***Q62***	***360***
NO LOCATION AID Release Tracking Number: 3-0030098	***12-30 CENTRAL AVE***	***NNW 1/4 - 1/2 (0.283 mi.)***	***U66***	***383***
NO LOCATION AID Release Tracking Number: 3-0022778	***9-15 BUBIER ST***	***WSW 1/4 - 1/2 (0.289 mi.)***	***S67***	***390***
ALL TUNE AND LUBE Release Tracking Number: 3-0015264	***361 LYNNWAY***	***WSW 1/4 - 1/2 (0.316 mi.)***	***74***	***413***
NO LOCATION AID Release Tracking Number: 3-0028221	***0 ANDREW 32-36 ANDRE***	***NNW 1/4 - 1/2 (0.323 mi.)***	***X76***	***421***
JB BLOOD BLDG TANK R Release Tracking Number: 3-0025838	***20 WHEELER ST***	***WNW 1/4 - 1/2 (0.328 mi.)***	***77***	***426***
MULBERRY ST Release Tracking Number: 3-0013920	***305-311 UNION ST***	***N 1/4 - 1/2 (0.332 mi.)***	***W78***	***440***
NO LOCATION AID Release Tracking Number: 3-0018919	***395 LYNNWAY***	***WSW 1/4 - 1/2 (0.394 mi.)***	***AD92***	***509***
COMMERCIAL PROPERTY Release Tracking Number: 3-0032657	***69-81 BALDWIN STREET***	***N 1/4 - 1/2 (0.404 mi.)***	***96***	***544***

EXECUTIVE SUMMARY

State and tribal Brownfields sites

MA BROWNFIELDS: Under Massachusetts law, M.G.L. c. 21E is the statute that governs the cleanup of releases of oil and/or hazardous material to the environment. The Brownfields Act of 1998 amended M.G.L. c. 21E by establishing significant liability relief and financial incentives to spur the redevelopment of brownfields, while ensuring that the Commonwealth's environmental standards are met. Most brownfields are redeveloped with the benefit of liability protections that operate automatically under M.G.L. c. 21E.

A review of the MA BROWNFIELDS list, as provided by EDR, has revealed that there are 2 MA BROWNFIELDS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NO LOCATION AID	***83 WILLOW ST***	***NNW 1/4 - 1/2 (0.372 mi.)***	***AB87***	***475***
Database: BROWNFIELDS 2, Date of Government Version: 05/22/2017 MCP Status: TIERI RTN: 3-0020896				
THE 395 LYNNWAY PROJ	394 LYNNWAY	WSW 1/4 - 1/2 (0.389 mi.)	AD90	505
Database: BROWNFIELDS, Date of Government Version: 04/05/2017				

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properties from the Cleanups in My Community program, which provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

A review of the US BROWNFIELDS list, as provided by EDR, and dated 03/19/2018 has revealed that there are 2 US BROWNFIELDS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
WALNUT STREET PUMP S	***64 MARKET ST***	***NW 1/4 - 1/2 (0.335 mi.)***	***Y79***	***445***
FORMER BEACON CHEVRO	***64 MARKET ST***	***NW 1/4 - 1/2 (0.335 mi.)***	***Y80***	***448***

Other Ascertainable Records

RCRA NonGen / NLR: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA NonGen / NLR list, as provided by EDR, and dated 03/01/2018 has revealed that there are 2 RCRA NonGen / NLR sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
OXFORD HOPKINS CO	***278 BROAD ST***	***NNW 0 - 1/8 (0.124 mi.)***	***G15***	***30***
STERLING MACHINE CO	***23 FARRAR ST***	***NNE 1/8 - 1/4 (0.222 mi.)***	***M41***	***225***

MA HW GEN: Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

A review of the MA HW GEN list, as provided by EDR, and dated 06/04/2018 has revealed that there are 8 MA HW GEN sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
COMM OF MASS COMUNIT State Generator Status: VQG-MA EPA Id: MV7815936722	***300 BROAD ST***	***N 0 - 1/8 (0.059 mi.)***	***B7***	***20***
GIOVANNI AUTO BODY State Generator Status: VQG-MA EPA Id: MV7813167583	892 WASHINGTON ST	ENE 0 - 1/8 (0.091 mi.)	C11	26
GOODYEAR AUTO SERVIC State Generator Status: LQG-MA EPA Id: MAD094851300	***205 MARKET ST***	***NW 1/8 - 1/4 (0.131 mi.)***	***F16***	***32***
MEINEKE CAR CARE CEN State Generator Status: SQG-MA EPA Id: MV7815920001	411-429 BROAD ST	WNW 1/8 - 1/4 (0.136 mi.)	E19	54
BOSTON AUTO PAINTING EPA Id: MV7815953245	***461 BROAD ST***	***WNW 1/8 - 1/4 (0.155 mi.)***	***K27***	***89***
OLYMPIC AUTO BODY IN EPA Id: MAD981060874	174 BROAD ST	NNE 1/8 - 1/4 (0.236 mi.)	O46	270
DCR MAINTENANCE FACI State Generator Status: VQG-MA EPA Id: MV5083281111	***1 NAHANT CAUSEWAY***	***ESE 1/8 - 1/4 (0.241 mi.)***	***P51***	***279***
PUDGYS EPA Id: MAD095859880	135 PLEASANT ST	WNW 1/8 - 1/4 (0.248 mi.)	R54	293

NJ MANIFEST: Hazardous waste manifest information.

A review of the NJ MANIFEST list, as provided by EDR, and dated 12/31/2017 has revealed that there is 1 NJ MANIFEST site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
STERLING MACHINE CO EPA ID: MAD001771104	***23 FARRAR ST***	***NNE 1/8 - 1/4 (0.222 mi.)***	***M41***	***225***

NY MANIFEST: Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

A review of the NY MANIFEST list, as provided by EDR, and dated 04/30/2018 has revealed that there are 3 NY MANIFEST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
NORTH SHORE COMMUNIT EPA ID: MAP815936722	300 BROAD STREET	N 0 - 1/8 (0.059 mi.)	B6	19
STERLING MACHINE CO	***23 FARRAR ST***	***NNE 1/8 - 1/4 (0.222 mi.)***	***M41***	***225***

EPA ID: MAD001771104				
PEVEAR BUILDING INCO EPA ID: MAP000006925	113 MUNROE STREET	NNW 1/8 - 1/4 (0.236 mi.)	N49	276

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the EDR MGP list, as provided by EDR, has revealed that there is 1 EDR MGP site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BOSTON GAS CO	436 LYNNWAY	WSW 1/4 - 1/2 (0.493 mi.)	AI114	636

EDR Hist Auto: EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

A review of the EDR Hist Auto list, as provided by EDR, has revealed that there are 6 EDR Hist Auto sites within approximately 0.125 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
LYNNWAY AMOCO	130 LYNNWAY	E 0 - 1/8 (0.063 mi.)	C8	25
AUTOMOTIVE SPECIALIS	805 WASHINGTON STREE	NE 0 - 1/8 (0.084 mi.)	D9	26
AUTOMOTIVE SPECIALIS	801 WASHINGTON STREE	NE 0 - 1/8 (0.085 mi.)	D10	26
CONNORS JENNY SERVIC	418 BROAD ST	WNW 0 - 1/8 (0.113 mi.)	E13	29
WARDS GEORGE MOBILE	355 BROAD ST	NW 0 - 1/8 (0.118 mi.)	F14	30

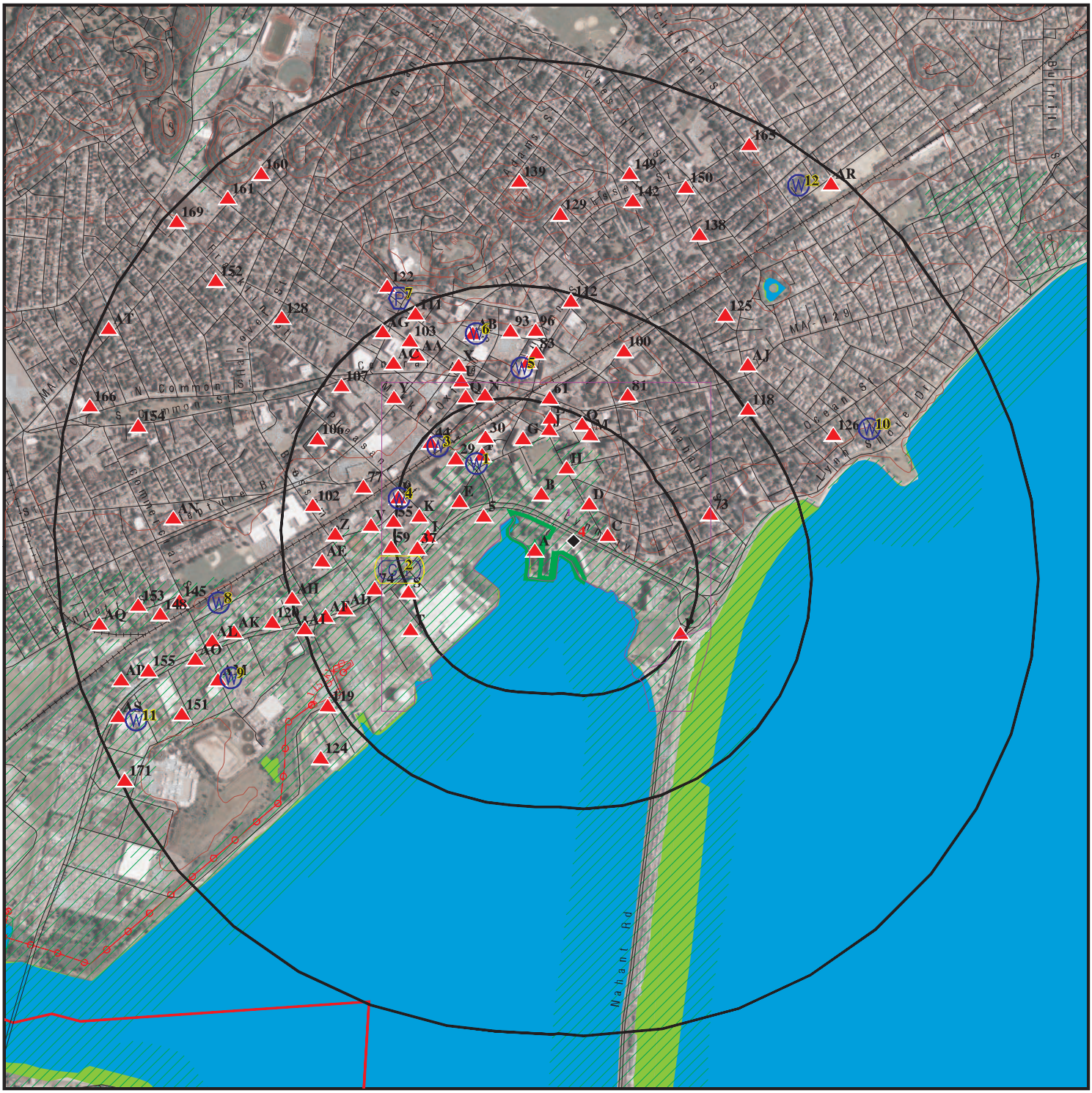
Lower Elevation	Address	Direction / Distance	Map ID	Page
BEST PETROLEUM INC	152 LYNNWAY STE 2F	ENE 0 - 1/8 (0.034 mi.)	4	10

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 18 records.

Site Name	Database(s)
RUSSOS TRANSMISSION	MA SHWS, MA RELEASE, MA ENF, MA HW GEN
NO LOCATION AID	MA SHWS, MA RELEASE, MA ENF
NO LOCATION AID	MA SHWS, MA RELEASE
PAD-MOUNTED TRANSFMR - 15 CLONAKIL	MA SHWS, MA RELEASE
PARCEL #5	MA SHWS, MA RELEASE
NO LOCATION AID	MA SHWS, MA RELEASE
BLOSSOM STREET LOT	MA SHWS, MA RELEASE
NO LOCATION AID	MA SHWS, MA RELEASE
NO LOCATION AID	MA SHWS, MA RELEASE
ADAMS ST TO SAINT MARYS	MA SHWS, MA RELEASE
ELLIS STREET PARKING LOT	MA SHWS, MA RELEASE
NO LOCATION AID	MA SHWS, MA RELEASE
RILEY WAY EXTENSION/	MA SHWS, MA RELEASE
INTERSECTION OF WASHINGTON & SAGAM	MA SHWS, MA RELEASE
2 MILES OFF SHORE NEAR NAHANT	MA SHWS, MA RELEASE
WARD ROAD PUMP STATION	MA SHWS, MA LAST, MA RELEASE
LANDMARK DEVELOPMENT	SEMS-ARCHIVE
MARKET STREET @ BROAD STREET	MA LUST, MA RELEASE

OVERVIEW MAP - 5393000.2S



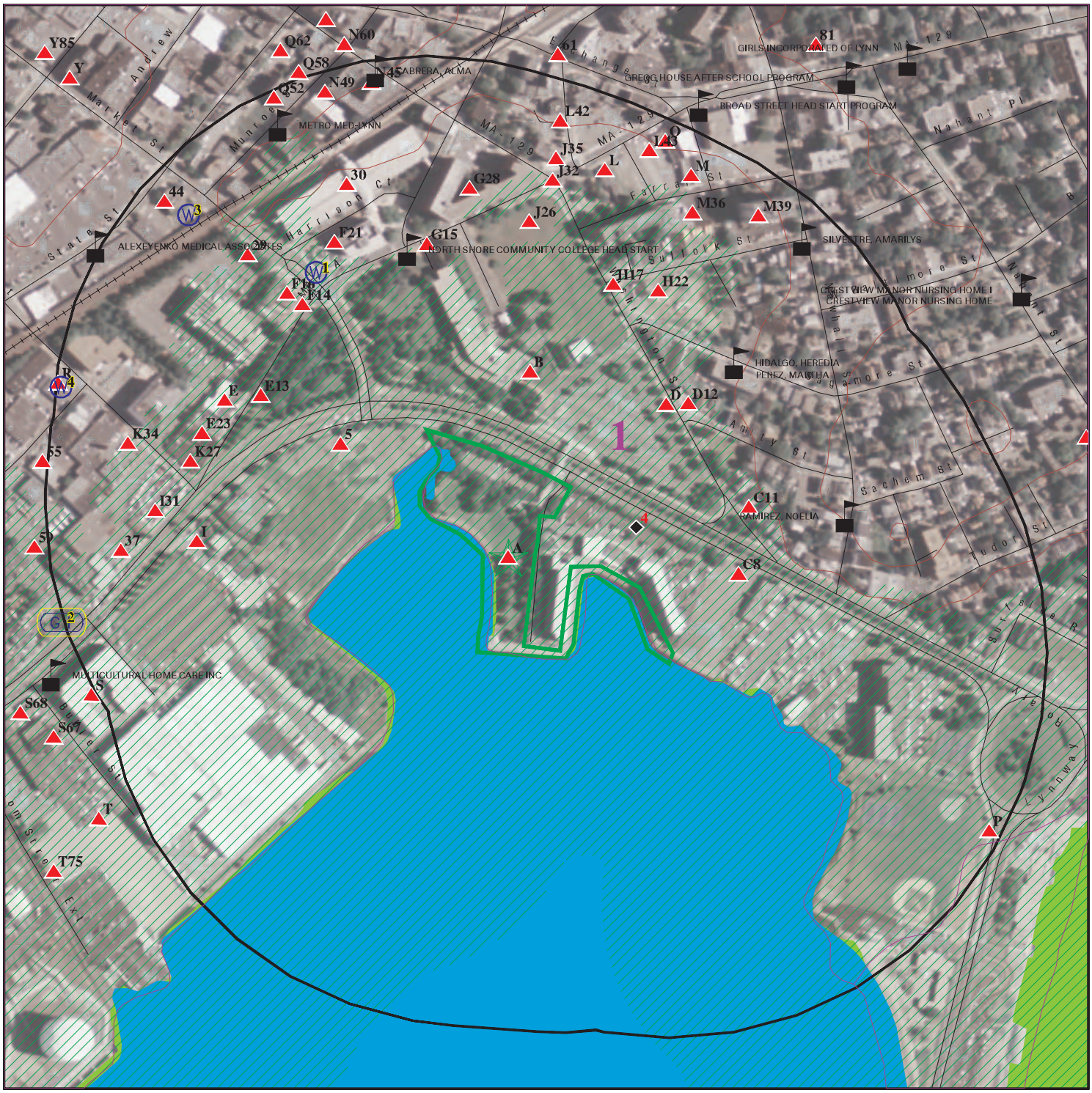
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Upgradient Area
- Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: Lynn Heritage State Park	CLIENT: Stantec
ADDRESS: 154 Lynnway Lynn MA 01902	CONTACT: Andrew Martzolf
LAT/LONG: 42.458733 / 70.94365	INQUIRY #: 5393000.2s DATE: August 15, 2018 1:21 pm

Copyright © 2018 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 5393000.2S



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

Sensitive Receptors

National Priority List Sites

Dept. Defense Sites

0 1/16 1/8 1/4 Miles

Indian Reservations BIA

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Lynn Heritage State Park	CLIENT:	Stantec
ADDRESS:	154 Lynnway Lynn MA 01902	CONTACT:	Andrew Martzolf
LAT/LONG:	42.458733 / 70.94365	INQUIRY #:	5393000.2s
		DATE:	August 15, 2018 1:23 pm

Copyright © 2018 EDR, Inc. © 2015 TomTom Rel. 2015.

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	TP		NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	1	NR	NR	1
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	3	NR	NR	3
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	1	0	NR	1
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-CESQG	0.250		0	3	NR	NR	NR	3
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP	1	NR	NR	NR	NR	NR	1
State- and tribal - equivalent CERCLIS								
MA SHWS	1.000		3	22	40	55	NR	120
State and tribal landfill and/or solid waste disposal site lists								
MA SWF/LF	0.500		0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
MA LAST	0.500		0	1	6	NR	NR	7
MA LUST	0.500		0	9	18	NR	NR	27
INDIAN LUST	0.500		0	0	0	NR	NR	0
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MA UST	0.250	1	1	5	NR	NR	NR	7
MA AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
MA INST CONTROL	0.500		1	8	12	NR	NR	21
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
MA BROWNFIELDS	0.500		0	0	2	NR	NR	2
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	2	NR	NR	2
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
MA LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
MA SPILLS	TP		NR	NR	NR	NR	NR	0
MA RELEASE	TP		NR	NR	NR	NR	NR	0
MA SPILLS 90	TP		NR	NR	NR	NR	NR	0
MA SPILLS 80	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		1	1	NR	NR	NR	2
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
MA AIRS	TP		NR	NR	NR	NR	NR	0
MA ASBESTOS	TP		NR	NR	NR	NR	NR	0
MA DRYCLEANERS	0.250		0	0	NR	NR	NR	0
MA ENF	TP		NR	NR	NR	NR	NR	0
MA Financial Assurance	TP	1	NR	NR	NR	NR	NR	1
MA GWDP	TP		NR	NR	NR	NR	NR	0
MA HW GEN	0.250	1	2	6	NR	NR	NR	9
RI MANIFEST	0.250		0	0	NR	NR	NR	0
NJ MANIFEST	0.250		0	1	NR	NR	NR	1
NY MANIFEST	0.250		1	2	NR	NR	NR	3
MA MERCURY	0.500		0	0	0	NR	NR	0
MA NPDES	TP		NR	NR	NR	NR	NR	0
MA TIER 2	TP		NR	NR	NR	NR	NR	0
MA TSD	0.500		0	0	0	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	1	0	NR	1
EDR Hist Auto	0.125		6	NR	NR	NR	NR	6

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
MA RGA HWS	TP		NR	NR	NR	NR	NR	0
MA RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		4	15	58	86	55	0	218

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1 **SEAPORT MARINA** **MA HW GEN** **S113411101**
Target Property **154 LYNNWAY** **N/A**
LYNN, MA 01905

Site 1 of 3 in cluster A

Actual: 2 ft.

HW GEN:
EPA Id: MV7815925821
RCRA Generator Status: Not reported
State Generator Status: SQG-MA

A2 **ERNS** **2017183169**
Target Property **154 LYNNWAY SUITE 164** **N/A**
LYNN, MA 01902

Site 2 of 3 in cluster A

Actual: 2 ft.

Click this hyperlink while viewing on your computer to access additional ERNS detail in the EDR Site Report.

A3 **CITY OF LYNN SEAPORT MARINA** **MA UST** **U002007491**
Target Property **154 LYNNWAY** **MA Financial Assurance** **N/A**
LYNN, MA 01902

Site 3 of 3 in cluster A

Actual: 2 ft.

UST:

Facility:
Facility ID: 8338
Owner Id: 8449
Owner: CITY OF LYNN
Owner Address: 154 LYNNWAY STE 604
Owner City,St,Zip: LYNN, MA 01902
Telephone: Not reported
Description: Marina
Facility address 2: Not reported
Owner address 2: Not reported
Latitude: 42.45861
Longitude: -70.94230
Contact name: Not reported
Contact address1: Not reported
Contact address2: Not reported
Contact city: Not reported
Contact state: Not reported
Contact zip: Not reported
Contact email: Not reported
Update: 2016-08-01 00:00:00
Update by: Not reported
Fac status: OPEN

Tank ID: 1
Tank Status: In Use
Status Date: Not reported
Date Installed: 10/01/1986
Capacity: 10000
Contents: Gasoline
Tank Usage: Not reported

CITY OF LYNN SEAPORT MARINA (Continued) **U002007491**

Tank Leak Detection: In-Tank Monitoring System
Pipe Leak Detection: Annual Automatic Line Leak Detection Test
Latitude: Not reported
Longitude: Not reported
Tank construct: Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Single-walled non-corrodible material (No corrosion protection required)
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 2
Tank Status: In Use
Status Date: Not reported
Date Installed: 10/01/1986
Capacity: 10000
Contents: Diesel
Tank Usage: Not reported
Tank Leak Detection: In-Tank Monitoring System
Pipe Leak Detection: Quarterly visual inspection and annual product line tightness test
Latitude: Not reported
Longitude: Not reported
Tank construct: Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Single-walled non-corrodible material (No corrosion protection required)
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

CITY OF LYNN SEAPORT MARINA (Continued) **U002007491**

MA Financial Assurance 2:
Facility Id: 8338
Description: Marina
Work Phone: (617) 592-5821

---

4 **BEST PETROLEUM INC** **EDR Hist Auto** **1020296486**
ENE **152 LYNNWAY STE 2F** **N/A**
< 1/8 **LYNN, MA 01902**
0.034 mi.
181 ft.

Relative: EDR Hist Auto
Lower

Actual:
0 ft.

Year:	Name:	Type:
1989	BEST PETROLEUM COMPANY INC	Gasoline Service Stations, NEC
1990	BEST PETROLEUM COMPANY INC	Gasoline Service Stations, NEC
1991	BEST PETROLEUM COMPANY INC	Gasoline Service Stations, NEC
1992	BEST PETROLEUM INC	Gasoline Service Stations, NEC
1993	BEST PETROLEUM INC	Gasoline Service Stations, NEC
1994	BEST PETROLEUM INC	Gasoline Service Stations, NEC
1995	BEST PETROLEUM INC	Gasoline Service Stations, NEC
1996	BEST PETROLEUM INC	Gasoline Service Stations, NEC
1997	BEST PETROLEUM INC	Gasoline Service Stations, NEC
1998	BEST PETROLEUM INC	Gasoline Service Stations, NEC
1999	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2000	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2001	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2002	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2003	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2004	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2005	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2006	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2007	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2008	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2009	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2010	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2011	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2012	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2013	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2014	BEST PETROLEUM INC	Gasoline Service Stations, NEC
2014	BEST PETROLEUM	Gasoline Service Stations

---

5 **FMR BEACON CHEVROLET** **MA SHWS** **S103545979**
NW **254 LYNNWAY** **MA INST CONTROL** **N/A**
< 1/8 **LYNN, MA 01901** **MA RELEASE**
0.058 mi. **MA ENF**
308 ft.

Relative: SHWS:
Higher
Release Tracking Number/Current Status: 3-0015391 / PSC

Actual:
16 ft.

Release Town: LYNN
Notification Date: 08/05/1997
Category: 120 DY
Associated ID: Not reported
Current Status: **PSC**
Status Date: 04/16/2015

FMR BEACON CHEVROLET (Continued) **S103545979**

Phase: PHASE II
Response Action Outcome: -
Oil Or Haz Material: Oil

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: TPH
Quantity: 3000 parts per million
Chemical: TPH
Quantity: 61.9 parts per million

Actions:
Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 1/17/2018
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: Interim Deadline Letter Issued
Action Date: 1/17/2018
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 1/17/2018
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 12/16/1999
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 12/16/1999
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/29/1997
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 12/3/2014
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/14/2001
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 3/19/2001

FMR BEACON CHEVROLET (Continued) **S103545979**

Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 3/28/2001
Response Action Outcome: Not reported

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 3/28/2001
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSARCD
Action Date: 4/16/2015
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSAREV
Action Date: 4/16/2015
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/16/2015
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/16/2015
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 4/16/2015
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/8/1999
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 4/8/1999
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 4/8/1999
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/2/1999
Response Action Outcome: Not reported

FMR BEACON CHEVROLET (Continued) **S103545979**

Action Type:	Partial RAO for this RTN
Action Status:	Level I - Technical Screen Audit
Action Date:	7/24/2001
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Level I - Technical Screen Audit
Action Date:	7/24/2001
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	7/29/1999
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Oral Approval of Plan or Action
Action Date:	7/29/1999
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	7/7/2006
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLFLD
Action Date:	8/15/2017
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FLDRUN
Action Date:	8/22/2008
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection
Action Date:	8/22/2008
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/5/1997
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/5/1997
Response Action Outcome:	Not reported
Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	9/19/2008
Response Action Outcome:	Not reported

FMR BEACON CHEVROLET (Continued) **S103545979**

INST CONTROL:

Release Tracking Number:	3-0015391
Action Type:	AUL
Action Stat:	LEGNOT
Action Date:	03/19/2001
Response Action Outcome:	-

Release Tracking Number:	3-0015391
Action Type:	AUL
Action Stat:	LEGNOT
Action Date:	12/03/2014
Response Action Outcome:	-

Release Tracking Number:	3-0015391
Action Type:	AUL
Action Stat:	RECPT
Action Date:	03/14/2001
Response Action Outcome:	-

Release Tracking Number:	3-0015391
Action Type:	AUL
Action Stat:	RECPT
Action Date:	04/16/2015
Response Action Outcome:	-

Release Tracking Number:	3-0015391
Action Type:	AUL
Action Stat:	SNAUDI
Action Date:	01/17/2018
Response Action Outcome:	-

Release Tracking Number:	3-0015391
Action Type:	AUL
Action Stat:	SNAUDI
Action Date:	08/22/2008
Response Action Outcome:	-

Release Tracking Number:	3-0015391
Action Type:	AUL
Action Stat:	TSAUD
Action Date:	04/16/2015
Response Action Outcome:	-

Release Tracking Number:	3-0015391
Action Type:	AUL
Action Stat:	TSAUD
Action Date:	07/24/2001
Response Action Outcome:	-

Release:

Release Tracking Number/Current Status:	3-0015391 / PSC
Primary ID:	Not reported
Official City:	LYNN
Notification:	08/05/1997
Category:	120 DY
Status Date:	04/16/2015

FMR BEACON CHEVROLET (Continued) **S103545979**

Phase: PHASE II
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 1/17/2018
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: Interim Deadline Letter Issued
Action Date: 1/17/2018
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 1/17/2018
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 12/16/1999
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 12/16/1999
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/29/1997
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 12/3/2014
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/14/2001
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 3/19/2001
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 3/28/2001
Response Action Outcome: Not reported

FMR BEACON CHEVROLET (Continued) **S103545979**

Action Type:	Partial RAO for this RTN
Action Status:	RAO Statement Received
Action Date:	3/28/2001
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSARCD
Action Date:	4/16/2015
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSAREV
Action Date:	4/16/2015
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	4/16/2015
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	4/16/2015
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Level I - Technical Screen Audit
Action Date:	4/16/2015
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	4/8/1999
Response Action Outcome:	Not reported
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	4/8/1999
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	4/8/1999
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	7/2/1999
Response Action Outcome:	Not reported
Action Type:	Partial RAO for this RTN
Action Status:	Level I - Technical Screen Audit
Action Date:	7/24/2001
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Level I - Technical Screen Audit

FMR BEACON CHEVROLET (Continued) **S103545979**

Action Date: 7/24/2001
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/29/1999
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Oral Approval of Plan or Action
Action Date: 7/29/1999
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 7/7/2006
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLFLD
Action Date: 8/15/2017
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRUN
Action Date: 8/22/2008
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 8/22/2008
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/5/1997
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/5/1997
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 9/19/2008
Response Action Outcome: Not reported

Chemicals:
Chemical: TPH
Quantity: 3000 parts per million
Chemical: TPH
Quantity: 61.9 parts per million

ENFORCEMENT:
Region: NERO

FMR BEACON CHEVROLET (Continued) **S103545979**

DEP Region:	NERO
DEP Program:	3a
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0015391
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	LYNN
Date Executed:	01/17/2018
ENF #:	00003883
Document Type:	IDL
AG Ref (Y/N):	False
Doc Archived (Y/N):	True
EJ Community (Y/N):	True
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0015391
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	07/07/2006
ENF #:	NON-NE-06-3A116
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Municipally Owned

B6 **NORTH SHORE COMMUNITY COLLEGE** **NY MANIFEST** **S109826115**
North **300 BROAD STREET** **N/A**
< 1/8 **LYNN, MA 01901**
0.059 mi.
309 ft. **Site 1 of 2 in cluster B**

Relative:
Higher

Actual:
16 ft.

NY MANIFEST:

Country:	USA
EPA ID:	MAP815936722
Facility Status:	Not reported
Location Address 1:	300 BROAD STREET
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	LYNN
Location State:	MA
Location Zip:	01901
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	MAP815936722
Mailing Name:	NORTH SHORE COMMUNITY COLLEGE
Mailing Contact:	G K NEUNABER
Mailing Address 1:	1 FERNCROFT ROAD
Mailing Address 2:	Not reported
Mailing City:	DANVERS
Mailing State:	MA
Mailing Zip:	01923
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	9787624000

NY MANIFEST:

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2010
Trans1 State ID:	MAD985286988
Trans2 State ID:	Not reported
Generator Ship Date:	06/11/2010
Trans1 Recv Date:	06/11/2010
Trans2 Recv Date:	Not reported
TSD Site Recv Date:	07/01/2010
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	MAP815936722
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD077444263
TSDF ID 2:	Not reported
Manifest Tracking Number:	003167374FLE
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported

NORTH SHORE COMMUNITY COLLEGE (Continued) **S109826115**

Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H141
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	23.0
Units:	P - Pounds
Number of Containers:	1.0
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	L Landfill.
Specific Gravity:	1.0
Waste Code:	D001
Waste Code 1_2:	D002
Waste Code 1_3:	D005
Waste Code 1_4:	D011
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

Click this hyperlink while viewing on your computer to access
8 additional NY_MANIFEST: record(s) in the EDR Site Report.

B7 **COMM OF MASS COMUNITY COLLEGE** **MA SHWS** **U003001577**
North **300 BROAD ST** **MA UST** **N/A**
< 1/8 **LYNN, MA 01901** **MA RELEASE**
0.059 mi. **MA Financial Assurance**
309 ft. **Site 2 of 2 in cluster B** **MA HW GEN**

Relative:
Higher

Actual:
16 ft.

SHWS:

Release Tracking Number/Current Status:	3-0032907 / PSNC
Release Town:	LYNN
Notification Date:	05/26/2015
Category:	120 DY
Associated ID:	Not reported
Current Status:	**PSNC**
Status Date:	06/07/2017
Phase:	PHASE III
Response Action Outcome:	-
Oil Or Haz Material:	Oil and Hazardous Material
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	BENZO[A]ANTHRACENE
Quantity:	17 milligrams per kilogram
Chemical:	BENZO[A]PYRENE
Quantity:	12 milligrams per kilogram
Chemical:	BENZO[B]FLUORANTHENE
Quantity:	15 milligrams per kilogram
Chemical:	PHENANTHRENE
Quantity:	35 milligrams per kilogram

COMM OF MASS COMUNITY COLLEGE (Continued) **U003001577**

Chemical:	2-METHYLNAPHTHALENE
Quantity:	1.5 milligrams per kilogram
Chemical:	LEAD
Quantity:	200 milligrams per kilogram
Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	170 milligrams per kilogram
Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	240 milligrams per kilogram
Chemical:	DIBENZO[A,H]ANTHRACENE
Quantity:	1.6 milligrams per kilogram

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	3/3/2016
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/26/2015
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/26/2015
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/26/2015
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	5/27/2016
Response Action Outcome:	Not reported
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	5/27/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/27/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	5/27/2016
Response Action Outcome:	Not reported
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/1/2015
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure

COMM OF MASS COMUNITY COLLEGE (Continued) **U003001577**

Action Status: Written Plan Received
Action Date: 6/1/2015
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 6/2/2015
Response Action Outcome: Not reported

Action Type: BOL
Action Status: SHPFAC
Action Date: 6/26/2015
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 6/7/2017
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 6/7/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/9/2015
Response Action Outcome: Not reported

UST:

Facility:
Facility ID: 263
Owner Id: 40191
Owner: MASS COMMUNITY COLLEGE
Owner Address: 300 BROAD ST
Owner City,St,Zip: LYNN, MA 01901
Telephone: Not reported
Description: Not reported
Facility address 2: Not reported
Owner address 2: Not reported
Latitude: 42.46053
Longitude: -70.94337
Contact name: Not reported
Contact address1: Not reported
Contact address2: Not reported
Contact city: Not reported
Contact state: Not reported
Contact zip: Not reported
Contact email: Not reported
Update: 2009-05-12 00:00:00
Update by: Not reported
Fac status: CLOSED

Tank ID: 1

COMM OF MASS COMUNITY COLLEGE (Continued) **U003001577**

Tank Status:	**Tank Removed**
Status Date:	12/04/1998
Date Installed:	10/24/1985
Capacity:	500
Contents:	Bulk Heati
Tank Usage:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Double-walled metal tank (cathodic protection required)
Pipe construct:	Not reported
Ptype:	Not reported
Number of compartment:	Not reported
Pipe install date:	Not reported
Pipe leak install date:	Not reported
Submersible sump:	N
Submersible sump install date:	Not reported
Turbine sump:	N
Turbine sump sensor:	N
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported
Overfill protect type:	Not reported
Automatic line leak detect:	Not reported
Tank corrosion type:	Not reported
Leak corrosion type:	Not reported

Release:

Release Tracking Number/Current Status:	3-0032907 / PSNC
Primary ID:	Not reported
Official City:	LYNN
Notification:	05/26/2015
Category:	120 DY
Status Date:	06/07/2017
Phase:	PHASE III
Response Action Outcome:	-
Oil / Haz Material Type:	Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	3/3/2016
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/26/2015
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E

COMM OF MASS COMUNITY COLLEGE (Continued) **U003001577**

Action Date:	5/26/2015
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/26/2015
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	5/27/2016
Response Action Outcome:	Not reported
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	5/27/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/27/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	5/27/2016
Response Action Outcome:	Not reported
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/1/2015
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	6/1/2015
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	6/2/2015
Response Action Outcome:	Not reported
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	6/26/2015
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	6/7/2017
Response Action Outcome:	Not reported
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	6/7/2017
Response Action Outcome:	Not reported

COMM OF MASS COMUNITY COLLEGE (Continued) **U003001577**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/9/2015
Response Action Outcome: Not reported

Chemicals:
Chemical: BENZO[A]ANTHRACENE
Quantity: 17 milligrams per kilogram
Chemical: BENZO[A]PYRENE
Quantity: 12 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 15 milligrams per kilogram
Chemical: PHENANTHRENE
Quantity: 35 milligrams per kilogram
Chemical: 2-METHYLNAPHTHALENE
Quantity: 1.5 milligrams per kilogram
Chemical: LEAD
Quantity: 200 milligrams per kilogram
Chemical: C9 THRU C10 AROMATIC HYDROCARBONS
Quantity: 170 milligrams per kilogram
Chemical: C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity: 240 milligrams per kilogram
Chemical: DIBENZO[A,H]ANTHRACENE
Quantity: 1.6 milligrams per kilogram
Source: UNKNOWN

MA Financial Assurance 2:
Facility Id: 263
Description: Other
Work Phone: (508) 762-4000

HW GEN:
EPA Id: MV7815936722
RCRA Generator Status: VSQG
State Generator Status: VQG-MA

C8 **LYNNWAY AMOCO** **EDR Hist Auto** **1021547798**
East **130 LYNNWAY** **N/A**
< 1/8 **LYNN, MA 01902**
0.063 mi.
334 ft. **Site 1 of 2 in cluster C**

Relative: EDR Hist Auto
Higher

Actual: Year: Name: Type:
16 ft.
1969 LYNNWAY AMOCO Gasoline Service Stations
1970 LYNNWAY AMOCO Gasoline Service Stations
1971 LYNNWAY AMOCO Gasoline Service Stations
1972 LYNNWAY AMOCO Gasoline Service Stations
1973 LYNNWAY AMOCO Gasoline Service Stations
1974 LYNNWAY AMOCO Gasoline Service Stations
1975 LYNNWAY AMOCO Gasoline Service Stations
1976 LYNNWAY AMOCO Gasoline Service Stations
1977 LYNNWAY AMOCO Gasoline Service Stations
1978 LYNNWAY AMOCO Gasoline Service Stations
1979 LYNNWAY AMOCO Gasoline Service Stations

LYNNWAY AMOCO (Continued) **1021547798**

1980	LYNNWAY AMOCO	Gasoline Service Stations
1982	LYNNWAY AMOCO	Gasoline Service Stations
1983	LYNNWAY AMOCO	Gasoline Service Stations

D9 **AUTOMOTIVE SPECIALISTS INC** **EDR Hist Auto** **1020442597**
NE **805 WASHINGTON STREET** **N/A**
< 1/8 **LYNN, MA 01902**
0.084 mi.
444 ft. **Site 1 of 3 in cluster D**

Relative: EDR Hist Auto
Higher

Actual: Year: Name: Type:
16 ft.

1969	WALTONS AUTO SERVICE	Gasoline Service Stations
1970	WALTONS AUTO SERVICE	Gasoline Service Stations
1971	WALTONS AUTO SERVICE	Gasoline Service Stations
1972	WALTONS AUTO SERVICE	Gasoline Service Stations
1973	WALTONS AUTO SERVICE	Gasoline Service Stations
1974	WALTONS AUTO SERVICE	Gasoline Service Stations
1975	AUTOMOTIVE SPECIALISTS INC	Gasoline Service Stations
1977	AUTOMOTIVE SPECIALISTS INC	Gasoline Service Stations
1978	AUTOMOTIVE SPECIALISTS INC	Gasoline Service Stations
1979	AUTOMOTIVE SPECIALISTS INC	Gasoline Service Stations
1980	AUTOMOTIVE SPECIALISTS INC	Gasoline Service Stations

D10 **AUTOMOTIVE SPECIALISTS INC** **EDR Hist Auto** **1020497353**
NE **801 WASHINGTON STREET** **N/A**
< 1/8 **LYNN, MA 01902**
0.085 mi.
447 ft. **Site 2 of 3 in cluster D**

Relative: EDR Hist Auto
Higher

Actual: Year: Name: Type:
16 ft.

1976	AUTOMOTIVE SPECIALISTS INC	Gasoline Service Stations

C11 **GIOVANNI AUTO BODY** **MA HW GEN** **S107396122**
ENE **892 WASHINGTON ST** **N/A**
< 1/8 **LYNN, MA 01902**
0.091 mi.
480 ft. **Site 2 of 2 in cluster C**

Relative: HW GEN:
Higher

Actual:
19 ft.

EPA Id:	MV7813167583
RCRA Generator Status:	VSQG
State Generator Status:	VQG-MA

D12 **826 WASHINGTON STREET** **MA SHWS** **S121394387**
NE **826 WASHINGTON STREET** **MA RELEASE** **N/A**
< 1/8 **LYNN, MA 01904**
0.097 mi.
510 ft. **Site 3 of 3 in cluster D**

Relative:
Higher

Actual:
18 ft.

SHWS:

Release Tracking Number/Current Status:	3-0034624 / UNCLSS
Release Town:	LYNN
Notification Date:	11/13/2017
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Unclassified**
Status Date:	11/13/2017
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil and Hazardous Material
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS
Quantity:	1500 milligrams per kilogram
Chemical:	2-METHYLNAPHTHALENE
Quantity:	9.8 milligrams per kilogram
Chemical:	PHENANTHRENE
Quantity:	25 milligrams per kilogram
Chemical:	TPH
Quantity:	1600 milligrams per kilogram
Chemical:	NAPTHALENE
Quantity:	160 milligrams per kilogram
Chemical:	ACENAPHTHENE
Quantity:	30 milligrams per kilogram

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	11/13/2017
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	11/13/2017
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/13/2017
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/20/2017
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only

826 WASHINGTON STREET (Continued) **S121394387**

Action Date: 3/15/2018
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/7/2018
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/7/2018
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 3/9/2018
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0034624 / UNCLSS
Primary ID: Not reported
Official City: LYNN
Notification: 11/13/2017
Category: 120 DY
Status Date: 11/13/2017
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/13/2017
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/13/2017
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/13/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/20/2017
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/15/2018

826 WASHINGTON STREET (Continued) **S121394387**

Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/7/2018
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/7/2018
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 3/9/2018
Response Action Outcome: Not reported

Chemicals:
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 1500 milligrams per kilogram
Chemical: 2-METHYLNAPHTHALENE
Quantity: 9.8 milligrams per kilogram
Chemical: PHENANTHRENE
Quantity: 25 milligrams per kilogram
Chemical: TPH
Quantity: 1600 milligrams per kilogram
Chemical: NAPTHALENE
Quantity: 160 milligrams per kilogram
Chemical: ACENAPHTHENE
Quantity: 30 milligrams per kilogram
Source: UNKNOWN

E13 **CONNORS JENNY SERVICE STATION** **EDR Hist Auto** **1020406714**
WNW **418 BROAD ST** **N/A**
< 1/8 **LYNN, MA 01901**
0.113 mi.
598 ft. **Site 1 of 5 in cluster E**

Relative: EDR Hist Auto
Higher

Actual: **16 ft.**

Year:	Name:	Type:
1969	CONNORS JENNY SERVICE STATION	Gasoline Service Stations
1970	CONNORS JENNY SERVICE STATION	Gasoline Service Stations
1971	CONNORS JENNY SERVICE STATION	Gasoline Service Stations
1972	CONNORS JENNY SERVICE STATION	Gasoline Service Stations
1973	CONNORS JENNY SERVICE STATION	Gasoline Service Stations
1974	CONNORS JENNY SERVICE STATION	Gasoline Service Stations
1975	CONNORS JENNY SERVICE STATION	Gasoline Service Stations
1976	CONNORS JENNY SERVICE STATION	Gasoline Service Stations

F14 **WARDS GEORGE MOBILE SV CTR** **EDR Hist Auto** **1021004515**
NW **355 BROAD ST** **N/A**
< 1/8 **LYNN, MA 01901**
0.118 mi.
624 ft. **Site 1 of 3 in cluster F**

Relative: EDR Hist Auto
Higher

Actual: **15 ft.**

Year:	Name:	Type:
1980	WARDS GEORGE MOBILE SV CTR	Gasoline Service Stations
1982	WARDS GEORGE MOBILE SV CTR	Gasoline Service Stations
1983	WARDS GEORGE MOBILE SV CTR	Gasoline Service Stations
1985	WARDS GEORGE MOBILE SV CTR	Gasoline Service Stations
1986	WARDS GEORGE MOBILE SV CTR	Gasoline Service Stations
1987	WARDS GEORGE MOBILE SV CTR	Gasoline Service Stations

G15 **OXFORD HOPKINS CO** **RCRA NonGen / NLR** **1000341128**
NNW **278 BROAD ST** **FINDS** **MAD001033521**
< 1/8 **LYNN, MA 01901** **ECHO**
0.124 mi.
657 ft. **Site 1 of 2 in cluster G**

Relative: RCRA NonGen / NLR:
Higher

Actual: **19 ft.**

Date form received by agency:	02/12/1981
Facility name:	OXFORD HOPKINS CO
Facility address:	278 BROAD ST LYNN, MA 01901
EPA ID:	MAD001033521
Contact:	FREDERIC PHILLIPS
Contact address:	278 BROAD ST LYNN, MA 01901
Contact country:	US
Contact telephone:	617-599-2550
Contact email:	Not reported
EPA Region:	01
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	OXFORD HOPKINS CO
Owner/operator address:	278 BROAD ST LYNN, MA 01901
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	10/16/2004
Owner/Op end date:	Not reported

Owner/operator name:	OXFORD HOPKINS CO
Owner/operator address:	278 BROAD ST LYNN, MA 01901
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported

OXFORD HOPKINS CO (Continued) **1000341128**

Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 03/01/1990
Owner/Op end date: 06/03/1991

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: U238
. Waste name: CARBAMIC ACID, ETHYL ESTER

Violation Status: No violations found

FINDS:

Registry ID: 110003418043

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000341128
Registry ID: 110003418043
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110003418043

F16
NW
1/8-1/4
0.131 mi.
691 ft.

Relative:
Higher

Actual:
16 ft.

GOODYEAR AUTO SERVICE CENTER 0325
205 MARKET ST
LYNN, MA 01901

Site 2 of 3 in cluster F

RCRA-CESQG
MA LUST
MA RELEASE
FINDS
ECHO
MA HW GEN

1000193937
MAD094851300

RCRA-CESQG:

Date form received by agency:	06/25/2014
Facility name:	GOODYEAR AUTO SERVICE CENTER 0325
Facility address:	205 MARKET ST LYNN, MA 01901
EPA ID:	MAD094851300
Contact:	WILLIAM LOGAN
Contact address:	205 MARKET ST LYNN, MA 01901-0000
Contact country:	US
Contact telephone:	781-598-4500
Contact email:	Not reported
EPA Region:	01
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	SEA REALTY TRUST II C/O JOANNE GERBER TR
Owner/operator address:	205 MARKET ST LYNN, MA 01901
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	11/23/1988
Owner/Op end date:	Not reported

Owner/operator name:	GOODYEAR TIRE AND RUBBER COMPANY
Owner/operator address:	205 MARKET ST LYNN, MA 01901
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private

GOODYEAR AUTO SERVICE CENTER 0325 (Continued) **1000193937**

Owner/Operator Type: Operator
Owner/Op start date: 12/08/1991
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: MA95
. Waste name: MA95

. Waste code: MA98
. Waste name: MA98

. Waste code: MA99
. Waste name: MA99

Historical Generators:
Date form received by agency: 11/06/1986
Site name: GOODYEAR AUTO SERVICE CENTER 0325
Classification: Small Quantity Generator

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Violation Status: No violations found

LUST:

GOODYEAR AUTO SERVICE CENTER 0325 (Continued) **1000193937**

Facility:

Release Tracking Number/Current Status:	3-0004515 / RAO
Status Date:	07/01/1996
Source Type:	UST
Release Town:	LYNN
Notification Date:	10/01/1993
Category:	NONE
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	AUTOREPAIR
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	PETROLEUM
Quantity:	Not reported

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	10/1/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	TREGS
Action Status:	DEPNDS
Action Date:	6/5/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	7/1/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	7/1/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	7/1/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

GOODYEAR AUTO SERVICE CENTER 0325 (Continued) **1000193937**

Release:

Release Tracking Number/Current Status:	3-0004515 / RAO
Primary ID:	Not reported
Official City:	LYNN
Notification:	10/01/1993
Category:	NONE
Status Date:	07/01/1996
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	10/1/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	TREGS
Action Status:	DEPNDS
Action Date:	6/5/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	7/1/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	7/1/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	7/1/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	PETROLEUM
Quantity:	Not reported
Location Type:	AUTOREPAIR
Source:	UST

FINDS:

Registry ID: 110003448270

GOODYEAR AUTO SERVICE CENTER 0325 (Continued) **1000193937**

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

MA-EPICS - Massachussetts Environmental Protection Integrated Computer System

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000193937
Registry ID:	110003448270
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110003448270

HW GEN:

EPA Id:	MAD094851300
RCRA Generator Status:	VSQG
State Generator Status:	LQG-MA

H17 **DALY BUILDING** **MA SHWS S119746806**
NNE **678 WASHINGTON STREET** **MA RELEASE N/A**
1/8-1/4 **LYNN, MA 01901**
0.134 mi.
709 ft. **Site 1 of 2 in cluster H**

Relative:
Higher

Actual:
18 ft.

SHWS:

Release Tracking Number/Current Status:	3-0034726 / UNCLSS
Release Town:	LYNN
Notification Date:	01/12/2018
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Unclassified**
Status Date:	01/12/2018
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	RESIDNTIAL
Location Type:	ELDERLY/DI
Location Type:	PRIVPROP
Source:	SOURCE
Source:	SUSPECT
Source:	UPGRADIEN
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	TCE
Quantity:	8.1 UG/M3

DALY BUILDING (Continued) **S119746806**

Actions:

Action Type:	Immediate Response Action
Action Status:	NOAPP
Action Date:	1/12/2018
Response Action Outcome:	Not reported

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/12/2018
Response Action Outcome:	Not reported

Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/7/2018
Response Action Outcome:	Not reported

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	2/7/2018
Response Action Outcome:	Not reported

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	4/6/2018
Response Action Outcome:	Not reported

Release Tracking Number/Current Status:	3-0034726 / UNCLSS
Release Town:	LYNN
Notification Date:	01/12/2018
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Unclassified**
Status Date:	01/12/2018
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	RESIDNTIAL
Location Type:	ELDERLY/DI
Location Type:	PRIVPROP
Source:	SOURCE
Source:	SUSPECT
Source:	UPGRADIEN
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	TCE
Quantity:	8.1 UG/M3

Actions:

Action Type:	Immediate Response Action
Action Status:	NOAPP
Action Date:	1/12/2018
Response Action Outcome:	Not reported

DALY BUILDING (Continued) **S119746806**

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/12/2018
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/7/2018
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	2/7/2018
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	4/6/2018
Response Action Outcome:	Not reported
Release Tracking Number/Current Status:	3-0034726 / UNCLSS
Release Town:	LYNN
Notification Date:	01/12/2018
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Unclassified**
Status Date:	01/12/2018
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	RESIDNTIAL
Location Type:	ELDERLY/DI
Location Type:	PRIVPROP
Source:	SOURCE
Source:	SUSPECT
Source:	UPGRADIEN
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	TCE
Quantity:	8.1 UG/M3

Actions:

Action Type:	Immediate Response Action
Action Status:	NOAPP
Action Date:	1/12/2018
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/12/2018
Response Action Outcome:	Not reported

DALY BUILDING (Continued) **S119746806**

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/7/2018
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/7/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/6/2018
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0034726 / UNCLSS
Release Town: LYNN
Notification Date: 01/12/2018
Category: 72 HR
Associated ID: Not reported
Current Status: **Unclassified**
Status Date: 01/12/2018
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material
Location Type: RESIDNTIAL
Location Type: ELDERLY/DI
Location Type: PRIVPROP
Source: SOURCE
Source: SUSPECT
Source: UPGRADIEN
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: TCE
Quantity: 8.1 UG/M3

Actions:
Action Type: Immediate Response Action
Action Status: NOAPP
Action Date: 1/12/2018
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/12/2018
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/7/2018
Response Action Outcome: Not reported

DALY BUILDING (Continued) **S119746806**

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/7/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/6/2018
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0034726 / UNCLSS
Primary ID: Not reported
Official City: LYNN
Notification: 01/12/2018
Category: 72 HR
Status Date: 01/12/2018
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: NOAPP
Action Date: 1/12/2018
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/12/2018
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/7/2018
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/7/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/6/2018
Response Action Outcome: Not reported

Chemicals:
Chemical: TCE
Quantity: 8.1 UG/M3
Location Type: RESIDNTIAL
Location Type: ELDERLY/DI
Location Type: PRIVPROP

DALY BUILDING (Continued) **S119746806**

Source: SOURCE
Source: SUSPECT
Source: UPGRADIEN
Source: UNKNOWN

E18 **FMR SHELL SERVICE STATION** **MA SHWS S101033632**
WNW **411 BROAD ST** **MA LUST N/A**
1/8-1/4 **LYNN, MA 01901** **MA RELEASE**
0.136 mi.
720 ft. **Site 2 of 5 in cluster E**

Relative:
Higher

Actual:
18 ft.

SHWS:
Release Tracking Number/Current Status: 3-0003635 / RAO
Release Town: LYNN
Notification Date: 07/15/1991
Category: NONE
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 08/11/2008
Phase: PHASE V
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Not reported
Location Type: GASSTATION

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 1/16/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 10/23/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/16/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 2/15/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5

FMR SHELL SERVICE STATION (Continued) **S101033632**

Action Status: Remedy Operation Status Report Received
Action Date: 2/15/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: RMRINT
Action Date: 2/15/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 2/16/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 2/2/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 2/2/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: RMRINT
Action Date: 2/2/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 5/11/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/9/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1991
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 7/19/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

FMR SHELL SERVICE STATION (Continued) **S101033632**

reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/8/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Modified Revised or Updated Plan Received
Action Date: 7/9/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Revised Statement or Transmittal Received
Action Date: 7/9/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 8/10/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/11/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/11/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/11/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/11/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 8/16/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5

FMR SHELL SERVICE STATION (Continued) **S101033632**

Action Status: Remedy Operation Status Report Received
Action Date: 8/16/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 8/18/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: RMRINI
Action Date: 8/18/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 8/2/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 8/27/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 8/27/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: LSPFA
Action Date: 8/8/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: RMRINT
Action Date: 8/8/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 8/8/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 9/13/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

FMR SHELL SERVICE STATION (Continued) **S101033632**

reduced to background.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 9/13/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LUST:

Facility:
Release Tracking Number/Current Status: 3-0011436 / RAO
Status Date: 10/11/1994
Source Type: UST
Release Town: LYNN
Notification Date: 08/09/1994
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 163 parts per million
Chemical: VOCS
Quantity: 163 micrograms per gallon

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)

FMR SHELL SERVICE STATION (Continued) **S101033632**

Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	8/18/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/9/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	8/9/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	8/9/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Facility:

Release Tracking Number/Current Status:	3-0010039 / RAO
Status Date:	10/11/1994
Source Type:	UST
Release Town:	LYNN
Notification Date:	10/08/1993
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	WASTE OIL
Quantity:	70.05 gallons per hour
Chemical:	TPH
Quantity:	4200 micrograms per gallon
Chemical:	OIL
Quantity:	Not reported

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/14/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been

FMR SHELL SERVICE STATION (Continued) **S101033632**

reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/28/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/28/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/7/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/8/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/8/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/17/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/17/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition

FMR SHELL SERVICE STATION (Continued) **S101033632**

Action Status: Reportable Release under MGL 21E
Action Date: 4/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0003635 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 07/15/1991
Category: NONE
Status Date: 08/11/2008
Phase: PHASE V
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 1/16/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 10/23/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/16/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 2/15/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 2/15/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: RMRINT
Action Date: 2/15/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

FMR SHELL SERVICE STATION (Continued) **S101033632**

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 2/16/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 2/2/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 2/2/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: RMRINT
Action Date: 2/2/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 5/11/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 6/9/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1991
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 7/19/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/8/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Modified Revised or Updated Plan Received
Action Date: 7/9/2004

FMR SHELL SERVICE STATION (Continued) **S101033632**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Revised Statement or Transmittal Received
Action Date: 7/9/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 8/10/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/11/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/11/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/11/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/11/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 8/16/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 8/16/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 8/18/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

FMR SHELL SERVICE STATION (Continued) **S101033632**

Action Type: Phase 5
Action Status: RMRINI
Action Date: 8/18/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 8/2/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 8/27/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 8/27/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: LSPFA
Action Date: 8/8/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: RMRINT
Action Date: 8/8/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 8/8/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 9/13/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 9/13/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

FMR SHELL SERVICE STATION (Continued) **S101033632**

Location Type: GASSTATION

Release Tracking Number/Current Status: 3-0010039 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/08/1993
Category: 72 HR
Status Date: 10/11/1994
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/14/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/28/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/28/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/7/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/8/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/8/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

FMR SHELL SERVICE STATION (Continued) **S101033632**

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	12/17/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/17/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/6/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/11/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	WASTE OIL
Quantity:	70.05 gallons per hour
Chemical:	TPH
Quantity:	4200 micrograms per gallon
Chemical:	OIL
Quantity:	Not reported
Location Type:	COMMERCIAL
Source:	UST
Release Tracking Number/Current Status:	3-0011436 / RAO
Primary ID:	Not reported
Official City:	LYNN
Notification:	08/09/1994
Category:	72 HR
Status Date:	10/11/1994
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/11/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received

FMR SHELL SERVICE STATION (Continued) **S101033632**

Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/18/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/9/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/9/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/9/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: GASOLINE
Quantity: 163 parts per million
Chemical: VOCS
Quantity: 163 micrograms per gallon
Location Type: COMMERCIAL
Source: UST

E19 **MEINEKE CAR CARE CENTER** **MA HW GEN** **S112559366**
WNW **411-429 BROAD ST** **N/A**
1/8-1/4 **LYNN, MA 01901**
0.136 mi.
720 ft. **Site 3 of 5 in cluster E**

Relative: **Higher**
Actual: **18 ft.**

HW GEN:
EPA Id: MV7815920001
RCRA Generator Status: Not reported
State Generator Status: SQG-MA

E20
WNW
1/8-1/4
0.136 mi.
720 ft.

SHELL OIL CO
411 BROAD ST
LYNN, MA 01901

Site 4 of 5 in cluster E

MA UST **U001005223**
MA Financial Assurance **N/A**

Relative:
Higher

Actual:
18 ft.

UST:

Facility:

Facility ID:	5430
Owner Id:	6038
Owner:	SHELL OIL CO
Owner Address:	400 BLUE HILL DRIVE
Owner City,St,Zip:	WESTWOOD, MA 02090
Telephone:	Not reported
Description:	Retail Motor Vehicle Fuel
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.46025
Longitude:	-70.94736
Contact name:	Not reported
Contact address1:	Not reported
Contact address2:	Not reported
Contact city:	Not reported
Contact state:	Not reported
Contact zip:	Not reported
Contact email:	Not reported
Update:	2004-10-28 00:00:00
Update by:	Not reported
Fac status:	CLOSED

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	08/08/1994
Date Installed:	05/01/1979
Capacity:	10000
Contents:	Gasoline
Tank Usage:	Not reported
Tank Leak Detection:	Manual Tank Gauging (1,000G or more capacity tank)
Pipe Leak Detection:	Annual Automatic Line Leak Detection Test
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Not reported
Pipe construct:	Not reported
Ptype:	Not reported
Number of compartment:	Not reported
Pipe install date:	Not reported
Pipe leak install date:	Not reported
Submersible sump:	N
Submersible sump install date:	Not reported
Turbine sump:	N
Turbine sump sensor:	N
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported
Overfill protect type:	Not reported
Automatic line leak detect:	Not reported

SHELL OIL CO (Continued) **U001005223**

Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 2
Tank Status: Tank Removed
Status Date: 08/08/1994
Date Installed: 05/01/1979
Capacity: 10000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Manual Tank Gauging (1,000G or more capacity tank)
Pipe Leak Detection: Annual Automatic Line Leak Detection Test
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 3
Tank Status: Tank Removed
Status Date: 08/09/1994
Date Installed: 05/01/1979
Capacity: 10000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Manual Tank Gauging (1,000G or more capacity tank)
Pipe Leak Detection: Annual Automatic Line Leak Detection Test
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Single-walled non-corrodible material (No corrosion protection required)
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N

SHELL OIL CO (Continued) **U001005223**

Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

MA Financial Assurance 2:
Facility Id: 5430
Description: Gas Station
Work Phone: (617) 461-4660

F21 **PROPOSED MBTA STATION** **MA SHWS S105199188**
NNW **MARKET STREET UNION STS** **MA LUST N/A**
1/8-1/4 **LYNN, MA 01901** **MA RELEASE**
0.140 mi.
740 ft. **Site 3 of 3 in cluster F**

Relative:
Higher

Actual:
19 ft.

SHWS:
Release Tracking Number/Current Status: 3-0000053 / DEPNFA
Release Town: LYNN
Notification Date: 07/17/1986
Category: NONE
Associated ID: Not reported
Current Status: **No Further Action (DEP Determined)**
Status Date: 07/23/1993
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil
Location Type: MUNICIPAL
Source: UST
Source: UNCONTAIN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: VOCS
Quantity: Not reported

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/17/1986
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/17/1986
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: DEPNFA
Action Date: 7/23/1993

PROPOSED MBTA STATION (Continued) **S105199188**

Response Action Outcome: Not reported

LUST:

Facility:
Release Tracking Number/Current Status: 3-0000053 / DEPNFA
Status Date: 07/23/1993
Source Type: UST
Release Town: LYNN
Notification Date: 07/17/1986
Category: NONE
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil

Location Type: MUNICIPAL
Source: UST
Source: UNCONTAIN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: VOCS
Quantity: Not reported

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/17/1986
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/17/1986
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: DEPNFA
Action Date: 7/23/1993
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0000053 / DEPNFA
Primary ID: Not reported
Official City: LYNN
Notification: 07/17/1986
Category: NONE
Status Date: 07/23/1993
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

PROPOSED MBTA STATION (Continued) **S105199188**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/17/1986
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	7/17/1986
Response Action Outcome:	Not reported
Action Type:	TREGS
Action Status:	DEPNFA
Action Date:	7/23/1993
Response Action Outcome:	Not reported

Chemicals:

Chemical:	VOCS
Quantity:	Not reported
Location Type:	MUNICIPAL
Source:	UST
Source:	UNCONTAIN

H22 **COMMERCIAL PROPERTY** **MA LAST** **S111411816**
NNE **44 SUFFOLK STREET** **MA RELEASE** **N/A**
1/8-1/4 **LYNN, MA 01901** **MA ASBESTOS**
0.144 mi.
758 ft. **Site 2 of 2 in cluster H**

Relative:
Higher

Actual:
19 ft.

LAST:

Release Tracking Number/Current Status:	3-0030376 / RAO
Source Type:	AST
Release Town:	LYNN
Notification Date:	10/14/2011
Category:	TWO HR
Associated ID:	Not reported
Status Date:	05/18/2012
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	100 gallons
Chemical:	#2 HEATING OIL
Quantity:	100 gallons
Location Type:	COMMERCIAL
Source:	AST

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	FLDISS
Action Date:	10/14/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

COMMERCIAL PROPERTY (Continued) **S111411816**

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 10/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/2/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 12/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/16/2012

COMMERCIAL PROPERTY (Continued) **S111411816**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/16/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 5/18/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 5/21/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/26/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0030376 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/14/2011
Category: TWO HR
Status Date: 05/18/2012
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 10/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition

COMMERCIAL PROPERTY (Continued) **S111411816**

Action Status: Reportable Release under MGL 21E
Action Date: 10/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 10/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/2/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/13/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 12/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/16/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/16/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

COMMERCIAL PROPERTY (Continued) **S111411816**

reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 5/18/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 5/21/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/26/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 100 gallons
Chemical: #2 HEATING OIL
Quantity: 100 gallons
Location Type: COMMERCIAL
Source: AST

ASBESTOS:
Notification: 100171003
DEP Region: NE
Notifiers Name: NATIONAL ABATEMENT INC
Start Date: 02/05/2013
End Date: 02/09/2013
Date Entered: 17/01/2013
Entry Date: 01/17/2013
Quantity Materical Removed SF: 5640
Quantity Material Removed LF: 30
Project Description: Spr,Insl,Trns
AR Tracking ID: Not reported
Super Lic Number: Not reported
Monitor Lic Number: Not reported
Lab Lic Number: Not reported
Year: Not reported
Sticker Number: Not reported
Form Type: Not reported
Fee Status: Not reported
Facility Phone: Not reported
Sub Town: Not reported
Worksite: Not reported
Occupied: Not reported
Contractor: Not reported
Contract Type: Not reported
Hours: Not reported
Project Type: Not reported
Abatement Process: Not reported

COMMERCIAL PROPERTY (Continued) **S111411816**

Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

E23 **451 BROAD STREET** **MA SHWS** **S101029057**
WNW **451 BROAD STREET** **MA INST CONTROL** **N/A**
1/8-1/4 **LYNN, MA 01901** **MA SPILLS**
0.150 mi. **MA RELEASE**
793 ft. **Site 5 of 5 in cluster E** **MA ASBESTOS**

Relative: Higher
Actual: 16 ft.

SHWS:

Release Tracking Number/Current Status:	3-0033419 / PSC
Release Town:	LYNN
Notification Date:	02/16/2016
Category:	120 DY
Associated ID:	Not reported
Current Status:	**PSC**
Status Date:	02/16/2017
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil and Hazardous Material
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	LEAD
Quantity:	1400 milligrams per kilogram
Chemical:	ARSENIC
Quantity:	49 milligrams per kilogram
Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS

451 BROAD STREET (Continued) **S101029057**

Quantity: 14100 micrograms per liter
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 42100 micrograms per liter

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 12/8/2016
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/16/2016
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/16/2016
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/16/2016
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/16/2017
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/16/2017
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSARCD
Action Date: 2/16/2017
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 3/13/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/2/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 4/6/2017
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Fee Received - FMCRA Use Only
Action Date: 4/6/2017

451 BROAD STREET (Continued) **S101029057**

Response Action Outcome: Not reported

INST CONTROL:

Release Tracking Number:	3-0033419
Action Type:	AUL
Action Stat:	FEEREC
Action Date:	04/06/2017
Response Action Outcome:	-

Release Tracking Number:	3-0033419
Action Type:	AUL
Action Stat:	LEGNOT
Action Date:	03/13/2017
Response Action Outcome:	-

Release Tracking Number:	3-0033419
Action Type:	AUL
Action Stat:	RECPT
Action Date:	02/16/2017
Response Action Outcome:	-

MA Spills:

Facility ID:	0000	Spill ID:	N85-0331
Staff Lead:	KEATING	Date Entered:	Not reported
Last Entered:	Not reported	First Response:	Not reported
Spill Date:	19850508	Spill Time:	Not reported
Report Date:	Not reported	Report Time:	Not reported
Case Closed:	YES	Mat Type:	Not reported
Virgin Waste:	Not reported	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	MOTOR OIL	Other Material:	Not reported
Qty Reported:	15 GAL.	Qty Actual:	Not reported
Qty Reported:	Not reported	Qty Actual:	Not reported
CAS No:	Not reported	PCB Lev (ppm):	Not reported
Source:	Not reported	Other Source:	Not reported
Incident:	Not reported	Other Incdnt:	Not reported
Cleanup Type:	Not reported	Contractor:	Not reported
Referral:	Not reported	LUST Elig:	Not reported
Report Prep:	Not reported	Category:	Not reported
Notifier:	Not reported		
Notif Tel:	Not reported		
Days/Close:	1		

Release:

Release Tracking Number/Current Status:	3-0033419 / PSC
Primary ID:	Not reported
Official City:	LYNN
Notification:	02/16/2016
Category:	120 DY
Status Date:	02/16/2017
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil and Hazardous Material

451 BROAD STREET (Continued) **S101029057**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	12/8/2016
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/16/2016
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/16/2016
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	2/16/2016
Response Action Outcome:	Not reported
Action Type:	Downgradient Property Status
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/16/2017
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/16/2017
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSARCD
Action Date:	2/16/2017
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Legal Notice Published
Action Date:	3/13/2017
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/2/2016
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	4/6/2017
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Fee Received - FMCRA Use Only
Action Date:	4/6/2017
Response Action Outcome:	Not reported

451 BROAD STREET (Continued) **S101029057**

Chemicals:

Chemical:	LEAD
Quantity:	1400 milligrams per kilogram
Chemical:	ARSENIC
Quantity:	49 milligrams per kilogram
Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS
Quantity:	14100 micrograms per liter
Chemical:	C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity:	42100 micrograms per liter
Source:	UNKNOWN

ASBESTOS:

Notification:	100207013
DEP Region:	NE
Notifiers Name:	CLEAR SERVICES ENVIRONMENTAL CONTRACTORS
Start Date:	09/08/2014
End Date:	09/15/2014
Date Entered:	08/09/2014
Entry Date:	09/08/2014
Quantity Materical Removed SF:	180
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported

451 BROAD STREET (Continued) **S101029057**

Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

I24 **U-HAUL CENTER OF LYNNWAY** **MA SHWS** **U003302624**
West **282 LYNNWAY** **MA UST** **N/A**
1/8-1/4 **LYNN, MA 01901** **MA INST CONTROL**
0.151 mi. **MA RELEASE**
795 ft. **Site 1 of 3 in cluster I** **MA ENF**
MA Financial Assurance

Relative:
Higher

Actual:
16 ft.

SHWS:

Release Tracking Number/Current Status:	3-0026703 / RAO
Release Town:	LYNN
Notification Date:	03/26/2007
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	10/29/2013
Phase:	PHASE III
Response Action Outcome:	B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil Or Haz Material:	Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	LEAD
Quantity:	577 milligrams per kilogram
Chemical:	C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity:	1760 milligrams per liter
Chemical:	ARSENIC
Quantity:	73.7 milligrams per kilogram
Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS
Quantity:	498 milligrams per kilogram
Chemical:	MERCURY
Quantity:	31.2 milligrams per kilogram

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	1/17/2008
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	Notice of Non-compliance related to an Audit

U-HAUL CENTER OF LYNNWAY (Continued) **U003302624**

Action Date: 1/17/2018
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 1/17/2018
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 1/17/2018
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Interim Deadline Letter Issued
Action Date: 1/17/2018
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 10/24/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 10/28/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/29/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 10/29/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 2/28/2018

U-HAUL CENTER OF LYNNWAY (Continued) **U003302624**

Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/26/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/26/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 3/28/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/28/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/28/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/3/2014
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 3/3/2014
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 4/10/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No

U-HAUL CENTER OF LYNNWAY (Continued) **U003302624**

Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/7/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 6/13/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 8/15/2017
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 9/25/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

UST:

Facility:
Facility ID: 5415
Owner Id: 7176
Owner: U-HAUL CO OF BOSTON
Owner Address: 2721 N CENTRAL AVE #700
Owner City,St,Zip: PHOENIX, AZ 85004
Telephone: Not reported
Description: Non-Retail Motor Vehicle
Facility address 2: Not reported
Owner address 2: Not reported
Latitude: 42.45863
Longitude: -70.94733
Contact name: Not reported
Contact address1: Not reported
Contact address2: Not reported
Contact city: Not reported
Contact state: Not reported
Contact zip: Not reported
Contact email: Not reported
Update: 2004-12-10 00:00:00
Update by: Not reported
Fac status: CLOSED

U-HAUL CENTER OF LYNNWAY (Continued) **U003302624**

Tank ID: 1
Tank Status: Tank Removed
Status Date: 06/05/1997
Date Installed: 04/21/1985
Capacity: 4000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Manual Tank Gauging (1,000G or more capacity tank)
Pipe Leak Detection: Annual Automatic Line Leak Detection Test
Latitude: Not reported
Longitude: Not reported
Tank construct: Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Single-walled non-corrodible material (No corrosion protection required)
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 2
Tank Status: Tank Removed
Status Date: 06/05/1997
Date Installed: 04/21/1985
Capacity: 4000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Manual Tank Gauging (1,000G or more capacity tank)
Pipe Leak Detection: Annual Automatic Line Leak Detection Test
Latitude: Not reported
Longitude: Not reported
Tank construct: Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Single-walled non-corrodible material (No corrosion protection required)
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N

U-HAUL CENTER OF LYNNWAY (Continued) **U003302624**

Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 3
Tank Status: Tank Removed
Status Date: 06/05/1997
Date Installed: 04/21/1985
Capacity: 4000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Manual Tank Gauging (1,000G or more capacity tank)
Pipe Leak Detection: Annual Automatic Line Leak Detection Test
Latitude: Not reported
Longitude: Not reported
Tank construct: Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Single-walled non-corrodible material (No corrosion protection required)
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

INST CONTROL:
Release Tracking Number: 3-0026703
Action Type: AUL
Action Stat: LEGNOT
Action Date: 10/29/2013
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0026703
Action Type: AUL
Action Stat: SNAUDI
Action Date: 01/17/2018
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0026703
Action Type: AUL

U-HAUL CENTER OF LYNNWAY (Continued) **U003302624**

Action Stat: TSAUD
Action Date: 03/03/2014
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release:
Release Tracking Number/Current Status: 3-0026703 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 03/26/2007
Category: 120 DY
Status Date: 10/29/2013
Phase: PHASE III
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 1/17/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 1/17/2018
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 1/17/2018
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 1/17/2018
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Interim Deadline Letter Issued
Action Date: 1/17/2018
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

U-HAUL CENTER OF LYNNWAY (Continued) **U003302624**

Action Type:	Compliance and Enforcement Action
Action Status:	ACOP
Action Date:	10/24/2013
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	10/28/2013
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/29/2013
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Legal Notice Published
Action Date:	10/29/2013
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received
Action Date:	2/28/2018
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/26/2007
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/26/2007
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	3/28/2008
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	Tier Classification

U-HAUL CENTER OF LYNNWAY (Continued) **U003302624**

Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/28/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/28/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/3/2014
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 3/3/2014
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 4/10/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/7/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 6/13/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 8/15/2017
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received

U-HAUL CENTER OF LYNNWAY (Continued) **U003302624**

Action Date: 9/25/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Chemicals:
Chemical: LEAD
Quantity: 577 milligrams per kilogram
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 1760 milligrams per liter
Chemical: ARSENIC
Quantity: 73.7 milligrams per kilogram
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 498 milligrams per kilogram
Chemical: MERCURY
Quantity: 31.2 milligrams per kilogram

ENFORCEMENT:
Region: NERO
DEP Region: NERO
DEP Program: 3a
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0026703
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: LYNN
Date Executed: 01/17/2018
ENF #: 00003881
Document Type: IDL
AG Ref (Y/N): False
Doc Archived (Y/N): True
EJ Community (Y/N): True
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported
Demand $: Not reported
Suspended $: Not reported
Ownership: Commercially Owned

Region: NERO
DEP Region: NERO
DEP Program: 3a
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0026703
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: LYNN

U-HAUL CENTER OF LYNNWAY (Continued) **U003302624**

Date Executed:	01/17/2018
ENF #:	00003882
Document Type:	NON
AG Ref (Y/N):	False
Doc Archived (Y/N):	True
EJ Community (Y/N):	True
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	T

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0026703
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	06/13/2012
ENF #:	NON-NE-12-3A039
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	T

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0026703
High Or Low Level Enforcement:	HLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Lynn
Date Executed:	10/24/2013

U-HAUL CENTER OF LYNNWAY (Continued) **U003302624**

ENF #:	ACOP-NE-13-3R006
Document Type:	ACOP
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	02/15/2014
ACOP $:	3100
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	27900
Ownership:	T

MA Financial Assurance 2:

Facility Id:	5415
Description:	Truck/Transport
Work Phone:	(617) 623-5600

I25 UHAUL CENTER **MA SHWS S102687469**
West 282 LYNNWAY RTE 1A **MA RELEASE N/A**
1/8-1/4 LYNN, MA 01901
0.151 mi.
795 ft. **Site 2 of 3 in cluster I**

Relative: Higher

Actual: 16 ft.

SHWS:

Release Tracking Number/Current Status:	3-0015595 / RAO
Release Town:	LYNN
Notification Date:	10/03/1997
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	11/21/2001
Phase:	PHASE II
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	DIESEL
Quantity:	Not reported
Chemical:	GASOLINE
Quantity:	Not reported

Actions:

Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	10/13/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

UHAUL CENTER (Continued) **S102687469**

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/3/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/3/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/9/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/9/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/9/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/21/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 6/15/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 6/15/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0015595 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/03/1997
Category: 120 DY
Status Date: 11/21/2001
Phase: PHASE II

UHAUL CENTER (Continued) **S102687469**

Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/13/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/3/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/3/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/9/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/9/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/9/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/21/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 6/15/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received

UHAUL CENTER (Continued) **S102687469**

Action Date: 6/15/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: DIESEL
Quantity: Not reported
Chemical: GASOLINE
Quantity: Not reported

J26 **LANDMARK SITE** **MA SHWS** **S105199225**
North **WASHINGTON AT BROAD ST** **MA INST CONTROL** **N/A**
1/8-1/4 **LYNN, MA 01901** **MA RELEASE**
0.153 mi. **MA ENF**
809 ft. **Site 1 of 3 in cluster J**

Relative: Higher
Actual: 19 ft.

SHWS:
Release Tracking Number/Current Status: 3-0000360 / RAO
Release Town: LYNN
Notification Date: 01/15/1986
Category: NONE
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 08/08/1995
Phase: PHASE II
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Oil
Location Type: INDUSTRIAL
Location Type: FORMER
Source: UNCONTAIN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: VOCS
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1986
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/15/1986
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 11/3/2014
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

LANDMARK SITE (Continued) **S105199225**

Action Type: Activity and Use Limitation
Action Status: Action Status or AUL Terminated
Action Date: 3/10/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/23/2010
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 4/15/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 5/2/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Activity and Use Limitation
Action Status: Action Status or AUL Terminated
Action Date: 5/2/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 5/24/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 5/24/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 6/12/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 6/12/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 6/2/2010

LANDMARK SITE (Continued) **S105199225**

Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 6/8/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/2/1995
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/8/1995
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/8/1995
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

INST CONTROL:
Release Tracking Number: 3-0000360
Action Type: AUL
Action Stat: LEGNOT
Action Date: 04/15/2011
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.

Release Tracking Number: 3-0000360
Action Type: AUL
Action Stat: RECPT
Action Date: 08/02/1995
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.

Release Tracking Number: 3-0000360
Action Type: AUL
Action Stat: SNAUDI
Action Date: 05/24/2007
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.

Release Tracking Number: 3-0000360
Action Type: AUL
Action Stat: TERMIN
Action Date: 03/10/2011
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.

LANDMARK SITE (Continued) **S105199225**

Release Tracking Number: 3-0000360
Action Type: AUL
Action Stat: TERMIN
Action Date: 05/02/2011
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:
Release Tracking Number/Current Status: 3-0000360 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1986
Category: NONE
Status Date: 08/08/1995
Phase: PHASE II
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1986
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/15/1986
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 11/3/2014
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Activity and Use Limitation
Action Status: Action Status or AUL Terminated
Action Date: 3/10/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/23/2010
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 4/15/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No

LANDMARK SITE (Continued) **S105199225**

Significant Risk exists.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 5/2/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Activity and Use Limitation
Action Status: Action Status or AUL Terminated
Action Date: 5/2/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 5/24/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 5/24/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 6/12/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 6/12/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 6/2/2010
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 6/8/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/2/1995
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1

LANDMARK SITE (Continued) **S105199225**

Action Status:	Completion Statement Received
Action Date:	8/8/1995
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	8/8/1995
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:

Chemical:	VOCS
Quantity:	Not reported
Location Type:	INDUSTRIAL
Location Type:	FORMER
Source:	UNCONTAIN

ENFORCEMENT:

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0000360
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	06/08/2007
ENF #:	Not reported
Document Type:	IDL
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	State Owned

K27 **BOSTON AUTO PAINTING INC** **MA LUST** **S109489337**
WNW **461 BROAD ST** **MA RELEASE** **N/A**
1/8-1/4 **LYNN, MA 01901** **MA HW GEN**
0.155 mi.
816 ft. **Site 1 of 2 in cluster K**

Relative: Higher

Actual: 16 ft.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0028089 / RAO
Status Date:	09/15/2009
Source Type:	UST
Release Town:	LYNN
Notification Date:	10/21/2008
Category:	120 DY
Associated ID:	Not reported
Phase:	PHASE IV
Response Action Outcome:	C1 - C1
Oil Or Haz Material:	Oil
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS
Quantity:	14 parts per million
Chemical:	C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity:	14 parts per million

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/21/2008
Response Action Outcome:	C1
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/21/2008
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/4/2010
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/7/2011
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	11/15/2013
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Not Required - Fee Credited-FMCRA Use Only

BOSTON AUTO PAINTING INC (Continued) **S109489337**

Action Date: 11/5/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 11/9/2012
Response Action Outcome: C1

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/29/2008
Response Action Outcome: C1

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/29/2008
Response Action Outcome: C1

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/12/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/24/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/25/2012
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/27/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/5/2011
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 4/1/2009
Response Action Outcome: C1

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/11/2009
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/15/2009
Response Action Outcome: C1

BOSTON AUTO PAINTING INC (Continued) **S109489337**

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 9/15/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/15/2009
Response Action Outcome: C1

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 9/15/2009
Response Action Outcome: C1

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 9/15/2009
Response Action Outcome: C1

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 9/15/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/21/2009
Response Action Outcome: C1

Release:
Release Tracking Number/Current Status: 3-0028089 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/21/2008
Category: 120 DY
Status Date: 09/15/2009
Phase: PHASE IV
Response Action Outcome: C1 - C1
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/21/2008
Response Action Outcome: C1

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/21/2008
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO

BOSTON AUTO PAINTING INC (Continued) **S109489337**

Action Status: Inspection and Monitoring Report Received
Action Date: 10/4/2010
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/7/2011
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 11/15/2013
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Fee Not Required - Fee Credited-FMCRA Use Only
Action Date: 11/5/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 11/9/2012
Response Action Outcome: C1

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/29/2008
Response Action Outcome: C1

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/29/2008
Response Action Outcome: C1

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/12/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/24/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/25/2012
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/27/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/5/2011

BOSTON AUTO PAINTING INC (Continued) **S109489337**

Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 4/1/2009
Response Action Outcome: C1

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/11/2009
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/15/2009
Response Action Outcome: C1

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 9/15/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/15/2009
Response Action Outcome: C1

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 9/15/2009
Response Action Outcome: C1

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 9/15/2009
Response Action Outcome: C1

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 9/15/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/21/2009
Response Action Outcome: C1

Chemicals:
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 14 parts per million
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 14 parts per million
Source: UST

HW GEN:
EPA Id: MV7815953245

BOSTON AUTO PAINTING INC (Continued) **S109489337**

RCRA Generator Status: VSQG
State Generator Status: Not reported

G28 **AKA 239-295 BROAD ST** **MA LUST** **S105736256**
North **7 LIBERTY SQ** **MA RELEASE** **N/A**
1/8-1/4 **LYNN, MA 01901**
0.164 mi.
868 ft. **Site 2 of 2 in cluster G**

Relative: Higher

Actual: 19 ft.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0022370 / RAO
Status Date:	02/13/2003
Source Type:	UST
Release Town:	LYNN
Notification Date:	12/09/2002
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	UNKNOWN
Quantity:	135 parts per million
Chemical:	FUEL OIL #2
Quantity:	135 gallons

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/8/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/9/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	12/9/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received

AKA 239-295 BROAD ST (Continued) **S105736256**

Action Date: 2/13/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/13/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release:
Release Tracking Number/Current Status: 3-0022370 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 12/09/2002
Category: 72 HR
Status Date: 02/13/2003
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/8/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/9/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 12/9/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/13/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/13/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

AKA 239-295 BROAD ST (Continued) **S105736256**

Chemicals:
Chemical: UNKNOWN
Quantity: 135 parts per million
Chemical: FUEL OIL #2
Quantity: 135 gallons
Location Type: RESIDNTIAL
Source: UST

---

29 **BELL ATLANTIC INFO RESOURCE** **MA SHWS** **U003000800**
NW **195 MARKET ST** **MA UST** **N/A**
1/8-1/4 **LYNN, MA 01901** **MA RELEASE**
0.168 mi. **MA ASBESTOS**
885 ft. **MA Financial Assurance**

Relative: Higher
Actual: 19 ft.

SHWS:
Release Tracking Number/Current Status: 3-0019787 / RAO
Release Town: LYNN
Notification Date: 07/24/2000
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 08/17/2000
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: ARSENIC
Quantity: 48.3 parts per million

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/11/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/24/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/24/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/17/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Significant Risk exists.

UST:

Facility:

Facility ID:	5401
Owner Id:	6309
Owner:	VERIZON NEW ENGLAND INC
Owner Address:	2 HAMPSHIRE ST
Owner City,St,Zip:	LAWRENCE, MA 01840
Telephone:	Not reported
Description:	Utilities
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.46099
Longitude:	-70.94761
Contact name:	William Irwin
Contact address1:	2 Hampshire Street
Contact address2:	Not reported
Contact city:	Lawrence
Contact state:	MA
Contact zip:	01840
Contact email:	b.irwin@verizon.com
Update:	1998-11-24 00:00:00
Update by:	Not reported
Fac status:	CLOSED

Facility ID:	5401
Owner Id:	6309
Owner:	VERIZON NEW ENGLAND INC
Owner Address:	2 HAMPSHIRE ST
Owner City,St,Zip:	LAWRENCE, MA 01840
Telephone:	Not reported
Description:	Utilities
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.46099
Longitude:	-70.94761
Contact name:	William Irwin
Contact address1:	2 Hampshire Street
Contact address2:	Not reported
Contact city:	Lawrence
Contact state:	MA
Contact zip:	01840
Contact email:	b.irwin@verizon.com
Update:	1998-11-24 00:00:00
Update by:	Not reported
Fac status:	CLOSED

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	06/01/1994
Date Installed:	03/01/1990
Capacity:	1500
Contents:	Diesel

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Tank Usage: Motor Vehi
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Double-walled metal tank (cathodic protection required)
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Release:
Release Tracking Number/Current Status: 3-0019787 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 07/24/2000
Category: 120 DY
Status Date: 08/17/2000
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/11/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/24/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/24/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/17/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: ARSENIC
Quantity: 48.3 parts per million

ASBESTOS:
Notification: 100194654
DEP Region: NE
Notifiers Name: ONE SOURCE ENVIRONMENTAL LLC
Start Date: 03/21/2014
End Date: 03/23/2014
Date Entered: 08/03/2014
Entry Date: 03/08/2014
Quantity Materical Removed SF: 2400
Quantity Material Removed LF: 0
Project Description: Trns
AR Tracking ID: Not reported
Super Lic Number: Not reported
Monitor Lic Number: Not reported
Lab Lic Number: Not reported
Year: Not reported
Sticker Number: Not reported
Form Type: Not reported
Fee Status: Not reported
Facility Phone: Not reported
Sub Town: Not reported
Worksite: Not reported
Occupied: Not reported
Contractor: Not reported
Contract Type: Not reported
Hours: Not reported
Project Type: Not reported
Abatement Process: Not reported
Location: Not reported
Decon Process: Not reported
Disposal Methods: Not reported
Facility Usage: Not reported
Waiver Given: Not reported
DEP Waiver Number: Not reported
DLWD Waiver Number: Not reported
Small Owner Occ: Not reported
Owner Name: Not reported
Owner Address: Not reported
Owner City: Not reported
Owner State: Not reported
On Site Manager Name: Not reported
On Site Manager Phone: Not reported
Ins Comp: Not reported
Policy Number: Not reported

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100209268
DEP Region:	NE
Notifiers Name:	ONE SOURCE ENVIRONMENTAL LLC
Start Date:	10/27/2014
End Date:	10/28/2014
Date Entered:	10/10/2014
Entry Date:	10/10/2014
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	30
Project Description:	,Oth:
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100209268R1
DEP Region:	NE
Notifiers Name:	ONE SOURCE ENVIRONMENTAL LLC
Start Date:	10/24/2014
End Date:	10/25/2014
Date Entered:	20/10/2014
Entry Date:	10/20/2014
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	30
Project Description:	,Oth:
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100209268R2
DEP Region:	NE
Notifiers Name:	ONE SOURCE ENVIRONMENTAL LLC
Start Date:	10/28/2014
End Date:	10/31/2014
Date Entered:	24/10/2014
Entry Date:	10/24/2014
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	30
Project Description:	,Oth:
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	09/11/2017
End Date:	09/12/2017
Date Entered:	Not reported
Entry Date:	08/31/2017
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	100
Project Description:	PIPEINSUL
AR Tracking ID:	276111
Super Lic Number:	AS032747
Monitor Lic Number:	AM062010
Lab Lic Number:	AA000240
Year:	2017
Sticker Number:	100271934
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7815988611
Sub Town:	Not reported
Worksite:	BATHROOMS
Occupied:	-1
Contractor:	AC000791
Contract Type:	WRITTEN
Hours:	7AM-9PM
Project Type:	Repr
Abatement Process:	Clnp,Fcontain
Location:	INDOORS
Decon Process:	3 CHAMBER DECON, WET METHODS, NEGATIVE PRESSURE
Disposal Methods:	ALL METHODS WILL COMPLY
Facility Usage:	BANK
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	EASTERN BANK
Owner Address:	195 MARKET STREET
Owner City:	LYNN
Owner State:	MA
On Site Manager Name:	TODD GAINEY
On Site Manager Phone:	3394404923
Ins Comp:	0
Policy Number:	0
EXP Date:	12/31/2017
Facility Size:	3000
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	58 PYLES LANE

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Transporter City:	NEW CASTLE
Transporter State:	DE
Final Site:	Not reported
Certified Name:	MARIA HOSTAGE
Cert Sign Date:	08/31/2017
Certified Company:	ONE SOURCE ENVIRONMENTAL
Certified Phone:	6034581482
Entered_by:	MHOSTAGE
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	11/13/2017
End Date:	11/15/2017
Date Entered:	Not reported
Entry Date:	11/02/2017
Quantity Materical Removed SF:	300
Quantity Material Removed LF:	Not reported
Project Description:	OTHER MASTIC
AR Tracking ID:	280763
Super Lic Number:	AS032747
Monitor Lic Number:	AM062010
Lab Lic Number:	AA000240
Year:	2017
Sticker Number:	100275798
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7815964650
Sub Town:	Not reported
Worksite:	5TH FLOOR BATHROOMS
Occupied:	-1
Contractor:	AC000791
Contract Type:	WRITTEN
Hours:	6PM TO 4AM
Project Type:	Repr
Abatement Process:	Clnp,Fcontain
Location:	INDOORS
Decon Process:	3 CHAMBER DECON, WET METHODS, NEGATIVE PRESSURE
Disposal Methods:	ALL METHODS WILL COMPLY
Facility Usage:	BANK
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	EASTERN BANK
Owner Address:	195 MARKET STREET
Owner City:	LYNN
Owner State:	MA
On Site Manager Name:	BARBARA WILSON
On Site Manager Phone:	7815964650
Ins Comp:	0
Policy Number:	0
EXP Date:	12/31/2017
Facility Size:	3000
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	58 PYLES LANE
Transporter City:	NEW CASTLE

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Transporter State:	DE
Final Site:	Not reported
Certified Name:	MARIA HOSTAGE
Cert Sign Date:	11/02/2017
Certified Company:	ONE SOURCE ENVIRONMENTAL
Certified Phone:	6034581482
Entered_by:	MHOSTAGE
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	02/24/2018
End Date:	03/04/2018
Date Entered:	Not reported
Entry Date:	02/10/2018
Quantity Materical Removed SF:	600
Quantity Material Removed LF:	0
Project Description:	OTHER TILE AND MASTIC
AR Tracking ID:	286995
Super Lic Number:	AS032747
Monitor Lic Number:	AM062010
Lab Lic Number:	AA000240
Year:	2018
Sticker Number:	100280986
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7815964650
Sub Town:	Not reported
Worksite:	4TH FLOOR BATHROOM ENTRIES
Occupied:	-1
Contractor:	AC000791
Contract Type:	WRITTEN
Hours:	7AM TO 7AM
Project Type:	Repr
Abatement Process:	Clnp,Fcontain
Location:	INDOORS
Decon Process:	3 CHAMBER DECON, WET METHODS, NEGATIVE PRESSURE
Disposal Methods:	ALL METHODS WILL COMPLY
Facility Usage:	BANK
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	EASTERN BANK
Owner Address:	195 MARKET STREET
Owner City:	LYNN
Owner State:	MA
On Site Manager Name:	BARBARA WILSON
On Site Manager Phone:	7815964650
Ins Comp:	0
Policy Number:	0
EXP Date:	12/31/2018
Facility Size:	164000
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	58 PYLES LANE
Transporter City:	NEW CASTLE
Transporter State:	DE

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Final Site:	Not reported
Certified Name:	MARIA HOSTAGE
Cert Sign Date:	02/10/2018
Certified Company:	ONE SOURCE ENVIRONMENTAL
Certified Phone:	6034581482
Entered_by:	MHOSTAGE
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	02/24/2018
End Date:	03/04/2018
Date Entered:	Not reported
Entry Date:	02/10/2018
Quantity Materical Removed SF:	600
Quantity Material Removed LF:	0
Project Description:	OTHER TILE AND MASTIC
AR Tracking ID:	286995
Super Lic Number:	AS032747
Monitor Lic Number:	AM062010
Lab Lic Number:	AA000240
Year:	2018
Sticker Number:	100280986
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7815964650
Sub Town:	Not reported
Worksite:	4TH FLOOR BATHROOM ENTRIES
Occupied:	-1
Contractor:	AC000791
Contract Type:	WRITTEN
Hours:	7AM TO 7AM
Project Type:	Repr
Abatement Process:	Clnp,Fcontain
Location:	INDOORS
Decon Process:	3 CHAMBER DECON, WET METHODS, NEGATIVE PRESSURE
Disposal Methods:	ALL METHODS WILL COMPLY
Facility Usage:	BANK
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	EASTERN BANK
Owner Address:	195 MARKET STREET
Owner City:	LYNN
Owner State:	MA
On Site Manager Name:	BARBARA WILSON
On Site Manager Phone:	7815964650
Ins Comp:	0
Policy Number:	0
EXP Date:	12/31/2018
Facility Size:	164000
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	58 PYLES LANE
Transporter City:	NEW CASTLE
Transporter State:	DE
Final Site:	Not reported

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Certified Name:	MARIA HOSTAGE
Cert Sign Date:	02/10/2018
Certified Company:	ONE SOURCE ENVIRONMENTAL
Certified Phone:	6034581482
Entered_by:	MHOSTAGE
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	05/12/2018
End Date:	05/12/2018
Date Entered:	Not reported
Entry Date:	05/01/2018
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	15
Project Description:	PIPEINSUL
AR Tracking ID:	292768
Super Lic Number:	AS032747
Monitor Lic Number:	AM062010
Lab Lic Number:	AA000240
Year:	2018
Sticker Number:	100285582
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7815964650
Sub Town:	Not reported
Worksite:	MECHANICAL ROOM LOWER LEVEL
Occupied:	-1
Contractor:	AC000791
Contract Type:	WRITTEN
Hours:	N/A
Project Type:	Repr
Abatement Process:	Glv,Clnp,Fcontain
Location:	INDOORS
Decon Process:	3 CHAMBER DECON, WET METHODS, NEGATIVE PRESSURE
Disposal Methods:	ALL METHODS WILL COMPLY
Facility Usage:	BANK
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	EASTERN BANK
Owner Address:	195 MARKET STREET
Owner City:	LYNN
Owner State:	MA
On Site Manager Name:	BARBARA WILSON
On Site Manager Phone:	7815964650
Ins Comp:	STATE NATIONAL INSURANCE
Policy Number:	0
EXP Date:	11/21/2018
Facility Size:	3000
Transporter Name:	SERVICE TRANSPORT GROUP
Transporter Address:	58 PYLES LANE
Transporter City:	NEW CASTLE
Transporter State:	DE
Final Site:	Not reported
Certified Name:	MARIA HOSTAGE

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Cert Sign Date:	05/01/2018
Certified Company:	ONE SOURCE ENVIRONMENTAL
Certified Phone:	6034581482
Entered_by:	MHOSTAGE
Notification:	100193929
DEP Region:	NE
Notifiers Name:	DEC-TAM CORPORATION
Start Date:	03/07/2014
End Date:	03/08/2014
Date Entered:	21/02/2014
Entry Date:	02/21/2014
Quantity Materical Removed SF:	900
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported

BELL ATLANTIC INFO RESOURCE (Continued) **U003000800**

Certified Company: Not reported
Certified Phone: Not reported
Entered_by: Not reported

MA Financial Assurance 2:
Facility Id: 5401
Description: Utilities
Work Phone: (617) 581-8791

30
NNW
1/8-1/4
0.173 mi.
913 ft.

NO LOCATION AID
325-327 BROAD ST
LYNN, MA 01901

MA SHWS **S110361016**
MA LUST **N/A**
MA RELEASE

Relative:
Higher

Actual:
18 ft.

SHWS:
Release Tracking Number/Current Status: 3-0029808 / RAONR
Release Town: LYNN
Notification Date: 02/18/2011
Category: 72 HR
Associated ID: Not reported
Current Status: **Response Action Outcome Not Required**
Status Date: 06/14/2011
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: GAL USTS
Source: UST
Source: 2X 20,000

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: TPH
Quantity: 2100 milligrams per kilogram
Chemical: PETROLEUM
Quantity: 100 parts per million

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/18/2011
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/18/2011
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/7/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action

NO LOCATION AID (Continued) **S110361016**

Action Status: Completion Statement Received
Action Date: 4/12/2011
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/12/2011
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/4/2011
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/4/2011
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/4/2011
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/21/2011
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0029333 / RAO
Release Town: LYNN
Notification Date: 06/24/2010
Category: 120 DY
Associated ID: 3-0029333
Current Status: **Response Action Outcome**
Status Date: 05/11/2012

NO LOCATION AID (Continued) **S110361016**

Phase:	PHASE II
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil and Hazardous Material
Location Type:	COMMERCIAL
Location Type:	UNKNOWN
Source:	UST
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	BENZENE
Quantity:	3.2 milligrams per kilogram
Chemical:	PHENANTHRENE
Quantity:	24 milligrams per kilogram
Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	13000 micrograms per liter
Chemical:	2-METHYLNAPHTHALENE
Quantity:	35 milligrams per kilogram
Chemical:	BENZO[A]PYRENE
Quantity:	8 milligrams per kilogram
Chemical:	C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity:	3300 milligrams per kilogram
Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	2400 milligrams per kilogram
Chemical:	M-XYLENE
Quantity:	16000 micrograms per liter
Chemical:	BENZO[A]ANTHRACENE
Quantity:	10 milligrams per kilogram
Chemical:	METHYL TERT-BUTYL ETHER
Quantity:	0.4 milligrams per kilogram
Chemical:	PYRENE
Quantity:	24 milligrams per kilogram
Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	13000 micrograms per liter
Chemical:	ETHYLBENZENE
Quantity:	180 milligrams per kilogram
Chemical:	TOTAL XYLENES
Quantity:	23000 micrograms per liter
Chemical:	P-XYLENE
Quantity:	16000 micrograms per liter
Chemical:	DIBENZO[A,H]ANTHRACENE
Quantity:	2.6 milligrams per kilogram
Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	2500 milligrams per kilogram
Chemical:	C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity:	38000 micrograms per liter
Chemical:	NAPHTHALENE
Quantity:	66 milligrams per kilogram
Chemical:	TOTAL XYLENES
Quantity:	450 milligrams per kilogram
Chemical:	O-XYLENE
Quantity:	6800 micrograms per liter
Chemical:	BENZO[B]FLUORANTHENE
Quantity:	7.8 milligrams per kilogram

NO LOCATION AID (Continued) **S110361016**

Chemical: CHROMIUM
Quantity: 81 milligrams per kilogram
Chemical: LEAD
Quantity: 3200 milligrams per kilogram
Chemical: TPH
Quantity: 2200 milligrams per kilogram

Actions:

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/13/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 10/14/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Denial of Plan
Action Date: 10/15/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/19/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 11/15/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/18/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/4/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 4/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received

NO LOCATION AID (Continued) **S110361016**

Action Date: 5/11/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 5/11/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/19/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/24/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/24/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S110361016**

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/15/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	7/18/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	BOL
Action Status:	SHPFAC
Action Date:	8/1/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	BOL
Action Status:	SHPFAC
Action Date:	8/3/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release Tracking Number/Current Status:	3-0029808 / RAONR
Release Town:	LYNN
Notification Date:	02/18/2011
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome Not Required**
Status Date:	06/14/2011
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	GAL USTS
Source:	UST
Source:	2X 20,000

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	TPH
Quantity:	2100 milligrams per kilogram
Chemical:	PETROLEUM
Quantity:	100 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	2/18/2011
Response Action Outcome:	Not reported

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E

NO LOCATION AID (Continued) **S110361016**

Action Date: 2/18/2011
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/7/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 4/12/2011
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/12/2011
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/4/2011
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/4/2011
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/4/2011
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/21/2011
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S110361016**

LUST:

Facility:

Release Tracking Number/Current Status:	3-0029808 / RAONR
Status Date:	06/14/2011
Source Type:	UST
Release Town:	LYNN
Notification Date:	02/18/2011
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	GAL USTS
Source:	UST
Source:	2X 20,000

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	TPH
Quantity:	2100 milligrams per kilogram
Chemical:	PETROLEUM
Quantity:	100 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	2/18/2011
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/18/2011
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/7/2011
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	4/12/2011
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	4/12/2011
Response Action Outcome:	Not reported
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received

NO LOCATION AID (Continued) **S110361016**

Action Date: 4/4/2011
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/4/2011
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/4/2011
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/21/2011
Response Action Outcome: Not reported

Facility:
Release Tracking Number/Current Status: 3-0029333 / RAO
Status Date: 05/11/2012
Source Type: UST
Release Town: LYNN
Notification Date: 06/24/2010
Category: 120 DY
Associated ID: 3-0029333
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil and Hazardous Material

Location Type: COMMERCIAL
Location Type: UNKNOWN
Source: UST
Source: UNKNOWN

NO LOCATION AID (Continued) **S110361016**

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	BENZENE
Quantity:	3.2 milligrams per kilogram
Chemical:	PHENANTHRENE
Quantity:	24 milligrams per kilogram
Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	13000 micrograms per liter
Chemical:	2-METHYLNAPHTHALENE
Quantity:	35 milligrams per kilogram
Chemical:	BENZO[A]PYRENE
Quantity:	8 milligrams per kilogram
Chemical:	C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity:	3300 milligrams per kilogram
Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	2400 milligrams per kilogram
Chemical:	M-XYLENE
Quantity:	16000 micrograms per liter
Chemical:	BENZO[A]ANTHRACENE
Quantity:	10 milligrams per kilogram
Chemical:	METHYL TERT-BUTYL ETHER
Quantity:	0.4 milligrams per kilogram
Chemical:	PYRENE
Quantity:	24 milligrams per kilogram
Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	13000 micrograms per liter
Chemical:	ETHYLBENZENE
Quantity:	180 milligrams per kilogram
Chemical:	TOTAL XYLENES
Quantity:	23000 micrograms per liter
Chemical:	P-XYLENE
Quantity:	16000 micrograms per liter
Chemical:	DIBENZO[A,H]ANTHRACENE
Quantity:	2.6 milligrams per kilogram
Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	2500 milligrams per kilogram
Chemical:	C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity:	38000 micrograms per liter
Chemical:	NAPHTHALENE
Quantity:	66 milligrams per kilogram
Chemical:	TOTAL XYLENES
Quantity:	450 milligrams per kilogram
Chemical:	O-XYLENE
Quantity:	6800 micrograms per liter
Chemical:	BENZO[B]FLUORANTHENE
Quantity:	7.8 milligrams per kilogram
Chemical:	CHROMIUM
Quantity:	81 milligrams per kilogram
Chemical:	LEAD
Quantity:	3200 milligrams per kilogram
Chemical:	TPH
Quantity:	2200 milligrams per kilogram

Actions:

NO LOCATION AID (Continued) **S110361016**

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/13/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 10/14/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Denial of Plan
Action Date: 10/15/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/19/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 11/15/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/18/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/4/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 4/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/11/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 5/11/2012

NO LOCATION AID (Continued) **S110361016**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/19/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/24/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/24/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/15/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S110361016**

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: SHPFAC
Action Date: 8/1/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: SHPFAC
Action Date: 8/3/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0029333 / RAO
Primary ID: 3-0029333
Official City: LYNN
Notification: 06/24/2010
Category: 120 DY
Status Date: 05/11/2012
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/13/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 10/14/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Denial of Plan
Action Date: 10/15/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/19/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S110361016**

reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 11/15/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/18/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/4/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 4/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/11/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 5/11/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/19/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2

NO LOCATION AID (Continued) **S110361016**

Action Status: Scope of Work Received
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/24/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/24/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/15/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: SHPFAC
Action Date: 8/1/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: SHPFAC
Action Date: 8/3/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: BENZENE
Quantity: 3.2 milligrams per kilogram
Chemical: PHENANTHRENE

NO LOCATION AID (Continued) **S110361016**

Quantity:	24 milligrams per kilogram
Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	13000 micrograms per liter
Chemical:	2-METHYLNAPHTHALENE
Quantity:	35 milligrams per kilogram
Chemical:	BENZO[A]PYRENE
Quantity:	8 milligrams per kilogram
Chemical:	C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity:	3300 milligrams per kilogram
Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	2400 milligrams per kilogram
Chemical:	M-XYLENE
Quantity:	16000 micrograms per liter
Chemical:	BENZO[A]ANTHRACENE
Quantity:	10 milligrams per kilogram
Chemical:	METHYL TERT-BUTYL ETHER
Quantity:	0.4 milligrams per kilogram
Chemical:	PYRENE
Quantity:	24 milligrams per kilogram
Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	13000 micrograms per liter
Chemical:	ETHYLBENZENE
Quantity:	180 milligrams per kilogram
Chemical:	TOTAL XYLENES
Quantity:	23000 micrograms per liter
Chemical:	P-XYLENE
Quantity:	16000 micrograms per liter
Chemical:	DIBENZO[A,H]ANTHRACENE
Quantity:	2.6 milligrams per kilogram
Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	2500 milligrams per kilogram
Chemical:	C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity:	38000 micrograms per liter
Chemical:	NAPHTHALENE
Quantity:	66 milligrams per kilogram
Chemical:	TOTAL XYLENES
Quantity:	450 milligrams per kilogram
Chemical:	O-XYLENE
Quantity:	6800 micrograms per liter
Chemical:	BENZO[B]FLUORANTHENE
Quantity:	7.8 milligrams per kilogram
Chemical:	CHROMIUM
Quantity:	81 milligrams per kilogram
Chemical:	LEAD
Quantity:	3200 milligrams per kilogram
Chemical:	TPH
Quantity:	2200 milligrams per kilogram
Location Type:	COMMERCIAL
Location Type:	UNKNOWN
Source:	UST
Source:	UNKNOWN

Release Tracking Number/Current Status:	3-0029808 / RAONR
Primary ID:	Not reported
Official City:	LYNN
Notification:	02/18/2011
Category:	72 HR

NO LOCATION AID (Continued) **S110361016**

Status Date: 06/14/2011
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/18/2011
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/18/2011
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/7/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 4/12/2011
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/12/2011
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/4/2011
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/4/2011
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/4/2011
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 6/14/2011
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S110361016**

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/14/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 6/21/2011
Response Action Outcome: Not reported

Chemicals:
Chemical: TPH
Quantity: 2100 milligrams per kilogram
Chemical: PETROLEUM
Quantity: 100 parts per million
Location Type: COMMERCIAL
Source: GAL USTS
Source: UST
Source: 2X 20,000

I31
West
1/8-1/4
0.177 mi.
932 ft.

PIZZERIA REGINA
295 LYNNWAY
LYNN, MA 01901

MA SHWS **S101030403**
MA RELEASE **N/A**
MA SPILLS

Site 3 of 3 in cluster I

Relative:
Higher

Actual:
15 ft.

SHWS:
Release Tracking Number/Current Status: 3-0000185 / DEPNFA
Release Town: LYNN
Notification Date: 01/15/1987
Category: NONE
Associated ID: Not reported
Current Status: **No Further Action (DEP Determined)**
Status Date: 03/02/1987
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: VOCS
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1987
Response Action Outcome: Not reported

PIZZERIA REGINA (Continued) **S101030403**

Action Type: TREGS
Action Status: DEPNFA
Action Date: 3/2/1987
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: REMSIT
Action Date: 7/23/1993
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0000185 / DEPNFA
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1987
Category: NONE
Status Date: 03/02/1987
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1987
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: DEPNFA
Action Date: 3/2/1987
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: REMSIT
Action Date: 7/23/1993
Response Action Outcome: Not reported

Chemicals:
Chemical: VOCS
Quantity: Not reported
Location Type: COMMERCIAL
Source: UNKNOWN

MA Spills:

Facility ID:	0000	Spill ID:	N86-0738
Staff Lead:	BESTER, M	Date Entered:	Not reported
Last Entered:	Not reported	First Response:	Not reported
Spill Date:	19860814	Spill Time:	Not reported
Report Date:	Not reported	Report Time:	Not reported
Case Closed:	YES	Mat Type:	Not reported
Virgin Waste:	Not reported	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported

PIZZERIA REGINA (Continued) **S101030403**

Material:	GASOLINE	Other Material:	Not reported
Qty Reported:	Not reported	Qty Actual:	Not reported
Qty Reported:	Not reported	Qty Actual:	Not reported
CAS No:	Not reported	PCB Lev (ppm):	Not reported
Source:	Not reported	Other Source:	Not reported
Incident:	Not reported	Other Incdnt:	Not reported
Cleanup Type:	Not reported	Contractor:	Not reported
Referral:	Not reported	LUST Elig:	Not reported
Report Prep:	Not reported	Category:	Not reported
Notifier:	Not reported		
Notif Tel:	Not reported		
Days/Close:	1		

J32 **FMR GASOLINE STATION NEAR** **MA SHWS** **S103545659**
North **WASHINGTON STREET SPRING ST** **MA RELEASE** **N/A**
1/8-1/4 **LYNN, MA**
0.184 mi.
972 ft. **Site 2 of 3 in cluster J**

Relative:
Higher

Actual:
19 ft.

SHWS:

Release Tracking Number/Current Status:	3-0010078 / URAM
Release Town:	LYNN
Notification Date:	10/20/1993
Category:	120 DY
Associated ID:	Not reported
Current Status:	**URAM**
Status Date:	10/20/1993
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	ROADWAY
Location Type:	STATE
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	GASOLINE
Quantity:	Not reported

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/24/1997
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/20/1993
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Notice of Intent to Conduct a URAM
Action Date:	10/20/1993
Response Action Outcome:	Not reported
Action Type:	RLFA

FMR GASOLINE STATION NEAR (Continued) **S103545659**

Action Status: FOLOFF
Action Date: 7/3/2009
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0010078 / URAM
Primary ID: Not reported
Official City: LYNN
Notification: 10/20/1993
Category: 120 DY
Status Date: 10/20/1993
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/24/1997
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/20/1993
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notice of Intent to Conduct a URAM
Action Date: 10/20/1993
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/3/2009
Response Action Outcome: Not reported

Chemicals:
Chemical: GASOLINE
Quantity: Not reported
Location Type: ROADWAY
Location Type: STATE
Source: UNKNOWN

L33 **NO LOCATION AID** **MA SHWS** **S105914176**
NNE **212 BROAD ST** **MA INST CONTROL** **N/A**
1/8-1/4 **LYNN, MA** **MA RELEASE**
0.196 mi.
1034 ft. **Site 1 of 4 in cluster L**

Relative: Higher

Actual: 19 ft.

SHWS:
Release Tracking Number/Current Status: 3-0022880 / RAO
Release Town: LYNN
Notification Date: 05/21/2003

NO LOCATION AID (Continued) **S105914176**

Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	05/28/2004
Phase:	Not reported
Response Action Outcome:	B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil Or Haz Material:	Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	THALLIUM
Quantity:	12.5 milligrams per kilogram
Chemical:	TRICHLOROETHYLENE
Quantity:	1130 micrograms per liter
Chemical:	VINYL CHLORIDE
Quantity:	25.2 micrograms per liter

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/21/2003
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/21/2003
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/28/2004
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	5/28/2004
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type:	Activity and Use Limitation
Action Status:	Legal Notice Published
Action Date:	5/29/2004
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

NO LOCATION AID (Continued) **S105914176**

Action Type: Response Action Outcome - RAO
Action Status: Fee Not Required - Fee Refunded-FMCRA Use Only
Action Date: 6/10/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/3/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/7/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/15/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/3/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

INST CONTROL:
Release Tracking Number: 3-0022880
Action Type: AUL
Action Stat: LEGNOT
Action Date: 05/29/2004
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0022880
Action Type: AUL
Action Stat: RECPT
Action Date: 05/28/2004
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release:
Release Tracking Number/Current Status: 3-0022880 / RAO
Primary ID: Not reported

NO LOCATION AID (Continued) **S105914176**

Official City: LYNN
Notification: 05/21/2003
Category: 120 DY
Status Date: 05/28/2004
Phase: Not reported
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/21/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/21/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/28/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 5/28/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 5/29/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Not Required - Fee Refunded-FMCRA Use Only
Action Date: 6/10/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only

NO LOCATION AID (Continued) **S105914176**

Action Date: 6/3/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/7/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/15/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/3/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Chemicals:
Chemical: THALLIUM
Quantity: 12.5 milligrams per kilogram
Chemical: TRICHLOROETHYLENE
Quantity: 1130 micrograms per liter
Chemical: VINYL CHLORIDE
Quantity: 25.2 micrograms per liter

K34 **TRADITIONAL BREADS** **MA SHWS** **S111274490**
WNW **161 PLEASANT ST** **MA RELEASE** **N/A**
1/8-1/4 **LYNN, MA 01901** **MA AIRS**
0.198 mi. **MA ASBESTOS**
1043 ft. **Site 2 of 2 in cluster K**

Relative: Higher
Actual: 16 ft.

SHWS:
Release Tracking Number/Current Status: 3-0032151 / PSNC
Release Town: LYNN
Notification Date: 05/14/2014
Category: TWO HR
Associated ID: Not reported
Current Status: **PSNC**
Status Date: 07/11/2014
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil
Location Type: ROADWAY
Location Type: MUNICIPAL
Source: FUEL LINE
Source: FUELTANK

TRADITIONAL BREADS (Continued) **S111274490**

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	75 gallons
Chemical:	DIESEL FUEL
Quantity:	50 gallons

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	FLDISS
Action Date:	5/14/2014
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	5/14/2014
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/14/2014
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/13/2014
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	7/11/2014
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	7/11/2014
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	7/11/2014
Response Action Outcome:	Not reported

Release Tracking Number/Current Status:	3-0032151 / PSNC
Release Town:	LYNN
Notification Date:	05/14/2014
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**PSNC**
Status Date:	07/11/2014
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil

TRADITIONAL BREADS (Continued) **S111274490**

Location Type: ROADWAY
Location Type: MUNICIPAL
Source: FUEL LINE
Source: FUELTANK

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: DIESEL FUEL
Quantity: 75 gallons
Chemical: DIESEL FUEL
Quantity: 50 gallons

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 5/14/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 5/14/2014
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/14/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/13/2014
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/11/2014
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/11/2014
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 7/11/2014
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0032151 / PSNC
Primary ID: Not reported
Official City: LYNN
Notification: 05/14/2014
Category: TWO HR

TRADITIONAL BREADS (Continued) **S111274490**

Status Date: 07/11/2014
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 5/14/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 5/14/2014
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/14/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/13/2014
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/11/2014
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/11/2014
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 7/11/2014
Response Action Outcome: Not reported

Chemicals:

Chemical: DIESEL FUEL
Quantity: 75 gallons
Chemical: DIESEL FUEL
Quantity: 50 gallons
Location Type: ROADWAY
Location Type: MUNICIPAL
Source: FUEL LINE
Source: FUELTANK

AIRS:

Address 2: Not reported
Facility Status: APPROV

TRADITIONAL BREADS (Continued) **S111274490**

Permit Code:	AQ01
Permit Name:	Plan Approval Limited
DEP Region:	NE
Application Tracking Number:	X237796
Date Closed:	06/02/2011
Applicant Name:	TRADITIONAL BREADS
Applicant Address:	Not reported
Applicant City,St,Zip:	Not reported
Applicant Telephone:	Not reported
AQID:	Not reported
Pollutant:	Not reported
Actual Emission:	Not reported
Emissions Year:	Not reported

ASBESTOS:

Notification:	302547
DEP Region:	NE
Notifiers Name:	NON LICENSED REMOVAL
Start Date:	08/16/2005
End Date:	08/17/2005
Date Entered:	04/08/2005
Entry Date:	08/04/2005
Quantity Materical Removed SF:	150
Quantity Material Removed LF:	Not reported
Project Description:	BOILER REMOV
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported

TRADITIONAL BREADS (Continued) **S111274490**

Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

J35 **BROAD AND WASHINGTON STREETS** **MA LUST S108117201**
North **217 BROAD ST** **MA RELEASE N/A**
1/8-1/4 **LYNN, MA 01903**
0.199 mi.
1049 ft. **Site 3 of 3 in cluster J**

Relative: Higher

Actual: 19 ft.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0026022 / RAO
Status Date:	03/09/2007
Source Type:	UST
Release Town:	LYNN
Notification Date:	06/30/2006
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	GASOLINE
Quantity:	1837 parts per million
Chemical:	GASOLINE UST
Quantity:	100 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	10/27/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	3/12/2007

BROAD AND WASHINGTON STREETS (Continued) **S108117201**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 3/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 3/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/30/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/30/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/29/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/29/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/4/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0026022 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 06/30/2006
Category: 72 HR
Status Date: 03/09/2007
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

BROAD AND WASHINGTON STREETS (Continued) **S108117201**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	10/27/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	3/12/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	3/9/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/9/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	6/30/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/30/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	8/29/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/29/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	8/4/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

BROAD AND WASHINGTON STREETS (Continued) **S108117201**

Chemicals:
- Chemical: GASOLINE
- Quantity: 1837 parts per million
- Chemical: GASOLINE UST
- Quantity: 100 parts per million
- Location Type: COMMERCIAL
- Source: UST

M36 **BETWEEN #23 & #26 FARRAR STREET** **MA SHWS** **S108962715**
NNE **26 FARRAR ST** **MA INST CONTROL** **N/A**
1/8-1/4 **LYNN, MA 01901** **MA RELEASE**
0.200 mi.
1058 ft. **Site 1 of 4 in cluster M**

Relative: Higher

Actual: 19 ft.

SHWS:
- Release Tracking Number/Current Status: 3-0027272 / PSC
- Release Town: LYNN
- Notification Date: 11/20/2007
- Category: TWO HR
- Associated ID: Not reported
- **Current Status:** **PSC**
- Status Date: 10/27/2016
- Phase: Not reported
- Response Action Outcome: -
- Oil Or Haz Material: Oil and Hazardous Material
- Location Type: MUNICIPAL
- Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
- Chemical: MINERAL SPIRITS
- Quantity: 2.28 inches
- Chemical: GASOLINE / MINERAL SPIRITS
- Quantity: 0.5 inches
- Chemical: GASOLINE
- Quantity: 1.68 inches
- Chemical: GASOLINE
- Quantity: 0.5 inches

Actions:
- Action Type: An activity type that is related to an Audit
- Action Status: Notice of Non-compliance related to an Audit
- Action Date: 1/20/2011
- Response Action Outcome: Not reported

- Action Type: RLFA
- Action Status: FOLOFF
- Action Date: 1/22/2008
- Response Action Outcome: Not reported

- Action Type: Immediate Response Action
- Action Status: Written Plan Received
- Action Date: 1/25/2008
- Response Action Outcome: Not reported

BETWEEN #23 & #26 FARRAR STREET (Continued) **S108962715**

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	1/29/2008
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	1/29/2008
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	1/4/2008
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/6/2009
Response Action Outcome:	Not reported
Action Type:	An activity type that is related to an Audit
Action Status:	NOA
Action Date:	10/15/2010
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	DEPRET
Action Date:	10/2/2008
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSARCD
Action Date:	10/27/2016
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/20/2007
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	IRA Assessment Only
Action Date:	11/20/2007
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	11/20/2007
Response Action Outcome:	Not reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	11/20/2008
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal

BETWEEN #23 & #26 FARRAR STREET (Continued) **S108962715**

Action Date:	11/20/2008
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	11/23/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	11/26/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	12/19/2007
Response Action Outcome:	Not reported
Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received
Action Date:	2/15/2012
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	2/15/2012
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	2/15/2013
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/16/2007
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	2/16/2007
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/18/2014
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	2/19/2014
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of a Modified Plan
Action Date:	2/22/2008
Response Action Outcome:	Not reported

BETWEEN #23 & #26 FARRAR STREET (Continued) **S108962715**

Action Type: RLFA
Action Status: FLDRAN
Action Date: 2/29/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/7/2008
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 3/15/2014
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 3/21/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 3/3/2008
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/2/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/23/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/30/2008
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/23/2008
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/24/2016
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/29/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT

BETWEEN #23 & #26 FARRAR STREET (Continued) **S108962715**

Action Date: 9/16/2008
Response Action Outcome: Not reported

INST CONTROL:
Release Tracking Number: 3-0027272
Action Type: AUL
Action Stat: FEEREC
Action Date: 08/24/2016
Response Action Outcome: -

Release Tracking Number: 3-0027272
Action Type: AUL
Action Stat: LEGNOT
Action Date: 03/15/2014
Response Action Outcome: -

Release Tracking Number: 3-0027272
Action Type: AUL
Action Stat: RECPT
Action Date: 02/18/2014
Response Action Outcome: -

Release Tracking Number: 3-0027272
Action Type: AUL
Action Stat: RECPT
Action Date: 08/29/2016
Response Action Outcome: -

Release:
Release Tracking Number/Current Status: 3-0027272 / PSC
Primary ID: Not reported
Official City: LYNN
Notification: 11/20/2007
Category: TWO HR
Status Date: 10/27/2016
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 1/20/2011
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/22/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 1/25/2008

BETWEEN #23 & #26 FARRAR STREET (Continued) **S108962715**

Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/29/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 1/29/2008
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/4/2008
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/6/2009
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 10/15/2010
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: DEPRET
Action Date: 10/2/2008
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSARCD
Action Date: 10/27/2016
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/20/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 11/20/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/20/2007
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 11/20/2008
Response Action Outcome: Not reported

BETWEEN #23 & #26 FARRAR STREET (Continued) **S108962715**

Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	11/20/2008
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	11/23/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	11/26/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	12/19/2007
Response Action Outcome:	Not reported
Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received
Action Date:	2/15/2012
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	2/15/2012
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	2/15/2013
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/16/2007
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	2/16/2007
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/18/2014
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	2/19/2014
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of a Modified Plan

BETWEEN #23 & #26 FARRAR STREET (Continued) **S108962715**

Action Date: 2/22/2008
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 2/29/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/7/2008
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 3/15/2014
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 3/21/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 3/3/2008
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/2/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/23/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/30/2008
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/23/2008
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/24/2016
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/29/2016
Response Action Outcome: Not reported

BETWEEN #23 & #26 FARRAR STREET (Continued) **S108962715**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/16/2008
Response Action Outcome: Not reported

Chemicals:
Chemical: MINERAL SPIRITS
Quantity: 2.28 inches
Chemical: GASOLINE / MINERAL SPIRITS
Quantity: 0.5 inches
Chemical: GASOLINE
Quantity: 1.68 inches
Chemical: GASOLINE
Quantity: 0.5 inches
Location Type: MUNICIPAL
Source: UNKNOWN

37
West
1/8-1/4
0.202 mi.
1065 ft.

299 LYNNWAY LLC
299-309 LYNNWAY
LYNN, MA 01901

MA SHWS **S102087393**
MA RELEASE **N/A**
MA ENF

Relative:
Higher

Actual:
13 ft.

SHWS:
Release Tracking Number/Current Status: 3-0015695 / RAONR
Release Town: LYNN
Notification Date: 11/06/1997
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome Not Required**
Status Date: 10/25/2011
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: WASTE OIL
Quantity: 30 gallons
Chemical: #2 FUEL OIL
Quantity: Not reported
Chemical: MOTOR OIL
Quantity: 20 gallons

Actions:
Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 1/13/1997
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 1/13/1997

299 LYNNWAY LLC (Continued) **S102087393**

Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/13/1998
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/13/1998
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/6/1997
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/6/1997
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/12/1997
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 12/9/1997
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/1/1996
Response Action Outcome: Not reported

299 LYNNWAY LLC (Continued) **S102087393**

Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/1/1996
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	8/1/1996
Response Action Outcome:	Not reported

Release Tracking Number/Current Status:	3-0013533 / RAONR
Release Town:	LYNN
Notification Date:	03/07/1996
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome Not Required**
Status Date:	10/25/2011
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	COMMERCIAL
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	COAL TAR PITCH
Quantity:	0.5 inches

Actions:

Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	1/13/1997
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	10/25/2011
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	10/25/2011
Response Action Outcome:	Not reported

Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	10/25/2011
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/25/2011
Response Action Outcome:	Not reported

299 LYNNWAY LLC (Continued) **S102087393**

Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	12/9/1997
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	IRA Assessment Only
Action Date:	3/7/1996
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/7/1996
Response Action Outcome:	Not reported
Action Type:	RAO Not Required
Action Status:	Linked to a Transition Site - Obsolete Status
Action Date:	5/6/1996
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	5/6/1996
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/6/1996
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	8/1/1996
Response Action Outcome:	Not reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	8/1/1996
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/1/1996
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/1/1996
Response Action Outcome:	Not reported

Release Tracking Number/Current Status:	3-0001579 / RAO
Release Town:	LYNN
Notification Date:	01/15/1990
Category:	NONE
Associated ID:	3-0001579
Current Status:	**Response Action Outcome**

299 LYNNWAY LLC (Continued) **S102087393**

Status Date: 09/11/2012
Phase: PHASE II
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Not reported

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 1/13/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1990
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 10/22/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 10/25/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/25/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/25/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/25/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO

299 LYNNWAY LLC (Continued) **S102087393**

Action Status: Level I - Technical Screen Audit
Action Date: 10/3/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/13/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 12/9/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 2/12/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 5/17/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/17/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 7/30/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: TREGS
Action Status: LSPFA
Action Date: 7/31/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/1/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/1/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No

299 LYNNWAY LLC (Continued) **S102087393**

Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/1/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 8/1/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/11/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/7/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:
Release Tracking Number/Current Status: 3-0001579 / RAO
Primary ID: 3-0001579
Official City: LYNN
Notification: 01/15/1990
Category: NONE
Status Date: 09/11/2012
Phase: PHASE II
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 1/13/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1990
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued

299 LYNNWAY LLC (Continued) **S102087393**

Action Date: 10/22/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 10/25/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/25/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/25/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/25/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 10/3/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/13/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 12/9/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 2/12/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 5/17/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

299 LYNNWAY LLC (Continued) **S102087393**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/17/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 7/30/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: TREGS
Action Status: LSPFA
Action Date: 7/31/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/1/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/1/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/1/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 8/1/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/11/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/7/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

299 LYNNWAY LLC (Continued) **S102087393**

Release Tracking Number/Current Status: 3-0013533 / RAONR
Primary ID: Not reported
Official City: LYNN
Notification: 03/07/1996
Category: 72 HR
Status Date: 10/25/2011
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 1/13/1997
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 12/9/1997
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 3/7/1996
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/7/1996
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Transition Site - Obsolete Status
Action Date: 5/6/1996
Response Action Outcome: Not reported

299 LYNNWAY LLC (Continued) **S102087393**

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/6/1996
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/6/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 8/1/1996
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 8/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/1/1996
Response Action Outcome: Not reported

Chemicals:
Chemical: COAL TAR PITCH
Quantity: 0.5 inches
Location Type: COMMERCIAL
Source: UNKNOWN

Release Tracking Number/Current Status: 3-0015695 / RAONR
Primary ID: Not reported
Official City: LYNN
Notification: 11/06/1997
Category: TWO HR
Status Date: 10/25/2011
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 1/13/1997
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site

299 LYNNWAY LLC (Continued) **S102087393**

Action Date: 1/13/1997
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/13/1998
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/13/1998
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/25/2011
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/6/1997
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/6/1997
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/12/1997
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 12/9/1997
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/1/1996
Response Action Outcome: Not reported

299 LYNNWAY LLC (Continued) **S102087393**

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 8/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 8/1/1996
Response Action Outcome: Not reported

Chemicals:
Chemical: WASTE OIL
Quantity: 30 gallons
Chemical: #2 FUEL OIL
Quantity: Not reported
Chemical: MOTOR OIL
Quantity: 20 gallons
Location Type: COMMERCIAL
Source: UNKNOWN

ENFORCEMENT:
Region: NERO
DEP Region: NERO
DEP Program: 3A
DEP Bureau: BWSC
Program: Not reported
Program Id: 3-0001579
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 09/07/2011
ENF #: NON-NE-11-3A081
Document Type: NON
AG Ref (Y/N): Not reported
Doc Archived (Y/N): Not reported
EJ Community (Y/N): Y
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported
Demand $: Not reported
Suspended $: Not reported
Ownership: Commercially Owned

Region: NERO
DEP Region: NERO
DEP Program: 3A
DEP Bureau: BWSC
Program: Not reported
Program Id: 3-0001579
High Or Low Level Enforcement: LLE

299 LYNNWAY LLC (Continued) **S102087393**

FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	05/17/2011
ENF #:	Not reported
Document Type:	IDL
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0001579
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	07/30/2008
ENF #:	NON-NE-08-3R026
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0001579
High Or Low Level Enforcement:	LLE
FMF #:	Not reported

299 LYNNWAY LLC (Continued) **S102087393**

Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	10/22/2007
ENF #:	NON-NE-07-3R037
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

L38 **C&C INDUSTRY** **MA SHWS S100830534**
NNE **210 BROAD ST** **MA RELEASE N/A**
1/8-1/4 **LYNN, MA 01901**
0.202 mi.
1067 ft. **Site 2 of 4 in cluster L**

Relative:
Higher

Actual:
19 ft.

SHWS:

Release Tracking Number/Current Status:	3-0000105 / RAO
Release Town:	LYNN
Notification Date:	01/15/1987
Category:	NONE
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	12/28/2004
Phase:	PHASE III
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Oil
Location Type:	FORMER
Location Type:	MANUFACT
Source:	UNCONTAIN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	VOCS
Quantity:	Not reported

Actions:

Action Type:	RLFA
Action Status:	FLDDO
Action Date:	1/10/2018
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Release Disposition
Action Status:	Valid Transition Site

C&C INDUSTRY (Continued) **S100830534**

Action Date: 1/15/1987
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FLDDO
Action Date: 1/3/2018
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/10/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/10/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/10/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 10/10/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 10/20/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 12/28/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/28/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:
Release Tracking Number/Current Status: 3-0000105 / RAO
Primary ID: Not reported
Official City: LYNN

C&C INDUSTRY (Continued) **S100830534**

Notification: 01/15/1987
Category: NONE
Status Date: 12/28/2004
Phase: PHASE III
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: RLFA
Action Status: FLDDO
Action Date: 1/10/2018
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1987
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FLDDO
Action Date: 1/3/2018
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/10/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/10/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/10/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 10/10/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 10/20/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No

C&C INDUSTRY (Continued) **S100830534**

Significant Risk exists.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 12/28/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/28/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: VOCS
Quantity: Not reported
Location Type: FORMER
Location Type: MANUFACT
Source: UNCONTAIN

M39 **LEISURE TOWER APARTMENTS** **MA UST** **U000227300**
NE **10 FARRAR ST** **MA ASBESTOS** **N/A**
1/8-1/4 **LYNN, MA 01902** **MA Financial Assurance**
0.221 mi.
1166 ft. **Site 2 of 4 in cluster M**

Relative: Higher
Actual: 19 ft.

UST:

Facility:
Facility ID: 5394
Owner Id: 8278
Owner: PEABODY PROPERTIES INC
Owner Address: 159 BURGIN PKWY
Owner City,St,Zip: QUINCY, MA 02169
Telephone: Not reported
Description: Not reported
Facility address 2: Not reported
Owner address 2: Not reported
Latitude: 42.46204
Longitude: -70.94038
Contact name: Not reported
Contact address1: Not reported
Contact address2: Not reported
Contact city: Not reported
Contact state: Not reported
Contact zip: Not reported
Contact email: Not reported
Update: 1997-12-18 00:00:00
Update by: Not reported
Fac status: CLOSED

Tank ID: 1
Tank Status: Tank Removed
Status Date: 08/01/1994
Date Installed: 05/14/1973
Capacity: 1000

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Contents: Diesel
Tank Usage: Not reported
Tank Leak Detection: Not reported
Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

ASBESTOS:
Notification: 100203375R1
DEP Region: NE
Notifiers Name: NORTHEAST REMEDIATION
Start Date: 07/28/2014
End Date: 08/31/2014
Date Entered: 31/07/2014
Entry Date: 07/31/2014
Quantity Materical Removed SF: 500
Quantity Material Removed LF: 0
Project Description: Trns
AR Tracking ID: Not reported
Super Lic Number: Not reported
Monitor Lic Number: Not reported
Lab Lic Number: Not reported
Year: Not reported
Sticker Number: Not reported
Form Type: Not reported
Fee Status: Not reported
Facility Phone: Not reported
Sub Town: Not reported
Worksite: Not reported
Occupied: Not reported
Contractor: Not reported
Contract Type: Not reported
Hours: Not reported
Project Type: Not reported
Abatement Process: Not reported
Location: Not reported
Decon Process: Not reported
Disposal Methods: Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100204629
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	08/14/2014
End Date:	12/31/2014
Date Entered:	31/07/2014
Entry Date:	07/31/2014
Quantity Materical Removed SF:	5000
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Notification:	100216943R2
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	05/05/2015
End Date:	05/30/2015
Date Entered:	05/05/2015
Entry Date:	05/05/2015
Quantity Materical Removed SF:	2200
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100221471
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	06/11/2015
End Date:	06/19/2015
Date Entered:	28/05/2015
Entry Date:	05/28/2015
Quantity Materical Removed SF:	1000
Quantity Material Removed LF:	0
Project Description:	OTHER FLOORING/SHEETROCK
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Notification:	100237264R2
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	03/02/2016
End Date:	04/30/2016
Date Entered:	18/03/2016
Entry Date:	03/18/2016
Quantity Materical Removed SF:	10000
Quantity Material Removed LF:	0
Project Description:	OTHER JOINT COMPOUND
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100204629R1
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	08/14/2014
End Date:	12/31/2014
Date Entered:	16/09/2014
Entry Date:	09/16/2014
Quantity Materical Removed SF:	5000
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Notification:	100072034
DEP Region:	NE
Notifiers Name:	MARCOR ENVIRONMENTAL
Start Date:	05/28/2008
End Date:	05/28/2008
Date Entered:	13/05/2008
Entry Date:	05/13/2008
Quantity Materical Removed SF:	20
Quantity Material Removed LF:	0
Project Description:	Insl
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100072036
DEP Region:	NE
Notifiers Name:	ENVIRO LABOR INC
Start Date:	05/28/2008
End Date:	05/28/2008
Date Entered:	13/05/2008
Entry Date:	05/13/2008
Quantity Materical Removed SF:	20
Quantity Material Removed LF:	0
Project Description:	Insl
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100216943R3
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	05/05/2015
End Date:	05/12/2015
Date Entered:	12/05/2015
Entry Date:	05/12/2015
Quantity Materical Removed SF:	2200
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	304738
DEP Region:	NE
Notifiers Name:	DEC-TAM CORPORATION
Start Date:	05/16/2007
End Date:	05/17/2007
Date Entered:	04/05/2007
Entry Date:	05/04/2007
Quantity Materical Removed SF:	200
Quantity Material Removed LF:	Not reported
Project Description:	RENOVATION
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100069795
DEP Region:	NE
Notifiers Name:	MARCOR ENVIRONMENTAL
Start Date:	03/27/2008
End Date:	03/27/2008
Date Entered:	27/03/2008
Entry Date:	03/27/2008
Quantity Materical Removed SF:	10
Quantity Material Removed LF:	0
Project Description:	Insl
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100215620R1
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	03/09/2015
End Date:	03/20/2015
Date Entered:	10/03/2015
Entry Date:	03/10/2015
Quantity Materical Removed SF:	500
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100215471R1
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	03/04/2015
End Date:	03/20/2015
Date Entered:	10/03/2015
Entry Date:	03/10/2015
Quantity Materical Removed SF:	1500
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100216943R1
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	05/06/2015
End Date:	05/30/2015
Date Entered:	09/04/2015
Entry Date:	04/09/2015
Quantity Materical Removed SF:	2200
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100061218
DEP Region:	NE
Notifiers Name:	MARCOR ENVIRONMENTAL
Start Date:	09/24/2007
End Date:	12/31/2007
Date Entered:	10/09/2007
Entry Date:	09/10/2007
Quantity Materical Removed SF:	500
Quantity Material Removed LF:	0
Project Description:	Insl
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100061220
DEP Region:	NE
Notifiers Name:	ENVIRO LABOR INC
Start Date:	09/24/2007
End Date:	12/31/2007
Date Entered:	10/09/2007
Entry Date:	09/10/2007
Quantity Materical Removed SF:	500
Quantity Material Removed LF:	0
Project Description:	Insl
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100216943
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	04/06/2015
End Date:	04/30/2015
Date Entered:	21/03/2015
Entry Date:	03/21/2015
Quantity Materical Removed SF:	2200
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100203375R2
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	07/28/2014
End Date:	08/31/2014
Date Entered:	20/08/2014
Entry Date:	08/20/2014
Quantity Materical Removed SF:	500
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100203375R3
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	07/28/2014
End Date:	09/12/2014
Date Entered:	27/08/2014
Entry Date:	08/27/2014
Quantity Materical Removed SF:	500
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100204629R2
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	08/14/2014
End Date:	12/31/2014
Date Entered:	07/10/2014
Entry Date:	10/07/2014
Quantity Materical Removed SF:	5000
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100204629R3
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	08/14/2014
End Date:	11/16/2014
Date Entered:	16/10/2014
Entry Date:	10/16/2014
Quantity Materical Removed SF:	5000
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100214025R2
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	01/30/2015
End Date:	02/13/2015
Date Entered:	04/02/2015
Entry Date:	02/04/2015
Quantity Materical Removed SF:	1000
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100237264
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	02/29/2016
End Date:	03/31/2016
Date Entered:	11/02/2016
Entry Date:	02/11/2016
Quantity Materical Removed SF:	10000
Quantity Material Removed LF:	0
Project Description:	OTHER JOINT COMPOUND
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100213983R2
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	02/27/2015
End Date:	02/28/2015
Date Entered:	29/01/2015
Entry Date:	01/29/2015
Quantity Materical Removed SF:	200
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100215471
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	03/04/2015
End Date:	03/13/2015
Date Entered:	19/02/2015
Entry Date:	02/19/2015
Quantity Materical Removed SF:	1500
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Entered_by:	Not reported
Notification:	100215620
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	03/09/2015
End Date:	03/13/2015
Date Entered:	23/02/2015
Entry Date:	02/23/2015
Quantity Materical Removed SF:	500
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Notification:	100237264R1
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	03/02/2016
End Date:	03/31/2016
Date Entered:	26/02/2016
Entry Date:	02/26/2016
Quantity Materical Removed SF:	10000
Quantity Material Removed LF:	0
Project Description:	OTHER JOINT COMPOUND
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Notification:	100213983

LEISURE TOWER APARTMENTS (Continued) **U000227300**

DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	01/27/2015
End Date:	01/30/2015
Date Entered:	13/01/2015
Entry Date:	01/13/2015
Quantity Materical Removed SF:	200
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100214025
DEP Region:	NE

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	02/02/2015
End Date:	02/13/2015
Date Entered:	14/01/2015
Entry Date:	01/14/2015
Quantity Materical Removed SF:	1000
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100221471R1
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Start Date:	06/15/2015
End Date:	06/19/2015
Date Entered:	10/06/2015
Entry Date:	06/10/2015
Quantity Materical Removed SF:	1000
Quantity Material Removed LF:	0
Project Description:	OTHER FLOORING/SHEETROCK
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100078675
DEP Region:	NE
Notifiers Name:	MARCOR ENVIRONMENTAL
Start Date:	10/21/2008

LEISURE TOWER APARTMENTS (Continued) **U000227300**

End Date:	01/30/2009
Date Entered:	22/09/2008
Entry Date:	09/22/2008
Quantity Materical Removed SF:	3200
Quantity Material Removed LF:	0
Project Description:	Insl
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100078732
DEP Region:	NE
Notifiers Name:	ENVIRO LABOR INC
Start Date:	10/21/2008
End Date:	01/30/2009

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Date Entered:	22/09/2008
Entry Date:	09/22/2008
Quantity Materical Removed SF:	3200
Quantity Material Removed LF:	0
Project Description:	Insl
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100214025R1
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	01/30/2015
End Date:	02/13/2015
Date Entered:	30/01/2015

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Entry Date:	01/30/2015
Quantity Materical Removed SF:	1000
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	02/29/2016
End Date:	03/31/2016
Date Entered:	Not reported
Entry Date:	02/11/2016

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Quantity Materical Removed SF:	10000
Quantity Material Removed LF:	0
Project Description:	OTHER JOINT COMPOUND
AR Tracking ID:	231928
Super Lic Number:	AS040279
Monitor Lic Number:	AA000006
Lab Lic Number:	AA000145
Year:	2016
Sticker Number:	100237264
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	9782733242
Sub Town:	Not reported
Worksite:	FLR 1-5 (UNIT 201-206,301-306,401-406 & 501-506)
Occupied:	-1
Contractor:	AC000392
Contract Type:	WRITTEN
Hours:	7AM-3PM
Project Type:	Renv
Abatement Process:	Fcontain
Location:	INDOORS
Decon Process:	3 STAGE DECON WITH SHOWER STATION.
Disposal Methods:	DOUBLE BAGGED AND/OR FIBER DRUM; CONSOLIDATED AT PREMISES, FINAL DISPO
Facility Usage:	APARTMENT COMPLEX
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	HOUSING MANAGER RESOURCES
Owner Address:	500 VICTORY ROAD
Owner City:	NORTH QUINCY
Owner State:	MA
On Site Manager Name:	STEVE DONOGHUE
On Site Manager Phone:	9782733242
Ins Comp:	CHARTIS
Policy Number:	WC34157306
EXP Date:	07/01/2016
Facility Size:	0
Transporter Name:	NORTHEAST REMEDIATION
Transporter Address:	25 STOREY AVENUE # 256
Transporter City:	NEWBURYPORT
Transporter State:	MA
Final Site:	Not reported
Certified Name:	WENDY CARIAS
Cert Sign Date:	02/11/2016
Certified Company:	NER
Certified Phone:	6173899188
Entered_by:	NORTHEAST
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	03/02/2016
End Date:	03/31/2016
Date Entered:	Not reported
Entry Date:	02/26/2016
Quantity Materical Removed SF:	10000

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Quantity Material Removed LF:	0
Project Description:	OTHER JOINT COMPOUND
AR Tracking ID:	232784
Super Lic Number:	AS040279
Monitor Lic Number:	AA000006
Lab Lic Number:	AA000145
Year:	2016
Sticker Number:	100237264R
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	9782733242
Sub Town:	Not reported
Worksite:	FLR 1-5 (UNIT 201-206,301-306,401-406 & 501-506)
Occupied:	-1
Contractor:	AC000392
Contract Type:	WRITTEN
Hours:	7AM-3PM
Project Type:	Renv
Abatement Process:	Fcontain
Location:	INDOORS
Decon Process:	3 STAGE DECON WITH SHOWER STATION.
Disposal Methods:	DOUBLE BAGGED AND/OR FIBER DRUM; CONSOLIDATED AT PREMISES, FINAL DISPO
Facility Usage:	APARTMENT COMPLEX
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	HOUSING MANAGER RESOURCES
Owner Address:	500 VICTORY ROAD
Owner City:	NORTH QUINCY
Owner State:	MA
On Site Manager Name:	STEVE DONOGHUE
On Site Manager Phone:	9782733242
Ins Comp:	CHARTIS
Policy Number:	WC34157306
EXP Date:	07/01/2016
Facility Size:	0
Transporter Name:	NORTHEAST REMEDIATION
Transporter Address:	25 STOREY AVENUE # 256
Transporter City:	NEWBURYPORT
Transporter State:	MA
Final Site:	Not reported
Certified Name:	WENDY CARIAS
Cert Sign Date:	02/26/2016
Certified Company:	Not reported
Certified Phone:	6173899188
Entered_by:	NORTHEAST
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	03/02/2016
End Date:	04/30/2016
Date Entered:	Not reported
Entry Date:	03/18/2016
Quantity Materical Removed SF:	10000
Quantity Material Removed LF:	0

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Project Description:	OTHER JOINT COMPOUND
AR Tracking ID:	234272
Super Lic Number:	AS040279
Monitor Lic Number:	AA000006
Lab Lic Number:	AA000145
Year:	2016
Sticker Number:	100237264R
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	9782733242
Sub Town:	Not reported
Worksite:	FLR 1-5 (UNIT 201-206,301-306,401-406 & 501-506)
Occupied:	-1
Contractor:	AC000392
Contract Type:	WRITTEN
Hours:	7AM-3PM
Project Type:	Renv
Abatement Process:	Fcontain
Location:	INDOORS
Decon Process:	3 STAGE DECON WITH SHOWER STATION.
Disposal Methods:	DOUBLE BAGGED AND/OR FIBER DRUM; CONSOLIDATED AT PREMISES, FINAL DISPO
Facility Usage:	APARTMENT COMPLEX
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	HOUSING MANAGER RESOURCES
Owner Address:	500 VICTORY ROAD
Owner City:	NORTH QUINCY
Owner State:	MA
On Site Manager Name:	STEVE DONOGHUE
On Site Manager Phone:	9782733242
Ins Comp:	CHARTIS
Policy Number:	WC34157306
EXP Date:	07/01/2016
Facility Size:	0
Transporter Name:	NORTHEAST REMEDIATION
Transporter Address:	25 STOREY AVENUE # 256
Transporter City:	NEWBURYPORT
Transporter State:	MA
Final Site:	Not reported
Certified Name:	WENDY CARIAS
Cert Sign Date:	03/18/2016
Certified Company:	NCG
Certified Phone:	6173899188
Entered_by:	LVIBOSTON1
Notification:	100211558
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	12/03/2014
End Date:	12/06/2014
Date Entered:	18/11/2014
Entry Date:	11/18/2014
Quantity Materical Removed SF:	250
Quantity Material Removed LF:	0
Project Description:	Trns

LEISURE TOWER APARTMENTS (Continued) **U000227300**

AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100203375
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	07/28/2014
End Date:	08/01/2014
Date Entered:	14/07/2014
Entry Date:	07/14/2014
Quantity Materical Removed SF:	500
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100064384
DEP Region:	NE
Notifiers Name:	MARCOR ENVIRONMENTAL
Start Date:	11/27/2007
End Date:	12/31/2007
Date Entered:	12/11/2007
Entry Date:	11/12/2007
Quantity Materical Removed SF:	100
Quantity Material Removed LF:	0
Project Description:	Insl
AR Tracking ID:	Not reported
Super Lic Number:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100064387
DEP Region:	NE
Notifiers Name:	ENVIRO LABOR INC
Start Date:	11/27/2007
End Date:	12/31/2007
Date Entered:	12/11/2007
Entry Date:	11/12/2007
Quantity Materical Removed SF:	100
Quantity Material Removed LF:	0
Project Description:	Insl
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100070462
DEP Region:	NE
Notifiers Name:	MARCOR ENVIRONMENTAL
Start Date:	04/23/2008
End Date:	04/23/2008
Date Entered:	09/04/2008
Entry Date:	04/09/2008
Quantity Materical Removed SF:	20
Quantity Material Removed LF:	0
Project Description:	Insl
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100213983R1
DEP Region:	NE
Notifiers Name:	NORTHEAST REMEDIATION
Start Date:	01/29/2015
End Date:	02/06/2015
Date Entered:	26/01/2015
Entry Date:	01/26/2015
Quantity Materical Removed SF:	200
Quantity Material Removed LF:	0
Project Description:	,Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported

LEISURE TOWER APARTMENTS (Continued) **U000227300**

Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

MA Financial Assurance 2:

Facility Id:	5394
Description:	Residential
Work Phone:	(617) 598-0844

M40 **NO LOCATION AID** **MA SHWS S108640640**
NNE **23 FARRAR ST** **MA INST CONTROL N/A**
1/8-1/4 **LYNN, MA 01901** **MA RELEASE**
0.222 mi. **MA ENF**
1173 ft. **Site 3 of 4 in cluster M**

Relative:
Higher

Actual:
19 ft.

SHWS:

Release Tracking Number/Current Status:	3-0026885 / DPS
Release Town:	LYNN
Notification Date:	06/08/2007
Category:	72 HR

NO LOCATION AID (Continued) **S108640640**

Associated ID:	Not reported
Current Status:	**Downgradient Property Status**
Status Date:	09/28/2007
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	MUNICIPAL
Location Type:	COMMERCIAL
Location Type:	RESIDNTIAL
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	OIL
Quantity:	0.5 inches
Chemical:	GASOLINE
Quantity:	12 inches

Actions:

Action Type:	Downgradient Property Status
Action Status:	Fee Received - FMCRA Use Only
Action Date:	10/1/2007
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	11/20/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	12/5/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	5/3/2010
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FLDD1A
Action Date:	6/11/2007
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/8/2007
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	IRA Assessment Only
Action Date:	6/8/2007
Response Action Outcome:	Not reported
Action Type:	RLFA

NO LOCATION AID (Continued) **S108640640**

Action Status:	FOLOFF
Action Date:	7/25/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	7/3/2007
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	8/3/2007
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/3/2007
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	9/13/2007
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	9/21/2007
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	9/28/2007
Response Action Outcome:	Not reported
Action Type:	Downgradient Property Status
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	9/28/2007
Response Action Outcome:	Not reported

Release Tracking Number/Current Status:	3-0025664 / PSC
Release Town:	LYNN
Notification Date:	02/10/2006
Category:	72 HR
Associated ID:	3-0025664
Current Status:	**PSC**
Status Date:	10/27/2016
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	INDUSTRIAL
Location Type:	COMMERCIAL
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

NO LOCATION AID (Continued) **S108640640**

Chemicals:
Chemical: WASTE OIL
Quantity: 0.5 inches

Actions:
Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/15/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 1/16/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/18/2008
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 1/20/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 1/29/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 1/4/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/1/2008
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/1/2008
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 10/10/2007
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 10/12/2010
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NOA

NO LOCATION AID (Continued) **S108640640**

Action Date: 10/15/2010
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 10/24/2006
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/24/2006
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 10/24/2011
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSARCD
Action Date: 10/27/2016
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 10/5/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/14/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/18/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 11/20/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 12/18/2006
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/10/2006
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 2/10/2006
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S108640640**

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 2/15/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/15/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/15/2013
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 2/16/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/16/2007
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 2/16/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 2/16/2007
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/18/2014
Response Action Outcome: Not reported

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 2/18/2014
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/19/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/27/2006
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued

NO LOCATION AID (Continued) **S108640640**

Action Date: 2/27/2006
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 2/6/2009
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 2/6/2009
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 3/1/2007
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 3/15/2014
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 3/17/2010
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 3/21/2014
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 3/23/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 3/26/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 3/4/2013
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 3/4/2013
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/13/2006
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S108640640**

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 5/11/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/11/2009
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 5/11/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/25/2010
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Level I - Technical Screen Audit
Action Date: 5/5/2010
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 6/11/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 6/16/2006
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 6/3/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 7/11/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/16/2008
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Revised Statement or Transmittal Received
Action Date: 7/18/2011
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Fee Received - FMCRA Use Only

NO LOCATION AID (Continued) **S108640640**

Action Date: 8/24/2016
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/29/2016
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 8/31/2009
Response Action Outcome: Not reported

INST CONTROL:
Release Tracking Number: 3-0025664
Action Type: AUL
Action Stat: FEEREC
Action Date: 08/24/2016
Response Action Outcome: -

Release Tracking Number: 3-0025664
Action Type: AUL
Action Stat: LEGNOT
Action Date: 03/15/2014
Response Action Outcome: -

Release Tracking Number: 3-0025664
Action Type: AUL
Action Stat: RECPT
Action Date: 02/18/2014
Response Action Outcome: -

Release Tracking Number: 3-0025664
Action Type: AUL
Action Stat: RECPT
Action Date: 08/29/2016
Response Action Outcome: -

Release:
Release Tracking Number/Current Status: 3-0025664 / PSC
Primary ID: 3-0025664
Official City: LYNN
Notification: 02/10/2006
Category: 72 HR
Status Date: 10/27/2016
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/15/2014

NO LOCATION AID (Continued) **S108640640**

Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 1/16/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/18/2008
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 1/20/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 1/29/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 1/4/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/1/2008
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/1/2008
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 10/10/2007
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 10/12/2010
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 10/15/2010
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 10/24/2006
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S108640640**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/24/2006
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 10/24/2011
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSARCD
Action Date: 10/27/2016
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 10/5/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/14/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/18/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 11/20/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 12/18/2006
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/10/2006
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 2/10/2006
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 2/15/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension

NO LOCATION AID (Continued) **S108640640**

Action Date: 2/15/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/15/2013
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 2/16/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/16/2007
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 2/16/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 2/16/2007
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/18/2014
Response Action Outcome: Not reported

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 2/18/2014
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/19/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/27/2006
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 2/27/2006
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 2/6/2009
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S108640640**

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 2/6/2009
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 3/1/2007
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 3/15/2014
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 3/17/2010
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 3/21/2014
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 3/23/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 3/26/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 3/4/2013
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 3/4/2013
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/13/2006
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 5/11/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received

NO LOCATION AID (Continued) **S108640640**

Action Date: 5/11/2009
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 5/11/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/25/2010
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Level I - Technical Screen Audit
Action Date: 5/5/2010
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 6/11/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 6/16/2006
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 6/3/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 7/11/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/16/2008
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Revised Statement or Transmittal Received
Action Date: 7/18/2011
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/24/2016
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/29/2016
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S108640640**

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 8/31/2009
Response Action Outcome: Not reported

Chemicals:
Chemical: WASTE OIL
Quantity: 0.5 inches
Location Type: INDUSTRIAL
Location Type: COMMERCIAL
Source: UNKNOWN

Release Tracking Number/Current Status: 3-0026885 / DPS
Primary ID: Not reported
Official City: LYNN
Notification: 06/08/2007
Category: 72 HR
Status Date: 09/28/2007
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Downgradient Property Status
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/1/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/20/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/5/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/3/2010
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1A
Action Date: 6/11/2007
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/8/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action

NO LOCATION AID (Continued) **S108640640**

Action Status: IRA Assessment Only
Action Date: 6/8/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/25/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/3/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/3/2007
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/3/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/13/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 9/21/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/28/2007
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/28/2007
Response Action Outcome: Not reported

Chemicals:
Chemical: OIL
Quantity: 0.5 inches
Chemical: GASOLINE
Quantity: 12 inches
Location Type: MUNICIPAL
Location Type: COMMERCIAL
Location Type: RESIDNTIAL
Source: UNKNOWN

ENFORCEMENT:
Region: NERO

NO LOCATION AID (Continued) **S108640640**

DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0025664
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	01/20/2011
ENF #:	NON-NE-11-3A008
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0025664
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	03/01/2007
ENF #:	NON-NE-07-3R002
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

M41 **STERLING MACHINE CO** **RCRA NonGen / NLR** **1000881555**
NNE **23 FARRAR ST** **FINDS** **MAD001771104**
1/8-1/4 **LYNN, MA 01901** **ECHO**
0.222 mi. **NJ MANIFEST**
1173 ft. **Site 4 of 4 in cluster M** **NY MANIFEST**

Relative: Higher
Actual: 19 ft.

RCRA NonGen / NLR:

Date form received by agency:	07/15/1983
Facility name:	STERLING MACHINE CO
Facility address:	23 FARRAR ST LYNN, MA 01901
EPA ID:	MAD001771104
Contact:	ROBERT STRUZZIERO
Contact address:	23 FARRAR ST LYNN, MA 01901
Contact country:	US
Contact telephone:	617-593-3000
Contact email:	Not reported
EPA Region:	01
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	STERLING MACHINE CO
Owner/operator address:	23 FARRAR ST LYNN, MA 01901
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	03/01/1990
Owner/Op end date:	06/30/1996

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

. Waste code:	U228
. Waste name:	ETHENE, TRICHLORO-

Violation Status: No violations found

STERLING MACHINE CO (Continued) **1000881555**

FINDS:

Registry ID: 110003422332

Environmental Interest/Information System

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

MA-EPICS - Massachussetts Environmental Protection Integrated Computer System

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:

Envid:	1000881555
Registry ID:	110003422332
DFR URL:	http://echo.epa.gov/detailed-facility-report?fid=110003422332

NJ MANIFEST:

EPA Id:	MAD001771104
Mail Address:	23 FARRAR ST
Mail City/State/Zip:	LYNN, MA 01901
Facility Phone:	Not reported
Emergency Phone:	Not reported
Contact:	ROBERT STRUZZIERO
Comments:	Not reported
SIC Code:	Not reported
County:	MA009
Municipal:	Not reported
Previous EPA Id:	Not reported
Gen Flag:	Not reported
Trans Flag:	Not reported
TSDF Flag:	Not reported
Name Change:	Not reported
Date Change:	Not reported

Manifest:

Manifest Number:	003761351JJK
EPA ID:	MAD001771104
Date Shipped:	06/12/2008
TSDF EPA ID:	NJD002182897
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	06/12/2008
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	06/17/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	55 G

Manifest Number:	007966262JJK
EPA ID:	MAD001771104
Date Shipped:	1/28/2011
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	500.00 Pounds

Manifest Number:	000842778JJK
EPA ID:	MAD001771104
Date Shipped:	04/06/2007
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	04/06/2007
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	04/24/2007
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H06
Quantity:	110 G

Manifest Number:	003763022JJK
EPA ID:	MAD001771104
Date Shipped:	08/21/2008
TSDF EPA ID:	NJD002182897
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	08/21/2008
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	09/02/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Waste Code:	D001
Hand Code:	H061
Quantity:	55 G

Manifest Number:	005873327JJK
EPA ID:	MAD001771104
Date Shipped:	10/20/2009
TSDF EPA ID:	NJD002182897
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	10/20/2009
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/03/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	55 G

Manifest Number:	005881235JJK
EPA ID:	MAD001771104
Date Shipped:	09/17/2010
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193

STERLING MACHINE CO (Continued) **1000881555**

Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	09/17/2010
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	09/30/2010
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	1000 P

Manifest Number:	000843356JJK
EPA ID:	MAD001771104
Date Shipped:	06/18/2007
TSDF EPA ID:	NJD002182897
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	06/18/2007

STERLING MACHINE CO (Continued) **1000881555**

Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	06/20/2007
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H06
Quantity:	110 G

Manifest Number:	009788716JJK
EPA ID:	MAD001771104
Date Shipped:	6/26/2012
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	Not reported
Quantity:	55.00 gallons

Manifest Number:	NJA5114746
EPA ID:	MAD001771104
Date Shipped:	12/28/2004
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	12/28/2004
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	01/05/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	02010521
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported
Manifest Number:	004889306JJK
EPA ID:	MAD001771104
Date Shipped:	02/25/2009
TSDF EPA ID:	NJD002182897
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	02/25/2009
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	03/10/2009
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	55 G

Manifest Number:	NJA5078847
EPA ID:	MAD001771104
Date Shipped:	07/18/2006
TSDF EPA ID:	NJD002200046

STERLING MACHINE CO (Continued) **1000881555**

Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	07/18/2006
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	07/31/2006
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	09080625
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5244124
EPA ID:	MAD001771104
Date Shipped:	10/28/2005
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	10/28/2005
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	11/10/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	01180625
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Manifest Number:	NJA5115097
EPA ID:	MAD001771104
Date Shipped:	06/03/2005
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	06/03/2005
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	06/16/2005
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Manifest Discrepancy Type:	Not reported
Data Entry Number:	07210525
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported
Manifest Number:	NJA5243526
EPA ID:	MAD001771104
Date Shipped:	02/28/2006
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	02/28/2006
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	03/13/2006
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	05030621
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported
Manifest Number:	000261550FLE
EPA ID:	MAD001771104
Date Shipped:	3/6/2012
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	Not reported
Quantity:	55.00 gallons

Manifest Number:	NJA5076759
EPA ID:	MAD001771104
Date Shipped:	05/11/2004
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	NJ0000027193
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	05/11/2004
Date Trans2 Transported Waste:	05/21/2004
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	05/27/2004
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	06150421
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Manifest Number:	007967036JJK
EPA ID:	MAD001771104
Date Shipped:	4/19/2011
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Data Entry Number: Not reported
Was Load Rejected: LYNN, MA 01901
Reason Load Was Rejected: Not reported

Waste:
Manifest Year: Not reported
Waste Code: D001
Hand Code: H061
Quantity: 55.00 gallons

Manifest Number: 005871544JJK
EPA ID: MAD001771104
Date Shipped: 08/12/2009
TSDF EPA ID: NJD002182897
Transporter EPA ID: NJ0000027193
Transporter 2 EPA ID: Not reported
Transporter 3 EPA ID: Not reported
Transporter 4 EPA ID: Not reported
Transporter 5 EPA ID: Not reported
Transporter 6 EPA ID: Not reported
Transporter 7 EPA ID: Not reported
Transporter 8 EPA ID: Not reported
Transporter 9 EPA ID: Not reported
Transporter 10 EPA ID: Not reported
Date Trans1 Transported Waste: 08/12/2009
Date Trans2 Transported Waste: Not reported
Date Trans3 Transported Waste: Not reported
Date Trans4 Transported Waste: Not reported
Date Trans5 Transported Waste: Not reported
Date Trans6 Transported Waste: Not reported
Date Trans7 Transported Waste: Not reported
Date Trans8 Transported Waste: Not reported
Date Trans9 Transported Waste: Not reported
Date Trans10 Transported Waste: Not reported
Date TSDF Received Waste: 08/18/2009
TSDF EPA Facility Name: Not reported
QTY Units: Not reported
Transporter SEQ ID: Not reported
Transporter-1 Date: Not reported
Waste SEQ ID: Not reported
Waste Type Code 2: Not reported
Waste Type Code 3: Not reported
Waste Type Code 4: Not reported
Waste Type Code 5: Not reported
Waste Type Code 6: Not reported
Date Accepted: Not reported
Manifest Discrepancy Type: Not reported
Data Entry Number: Not reported
Was Load Rejected: LYNN, MA 01901
Reason Load Was Rejected: Not reported

Waste:
Manifest Year: Not reported
Waste Code: D001
Hand Code: H061
Quantity: 110 G

STERLING MACHINE CO (Continued) **1000881555**

Manifest Number:	008778305JJK
EPA ID:	MAD001771104
Date Shipped:	11/8/2011
TSDF EPA ID:	NJD002200046
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported
Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	Not reported
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	Not reported
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	55.00 gallons

Manifest Number:	000896840JJK
EPA ID:	MAD001771104
Date Shipped:	01/31/2008
TSDF EPA ID:	NJD002182897
Transporter EPA ID:	NJ0000027193
Transporter 2 EPA ID:	Not reported
Transporter 3 EPA ID:	Not reported
Transporter 4 EPA ID:	Not reported
Transporter 5 EPA ID:	Not reported
Transporter 6 EPA ID:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Transporter 7 EPA ID:	Not reported
Transporter 8 EPA ID:	Not reported
Transporter 9 EPA ID:	Not reported
Transporter 10 EPA ID:	Not reported
Date Trans1 Transported Waste:	01/31/2008
Date Trans2 Transported Waste:	Not reported
Date Trans3 Transported Waste:	Not reported
Date Trans4 Transported Waste:	Not reported
Date Trans5 Transported Waste:	Not reported
Date Trans6 Transported Waste:	Not reported
Date Trans7 Transported Waste:	Not reported
Date Trans8 Transported Waste:	Not reported
Date Trans9 Transported Waste:	Not reported
Date Trans10 Transported Waste:	Not reported
Date TSDF Received Waste:	02/05/2008
TSDF EPA Facility Name:	Not reported
QTY Units:	Not reported
Transporter SEQ ID:	Not reported
Transporter-1 Date:	Not reported
Waste SEQ ID:	Not reported
Waste Type Code 2:	Not reported
Waste Type Code 3:	Not reported
Waste Type Code 4:	Not reported
Waste Type Code 5:	Not reported
Waste Type Code 6:	Not reported
Date Accepted:	Not reported
Manifest Discrepancy Type:	Not reported
Data Entry Number:	Not reported
Was Load Rejected:	LYNN, MA 01901
Reason Load Was Rejected:	Not reported

Waste:

Manifest Year:	Not reported
Waste Code:	D001
Hand Code:	H061
Quantity:	110 G

NY MANIFEST:

Country:	USA
EPA ID:	MAD001771104
Facility Status:	Not reported
Location Address 1:	23 FARRAR ST
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	LYNN
Location State:	MA
Location Zip:	01901
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	MAD001771104
Mailing Name:	STERLING MACHINE CO
Mailing Contact:	STERLING MACHINE CO
Mailing Address 1:	23 FARRAR ST
Mailing Address 2:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Mailing City:	LYNN
Mailing State:	MA
Mailing Zip:	01901
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	7815933000

NY MANIFEST:

Document ID:	Not reported
Manifest Status:	Not reported
seq:	Not reported
Year:	2017
Trans1 State ID:	NJ0000027193
Trans2 State ID:	CTD021816889
Generator Ship Date:	06/16/2017
Trans1 Recv Date:	06/16/2017
Trans2 Recv Date:	06/21/2017
TSD Site Recv Date:	06/23/2017
Part A Recv Date:	Not reported
Part B Recv Date:	Not reported
Generator EPA ID:	MAD001771104
Trans1 EPA ID:	Not reported
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD080469935
TSDF ID 2:	Not reported
Manifest Tracking Number:	016819077JJK
Import Indicator:	N
Export Indicator:	N
Discr Quantity Indicator:	N
Discr Type Indicator:	N
Discr Residue Indicator:	N
Discr Partial Reject Indicator:	N
Discr Full Reject Indicator:	N
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	H050
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	100
Units:	G - Gallons (liquids only)* (8.3 pounds)
Number of Containers:	2
Container Type:	DM - Metal drums, barrels
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	1
Waste Code:	Not reported
Waste Code 1_2:	Not reported
Waste Code 1_3:	Not reported
Waste Code 1_4:	D001
Waste Code 1_5:	Not reported
Waste Code 1_6:	Not reported

STERLING MACHINE CO (Continued) **1000881555**

Click this hyperlink while viewing on your computer to access
14 additional NY_MANIFEST: record(s) in the EDR Site Report.

L42 **SPRING STREET LOT** **MA LUST S108117606**
North **39-45 SPRING ST** **MA RELEASE N/A**
1/8-1/4 **LYNN, MA 01903**
0.223 mi.
1180 ft. **Site 3 of 4 in cluster L**

Relative: **Higher**

Actual: **21 ft.**

LUST:

Facility:

Release Tracking Number/Current Status:	3-0025865 / RAO
Status Date:	06/29/2007
Source Type:	UST
Release Town:	LYNN
Notification Date:	06/30/2006
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	692 parts per million
Chemical:	DIESEL/FUEL OIL UST
Quantity:	100 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	10/27/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	4/26/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	5/7/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO

SPRING STREET LOT (Continued) **S108117606**

Action Status:	RAO Statement Received
Action Date:	6/29/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/30/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	6/30/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	7/5/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/29/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	8/29/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	8/4/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release:

Release Tracking Number/Current Status:	3-0025865 / RAO
Primary ID:	Not reported
Official City:	LYNN
Notification:	06/30/2006
Category:	72 HR
Status Date:	06/29/2007
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

SPRING STREET LOT (Continued) **S108117606**

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	10/27/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	4/26/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	5/7/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	6/29/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/30/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	6/30/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	7/5/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/29/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	8/29/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.

SPRING STREET LOT (Continued) **S108117606**

Action Date: 8/4/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: DIESEL FUEL
Quantity: 692 parts per million
Chemical: DIESEL/FUEL OIL UST
Quantity: 100 parts per million
Location Type: COMMERCIAL
Source: UST

L43 **CARROLL ST** **MA SHWS** **S105309388**
NNE **190-192 BROAD ST** **MA INST CONTROL** **N/A**
1/8-1/4 **LYNN, MA 01902** **MA RELEASE**
0.226 mi. **MA ENF**
1193 ft. **Site 4 of 4 in cluster L**

Relative: Higher
Actual: 19 ft.

SHWS:
Release Tracking Number/Current Status: 3-0021432 / RAO
Release Town: LYNN
Notification Date: 01/22/2002
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 11/30/2009
Phase: PHASE IV
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil Or Haz Material: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: 1,1-DICHLOROETHENE
Quantity: 0.0015 milligrams per liter
Chemical: C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity: 202 milligrams per kilogram

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 1/11/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 1/13/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNF

CARROLL ST (Continued) **S105309388**

Action Status: Reportable Release under MGL 21E
Action Date: 1/22/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/22/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/29/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 1/29/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/29/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/30/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 12/12/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 12/12/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received

CARROLL ST (Continued) **S105309388**

Action Date: 12/14/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/17/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 3/30/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 4/1/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 4/1/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 5/2/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 5/2/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 6/1/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 6/17/2008

CARROLL ST (Continued) **S105309388**

Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 6/3/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/3/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 7/8/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

INST CONTROL:
Release Tracking Number: 3-0021432
Action Type: AUL
Action Stat: RECPT
Action Date: 12/14/2009
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0021432
Action Type: AUL
Action Stat: SNAUDI
Action Date: 04/01/2016
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0021432
Action Type: AUL
Action Stat: TSAUD
Action Date: 03/30/2016
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release:
Release Tracking Number/Current Status: 3-0021432 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/22/2002

CARROLL ST (Continued) **S105309388**

Category: 120 DY
Status Date: 11/30/2009
Phase: PHASE IV
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 1/11/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 1/13/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/22/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/22/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/29/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 1/29/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/29/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No

CARROLL ST (Continued) **S105309388**

Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/30/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 12/12/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 12/12/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/14/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/17/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 3/30/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 4/1/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 4/1/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more

CARROLL ST (Continued) **S105309388**

AULs that have been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 5/2/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 5/2/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 6/1/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 6/17/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 6/3/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/3/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 7/8/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Chemicals:
Chemical: 1,1-DICHLOROETHENE
Quantity: 0.0015 milligrams per liter
Chemical: C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity: 202 milligrams per kilogram

CARROLL ST (Continued) **S105309388**

ENFORCEMENT:

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0021432
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	01/11/2008
ENF #:	NON-NE-08-3A003
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0021432
High Or Low Level Enforcement:	HLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	07/08/2008
ENF #:	ACO-NE-08-3A017
Document Type:	ACO
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

CARROLL ST (Continued) **S105309388**

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0021432
High Or Low Level Enforcement:	HLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	06/17/2008
ENF #:	ACO-NE-08-3A016
Document Type:	ACO
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

44
NW
1/8-1/4
0.233 mi.
1229 ft.

CAKE CO FMR **MA SHWS** **S100830535**
2 STATE ST **MA RELEASE** **N/A**
LYNN, MA 01901

Relative:
Higher

Actual:
19 ft.

SHWS:

Release Tracking Number/Current Status:	3-0000714 / LSPNFA
Release Town:	LYNN
Notification Date:	10/15/1988
Category:	NONE
Associated ID:	Not reported
Current Status:	**LSP No Further Action**
Status Date:	02/25/1997
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Not reported

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not reported

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	10/15/1988
Response Action Outcome:	Not reported

CAKE CO FMR (Continued) **S100830535**

Action Type: TREGS
Action Status: LSPNFA
Action Date: 2/25/1997
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0000714 / LSPNFA
Primary ID: Not reported
Official City: LYNN
Notification: 10/15/1988
Category: NONE
Status Date: 02/25/1997
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 10/15/1988
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: LSPNFA
Action Date: 2/25/1997
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

N45 **501 WASHINGTON STREET** **MA SHWS** **S117692220**
NNW **501 WASHINGTON STREET** **MA RELEASE** **N/A**
1/8-1/4 **LYNN, MA 01901** **MA ENF**
0.235 mi.
1243 ft. **Site 1 of 3 in cluster N**

Relative:
Higher

Actual:
20 ft.

SHWS:
Release Tracking Number/Current Status: 3-0032762 / TIERII
Release Town: LYNN
Notification Date: 03/04/2015
Category: 120 DY
Associated ID: 3-0032762
Current Status: **Tier II, A site/release receiving a total NRS score of less than 350, unless the site meets any of the Tier 1 Inclusionary Criteria (see above). Permits are not required at Tier 2 sites/releases and response actions may be performed under the supervision of an LSP without prior DEP approval. All pre-1993 transition sites that have accepted waivers are categorically Tier 2 sites.**
Status Date: 03/04/2016
Phase: PHASE II
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material

501 WASHINGTON STREET (Continued) **S117692220**

Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	TRICHLOROETHENE
Quantity:	190 micrograms per liter
Chemical:	TRICHLOROETHENE
Quantity:	2.3 milligrams per kilogram
Chemical:	ARSENIC
Quantity:	120 milligrams per kilogram
Chemical:	LEAD
Quantity:	660 milligrams per kilogram

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	1/12/2016
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	10/19/2015
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	10/6/2015
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	10/7/2015
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	2/9/2016
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/17/2015
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	3/22/2016
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/4/2015
Response Action Outcome:	Not reported
Action Type:	RNF

501 WASHINGTON STREET (Continued) **S117692220**

Action Status:	Reportable Release under MGL 21E
Action Date:	3/4/2015
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/4/2015
Response Action Outcome:	Not reported
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	3/4/2016
Response Action Outcome:	Not reported

Release Tracking Number/Current Status:	3-0033301 / RAONR
Release Town:	LYNN
Notification Date:	12/09/2015
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome Not Required**
Status Date:	03/04/2016
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	COMMERCIAL
Location Type:	RESIDNTIAL
Source:	USAGE
Source:	PROPERTY
Source:	HISTORICAL

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	TRICHLOROETHYLENE
Quantity:	190 micrograms per liter

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/15/2016

501 WASHINGTON STREET (Continued) **S117692220**

Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/15/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/5/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/5/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 10/6/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/6/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 12/9/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/9/2015
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/3/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 2/3/2016
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/3/2016
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 3/22/2016
Response Action Outcome: Not reported

501 WASHINGTON STREET (Continued) **S117692220**

Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	4/15/2016
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	4/25/2017
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	5/2/2017
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	6/7/2017
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	9/12/2017
Response Action Outcome:	Not reported

Release Tracking Number/Current Status:	3-0033301 / RAONR
Release Town:	LYNN
Notification Date:	12/09/2015
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome Not Required**
Status Date:	03/04/2016
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	COMMERCIAL

501 WASHINGTON STREET (Continued) **S117692220**

Location Type: RESIDNTIAL
Source: USAGE
Source: PROPERTY
Source: HISTORICAL

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: TRICHLOROETHYLENE
Quantity: 190 micrograms per liter

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/15/2016
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/15/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/5/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/5/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 10/6/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/6/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 12/9/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/9/2015
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/3/2016
Response Action Outcome: Not reported

501 WASHINGTON STREET (Continued) **S117692220**

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	2/3/2016
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/3/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	3/22/2016
Response Action Outcome:	Not reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	4/15/2016
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	4/25/2017
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	5/2/2017
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	6/7/2017
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF

501 WASHINGTON STREET (Continued) **S117692220**

Action Date: 9/12/2017
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0033301 / RAONR
Release Town: LYNN
Notification Date: 12/09/2015
Category: 72 HR
Associated ID: Not reported
Current Status: **Response Action Outcome Not Required**
Status Date: 03/04/2016
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material
Location Type: COMMERCIAL
Location Type: RESIDNTIAL
Source: USAGE
Source: PROPERTY
Source: HISTORICAL

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: TRICHLOROETHYLENE
Quantity: 190 micrograms per liter

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/15/2016
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/15/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/5/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/5/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 10/6/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/6/2017
Response Action Outcome: Not reported

501 WASHINGTON STREET (Continued) **S117692220**

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 12/9/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/9/2015
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/3/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 2/3/2016
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/3/2016
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 3/22/2016
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 3/4/2016
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 3/4/2016
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/4/2016
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/4/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 4/15/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received

501 WASHINGTON STREET (Continued) **S117692220**

Action Date: 4/25/2017
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 5/2/2017
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 6/7/2017
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/12/2017
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0032762 / TIERII
Primary ID: 3-0032762
Official City: LYNN
Notification: 03/04/2015
Category: 120 DY
Status Date: 03/04/2016
Phase: PHASE II
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 1/12/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/19/2015
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/6/2015
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 10/7/2015
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 2/9/2016

501 WASHINGTON STREET (Continued) **S117692220**

Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/17/2015
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 3/22/2016
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/4/2015
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/4/2015
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/4/2015
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 3/4/2016
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/4/2016
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/4/2016
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 3/4/2016
Response Action Outcome: Not reported

Chemicals:
Chemical: TRICHLOROETHENE
Quantity: 190 micrograms per liter
Chemical: TRICHLOROETHENE
Quantity: 2.3 milligrams per kilogram
Chemical: ARSENIC
Quantity: 120 milligrams per kilogram
Chemical: LEAD
Quantity: 660 milligrams per kilogram
Source: UNKNOWN

501 WASHINGTON STREET (Continued) **S117692220**

Release Tracking Number/Current Status: 3-0033301 / RAONR
Primary ID: Not reported
Official City: LYNN
Notification: 12/09/2015
Category: 72 HR
Status Date: 03/04/2016
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/15/2016
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/15/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/5/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/5/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 10/6/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/6/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 12/9/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/9/2015
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/3/2016
Response Action Outcome: Not reported

501 WASHINGTON STREET (Continued) **S117692220**

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	2/3/2016
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/3/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Legal Notice Published
Action Date:	3/22/2016
Response Action Outcome:	Not reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	3/4/2016
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	4/15/2016
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	4/25/2017
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	5/2/2017
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	6/7/2017
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF

501 WASHINGTON STREET (Continued) **S117692220**

Action Date: 9/12/2017
Response Action Outcome: Not reported

Chemicals:
Chemical: TRICHLOROETHYLENE
Quantity: 190 micrograms per liter
Location Type: COMMERCIAL
Location Type: RESIDNTIAL
Source: USAGE
Source: PROPERTY
Source: HISTORICAL

ENFORCEMENT:
Region: NERO
DEP Region: NERO
DEP Program: 3r
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0033301
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: LYNN
Date Executed: 05/02/2017
ENF #: 00002394
Document Type: IDL
AG Ref (Y/N): False
Doc Archived (Y/N): True
EJ Community (Y/N): True
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported
Demand $: Not reported
Suspended $: Not reported
Ownership: Commercially Owned

Region: NERO
DEP Region: NERO
DEP Program: 3
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0033301
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: LYNN
Date Executed: 06/07/2017
ENF #: 00002499
Document Type: NON
AG Ref (Y/N): False
Doc Archived (Y/N): True

501 WASHINGTON STREET (Continued) **S117692220**

EJ Community (Y/N):	True
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned
Region:	NERO
DEP Region:	NERO
DEP Program:	BWSC
DEP Bureau:	BWSC
Program:	3c
Program Id:	3-0033301
High Or Low Level Enforcement:	LLE
FMF #:	0
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	LYNN
Date Executed:	01/15/2016
ENF #:	Faux Enf- 2633
Document Type:	IDL
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	True
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

O46 **OLYMPIC AUTO BODY INC OF LYNN** **MA HW GEN** **S112552241**
NNE **174 BROAD ST** **N/A**
1/8-1/4 **LYNN, MA 01901**
0.236 mi.
1246 ft. **Site 1 of 3 in cluster O**

Relative: HW GEN:
Higher

EPA Id:	MAD981060874
RCRA Generator Status:	VSQG
State Generator Status:	Not reported

Actual:
21 ft.

O47 **OLYMPIC AUTO BODY INC OF LYNN** **RCRA-CESQG** **1004716536**
NNE **174 BROAD ST** **FINDS** **MAD981060874**
1/8-1/4 **LYNN, MA 01901** **ECHO**
0.236 mi.
1246 ft. **Site 2 of 3 in cluster O**

Relative:
Higher

Actual:
21 ft.

RCRA-CESQG:

Date form received by agency:	02/03/1986
Facility name:	OLYMPIC AUTO BODY INC OF LYNN
Facility address:	174 BROAD ST LYNN, MA 01901
EPA ID:	MAD981060874
Contact:	DEMITRIOS KOTZAMINIS
Contact address:	174 BROAD ST LYNN, MA 01901
Contact country:	US
Contact telephone:	617-598-8959
Contact email:	Not reported
EPA Region:	01
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	OLYMPIC AUTO BODY INC OF LYNN
Owner/operator address:	174 BROAD ST LYNN, MA 01901
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	12/08/1991
Owner/Op end date:	Not reported
Owner/operator name:	KOTZAMANIS DIMITRIOS
Owner/operator address:	174 BROAD ST LYNN, MA 01901
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner

OLYMPIC AUTO BODY INC OF LYNN (Continued) **1004716536**

Owner/Op start date: 10/16/2004
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Violation Status: No violations found

FINDS:

Registry ID: 110003459212

Environmental Interest/Information System

OLYMPIC AUTO BODY INC OF LYNN (Continued) **1004716536**

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

MA-EPICS - Massachussetts Environmental Protection Integrated Computer System

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1004716536
Registry ID: 110003459212
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110003459212

O48 **OLYMPIC AUTO BODY** **MA SHWS** **S106953984**
NNE **174 BROAD STREET AND 27 FARRAR ST** **MA RELEASE** **N/A**
1/8-1/4 **LYNN, MA 01901**
0.236 mi.
1246 ft. **Site 3 of 3 in cluster O**

Relative:
Higher

Actual:
21 ft.

SHWS:
Release Tracking Number/Current Status: 3-0024836 / DPS
Release Town: LYNN
Notification Date: 05/06/2005
Category: 120 DY
Associated ID: Not reported
Current Status: **Downgradient Property Status**
Status Date: 06/10/2005
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 44900 micrograms per liter
Chemical: C19 THRU C36 ALIPHATIC HYDROCARBONS
Quantity: 104000 micrograms per liter
Chemical: C9 THRU C10 AROMATIC HYDROCARBONS
Quantity: 9320 micrograms per liter

Actions:
Action Type: Downgradient Property Status
Action Status: Level I - Technical Screen Audit
Action Date: 1/17/2008
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 3/10/2006

OLYMPIC AUTO BODY (Continued) **S106953984**

Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Level III - Comprehensive Audit
Action Date: 3/10/2006
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/18/2005
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/6/2005
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/6/2005
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/10/2005
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/10/2005
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Revised Statement or Transmittal Received
Action Date: 7/14/2006
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0024836 / DPS
Primary ID: Not reported
Official City: LYNN
Notification: 05/06/2005
Category: 120 DY
Status Date: 06/10/2005
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Downgradient Property Status
Action Status: Level I - Technical Screen Audit
Action Date: 1/17/2008
Response Action Outcome: Not reported

OLYMPIC AUTO BODY (Continued) **S106953984**

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 3/10/2006
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Level III - Comprehensive Audit
Action Date: 3/10/2006
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/18/2005
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/6/2005
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/6/2005
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/10/2005
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/10/2005
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Revised Statement or Transmittal Received
Action Date: 7/14/2006
Response Action Outcome: Not reported

Chemicals:
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 44900 micrograms per liter
Chemical: C19 THRU C36 ALIPHATIC HYDROCARBONS
Quantity: 104000 micrograms per liter
Chemical: C9 THRU C10 AROMATIC HYDROCARBONS
Quantity: 9320 micrograms per liter

N49 **PEVEAR BUILDING INCORPORATED** **NY MANIFEST** **1009221976**
NNW **113 MUNROE STREET** **N/A**
1/8-1/4 **LYNN, MA 01901**
0.236 mi.
1247 ft. **Site 2 of 3 in cluster N**

Relative:
Higher

Actual:
16 ft.

NY MANIFEST:

Country:	USA
EPA ID:	MAP000006925
Facility Status:	Not reported
Location Address 1:	113 MUNROE STREET
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	LYNN
Location State:	MA
Location Zip:	01901
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	MAP000006925
Mailing Name:	PEVEAR BUILDING INCORPORATED
Mailing Contact:	PEVEAR BUILDING INCORPORATED
Mailing Address 1:	113 MUNROE STREET
Mailing Address 2:	Not reported
Mailing City:	LYNN
Mailing State:	MA
Mailing Zip:	01901
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	6175927932

NY MANIFEST:

Document ID:	NYA3539891
Manifest Status:	C
seq:	Not reported
Year:	1986
Trans1 State ID:	9A-098
Trans2 State ID:	Not reported
Generator Ship Date:	06/12/1986
Trans1 Recv Date:	06/12/1986
Trans2 Recv Date:	/ /
TSD Site Recv Date:	06/13/1986
Part A Recv Date:	06/25/1986
Part B Recv Date:	06/30/1986
Generator EPA ID:	MAP000006925
Trans1 EPA ID:	NYD051809952
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD051817682
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported

PEVEAR BUILDING INCORPORATED (Continued) **1009221976**

Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	M001 - WASTE OIL (STATE OF MASS.)
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00019
Units:	Y - Cubic yards* (.85 tons)
Number of Containers:	001
Container Type:	DT - Dump trucks
Handling Method:	L Landfill.
Specific Gravity:	100

Click this hyperlink while viewing on your computer to access
7 additional NY_MANIFEST: record(s) in the EDR Site Report.

P50 **DCR NAHANT LABOR YARD** **MA UST** **U004200688**
ESE **1 NAHANT RD** **N/A**
1/8-1/4 **NAHANT, MA 01908**
0.241 mi.
1274 ft. **Site 1 of 2 in cluster P**

Relative: Higher

Actual: 15 ft.

UST:

Facility:

Facility ID:	22738
Owner Id:	10258
Owner:	DEPT OF CONSERVATION AND RECREATION
Owner Address:	251 CAUSEWAY ST
Owner City,St,Zip:	BOSTON, MA 02114
Telephone:	6178287446
Description:	Government Entity
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.45488
Longitude:	-70.93813
Contact name:	Norman Orrall
Contact address1:	251 Causeway St.
Contact address2:	Not reported
Contact city:	Boston
Contact state:	MA
Contact zip:	02114
Contact email:	Norman.orrall@massmail.state.ma.us
Update:	2016-09-15 00:00:00
Update by:	Norman Orrall
Fac status:	OPEN

Tank ID:	1
Tank Status:	**In Use**
Status Date:	Not reported
Date Installed:	01/01/1998
Capacity:	5000
Contents:	Gasoline

DCR NAHANT LABOR YARD (Continued) **U004200688**

Tank Usage: Motor Vehi
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Quarterly visual inspection and annual product line tightness test
Latitude: 42.45459
Longitude: -70.93824
Tank construct: Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: European suction system
Number of compartment: Not reported
Pipe install date: 01/01/1998
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: Y
Turbine sump sensor: Y
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Automatic shut-off valve
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 2
Tank Status: In Use
Status Date: Not reported
Date Installed: 01/01/1998
Capacity: 5000
Contents: Diesel
Tank Usage: Motor Vehi
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Quarterly visual inspection and annual product line tightness test
Latitude: 42.45458
Longitude: -70.93822
Tank construct: Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: European suction system
Number of compartment: Not reported
Pipe install date: 01/01/1998
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: Y
Turbine sump sensor: Y
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Automatic shut-off valve
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

P51 **DCR MAINTENANCE FACILITY** **MA ASBESTOS** **S118485710**
ESE **1 NAHANT CAUSEWAY** **MA HW GEN** **N/A**
1/8-1/4 **NAHANT, MA 01908**
0.241 mi.
1274 ft. **Site 2 of 2 in cluster P**

Relative: **Higher**

Actual: **15 ft.**

ASBESTOS:

Notification:	100208945
DEP Region:	NE
Notifiers Name:	ENVIRONMENTAL RESTORATIONS INC
Start Date:	10/21/2014
End Date:	10/21/2014
Date Entered:	07/10/2014
Entry Date:	10/07/2014
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	25
Project Description:	Spr
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported

DCR MAINTENANCE FACILITY (Continued) **S118485710**

Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100209035
DEP Region:	NE
Notifiers Name:	ESS CONTRACTING CORP
Start Date:	10/21/2014
End Date:	10/21/2014
Date Entered:	07/10/2014
Entry Date:	10/07/2014
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	25
Project Description:	Spr
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported

DCR MAINTENANCE FACILITY (Continued) **S118485710**

Certified Phone: Not reported
Entered_by: Not reported

HW GEN:
EPA Id: MV5083281111
RCRA Generator Status: Not reported
State Generator Status: VQG-MA

Q52 **NO LOCATION AID** **MA SHWS** **S104482557**
NNW **70 MUNROE ST** **MA LUST** **N/A**
1/8-1/4 **LYNN, MA 01901** **MA INST CONTROL**
0.245 mi. **MA RELEASE**
1291 ft. **Site 1 of 3 in cluster Q**

Relative:
Higher

Actual:
17 ft.

SHWS:
Release Tracking Number/Current Status: 3-0019214 / RAO
Release Town: LYNN
Notification Date: 01/26/2000
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 10/20/2005
Phase: Not reported
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: BURNER

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: FUEL OIL
Quantity: 10 gallons
Chemical: FUEL OIL #2
Quantity: 20 gallons

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/26/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/26/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/20/2005

NO LOCATION AID (Continued) **S104482557**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 10/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 11/14/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 12/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 12/9/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/16/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 3/16/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 3/16/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/16/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S104482557**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 3/19/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/3/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/31/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/25/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

NO LOCATION AID (Continued) **S104482557**

been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 6/22/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/28/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 7/26/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

LUST:

Facility:
Release Tracking Number/Current Status: 3-0019788 / RAONR
Status Date: 03/16/2001
Source Type: UST
Release Town: LYNN
Notification Date: 08/02/2000
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: FUEL OIL #2
Quantity: Not reported
Chemical: FUEL OIL
Quantity: 101 parts per million

NO LOCATION AID (Continued) **S104482557**

Actions:

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/26/2001
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 1/5/2004
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/2/2000
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 10/2/2000
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 10/24/2000
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 3/16/2001
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/2/2000
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/2/2000
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 8/4/2003
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/7/2001
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/12/2000
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S104482557**

INST CONTROL:

Release Tracking Number:	3-0019214
Action Type:	AUL
Action Stat:	LEGNOT
Action Date:	06/22/2005
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number:	3-0019214
Action Type:	AUL
Action Stat:	RECPT
Action Date:	06/28/2005
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number:	3-0019214
Action Type:	AUL
Action Stat:	SNAUDI
Action Date:	11/14/2008
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number:	3-0019214
Action Type:	AUL
Action Stat:	TSAUD
Action Date:	04/24/2006
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:

Release Tracking Number/Current Status:	3-0019214 / RAO
Primary ID:	Not reported
Official City:	LYNN
Notification:	01/26/2000
Category:	TWO HR
Status Date:	10/20/2005
Phase:	Not reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/26/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

NO LOCATION AID (Continued) **S104482557**

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/26/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 10/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 11/14/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 12/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 12/9/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/16/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 3/16/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification

NO LOCATION AID (Continued) **S104482557**

Action Status: Legal Notice Published
Action Date: 3/16/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/16/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 3/19/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/3/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/31/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/25/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Written Plan Received

NO LOCATION AID (Continued) **S104482557**

Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 6/22/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/28/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 7/26/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: FUEL OIL
Quantity: 10 gallons
Chemical: FUEL OIL #2
Quantity: 20 gallons
Location Type: COMMERCIAL
Source: BURNER

Release Tracking Number/Current Status: 3-0019788 / RAONR
Primary ID: Not reported
Official City: LYNN
Notification: 08/02/2000
Category: 72 HR
Status Date: 03/16/2001
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

NO LOCATION AID (Continued) **S104482557**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	1/26/2001
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	1/5/2004
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/2/2000
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	10/2/2000
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	10/24/2000
Response Action Outcome:	Not reported
Action Type:	RAO Not Required
Action Status:	Linked to a Tier Classified Site
Action Date:	3/16/2001
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	8/2/2000
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/2/2000
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	8/4/2003
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	8/7/2001
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	9/12/2000
Response Action Outcome:	Not reported

NO LOCATION AID (Continued) **S104482557**

Chemicals:
- Chemical: FUEL OIL #2
- Quantity: Not reported
- Chemical: FUEL OIL
- Quantity: 101 parts per million
- Location Type: COMMERCIAL
- Source: UST

R53 **PUDGYS** **RCRA-CESQG** **1000237432**
WNW **135 PLEASANT ST** **FINDS** **MAD095859880**
1/8-1/4 **LYNN, MA 01901** **ECHO**
0.248 mi.
1311 ft. **Site 1 of 2 in cluster R**

Relative: Higher
Actual: 19 ft.

RCRA-CESQG:
- Date form received by agency: 12/16/1986
- Facility name: PUDGYS
- Facility address: 135 PLEASANT ST
  LYNN, MA 01901
- EPA ID: MAD095859880
- Mailing address: 135 PIEASANT ST
  LYNN, MA 01901-0000
- Contact: THOMAS KASDER
- Contact address: 135 PIEASANT ST
  LYNN, MA 01901
- Contact country: US
- Contact telephone: 617-595-8999
- Contact email: Not reported
- EPA Region: 01
- Land type: Private
- Classification: Conditionally Exempt Small Quantity Generator
- Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
- Owner/operator name: PUDGYS
- Owner/operator address: 135 PIEASANT ST
  LYNN, MA 01901
- Owner/operator country: US
- Owner/operator telephone: Not reported
- Owner/operator email: Not reported
- Owner/operator fax: Not reported
- Owner/operator extension: Not reported
- Legal status: Private
- Owner/Operator Type: Operator

PUDGYS (Continued) **1000237432**

Owner/Op start date: 03/01/1973
Owner/Op end date: Not reported

Owner/operator name: JAMES T KASPER
Owner/operator address: 135 PIEASANT ST
LYNN, MA 01901
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 10/16/2004
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/01/1988
Date achieved compliance: 12/01/1990
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 06/23/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

PUDGYS (Continued) **1000237432**

Evaluation Action Summary:
Evaluation date: 03/01/1988
Evaluation: NON-FINANCIAL RECORD REVIEW
Area of violation: Generators - General
Date achieved compliance: 12/01/1990
Evaluation lead agency: State

FINDS:

Registry ID: 110003448350

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

MA-EPICS - Massachussetts Environmental Protection Integrated Computer System

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000237432
Registry ID: 110003448350
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110003448350

R54 **PUDGYS** **MA HW GEN** **S112551809**
WNW **135 PLEASANT ST** **N/A**
1/8-1/4 **LYNN, MA 01901**
0.248 mi.
1311 ft. **Site 2 of 2 in cluster R**

Relative: Higher
Actual: 19 ft.

HW GEN:
EPA Id: MAD095859880
RCRA Generator Status: VSQG
State Generator Status: Not reported

---

55 **METAL IMPROVEMENT CO** **MA SHWS** **1000147848**
WNW **26 ALLEY ST** **MA INST CONTROL** **MAD091493882**
1/4-1/2 **LYNN, MA 01902** **MA RELEASE**
0.253 mi. **RCRA NonGen / NLR**
1334 ft. **MA ENF**

Relative: Higher
Actual: 15 ft.

SHWS:
Release Tracking Number/Current Status: 3-0015389 / PSC
Release Town: LYNN
Notification Date: 07/31/1997
Category: 120 DY
Associated ID: Not reported
Current Status: **PSC**
Status Date: 05/01/2014

METAL IMPROVEMENT CO (Continued) **1000147848**

Phase: PHASE III
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: ARSENIC
Quantity: 37.1 milligrams per kilogram
Chemical: LEAD
Quantity: 126000 milligrams per kilogram
Chemical: ZINC
Quantity: 41600 milligrams per kilogram

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/8/2008
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: CILS
Action Date: 1/8/2008
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 10/2/2013
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 11/12/2009
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 11/12/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/12/2009
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 11/16/2011
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/17/2011
Response Action Outcome: Not reported

METAL IMPROVEMENT CO (Continued) **1000147848**

Action Type:	Phase 3
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	11/18/2011
Response Action Outcome:	Not reported
Action Type:	Phase 2
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	11/18/2011
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/29/1997
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Penalty Assessment Notice Issued
Action Date:	3/11/2002
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	3/22/2012
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Enforcement Conference
Action Date:	4/13/2009
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	4/19/2001
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	4/4/2013
Response Action Outcome:	Not reported
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	5/1/2014
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	5/1/2014
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSARCD
Action Date:	5/1/2014
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received

METAL IMPROVEMENT CO (Continued) **1000147848**

Action Date: 5/9/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/11/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 7/15/2009
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/31/1997
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/31/1997
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRUN
Action Date: 8/12/1999
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/17/2008
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 9/27/2012
Response Action Outcome: Not reported

INST CONTROL:
Release Tracking Number: 3-0015389
Action Type: AUL
Action Stat: RECPT
Action Date: 05/09/2014
Response Action Outcome: -

Release:
Release Tracking Number/Current Status: 3-0015389 / PSC
Primary ID: Not reported
Official City: LYNN
Notification: 07/31/1997
Category: 120 DY
Status Date: 05/01/2014
Phase: PHASE III
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

METAL IMPROVEMENT CO (Continued) **1000147848**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	1/8/2008
Response Action Outcome:	Not reported

Action Type:	Compliance and Enforcement Action
Action Status:	CILS
Action Date:	1/8/2008
Response Action Outcome:	Not reported

Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	10/2/2013
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	11/12/2009
Response Action Outcome:	Not reported

Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	11/12/2009
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	11/12/2009
Response Action Outcome:	Not reported

Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	11/16/2011
Response Action Outcome:	Not reported

Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	11/17/2011
Response Action Outcome:	Not reported

Action Type:	Phase 3
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	11/18/2011
Response Action Outcome:	Not reported

Action Type:	Phase 2
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	11/18/2011
Response Action Outcome:	Not reported

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/29/1997
Response Action Outcome:	Not reported

METAL IMPROVEMENT CO (Continued) **1000147848**

Action Type:	Compliance and Enforcement Action
Action Status:	Penalty Assessment Notice Issued
Action Date:	3/11/2002
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	3/22/2012
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Enforcement Conference
Action Date:	4/13/2009
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	4/19/2001
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	4/4/2013
Response Action Outcome:	Not reported
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	5/1/2014
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	5/1/2014
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSARCD
Action Date:	5/1/2014
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/9/2014
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/11/2007
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	ACOP
Action Date:	7/15/2009
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E

METAL IMPROVEMENT CO (Continued) **1000147848**

Action Date: 7/31/1997
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/31/1997
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRUN
Action Date: 8/12/1999
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/17/2008
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 9/27/2012
Response Action Outcome: Not reported

Chemicals:
Chemical: ARSENIC
Quantity: 37.1 milligrams per kilogram
Chemical: LEAD
Quantity: 126000 milligrams per kilogram
Chemical: ZINC
Quantity: 41600 milligrams per kilogram
Source: UNKNOWN

RCRA NonGen / NLR:
Date form received by agency: 11/15/1980
Facility name: METAL IMPROVEMENT CO
Facility address: 26 ALLEY ST
LYNN, MA 01902
EPA ID: MAD091493882
Contact: JERRY CACAS
Contact address: 26 ALLEY ST
LYNN, MA 01902
Contact country: US
Contact telephone: 617-599-4165
Contact email: Not reported
EPA Region: 01
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: METAL IMPROVEMENT CO
Owner/operator address: 26 ALLEY ST
LYNN, MA 01902
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported

METAL IMPROVEMENT CO (Continued) **1000147848**

Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 12/08/1991
Owner/Op end date: Not reported

Owner/operator name: METAL IMPROVEMENT COMPANY
Owner/operator address: 26 ALLEY ST
LYNN, MA 01902
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 10/16/2004
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: F001
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS USED IN DEGREASING: TETRACHLOROETHYLENE, TRICHLOROETHYLENE, METHYLENE CHLORIDE, 1,1,1-TRICHLOROETHANE, CARBON TETRACHLORIDE, AND CHLORINATED FLUOROCARBONS; ALL SPENT SOLVENT MIXTURES/BLENDS USED IN DEGREASING CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

Historical Generators:

METAL IMPROVEMENT CO (Continued) **1000147848**

Date form received by agency: 11/15/1980
Site name: METAL IMPROVEMENT CO
Classification: Not a generator, verified

Violation Status: No violations found

ENFORCEMENT:
Region: NERO
DEP Region: NERO
DEP Program: 3A
DEP Bureau: BWSC
Program: Not reported
Program Id: 3-0015389
High Or Low Level Enforcement: HLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 07/15/2009
ENF #: ACOP-NE-09-3A004
Document Type: ACOP
AG Ref (Y/N): Not reported
Doc Archived (Y/N): Not reported
EJ Community (Y/N): Not reported
Regional Comment: Not reported
Final Payment Due Date: 08/15/2010
ACOP $: 5000
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported
Demand $: Not reported
Suspended $: 25000
Ownership: T

Region: NERO
DEP Region: NERO
DEP Program: 3A
DEP Bureau: BWSC
Program: Not reported
Program Id: 3-0015389
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 09/17/2008
ENF #: NON-NE-08-3A099
Document Type: NON
AG Ref (Y/N): Not reported
Doc Archived (Y/N): Not reported
EJ Community (Y/N): Not reported
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported

METAL IMPROVEMENT CO (Continued) **1000147848**

SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned
Region:	NERO
DEP Region:	NERO
DEP Program:	3C
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0015389
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	01/08/2008
ENF #:	Not reported
Document Type:	IDL
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

S56 **NORTH AMERICAN PHILLIPS LIGHTING (FORMER)** **SEMS** **1000286363**
WSW **100 WESTERN AVENUE** **CORRACTS** **MAD066609520**
1/4-1/2 **LYNN, MA 01905** **RCRA NonGen / NLR**
0.253 mi. **RAATS**
1335 ft. **Site 1 of 4 in cluster S** **NY MANIFEST**

Relative:
Higher

Actual:
12 ft.

SEMS:

Site ID:	100563
EPA ID:	MAD066609520
Cong District:	6
FIPS Code:	25009
Latitude:	Not reported
Longitude:	Not reported
FF:	N
NPL:	Not on the NPL
Non NPL Status:	Other Cleanup Activity: State-Lead Cleanup

SEMS Detail:

Region:	1
Site ID:	100563
EPA ID:	MAD066609520
Site Name:	NORTH AMERICAN PHILLIPS LIGHTING (FORMER)
NPL:	N
FF:	N
OU:	0

NORTH AMERICAN PHILLIPS LIGHTING (FORMER) (Continued) **1000286363**

Action Code:	DS
Action Name:	DISCVRY
SEQ:	1
Start Date:	1983-12-01 00:00:00
Finish Date:	12/1/1983
Qual:	Not reported
Current Action Lead:	EPA Perf
Region:	1
Site ID:	100563
EPA ID:	MAD066609520
Site Name:	NORTH AMERICAN PHILLIPS LIGHTING (FORMER)
NPL:	N
FF:	N
OU:	0
Action Code:	PA
Action Name:	PA
SEQ:	1
Start Date:	Not reported
Finish Date:	5/20/1987
Qual:	L
Current Action Lead:	EPA Perf
Region:	1
Site ID:	100563
EPA ID:	MAD066609520
Site Name:	NORTH AMERICAN PHILLIPS LIGHTING (FORMER)
NPL:	N
FF:	N
OU:	0
Action Code:	SI
Action Name:	SI
SEQ:	1
Start Date:	2000-05-01 00:00:00
Finish Date:	11/2/2000
Qual:	L
Current Action Lead:	EPA Perf
Region:	1
Site ID:	100563
EPA ID:	MAD066609520
Site Name:	NORTH AMERICAN PHILLIPS LIGHTING (FORMER)
NPL:	N
FF:	N
OU:	0
Action Code:	VA
Action Name:	OTHR CLEANUP
SEQ:	1
Start Date:	2000-07-01 00:00:00
Finish Date:	Not reported
Qual:	Not reported
Current Action Lead:	St Ovrsght

CORRACTS:

NORTH AMERICAN PHILLIPS LIGHTING (FORMER) (Continued) **1000286363**

EPA ID: MAD066609520
EPA Region: 1
Area Name: ENTIRE FACILITY
Actual Date: 20001004
Action: CA210SF - CA Responsibility Referred To A Non-RCRA Federal Authority, Corrective Action at the facility or area referred to CERCLA
NAICS Code(s): 33511 335999 335129
Electric Lamp Bulb and Part Manufacturing
All Other Miscellaneous Electrical Equipment and Component Manufacturing
Other Lighting Equipment Manufacturing
Original schedule date: Not reported
Schedule end date: Not reported

RCRA NonGen / NLR:
Date form received by agency: 03/07/1996
Facility name: NORTH AMERICAN PHILIPS LIGHTING CO
Site name: PHILLIPS LIGHTING CORPORATION
Facility address: 330 LYNNWAY
LYNN, MA 01901-1712
EPA ID: MAD066609520
Mailing address: 200 FRANKLIN SQUARE DRIVE
SOMERSET, NJ 08875-6800
Contact: WALITSKI PAUL
Contact address: Not reported
Not reported
Contact country: US
Contact telephone: 908-563-3197
Contact email: Not reported
EPA Region: 01
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 03/25/1994
Site name: PHILLIPS LIGHTING CORP.
Classification: Large Quantity Generator

NORTH AMERICAN PHILLIPS LIGHTING (FORMER) (Continued) **1000286363**

Date form received by agency: 02/27/1992
Site name: PHILIPS LIGHTING
Classification: Large Quantity Generator

Date form received by agency: 03/01/1990
Site name: PHILIPS LIGHTING COMPANY
Classification: Large Quantity Generator

Date form received by agency: 11/19/1980
Site name: NORTH AMERICAN PHILIPS LIGHTING CO
Classification: Not a generator, verified

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS

NORTH AMERICAN PHILLIPS LIGHTING (FORMER) (Continued) **1000286363**

CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F009
. Waste name: SPENT STRIPPING AND CLEANING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.

. Waste code: U019
. Waste name: BENZENE (I,T)

. Waste code: U102
. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER

. Waste code: U122
. Waste name: FORMALDEHYDE

. Waste code: U123
. Waste name: FORMIC ACID (C,T)

. Waste code: U134
. Waste name: HYDROFLUORIC ACID (C,T)

. Waste code: U162
. Waste name: METHYL METHACRYLATE (I,T)

Date form received by agency: 08/15/1980
Site name: NORTH AMERICAN PHILIPS LIGHTING CO
Classification: Not a generator, verified

Date form received by agency: 08/15/1980
Site name: NORTH AMERICAN PHILIPS LIGHTING CO
Classification: Not a generator, verified

. Waste code: D001
. Waste name: IGNITABLE HAZARDOUS WASTES ARE THOSE WASTES WHICH HAVE A FLASHPOINT OF LESS THAN 140 DEGREES FAHRENHEIT AS DETERMINED BY A PENSKY-MARTENS CLOSED CUP FLASH POINT TESTER. ANOTHER METHOD OF DETERMINING THE FLASH POINT OF A WASTE IS TO REVIEW THE MATERIAL SAFETY DATA SHEET, WHICH CAN BE OBTAINED FROM THE MANUFACTURER OR DISTRIBUTOR OF THE MATERIAL. LACQUER THINNER IS AN EXAMPLE OF A COMMONLY USED SOLVENT WHICH WOULD BE CONSIDERED AS IGNITABLE HAZARDOUS WASTE.

. Waste code: D002
. Waste name: A WASTE WHICH HAS A PH OF LESS THAN 2 OR GREATER THAN 12.5 IS CONSIDERED TO BE A CORROSIVE HAZARDOUS WASTE. SODIUM HYDROXIDE, A CAUSTIC SOLUTION WITH A HIGH PH, IS OFTEN USED BY INDUSTRIES TO CLEAN OR DEGREASE PARTS. HYDROCHLORIC ACID, A SOLUTION WITH A LOW PH, IS USED BY MANY INDUSTRIES TO CLEAN METAL PARTS PRIOR TO PAINTING. WHEN THESE CAUSTIC OR ACID SOLUTIONS BECOME CONTAMINATED AND MUST BE DISPOSED, THE WASTE WOULD BE A CORROSIVE HAZARDOUS WASTE.

. Waste code: D003
. Waste name: A MATERIAL IS CONSIDERED TO BE A REACTIVE HAZARDOUS WASTE IF IT IS NORMALLY UNSTABLE, REACTS VIOLENTLY WITH WATER, GENERATES TOXIC GASES WHEN EXPOSED TO WATER OR CORROSIVE MATERIALS, OR IF IT IS CAPABLE OF

NORTH AMERICAN PHILLIPS LIGHTING (FORMER) (Continued) **1000286363**

DETONATION OR EXPLOSION WHEN EXPOSED TO HEAT OR A FLAME. ONE EXAMPLE OF SUCH WASTE WOULD BY WASTE GUNPOWDER.

. Waste code: D006
. Waste name: CADMIUM

. Waste code: D008
. Waste name: LEAD

. Waste code: D009
. Waste name: MERCURY

. Waste code: F002
. Waste name: THE FOLLOWING SPENT HALOGENATED SOLVENTS: TETRACHLOROETHYLENE, METHYLENE CHLORIDE, TRICHLOROETHYLENE, 1,1,1-TRICHLOROETHANE, CHLOROBENZENE, 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE, ORTHO-DICHLOROBENZENE, TRICHLOROFLUOROMETHANE, AND 1,1,2-TRICHLOROETHANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE HALOGENATED SOLVENTS OR THOSE LISTED IN F001, F004, OR F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F003
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: XYLENE, ACETONE, ETHYL ACETATE, ETHYL BENZENE, ETHYL ETHER, METHYL ISOBUTYL KETONE, N-BUTYL ALCOHOL, CYCLOHEXANONE, AND METHANOL; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONLY THE ABOVE SPENT NON-HALOGENATED SOLVENTS; AND ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS, AND, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THOSE SOLVENTS LISTED IN F001, F002, F004, AND F005, AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F005
. Waste name: THE FOLLOWING SPENT NON-HALOGENATED SOLVENTS: TOLUENE, METHYL ETHYL KETONE, CARBON DISULFIDE, ISOBUTANOL, PYRIDINE, BENZENE, 2-ETHOXYETHANOL, AND 2-NITROPROPANE; ALL SPENT SOLVENT MIXTURES/BLENDS CONTAINING, BEFORE USE, A TOTAL OF TEN PERCENT OR MORE (BY VOLUME) OF ONE OR MORE OF THE ABOVE NON-HALOGENATED SOLVENTS OR THOSE SOLVENTS LISTED IN F001, F002, OR F004; AND STILL BOTTOMS FROM THE RECOVERY OF THESE SPENT SOLVENTS AND SPENT SOLVENT MIXTURES.

. Waste code: F009
. Waste name: SPENT STRIPPING AND CLEANING BATH SOLUTIONS FROM ELECTROPLATING OPERATIONS WHERE CYANIDES ARE USED IN THE PROCESS.

. Waste code: U002
. Waste name: ACETONE (I)

. Waste code: U019
. Waste name: BENZENE (I,T)

. Waste code: U088
. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIETHYL ESTER

NORTH AMERICAN PHILLIPS LIGHTING (FORMER) (Continued) **1000286363**

. Waste code: U102
. Waste name: 1,2-BENZENEDICARBOXYLIC ACID, DIMETHYL ESTER

. Waste code: U122
. Waste name: FORMALDEHYDE

. Waste code: U123
. Waste name: FORMIC ACID (C,T)

. Waste code: U124
. Waste name: FURAN (I)

. Waste code: U134
. Waste name: HYDROFLUORIC ACID (C,T)

. Waste code: U151
. Waste name: MERCURY

. Waste code: U154
. Waste name: METHANOL (I)

. Waste code: U159
. Waste name: 2-BUTANONE (I,T)

. Waste code: U162
. Waste name: METHYL METHACRYLATE (I,T)

. Waste code: U220
. Waste name: BENZENE, METHYL-

. Waste code: U226
. Waste name: ETHANE, 1,1,1-TRICHLORO-

. Waste code: U228
. Waste name: ETHENE, TRICHLORO-

Corrective Action Summary:
Event date: 10/04/2000
Event: REFERRED TO A NON-RCRA AUTHORITY-REFERRED TO CERCLA

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 08/15/1985
Date achieved compliance: 10/28/1985
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: Not reported
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: Not reported
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported

NORTH AMERICAN PHILLIPS LIGHTING (FORMER) (Continued) **1000286363**

Area of violation: Generators - General
Date violation determined: 08/15/1985
Date achieved compliance: 10/28/1985
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/27/1985
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/12/1984
Date achieved compliance: 08/16/1984
Violation lead agency: EPA
Enforcement action: INITIAL 3008(A) COMPLIANCE
Enforcement action date: 07/09/1984
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: EPA
Proposed penalty amount: 1800
Final penalty amount: 1800
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 05/22/1990
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 08/15/1985
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 10/28/1985
Evaluation lead agency: State

Evaluation date: 05/24/1984
Evaluation: COMPLIANCE SCHEDULE EVALUATION
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA-Initiated Oversight/Observation/Training Actions

Evaluation date: 03/12/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: State

Evaluation date: 03/12/1984
Evaluation: COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation: Generators - General
Date achieved compliance: 08/16/1984
Evaluation lead agency: EPA

NORTH AMERICAN PHILLIPS LIGHTING (FORMER) (Continued) **1000286363**

NY MANIFEST:

Country:	USA
EPA ID:	MAD066609520
Facility Status:	Not reported
Location Address 1:	330 LYNNWAY
Code:	BP
Location Address 2:	Not reported
Total Tanks:	Not reported
Location City:	LYNN
Location State:	MA
Location Zip:	01910
Location Zip 4:	Not reported

NY MANIFEST:

EPAID:	MAD066609520
Mailing Name:	PHILIPS LIGHTING
Mailing Contact:	K.A. SHUMAN
Mailing Address 1:	330 LYNNWAY
Mailing Address 2:	Not reported
Mailing City:	LYNN
Mailing State:	MA
Mailing Zip:	01910
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	6175997500

NY MANIFEST:

Document ID:	NYB2548125
Manifest Status:	C
seq:	Not reported
Year:	1991
Trans1 State ID:	44571TNY
Trans2 State ID:	Not reported
Generator Ship Date:	03/20/1991
Trans1 Recv Date:	03/20/1991
Trans2 Recv Date:	/ /
TSD Site Recv Date:	03/22/1991
Part A Recv Date:	04/05/1991
Part B Recv Date:	04/02/1991
Generator EPA ID:	MAD066609520
Trans1 EPA ID:	NYD982792814
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD000632372
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D003 - NON-LISTED REACTIVE WASTES

NORTH AMERICAN PHILLIPS LIGHTING (FORMER) (Continued) **1000286363**

Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00008
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	D002 - NON-LISTED CORROSIVE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00012
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	T Chemical, physical, or biological treatment.
Specific Gravity:	100
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00009
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00008
Units:	P - Pounds
Number of Containers:	001
Container Type:	DF - Fiberboard or plastic drums (glass)
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100

Click this hyperlink while viewing on your computer to access additional NY_MANIFEST: detail in the EDR Site Report.

S57 **KETTLE CUISINE** **MA SHWS** **S101029337**
WSW **330 LYNNWAY** **MA LUST** **N/A**
1/4-1/2 **LYNN, MA 01901** **MA INST CONTROL**
0.253 mi. **MA RELEASE**
1335 ft. **Site 2 of 4 in cluster S** **MA SPILLS**
MA TIER 2

Relative: Higher

Actual: 12 ft.

SHWS:

Release Tracking Number/Current Status:	3-0020461 / RAO
Release Town:	LYNN
Notification Date:	03/08/2001
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	05/07/2001
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Location Type:	INDUSTRIAL
Source:	VEHICLE

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	DIESEL
Quantity:	25 gallons
Chemical:	DIESEL FUEL
Quantity:	30 gallons

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/26/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/8/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/8/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	3/8/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received

KETTLE CUISINE (Continued) **S101029337**

Action Date: 5/7/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/7/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release Tracking Number/Current Status: 3-0018565 / RAO
Release Town: LYNN
Notification Date: 07/26/1999
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 11/10/2000
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Oil
Location Type: COMMERCIAL

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: DIESEL FUEL
Quantity: 10 gallons

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 10/11/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RAO - DEP Lead
Action Status: RAO Statement Received
Action Date: 11/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 7/26/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/26/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)

KETTLE CUISINE (Continued) **S101029337**

Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/1/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release Tracking Number/Current Status: 3-0018837 / RAO
Release Town: LYNN
Notification Date: 10/12/1999
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 02/07/2000
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Oil
Location Type: INDUSTRIAL
Source: VAULT
Source: CONCRETE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: OIL
Quantity: Not reported
Chemical: #6 FUEL OIL
Quantity: Not reported

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/16/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/13/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E

KETTLE CUISINE (Continued) **S101029337**

Action Date: 12/17/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/7/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/7/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release Tracking Number/Current Status: 3-0001680 / RAO
Release Town: LYNN
Notification Date: 01/15/1987
Category: NONE
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 05/23/2003
Phase: PHASE IV
Response Action Outcome: C1 - C1
Oil Or Haz Material: Not reported
Location Type: INDUSTRIAL
Location Type: MANUFACT
Source: UST
Source: UNKNOWN
Source: TANK

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: RADIOACTIVE MATERIAL
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1987
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 1/18/2002
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/29/1991
Response Action Outcome: C1

Action Type: TREGS

KETTLE CUISINE (Continued) **S101029337**

Action Status:	WAVACC
Action Date:	1/29/1991
Response Action Outcome:	C1
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	1/29/1996
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	1/31/1997
Response Action Outcome:	C1
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	1/31/1997
Response Action Outcome:	C1
Action Type:	Partial RAO for this RTN
Action Status:	RAO Statement Received
Action Date:	1/31/1997
Response Action Outcome:	C1
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/31/1997
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	10/17/2014
Response Action Outcome:	C1
Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received
Action Date:	10/25/2002
Response Action Outcome:	C1
Action Type:	Activity and Use Limitation
Action Status:	Amendment Received or Issued
Action Date:	10/25/2002
Response Action Outcome:	C1
Action Type:	Activity and Use Limitation
Action Status:	Legal Notice Published
Action Date:	11/1/2002
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/12/2013
Response Action Outcome:	C1
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	11/27/1995

KETTLE CUISINE (Continued) **S101029337**

Response Action Outcome: C1

Action Type: TREGS
Action Status: WAVSIG
Action Date: 12/20/1990
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 12/28/1995
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 2/15/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 2/6/2013
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 3/13/2008
Response Action Outcome: C1

Action Type: RLFA
Action Status: FLDRUN
Action Date: 3/13/2008
Response Action Outcome: C1

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 3/24/2008
Response Action Outcome: C1

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 3/29/1995
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/29/1995
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/1/2002
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 5/23/2003
Response Action Outcome: C1

KETTLE CUISINE (Continued) **S101029337**

Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/23/2013
Response Action Outcome:	C1
Action Type:	TREGS
Action Status:	WAVREC
Action Date:	5/29/1990
Response Action Outcome:	C1
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	7/27/1995
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	8/18/1995
Response Action Outcome:	C1
Release Tracking Number/Current Status:	3-0001680 / RAO
Release Town:	LYNN
Notification Date:	01/15/1987
Category:	NONE
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	05/23/2003
Phase:	PHASE IV
Response Action Outcome:	C1 - C1
Oil Or Haz Material:	Not reported
Location Type:	INDUSTRIAL
Location Type:	MANUFACT
Source:	UST
Source:	UNKNOWN
Source:	TANK

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	RADIOACTIVE MATERIAL
Quantity:	Not reported

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1987
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Periodic Review Opinion Evaluating Temp Solution
Action Date:	1/18/2002
Response Action Outcome:	C1
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received

KETTLE CUISINE (Continued) **S101029337**

Action Date: 1/29/1991
Response Action Outcome: C1

Action Type: TREGS
Action Status: WAVACC
Action Date: 1/29/1991
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/29/1996
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/31/1997
Response Action Outcome: C1

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 1/31/1997
Response Action Outcome: C1

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 1/31/1997
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/31/1997
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/17/2014
Response Action Outcome: C1

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 10/25/2002
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 10/25/2002
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 11/1/2002
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/12/2013
Response Action Outcome: C1

KETTLE CUISINE (Continued) **S101029337**

Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	11/27/1995
Response Action Outcome:	C1
Action Type:	TREGS
Action Status:	WAVSIG
Action Date:	12/20/1990
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	12/28/1995
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	2/15/2013
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	2/6/2013
Response Action Outcome:	C1
Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection
Action Date:	3/13/2008
Response Action Outcome:	C1
Action Type:	RLFA
Action Status:	FLDRUN
Action Date:	3/13/2008
Response Action Outcome:	C1
Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	3/24/2008
Response Action Outcome:	C1
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	3/29/1995
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	3/29/1995
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	4/1/2002
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received

KETTLE CUISINE (Continued) **S101029337**

Action Date:	5/23/2003
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/23/2013
Response Action Outcome:	C1
Action Type:	TREGS
Action Status:	WAVREC
Action Date:	5/29/1990
Response Action Outcome:	C1
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	7/27/1995
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	8/18/1995
Response Action Outcome:	C1
Release Tracking Number/Current Status:	3-0018837 / RAO
Release Town:	LYNN
Notification Date:	10/12/1999
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	02/07/2000
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Oil
Location Type:	INDUSTRIAL
Source:	VAULT
Source:	CONCRETE

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	OIL
Quantity:	Not reported
Chemical:	#6 FUEL OIL
Quantity:	Not reported

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/12/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E

KETTLE CUISINE (Continued) **S101029337**

Action Date:	10/12/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	11/16/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	12/13/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/17/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	2/7/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	2/7/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0001680 / RAO
Status Date:	05/23/2003
Source Type:	UST
Release Town:	LYNN
Notification Date:	01/15/1987
Category:	NONE
Associated ID:	Not reported
Phase:	PHASE IV
Response Action Outcome:	C1 - C1
Oil Or Haz Material:	Not reported
Location Type:	INDUSTRIAL
Location Type:	MANUFACT
Source:	UST
Source:	UNKNOWN
Source:	TANK

KETTLE CUISINE (Continued) **S101029337**

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: RADIOACTIVE MATERIAL
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1987
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 1/18/2002
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/29/1991
Response Action Outcome: C1

Action Type: TREGS
Action Status: WAVACC
Action Date: 1/29/1991
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/29/1996
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/31/1997
Response Action Outcome: C1

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 1/31/1997
Response Action Outcome: C1

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 1/31/1997
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/31/1997
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/17/2014

KETTLE CUISINE (Continued) **S101029337**

Response Action Outcome: C1

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 10/25/2002
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 10/25/2002
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 11/1/2002
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/12/2013
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 11/27/1995
Response Action Outcome: C1

Action Type: TREGS
Action Status: WAVSIG
Action Date: 12/20/1990
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 12/28/1995
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 2/15/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 2/6/2013
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 3/13/2008
Response Action Outcome: C1

Action Type: RLFA
Action Status: FLDRUN
Action Date: 3/13/2008
Response Action Outcome: C1

KETTLE CUISINE (Continued) **S101029337**

Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	3/24/2008
Response Action Outcome:	C1
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	3/29/1995
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	3/29/1995
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	4/1/2002
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	5/23/2003
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/23/2013
Response Action Outcome:	C1
Action Type:	TREGS
Action Status:	WAVREC
Action Date:	5/29/1990
Response Action Outcome:	C1
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	7/27/1995
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	8/18/1995
Response Action Outcome:	C1

INST CONTROL:

Release Tracking Number:	3-0001680
Action Type:	AUL
Action Stat:	AMEND
Action Date:	10/25/2002
Response Action Outcome:	C1 - C1
Release Tracking Number:	3-0001680
Action Type:	AUL
Action Stat:	LEGNOT
Action Date:	11/01/2002

KETTLE CUISINE (Continued) **S101029337**

Response Action Outcome: C1 - C1

Release Tracking Number: 3-0001680
Action Type: AUL
Action Stat: RECPT
Action Date: 01/31/1997
Response Action Outcome: C1 - C1

Release Tracking Number: 3-0001680
Action Type: AUL
Action Stat: SNAUDI
Action Date: 03/13/2008
Response Action Outcome: C1 - C1

Release:
Release Tracking Number/Current Status: 3-0001680 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1987
Category: NONE
Status Date: 05/23/2003
Phase: PHASE IV
Response Action Outcome: C1 - C1
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1987
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 1/18/2002
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/29/1991
Response Action Outcome: C1

Action Type: TREGS
Action Status: WAVACC
Action Date: 1/29/1991
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/29/1996
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/31/1997

KETTLE CUISINE (Continued) **S101029337**

Response Action Outcome: C1

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 1/31/1997
Response Action Outcome: C1

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 1/31/1997
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/31/1997
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/17/2014
Response Action Outcome: C1

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 10/25/2002
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 10/25/2002
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 11/1/2002
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/12/2013
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 11/27/1995
Response Action Outcome: C1

Action Type: TREGS
Action Status: WAVSIG
Action Date: 12/20/1990
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 12/28/1995
Response Action Outcome: C1

KETTLE CUISINE (Continued) **S101029337**

Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	2/15/2013
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	2/6/2013
Response Action Outcome:	C1
Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection
Action Date:	3/13/2008
Response Action Outcome:	C1
Action Type:	RLFA
Action Status:	FLDRUN
Action Date:	3/13/2008
Response Action Outcome:	C1
Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	3/24/2008
Response Action Outcome:	C1
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	3/29/1995
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	3/29/1995
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	4/1/2002
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	5/23/2003
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/23/2013
Response Action Outcome:	C1
Action Type:	TREGS
Action Status:	WAVREC
Action Date:	5/29/1990
Response Action Outcome:	C1
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued

KETTLE CUISINE (Continued) **S101029337**

Action Date: 7/27/1995
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/18/1995
Response Action Outcome: C1

Chemicals:
Chemical: RADIOACTIVE MATERIAL
Quantity: Not reported
Location Type: INDUSTRIAL
Location Type: MANUFACT
Source: UST
Source: UNKNOWN
Source: TANK

Release Tracking Number/Current Status: 3-0018565 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 07/26/1999
Category: TWO HR
Status Date: 11/10/2000
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 10/11/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RAO - DEP Lead
Action Status: RAO Statement Received
Action Date: 11/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 7/26/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/26/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)

KETTLE CUISINE (Continued) **S101029337**

Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/1/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: DIESEL FUEL
Quantity: 10 gallons
Location Type: COMMERCIAL

Release Tracking Number/Current Status: 3-0018837 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/12/1999
Category: TWO HR
Status Date: 02/07/2000
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/16/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/13/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/17/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received

KETTLE CUISINE (Continued) **S101029337**

Action Date: 2/7/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/7/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: OIL
Quantity: Not reported
Chemical: #6 FUEL OIL
Quantity: Not reported
Location Type: INDUSTRIAL
Source: VAULT
Source: CONCRETE

Release Tracking Number/Current Status: 3-0020461 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 03/08/2001
Category: TWO HR
Status Date: 05/07/2001
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/26/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 3/8/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/8/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/8/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

KETTLE CUISINE (Continued) **S101029337**

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	5/7/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/7/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical:	DIESEL
Quantity:	25 gallons
Chemical:	DIESEL FUEL
Quantity:	30 gallons
Location Type:	COMMERCIAL
Location Type:	INDUSTRIAL
Source:	VEHICLE

MA Spills:

Facility ID:	0000	Spill ID:	N85-0611
Staff Lead:	NDI	Date Entered:	Not reported
Last Entered:	Not reported	First Response:	Not reported
Spill Date:	19850715	Spill Time:	Not reported
Report Date:	Not reported	Report Time:	Not reported
Case Closed:	YES	Mat Type:	Not reported
Virgin Waste:	Not reported	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	N-BUTYL ACETATE	Other Material:	Not reported
Qty Reported:	8-20 GAL	Qty Actual:	Not reported
Qty Reported:	Not reported	Qty Actual:	Not reported
CAS No:	Not reported	PCB Lev (ppm):	Not reported
Source:	Not reported	Other Source:	Not reported
Incident:	Not reported	Other Incdnt:	Not reported
Cleanup Type:	Not reported	Contractor:	Not reported
Referral:	Not reported	LUST Elig:	Not reported
Report Prep:	Not reported	Category:	Not reported
Notifier:	Not reported		
Notif Tel:	Not reported		
Days/Close:	1		

TIER 2:

Report Year:	2017
Facility Id:	FATR2017000000034523
Facility Dept:	Not reported
Latitude:	42.45645
Longitude:	-70.94751
Mailing Address:	330 Lynnway
Mailing City/State/Zip:	01901
Mailing Country:	Not reported
Notes:	Not reported
All Chemicals Same As Last Yr:	Not reported
Date Signed:	2/13/2018
Dike Or Other Safeguard:	Not reported

KETTLE CUISINE (Continued) **S101029337**

Failed Validation:	Not reported
Date Modified:	06/28/2018
Fees Total:	Not reported
Num Of Employees:	200
Site Coord Abbreviated?:	Not reported
Site Map:	Not reported
State Label Code:	MA2017
Submitted By:	Alan Gilbert, EHS/PSM Manager
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
Record Key:	FDTR2017000000033409
Id:	Not reported
Type:	EIN
Description:	EIN
Last Modified:	Not reported
Record Key:	FDTR2017000000033410
Id:	Not reported
Type:	State ID
Description:	State ID
Last Modified:	Not reported
Record Key:	FDTR2017000000033411
Id:	Not reported
Type:	TRI
Description:	TRI
Last Modified:	Not reported
Record Key:	FDTR2017000000033412
Id:	100000225286
Type:	RMP
Description:	RMP
Last Modified:	Not reported
Record Key:	FDTR2017000000033413
Id:	183500131
Type:	DUN & BradStreet
Description:	DUN & BradStreet
Last Modified:	Not reported
Record Key:	FDTR2017000000033414
Id:	2032
Type:	SIC
Description:	SIC
Last Modified:	Not reported
Record Key:	FDTR2017000000033415
Id:	311422
Type:	NAICS
Description:	Specialty Canning
Last Modified:	Not reported
Record Key:	FDTR2017000000033416
Id:	8082

KETTLE CUISINE (Continued) **S101029337**

Type: T2M Facility ID
Description: T2M Facility ID
Last Modified: Not reported

Contact:
Report Year: 2017
Contact Record Id: CTTR2017129381P34523
Title: Not reported
Contact Name: Duey Pyle
Contact Email: Not reported
Contact Mail Address: 210 Bartlett St
Contact Mail City: Northborough
Contact Mail State: MA
Contact Mail Zip: 01532-532-
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:
Report Year: 2017
Contact Record Id: CTTR2017318288P34523
Title: facilities manager
Contact Name: Mosonyi
Contact Email: emosonyi@kettlecuisine.com
Contact Mail Address: Not reported
Contact Mail City: Not reported
Contact Mail State: Not reported
Contact Mail Zip: Not reported
Contact Mail Country: Not reported
Contact1 Type: Emergency Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:
Report Year: 2017
Contact Record Id: CTTR2017318287P34523
Title: EHS/PSM Manager
Contact Name: Gilbert
Contact Email: agilbert@kettlecuisine.com
Contact Mail Address: Not reported
Contact Mail City: Not reported
Contact Mail State: Not reported
Contact Mail Zip: Not reported
Contact Mail Country: Not reported
Contact1 Type: Fac. Emergency Coordinator
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

KETTLE CUISINE (Continued) **S101029337**

Contact:
Report Year: 2017
Contact Record Id: CTTR2017129380P34523
Title: Not reported
Contact Name: duie pyle
Contact Email: Not reported
Contact Mail Address: 210 bartlett st
Contact Mail City: Northborough
Contact Mail State: MA
Contact Mail Zip: 01532-532-
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:
Report Year: 2017
Contact Record Id: CTTR2017129379P34523
Title: Not reported
Contact Name: Duie Pyle Co.
Contact Email: Not reported
Contact Mail Address: 210 Bartlett St
Contact Mail City: Northborough
Contact Mail State: MA
Contact Mail Zip: 01532-532-
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:
Report Year: 2017
Contact Record Id: CTTR2017318286P34523
Title: EHS/PSM Manager
Contact Name: Gilbert
Contact Email: agilbert@kettlecuisine.com
Contact Mail Address: Not reported
Contact Mail City: Not reported
Contact Mail State: Not reported
Contact Mail Zip: Not reported
Contact Mail Country: Not reported
Contact1 Type: Tier II Information Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:

KETTLE CUISINE (Continued) **S101029337**

Report Year:	2017
Contact Record Id:	CTTR2017318281P34523
Title:	Not reported
Contact Name:	Kainos Capital, LLC
Contact Email:	LMcClinnan@kettlecuisine.com
Contact Mail Address:	2100 McKinney Ave. Suite 1600
Contact Mail City:	Dallas
Contact Mail State:	TX
Contact Mail Zip:	75201-201-
Contact Mail Country:	US
Contact1 Type:	Owner / Operator
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Report Year:	2017
Contact Record Id:	CTTR2017318285P34523
Title:	Safety manager
Contact Name:	Gilbert
Contact Email:	agilbert@kettlecuisine.com
Contact Mail Address:	Not reported
Contact Mail City:	Not reported
Contact Mail State:	Not reported
Contact Mail Zip:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Emergency Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Report Year:	2017
Contact Record Id:	CTTR2017318284P34523
Title:	Not reported
Contact Name:	Not reported
Contact Email:	agilbert@kettlecuisine.com
Contact Mail Address:	330 Lynnway
Contact Mail City:	Lynn
Contact Mail State:	MA
Contact Mail Zip:	01901
Contact Mail Country:	US
Contact1 Type:	Other
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Report Year:	2017
Contact Record Id:	CTTR2017129378P34523

KETTLE CUISINE (Continued) **S101029337**

Title:	Not reported
Contact Name:	Industries
Contact Email:	Not reported
Contact Mail Address:	735 Davisville Road
Contact Mail City:	Southampton
Contact Mail State:	PA
Contact Mail Zip:	18966-966-
Contact Mail Country:	Not reported
Contact1 Type:	Carrier Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Report Year:	2017
Contact Record Id:	CTTR2017318282P34523
Title:	Not reported
Contact Name:	Not reported
Contact Email:	Not reported
Contact Mail Address:	Not reported
Contact Mail City:	Not reported
Contact Mail State:	Not reported
Contact Mail Zip:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Billing
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Report Year:	2017
Contact Record Id:	CTTR2017129376P34523
Title:	Not reported
Contact Name:	industrial truck
Contact Email:	Not reported
Contact Mail Address:	230 cherry st
Contact Mail City:	shrewsbury
Contact Mail State:	MA
Contact Mail Zip:	01545-545-
Contact Mail Country:	Not reported
Contact1 Type:	Carrier Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Report Year:	2017
Contact Record Id:	CTTR2017318280P34523
Title:	Not reported
Contact Name:	Capital, LLC

KETTLE CUISINE (Continued) **S101029337**

Contact Email:	LmcClinnan@kettlecuisine.com
Contact Mail Address:	2100 McKinney Ave. Suite 1600
Contact Mail City:	Dallas
Contact Mail State:	TX
Contact Mail Zip:	75201
Contact Mail Country:	US
Contact1 Type:	Parent Company
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Chemicals:

Acute:	T
Ave Amount:	2019.00
Ave Amount Code:	4
Chem Inv Record Id:	CVTR2017000000129376
Chem Same As Last Yr:	Not reported
Chronic:	Not reported
CICAS:	7664939
CI EHS Chemical:	Yes
CI Last Modified:	6/28/2018
Days On Site:	365
Entered Chemical Name:	SULFURIC ACID
Fire:	Not reported
Gas:	Not reported
Liquid:	T
Max Amount:	2091.00
Max Amount Code:	4
Max Amt Container:	2.091000000000000e+003
Mixture:	Not reported
Pressure:	Not reported
Pure:	T
Reactive:	Not reported
Solid:	Not reported
State01 Checkbox:	T
State01 Number:	40000
State01 Text:	na
State02 Checkbox:	Not reported
State02 Number:	0
State02 Text:	Year
State03 Checkbox:	Not reported
State03 Number:	2001
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	2001
State04 Text:	Liquid
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported
State07 Checkbox:	Not reported
State07 Text:	batteries purchased as needed. no regularly schedulled shipments.
State1 Contact Field:	northland industrial truck
State Label Code:	MA2017
Trade Secret:	Not reported

KETTLE CUISINE (Continued) **S101029337**

Location:

Record Key:	CLTR201700000S346463
Chem Inv Record Id:	CVTR2017000000129376
Type Code:	Not reported
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	forklift and electric jack- rear warehouse
Amount:	3773
Amount Unit:	lbs
Last Modified:	6/28/2018

Record Key:	CLTR201700000S346464
Chem Inv Record Id:	CVTR2017000000129376
Type Code:	Plastic or nonmetallic drum
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	rear warehouse
Amount:	3000
Amount Unit:	lbs
Last Modified:	6/28/2018

Record Key:	CLTR201700000S346476
Chem Inv Record Id:	CVTR2017000000129376
Type Code:	Plastic or nonmetallic drum
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	wastewater room
Amount:	1500
Amount Unit:	lbs
Last Modified:	6/28/2018

Acute:	T
Ave Amount:	34460.00
Ave Amount Code:	7
Chem Inv Record Id:	CVTR2017000000129377
Chem Same As Last Yr:	Not reported
Chronic:	Not reported
CICAS:	7439921
CI EHS Chemical:	No
CI Last Modified:	6/28/2018
Days On Site:	365
Entered Chemical Name:	LEAD
Fire:	Not reported
Gas:	Not reported
Liquid:	Not reported
Max Amount:	34460.00
Max Amount Code:	7
Max Amt Container:	3.446000000000000e+004
Mixture:	Not reported
Pressure:	Not reported
Pure:	T
Reactive:	Not reported
Solid:	T
State01 Checkbox:	T
State01 Number:	0
State01 Text:	n/a

KETTLE CUISINE (Continued) **S101029337**

State02 Checkbox: Not reported
State02 Number: 0
State02 Text: Year
State03 Checkbox: Not reported
State03 Number: 0
State03 Text: Not reported
State04 Checkbox: Not reported
State04 Number: 0
State04 Text: Solid
State05 Checkbox: Not reported
State05 Text: Not reported
State06 Checkbox: Not reported
State06 Text: Not reported
State07 Checkbox: Not reported
State07 Text: n/a
State1 Contact Field: N/A
State Label Code: MA2017
Trade Secret: Not reported

Location:
Record Key: CLTR201700000S346466
Chem Inv Record Id: CVTR2017000000129377
Type Code: other
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: used in forklifts and electric jacks only
Amount: 34460
Amount Unit: lbs
Last Modified: 6/28/2018

Acute: T
Ave Amount: 12144.00
Ave Amount Code: 6
Chem Inv Record Id: CVTR2017000000129378
Chem Same As Last Yr: Not reported
Chronic: Not reported
CICAS: 7664417
CI EHS Chemical: Yes
CI Last Modified: 6/28/2018
Days On Site: 365
Entered Chemical Name: ANHYDROUS AMMONIA, LIQUEFIED
Fire: Not reported
Gas: Not reported
Liquid: T
Max Amount: 12144.00
Max Amount Code: 6
Max Amt Container: 1.214400000000000e+004
Mixture: Not reported
Pressure: Not reported
Pure: T
Reactive: Not reported
Solid: Not reported
State01 Checkbox: T
State01 Number: 40000
State01 Text: N/A
State02 Checkbox: T
State02 Number: 1

KETTLE CUISINE (Continued) **S101029337**

State02 Text:	Year
State03 Checkbox:	Not reported
State03 Number:	3000
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	2000
State04 Text:	Liquid
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported
State07 Checkbox:	Not reported
State07 Text:	route 93 to route 1a
State1 Contact Field:	Tanner Industries
State Label Code:	MA2017
Trade Secret:	Not reported

Location:

Record Key:	CLTR201700000S346468
Chem Inv Record Id:	CVTR2017000000129378
Type Code:	Tank inside building
Pressure Code:	Ambient pressure
Temperature Code:	Less than ambient temperature but not cryogenic
Location:	ammonia engine room
Amount:	8400
Amount Unit:	lbs
Last Modified:	6/28/2018

Acute:	T
Ave Amount:	750.00
Ave Amount Code:	3
Chem Inv Record Id:	CVTR2017000000129379
Chem Same As Last Yr:	Not reported
Chronic:	Not reported
CICAS:	7664939
CI EHS Chemical:	Yes
CI Last Modified:	6/28/2018
Days On Site:	365
Entered Chemical Name:	Sulfuric acid
Fire:	Not reported
Gas:	Not reported
Liquid:	T
Max Amount:	750.00
Max Amount Code:	3
Max Amt Container:	7.500000000000000e+002
Mixture:	Not reported
Pressure:	Not reported
Pure:	T
Reactive:	Not reported
Solid:	Not reported
State01 Checkbox:	T
State01 Number:	40000
State01 Text:	N/A
State02 Checkbox:	Not reported
State02 Number:	1
State02 Text:	Month
State03 Checkbox:	Not reported

KETTLE CUISINE (Continued) **S101029337**

State03 Number: 3080
State03 Text: Not reported
State04 Checkbox: Not reported
State04 Number: 36960
State04 Text: Liquid
State05 Checkbox: Not reported
State05 Text: Not reported
State06 Checkbox: Not reported
State06 Text: Not reported
State07 Checkbox: Not reported
State07 Text: route 93 to route 1a
State1 Contact Field: A Duie Pyle Co.
State Label Code: MA2017
Trade Secret: Not reported

Location:
Record Key: CLTR201700000S346471
Chem Inv Record Id: CVTR2017000000129379
Type Code: Plastic or nonmetallic drum
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: chemical storage room
Amount: 750
Amount Unit: lbs
Last Modified: 6/28/2018

Acute: T
Ave Amount: 2773.89
Ave Amount Code: 4
Chem Inv Record Id: CVTR2017000000129380
Chem Same As Last Yr: Not reported
Chronic: Not reported
CICAS: 1310732
CI EHS Chemical: No
CI Last Modified: 6/28/2018
Days On Site: 365
Entered Chemical Name: Sodium hydroxide
Fire: Not reported
Gas: Not reported
Liquid: T
Max Amount: 3390.31
Max Amount Code: 4
Max Amt Container: 3.390310000000000e+003
Mixture: Not reported
Pressure: Not reported
Pure: T
Reactive: Not reported
Solid: Not reported
State01 Checkbox: T
State01 Number: 40000
State01 Text: N/A
State02 Checkbox: Not reported
State02 Number: 2
State02 Text: Month
State03 Checkbox: Not reported
State03 Number: 2800
State03 Text: Not reported

KETTLE CUISINE (Continued) **S101029337**

State04 Checkbox: Not reported
State04 Number: 71200
State04 Text: Liquid
State05 Checkbox: Not reported
State05 Text: Not reported
State06 Checkbox: Not reported
State06 Text: Not reported
State07 Checkbox: Not reported
State07 Text: route 93 to route 1a
State1 Contact Field: a duie pyle
State Label Code: MA2017
Trade Secret: Not reported

Location:
Record Key: CLTR201700000S346473
Chem Inv Record Id: CVTR2017000000129380
Type Code: Tote bin
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: chemical storage room
Amount: 2774
Amount Unit: lbs
Last Modified: 6/28/2018

Record Key: CLTR201700000S346474
Chem Inv Record Id: CVTR2017000000129380
Type Code: Plastic or nonmetallic drum
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: wastewater room
Amount: 1356
Amount Unit: lbs
Last Modified: 6/28/2018

Acute: T
Ave Amount: 250.00
Ave Amount Code: 2
Chem Inv Record Id: CVTR2017000000129381
Chem Same As Last Yr: Not reported
Chronic: Not reported
CICAS: 7782505
CI EHS Chemical: Yes
CI Last Modified: 6/28/2018
Days On Site: 365
Entered Chemical Name: Chlorine dioxide
Fire: Not reported
Gas: Not reported
Liquid: T
Max Amount: 250.00
Max Amount Code: 2
Max Amt Container: 2.500000000000000e+002
Mixture: Not reported
Pressure: Not reported
Pure: T
Reactive: Not reported
Solid: Not reported
State01 Checkbox: T

KETTLE CUISINE (Continued) **S101029337**

State01 Number:	40000
State01 Text:	N/A
State02 Checkbox:	Not reported
State02 Number:	1
State02 Text:	Month
State03 Checkbox:	Not reported
State03 Number:	1000
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	12000
State04 Text:	Liquid
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported
State07 Checkbox:	Not reported
State07 Text:	rte 93 to 1a
State1 Contact Field:	A Duey Pyle
State Label Code:	MA2017
Trade Secret:	Not reported

Location:

Record Key:	CLTR201700000S346477
Chem Inv Record Id:	CVTR2017000000129381
Type Code:	Plastic or nonmetallic drum
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Packaging Room
Amount:	250
Amount Unit:	lbs
Last Modified:	6/28/2018

Q58 **WASHINGTON STREET** **MA SHWS** **S102403942**
NNW **80-112 MUNROE ST 124-150OXFORD** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901**
0.254 mi.
1342 ft. **Site 2 of 3 in cluster Q**

Relative:
Higher

Actual:
16 ft.

SHWS:

Release Tracking Number/Current Status:	3-0014342 / RAO
Release Town:	LYNN
Notification Date:	10/12/1996
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	10/15/1996
Phase:	Not reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

WASHINGTON STREET (Continued) **S102403942**

Chemicals:
Chemical: LEAD
Quantity: 884 milligrams per kilogram
Chemical: TPH
Quantity: 580 milligrams per kilogram

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/12/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/12/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/15/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:
Release Tracking Number/Current Status: 3-0014342 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/12/1996
Category: 120 DY
Status Date: 10/15/1996
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/12/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/12/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/15/1996

WASHINGTON STREET (Continued) **S102403942**

Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: LEAD
Quantity: 884 milligrams per kilogram
Chemical: TPH
Quantity: 580 milligrams per kilogram

59
West
1/4-1/2
0.259 mi.
1366 ft.

NO LOCATION AID
319 LYNNWAY
LYNN, MA 01901

MA SHWS **S102687360**
MA INST CONTROL **N/A**
MA RELEASE
MA ENF

Relative:
Higher

Actual:
16 ft.

SHWS:
Release Tracking Number/Current Status: 3-0015354 / RAO
Release Town: LYNN
Notification Date: 07/28/1997
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 11/26/1997
Phase: Not reported
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material: Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: COAL TAR PITCH
Quantity: 25000 milligrams per kilogram

Actions:
Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 1/5/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 10/10/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 10/26/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

NO LOCATION AID (Continued) **S102687360**

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 10/26/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/19/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/26/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/26/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 11/7/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 3/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 3/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 4/7/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit

NO LOCATION AID (Continued) **S102687360**

Action Status: NOA
Action Date: 7/14/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/28/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/28/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 8/16/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 8/22/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 8/26/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 8/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:
Release Tracking Number: 3-0015354
Action Type: AUL
Action Stat: AMEND
Action Date: 08/16/2002
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

NO LOCATION AID (Continued) **S102687360**

Release Tracking Number: 3-0015354
Action Type: AUL
Action Stat: LEGNOT
Action Date: 08/26/2002
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0015354
Action Type: AUL
Action Stat: RECPT
Action Date: 11/26/1997
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0015354
Action Type: AUL
Action Stat: SNAUDI
Action Date: 03/20/2008
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:
Release Tracking Number/Current Status: 3-0015354 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 07/28/1997
Category: 120 DY
Status Date: 11/26/1997
Phase: Not reported
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 1/5/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 10/10/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD

NO LOCATION AID (Continued) **S102687360**

Action Date: 10/26/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 10/26/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/19/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/26/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/26/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 11/7/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 3/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 3/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 4/7/2008

NO LOCATION AID (Continued) **S102687360**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 7/14/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/28/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/28/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 8/16/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 8/22/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 8/26/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 8/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: COAL TAR PITCH
Quantity: 25000 milligrams per kilogram

NO LOCATION AID (Continued) **S102687360**

ENFORCEMENT:

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0015354
High Or Low Level Enforcement:	HLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	01/05/2009
ENF #:	ACOP-NE-08-3R009
Document Type:	ACOP
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	10/01/2009
ACOP $:	5000
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0015354
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	04/07/2008
ENF #:	NON-NE-08-3R013
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

N60 **NO LOCATION AID** **MA LAST** **S103812144**
NNW **130 MUNROE ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901**
0.264 mi.
1393 ft. **Site 3 of 3 in cluster N**

Relative:
Higher

Actual:
16 ft.

LAST:

Release Tracking Number/Current Status:	3-0018075 / RAO
Source Type:	AST
Release Town:	LYNN
Notification Date:	03/10/1999
Category:	TWO HR
Associated ID:	Not reported
Status Date:	09/28/2000
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	265 gallons
Chemical:	FUEL OIL
Quantity:	100 gallons
Location Type:	RESIDNTIAL
Source:	AST

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	10/2/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/10/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/10/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	FLDISS
Action Date:	3/10/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	3/11/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.

NO LOCATION AID (Continued) **S103812144**

Action Date: 3/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/24/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/10/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/5/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/28/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0018075 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 03/10/1999
Category: TWO HR
Status Date: 09/28/2000
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/2/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 3/10/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S103812144**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/10/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 3/10/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/11/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/24/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/10/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/5/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/28/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 265 gallons
Chemical: FUEL OIL
Quantity: 100 gallons
Location Type: RESIDNTIAL
Source: AST

61
North
1/4-1/2
0.266 mi.
1402 ft.

COSGROVE SQUARE
39 EXCHANGE ST
LYNN, MA 01901

MA SHWS **S104562515**
MA RELEASE **N/A**
MA ASBESTOS

Relative:
Higher

Actual:
28 ft.

SHWS:

Release Tracking Number/Current Status:	3-0019462 / RAO
Release Town:	LYNN
Notification Date:	04/12/2000
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	07/11/2001
Phase:	PHASE II
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	BENZO[B]FLUORANTHENE
Quantity:	2.3 milligrams per kilogram
Chemical:	BERYLLIUM
Quantity:	0.92 milligrams per kilogram
Chemical:	BENZO[A]PYRENE
Quantity:	2.5 milligrams per kilogram
Chemical:	INDENO(1,2,3-CD)PYRENE
Quantity:	1.5 milligrams per kilogram
Chemical:	BENZO[A]ANTHRACENE
Quantity:	2.5 milligrams per kilogram

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	4/12/2000
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/12/2000
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	4/12/2001
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	4/12/2001
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

COSGROVE SQUARE (Continued) **S104562515**

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 4/12/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 4/12/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/11/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/11/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:
Release Tracking Number/Current Status: 3-0019462 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 04/12/2000
Category: 120 DY
Status Date: 07/11/2001
Phase: PHASE II
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/12/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/12/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 4/12/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No

COSGROVE SQUARE (Continued) **S104562515**

Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/12/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 4/12/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 4/12/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/11/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/11/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: BENZO[B]FLUORANTHENE
Quantity: 2.3 milligrams per kilogram
Chemical: BERYLLIUM
Quantity: 0.92 milligrams per kilogram
Chemical: BENZO[A]PYRENE
Quantity: 2.5 milligrams per kilogram
Chemical: INDENO(1,2,3-CD)PYRENE
Quantity: 1.5 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 2.5 milligrams per kilogram

ASBESTOS:
Notification: 100180040
DEP Region: NE
Notifiers Name: CORE CONTRACTING
Start Date: 07/03/2013
End Date: 07/31/2013
Date Entered: 21/06/2013
Entry Date: 06/21/2013
Quantity Materical Removed SF: 254
Quantity Material Removed LF: 0
Project Description: Trns
AR Tracking ID: Not reported

COSGROVE SQUARE (Continued) **S104562515**

Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	203939
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	11/07/2003
End Date:	11/08/2003
Date Entered:	28/10/2003
Entry Date:	10/28/2003
Quantity Materical Removed SF:	Not reported
Quantity Material Removed LF:	450
Project Description:	Corrugated Pipe
AR Tracking ID:	Not reported
Super Lic Number:	Not reported

COSGROVE SQUARE (Continued) **S104562515**

Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Q62 **NO LOCATION AID** **MA LUST** **S104482455**
NNW **128 OXFORD ST** **MA INST CONTROL** **N/A**
1/4-1/2 **LYNN, MA 01901** **MA RELEASE**
0.272 mi.
1437 ft. **Site 3 of 3 in cluster Q**

Relative: Higher

Actual: 16 ft.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0019084 / RAO
Status Date:	10/20/2005
Source Type:	UST
Release Town:	LYNN
Notification Date:	12/20/1999

NO LOCATION AID (Continued) **S104482455**

Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 100 parts per million
Chemical: FUEL OIL #2
Quantity: 160 parts per million

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/26/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 1/5/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 10/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 11/14/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

NO LOCATION AID (Continued) **S104482455**

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 12/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 12/20/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/20/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 12/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 12/9/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/18/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF

NO LOCATION AID (Continued) **S104482455**

Action Status: Reportable Release under MGL 21E
Action Date: 2/18/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 2/20/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 3/19/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/25/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 4/25/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published

NO LOCATION AID (Continued) **S104482455**

Action Date: 6/22/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/28/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:
Release Tracking Number: 3-0019084
Action Type: AUL
Action Stat: LEGNOT
Action Date: 06/22/2005
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0019084
Action Type: AUL
Action Stat: RECPT
Action Date: 06/28/2005
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0019084
Action Type: AUL
Action Stat: SNAUDI
Action Date: 11/14/2008
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0019084
Action Type: AUL
Action Stat: TSAUD
Action Date: 04/25/2006
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:
Release Tracking Number/Current Status: 3-0019084 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 12/20/1999
Category: 72 HR
Status Date: 10/20/2005
Phase: Not reported
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL)

NO LOCATION AID (Continued) **S104482455**

has been implemented.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/26/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 1/5/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 10/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/20/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 11/14/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 12/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 12/20/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E

NO LOCATION AID (Continued) **S104482455**

Action Date: 12/20/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 12/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 12/9/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/18/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/18/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 2/20/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 3/19/2009

NO LOCATION AID (Continued) **S104482455**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/25/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 4/25/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 5/28/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 6/22/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/28/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 100 parts per million
Chemical: FUEL OIL #2

NO LOCATION AID (Continued) **S104482455**

Quantity: 160 parts per million
Location Type: COMMERCIAL
Source: UST

T63 **EASTERN SMELTING & REFINING** **SEMS-ARCHIVE** **1000402018**
WSW **37-39 BUBIER ST** **MA SHWS** **MAD001020775**
1/4-1/2 **LYNN, MA 01901** **MA RELEASE**
0.276 mi. **RCRA NonGen / NLR**
1458 ft. **Site 1 of 3 in cluster T** **LEAD SMELTERS**
MA AIRS
Relative: **NY MANIFEST**
Higher **RI MANIFEST**

Actual:
9 ft.

SEMS Archive:
Site ID: 100369
EPA ID: MAD001020775
Cong District: 6
FIPS Code: 25009
FF: N
NPL: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

SEMS Archive Detail:
Region: 1
Site ID: 100369
EPA ID: MAD001020775
Site Name: EASTERN SMELTING
NPL: N
FF: N
OU: 0
Action Code: VS
Action Name: ARCH SITE
SEQ: 1
Start Date: Not reported
Finish Date: 1986-08-19 00:00:00
Qual: Not reported
Current Action Lead: EPA Perf In-Hse

Region: 1
Site ID: 100369
EPA ID: MAD001020775
Site Name: EASTERN SMELTING
NPL: N
FF: N
OU: 0
Action Code: DS
Action Name: DISCVRY
SEQ: 1
Start Date: 1979-11-01 00:00:00
Finish Date: 1979-11-01 00:00:00
Qual: Not reported
Current Action Lead: EPA Perf

Region: 1
Site ID: 100369
EPA ID: MAD001020775
Site Name: EASTERN SMELTING
NPL: N

EASTERN SMELTING & REFINING (Continued) **1000402018**

FF: N
OU: 0
Action Code: PA
Action Name: PA
SEQ: 1
Start Date: Not reported
Finish Date: 1986-08-19 00:00:00
Qual: N
Current Action Lead: St Perf

SHWS:
Release Tracking Number/Current Status: 3-0001678 / LSPNFA
Release Town: LYNN
Notification Date: 01/15/1987
Category: NONE
Associated ID: Not reported
Current Status: **LSP No Further Action**
Status Date: 07/18/1995
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Not reported

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1987
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: LSPNFA
Action Date: 7/18/1995
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0031884 / TIERII
Release Town: LYNN
Notification Date: 11/25/2013
Category: 120 DY
Associated ID: Not reported
Current Status: **Tier II, A site/release receiving a total NRS score of less than 350, unless the site meets any of the Tier 1 Inclusionary Criteria (see above). Permits are not required at Tier 2 sites/releases and response actions may be performed under the supervision of an LSP without prior DEP approval. All pre-1993 transition sites that have accepted waivers are categorically Tier 2 sites.**
Status Date: 11/24/2014
Phase: PHASE III
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material

EASTERN SMELTING & REFINING (Continued) **1000402018**

Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: POLYCHLORINATED BIPHENYLS (PCBS)
Quantity: 51 parts per million

Actions:
Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 11/24/2014
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 11/24/2014
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/24/2014
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/25/2013
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/25/2013
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/25/2013
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 11/27/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/11/2013
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 2/18/2015
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received

EASTERN SMELTING & REFINING (Continued) **1000402018**

Action Date: 2/23/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 4/15/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 4/17/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 4/18/2014
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 4/25/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/15/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/20/2015
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/8/2014
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0001678 / LSPNFA
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1987
Category: NONE
Status Date: 07/18/1995
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1987

EASTERN SMELTING & REFINING (Continued) **1000402018**

Response Action Outcome: Not reported

Action Type: TREGS
Action Status: LSPNFA
Action Date: 7/18/1995
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Release Tracking Number/Current Status: 3-0031884 / TIERII
Primary ID: Not reported
Official City: LYNN
Notification: 11/25/2013
Category: 120 DY
Status Date: 11/24/2014
Phase: PHASE III
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 11/24/2014
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 11/24/2014
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/24/2014
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/25/2013
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/25/2013
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/25/2013
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received

EASTERN SMELTING & REFINING (Continued) **1000402018**

Action Date: 11/27/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/11/2013
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 2/18/2015
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 2/23/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 4/15/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 4/17/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 4/18/2014
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 4/25/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/15/2014
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/20/2015
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/8/2014
Response Action Outcome: Not reported

Chemicals:
Chemical: POLYCHLORINATED BIPHENYLS (PCBS)
Quantity: 51 parts per million
Source: UNKNOWN

EASTERN SMELTING & REFINING (Continued) **1000402018**

RCRA NonGen / NLR:
Date form received by agency: 08/18/1980
Facility name: EASTERN SMELTING & REFINING
Facility address: 37-39 BUBIER ST
LYNN, MA 01901
EPA ID: MAD001020775
Mailing address: 37 - 39 BUBIER ST
LYNN, MA 01901
Contact: UNKNOWN UNKNOWN
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: 999-999-9999
Contact email: Not reported
EPA Region: 01
Land type: Private
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: REFINITY CORPORATION
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 03/01/1996
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

Evaluation Action Summary:
Evaluation date: 06/13/2006
Evaluation: FOCUSED COMPLIANCE INSPECTION

EASTERN SMELTING & REFINING (Continued) **1000402018**

Area of violation: Not reported
Date achieved compliance: Not reported
Evaluation lead agency: EPA

Lead Smelter Sites:
Site ID: 100369
Facility Region Id: 1
Latitude: Not reported
Longitude: Not reported
CoC Ind: Not reported
Contaminant Name: Not reported
FF Ind: N
NAI: N
Non-Primary Site-Sub Type: Not reported
NPL: Not on the NPL
Primary Site-Sub Type: Not reported
Special Initiative: Not reported

AIRS:
Address 2: Not reported
Facility Status: APPROV
Permit Code: AQ02
Permit Name: Plan Approval Non-Major Comprehensive
DEP Region: NE
Application Tracking Number: 201706
Date Closed: 02/02/1999
Applicant Name: EASTERN SMELTING
Applicant Address: 37-39 BUBIER ST
Applicant City,St,Zip: LYNN, MA 01901
Applicant Telephone: Not reported
AQID: Not reported
Pollutant: Not reported
Actual Emission: Not reported
Emissions Year: Not reported

NY MANIFEST:
Country: USA
EPA ID: MAD001020775
Facility Status: Not reported
Location Address 1: 37 - 39 BUBIER ST
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: LYNN
Location State: MA
Location Zip: 01901
Location Zip 4: Not reported

NY MANIFEST:
EPAID: MAD001020775
Mailing Name: EASTERN SMELTING & REFINING CORP
Mailing Contact: ANTHONY AMICO
Mailing Address 1: 37-39 BUBIER ST
Mailing Address 2: Not reported
Mailing City: LYNN
Mailing State: MA
Mailing Zip: 01901

EASTERN SMELTING & REFINING (Continued) **1000402018**

Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	6175999000

RI MANIFEST:

EPA Id:	MAD001020775
GEN Cert Date:	10/30/2000
Manifest Document Number:	MAK081372
Waste Description:	NITRIC ACID
TSDF Id:	RID059735761
TSDF Name:	ADVANCED CHEMICAL CO INC
Qty:	275
WT/Vol Units:	G
TSDF Date:	Not reported
Transporter 2 Id:	Not reported
Item Number:	1
Transporter 2 Name:	Not reported
Transporter Name 2:	HAZMAT ENV GROUP INC
Transporter EPAID:	NYD980769947
Transporter Receipt Date:	Not reported
Number Of Containers:	0
Container Type:	Not reported
Waste Code1:	D002
Waste Code2:	Not reported
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Fee Exempt Code:	Not reported
Comment:	Not reported
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
Quarter:	Not reported
Transporter Contact Name:	Not reported
Transporter Contact Email:	Not reported
Filing Date:	Not reported
Total Fee:	Not reported
Billing Name:	Not reported
Paid Date:	Not reported
Paid Time:	Not reported
Facility Receipt Date:	Not reported
Fee:	Not reported
Manifest Created Date:	Not reported
Manifest Updated Date:	Not reported

RI MANIFEST:

Transporter Receipt Date:	Not reported
Number Of Containers:	0
Container Type:	Not reported
Waste Code1:	D002
Waste Code2:	Not reported
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported

EASTERN SMELTING & REFINING (Continued) **1000402018**

Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	ADVANCED CHEMICAL CO INC
TSDF Id:	RID059735761
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD001020775
Manifest Docket Number:	MAK081372
Quarter:	Not reported
Waste Description:	NITRIC ACID
Transporter Contact Name:	Not reported
Quantity:	275
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported
Total Fee:	Not reported
Item Number:	1
Transporter Name:	HAZMAT ENV GROUP INC
Billing Name:	Not reported
Transporter EPA ID:	NYD980769947
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	10/30/2000
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	Not reported
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported
Transporter Receipt Date:	Not reported
Number Of Containers:	0
Container Type:	Not reported
Waste Code1:	D002
Waste Code2:	Not reported
Waste Code3:	Not reported
Waste Code4:	Not reported
Waste Code5:	Not reported
Waste Code6:	Not reported
Comment:	Not reported
Fee Exempt Code:	Not reported
TSDF Name:	ADVANCED CHEMICAL CO INC
TSDF Id:	RID059735761
Transporter Name 2:	Not reported
Company Permit Number:	Not reported
Year:	Not reported
EPA ID:	MAD001020775
Manifest Docket Number:	MAK081372
Quarter:	Not reported
Waste Description:	NITRIC ACID
Transporter Contact Name:	Not reported
Quantity:	275
Transporter Contact Email:	Not reported
WT/Vol Units:	G
Filing Date:	Not reported

EASTERN SMELTING & REFINING (Continued) **1000402018**

Total Fee:	Not reported
Item Number:	1
Transporter Name:	HAZMAT ENV GROUP INC
Billing Name:	Not reported
Transporter EPA ID:	NYD980769947
Date Paid:	Not reported
Time Paid:	Not reported
GEN Cert Date:	10/30/2000
Facility Receipt Date:	Not reported
Fee:	Not reported
Transporter 2 Receipt Date:	Not reported
Manifest Created Date:	Not reported
TSDF Receipt Date:	Not reported
Transporter 2 ID:	Not reported
Manifest Updated Date:	Not reported

T64 **NO LOCATION AID** **MA SHWS S103812205**
WSW **37 TO 39 BUBIER ST** **MA RELEASE N/A**
1/4-1/2 **LYNN, MA 01901**
0.276 mi.
1458 ft. **Site 2 of 3 in cluster T**

Relative:
Higher

Actual:
9 ft.

SHWS:

Release Tracking Number/Current Status:	3-0018150 / RAO
Release Town:	LYNN
Notification Date:	03/31/1999
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	07/20/1999
Phase:	Not reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	NICKEL
Quantity:	0.114 micrograms per liter
Chemical:	LEAD
Quantity:	798 milligrams per kilogram

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/31/1999
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/31/1999
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

NO LOCATION AID (Continued) **S103812205**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/25/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/20/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:
Release Tracking Number/Current Status: 3-0018150 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 03/31/1999
Category: 120 DY
Status Date: 07/20/1999
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/31/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/31/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/25/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/20/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: NICKEL
Quantity: 0.114 micrograms per liter
Chemical: LEAD

NO LOCATION AID (Continued) **S103812205**

Quantity: 798 milligrams per kilogram

U65 **SUBMERSIBLE ELEC TRANSFORMER IN VAULT 14** **MA SHWS** **S113973469**
NNW **12 - 30 CENTRAL AVENUE** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901**
0.283 mi.
1493 ft. **Site 1 of 3 in cluster U**

Relative:
Higher

Actual:
16 ft.

SHWS:

Release Tracking Number/Current Status:	3-0033130 / PSNC
Release Town:	LYNN
Notification Date:	09/15/2015
Category:	72 HR
Associated ID:	Not reported
Current Status:	**PSNC**
Status Date:	07/13/2016
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	COMMERCIAL
Source:	TRANSFORM

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	PCB
Quantity:	40 milligrams per liter
Chemical:	MINERAL OIL DIELECTRIC FLUID
Quantity:	65 gallons
Chemical:	MODF
Quantity:	1 inches

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	1/12/2016
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	1/15/2016
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	11/13/2015
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	11/13/2015
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	11/13/2015
Response Action Outcome:	Not reported

SUBMERSIBLE ELEC TRANSFORMER IN VAULT 14 (Continued) **S113973469**

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 7/13/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 7/13/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 7/13/2016
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/15/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/15/2015
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/25/2015
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0033130 / PSNC
Primary ID: Not reported
Official City: LYNN
Notification: 09/15/2015
Category: 72 HR
Status Date: 07/13/2016
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/12/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/15/2016
Response Action Outcome: Not reported

Action Type: RNFE

SUBMERSIBLE ELEC TRANSFORMER IN VAULT 14 (Continued) **S113973469**

Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/13/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 11/13/2015
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/13/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 7/13/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 7/13/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 7/13/2016
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/15/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/15/2015
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/25/2015
Response Action Outcome: Not reported

Chemicals:
Chemical: PCB
Quantity: 40 milligrams per liter
Chemical: MINERAL OIL DIELECTRIC FLUID
Quantity: 65 gallons
Chemical: MODF
Quantity: 1 inches
Location Type: COMMERCIAL
Source: TRANSFORM

U66 **NO LOCATION AID** **MA SHWS** **S111085962**
NNW **12-30 CENTRAL AVE** **MA INST CONTROL** **N/A**
1/4-1/2 **LYNN, MA 01901** **MA RELEASE**
0.283 mi.
1493 ft. **Site 2 of 3 in cluster U**

Relative:
Higher

Actual:
16 ft.

SHWS:

Release Tracking Number/Current Status:	3-0030098 / DPS
Release Town:	LYNN
Notification Date:	06/23/2011
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Downgradient Property Status**
Status Date:	11/08/2012
Phase:	PHASE II
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	COMMERCIAL
Source:	UNDER IN
Source:	VESTIGATN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	PCE
Quantity:	318 micrograms per liter
Chemical:	VINYL CHLORIDE
Quantity:	17.9 micrograms per liter
Chemical:	DICHLOROETHYLENE-CIS
Quantity:	439 micrograms per liter
Chemical:	TETRACHLOROETHYLENE
Quantity:	318 micrograms per liter
Chemical:	TRICHLOROETHYLENE
Quantity:	118 micrograms per liter

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	11/7/2011
Response Action Outcome:	Not reported
Action Type:	Downgradient Property Status
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	11/8/2012
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/15/2013
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	3/21/2012
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT

NO LOCATION AID (Continued) **S111085962**

Action Date: 4/9/2012
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/25/2012
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/23/2011
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/23/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/28/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/28/2012
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 6/28/2012
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1U
Action Date: 7/10/2012
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1A
Action Date: 7/19/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/2/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 7/20/2012
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/8/2011
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S111085962**

Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	9/6/2011
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	9/6/2011
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	9/6/2011
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	9/6/2011
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Imminent Hazard Evaluation Received
Action Date:	9/6/2011
Response Action Outcome:	Not reported
Release Tracking Number/Current Status:	3-0030098 / DPS
Release Town:	LYNN
Notification Date:	06/23/2011
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Downgradient Property Status**
Status Date:	11/08/2012
Phase:	PHASE II
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	COMMERCIAL
Source:	UNDER IN
Source:	VESTIGATN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	PCE
Quantity:	318 micrograms per liter
Chemical:	VINYL CHLORIDE
Quantity:	17.9 micrograms per liter
Chemical:	DICHLOROETHYLENE-CIS
Quantity:	439 micrograms per liter
Chemical:	TETRACHLOROETHYLENE
Quantity:	318 micrograms per liter
Chemical:	TRICHLOROETHYLENE
Quantity:	118 micrograms per liter

Actions:

Action Type:	Immediate Response Action

NO LOCATION AID (Continued) **S111085962**

Action Status: Status or Interim Report Received
Action Date: 11/7/2011
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/8/2012
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/15/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/21/2012
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 4/9/2012
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/25/2012
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/23/2011
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/23/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/28/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/28/2012
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 6/28/2012
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1U
Action Date: 7/10/2012

NO LOCATION AID (Continued) **S111085962**

Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1A
Action Date: 7/19/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/2/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 7/20/2012
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/8/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 9/6/2011
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/6/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 9/6/2011
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/6/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 9/6/2011
Response Action Outcome: Not reported

INST CONTROL:
Release Tracking Number: 3-0030098
Action Type: AUL
Action Stat: RECPT
Action Date: 02/15/2013
Response Action Outcome: -

Release:

NO LOCATION AID (Continued) **S111085962**

Release Tracking Number/Current Status: 3-0030098 / DPS
Primary ID: Not reported
Official City: LYNN
Notification: 06/23/2011
Category: 72 HR
Status Date: 11/08/2012
Phase: PHASE II
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 11/7/2011
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/8/2012
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/15/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/21/2012
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 4/9/2012
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/25/2012
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/23/2011
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/23/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/28/2012
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S111085962**

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/28/2012
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 6/28/2012
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1U
Action Date: 7/10/2012
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1A
Action Date: 7/19/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/2/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 7/20/2012
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/8/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 9/6/2011
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/6/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 9/6/2011
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/6/2011
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received

NO LOCATION AID (Continued) **S111085962**

Action Date: 9/6/2011
Response Action Outcome: Not reported

Chemicals:
Chemical: PCE
Quantity: 318 micrograms per liter
Chemical: VINYL CHLORIDE
Quantity: 17.9 micrograms per liter
Chemical: DICHLOROETHYLENE-CIS
Quantity: 439 micrograms per liter
Chemical: TETRACHLOROETHYLENE
Quantity: 318 micrograms per liter
Chemical: TRICHLOROETHYLENE
Quantity: 118 micrograms per liter
Location Type: COMMERCIAL
Source: UNDER IN
Source: VESTIGATN

S67 **NO LOCATION AID** **MA SHWS** **S105811039**
WSW **9-15 BUBIER ST** **MA INST CONTROL** **N/A**
1/4-1/2 **LYNN, MA** **MA RELEASE**
0.289 mi. **MA ENF**
1524 ft. **Site 3 of 4 in cluster S**

Relative: Higher
Actual: 11 ft.

SHWS:
Release Tracking Number/Current Status: 3-0022778 / RAO
Release Town: LYNN
Notification Date: 04/11/2003
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 07/31/2003
Phase: Not reported
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil Or Haz Material: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 4500 milligrams per kilogram
Chemical: PHENANTHRENE
Quantity: 480 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 170 milligrams per kilogram

Actions:
Action Type: An activity type that is related to an Audit
Action Status: NON-A
Action Date: 12/14/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

NO LOCATION AID (Continued) **S105811039**

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 3/5/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/5/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/11/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/11/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/16/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 7/22/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 7/22/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/31/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation

NO LOCATION AID (Continued) **S105811039**

Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/31/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 8/22/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 8/25/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 8/4/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 8/9/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 9/19/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

INST CONTROL:
Release Tracking Number: 3-0022778
Action Type: AUL
Action Stat: LEGNOT
Action Date: 08/09/2003
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0022778
Action Type: AUL
Action Stat: RECPT
Action Date: 07/31/2003
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more

NO LOCATION AID (Continued) **S105811039**

AULs that have been implemented.

Release Tracking Number: 3-0022778
Action Type: AUL
Action Stat: SNAUDI
Action Date: 07/22/2009
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0022778
Action Type: AUL
Action Stat: SNAUDI
Action Date: 08/22/2008
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0022778
Action Type: AUL
Action Stat: TSAUD
Action Date: 03/05/2004
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release:
Release Tracking Number/Current Status: 3-0022778 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 04/11/2003
Category: 120 DY
Status Date: 07/31/2003
Phase: Not reported
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: An activity type that is related to an Audit
Action Status: NON-A
Action Date: 12/14/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 3/5/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

NO LOCATION AID (Continued) **S105811039**

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/5/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/11/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/11/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/16/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 7/22/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 7/22/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/31/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/31/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation

NO LOCATION AID (Continued) **S105811039**

Action Status: Level II - Audit Inspection
Action Date: 8/22/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 8/25/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 8/4/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 8/9/2003
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 9/19/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Chemicals:
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 4500 milligrams per kilogram
Chemical: PHENANTHRENE
Quantity: 480 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 170 milligrams per kilogram

ENFORCEMENT:
Region: NERO
DEP Region: NERO
DEP Program: 3R
DEP Bureau: BWSC
Program: Not reported
Program Id: 3-0022778
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 12/14/2009
ENF #: NON-NE-09-3R017A
Document Type: NON

NO LOCATION AID (Continued) **S105811039**

AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0022778
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	08/04/2009
ENF #:	NON-NE-09-3R017
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

S68 **AT BLOSSOM ST** **MA SHWS** **S104000506**
WSW **370 LYNNWAY** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901**
0.300 mi.
1585 ft. **Site 4 of 4 in cluster S**

Relative:
Higher

Actual:
11 ft.

SHWS:

Release Tracking Number/Current Status:	3-0018413 / RAO
Release Town:	LYNN
Notification Date:	06/15/1999
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	06/05/2000
Phase:	Not reported

AT BLOSSOM ST (Continued) **S104000506**

Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 4900 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 100 milligrams per kilogram
Chemical: BENZO(K)FLUORANTHENE
Quantity: 86 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 290 milligrams per kilogram
Chemical: BENZO[A]PYRENE
Quantity: 150 milligrams per kilogram
Chemical: CHRYSENE
Quantity: 25 milligrams per kilogram

Actions:
Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/5/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/7/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 5/31/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/15/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/15/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 6/19/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

AT BLOSSOM ST (Continued) **S104000506**

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/5/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/13/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0018413 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 06/15/1999
Category: 120 DY
Status Date: 06/05/2000
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/5/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/7/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 5/31/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/15/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/15/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

AT BLOSSOM ST (Continued) **S104000506**

reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 6/19/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/5/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/13/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 4900 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 100 milligrams per kilogram
Chemical: BENZO(K)FLUORANTHENE
Quantity: 86 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 290 milligrams per kilogram
Chemical: BENZO[A]PYRENE
Quantity: 150 milligrams per kilogram
Chemical: CHRYSENE
Quantity: 25 milligrams per kilogram

V69 **MCGINN BUS GARAGE** **MA SHWS S101696359**
West **39 ALLEY ST** **MA RELEASE N/A**
1/4-1/2 **LYNN, MA 01901**
0.302 mi.
1595 ft. **Site 1 of 2 in cluster V**

Relative: Higher
Actual: 17 ft.

SHWS:
Release Tracking Number/Current Status: 3-0006007 / RAO
Release Town: LYNN
Notification Date: 01/01/1994
Category: NONE
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 10/13/1994
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: DISPENSER

Click here to access the MA DEP site for this facility:

MCGINN BUS GARAGE (Continued) **S101696359**

Chemicals:
Chemical: PETROLEUM
Quantity: Not reported

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/1/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/1/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/1/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0006007 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/01/1994
Category: NONE
Status Date: 10/13/1994
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/1/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/1/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

MCGINN BUS GARAGE (Continued) **S101696359**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/1/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: PETROLEUM
Quantity: Not reported
Location Type: COMMERCIAL
Source: DISPENSER

V70 **MCGINN BUS** **MA LUST S101046805**
West **39 ALLEY ST** **MA SPILLS N/A**
1/4-1/2 **LYNN, MA 01901** **MA RELEASE**
0.302 mi.
1595 ft. **Site 2 of 2 in cluster V**

Relative: Higher
Actual: 17 ft.

LUST:

Facility:
Release Tracking Number/Current Status: 3-0011484 / RAO
Status Date: 10/13/1994
Source Type: UST
Release Town: LYNN
Notification Date: 08/18/1994
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: DIESEL FUEL
Quantity: 10 gallons
Chemical: OIL
Quantity: 467 parts per million
Chemical: WASTE OIL
Quantity: 10 gallons

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/13/1994

MCGINN BUS (Continued) **S101046805**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/18/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/18/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/29/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

MA Spills:

Facility ID:	3-6007	Spill ID:	N93-0493
Staff Lead:	SAYERS, S	Date Entered:	19940207
Last Entered:	19940207	First Response:	19930416
Spill Date:	19930416	Spill Time:	Not reported
Report Date:	19930416	Report Time:	03:25PM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	DIESEL FUEL	Other Material:	Not reported
Qty Reported:	----------	Qty Actual:	----------
Qty Reported:	----------	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	----------
Source:	OTHER SOURCE >	Other Source:	DISPENSER
Incident:	OVERFILL	Other Incdnt:	Not reported
Cleanup Type:	Not reported	Contractor:	NOT USED
Referral:	SA	LUST Elig:	---
Report Prep:	Not reported	Category:	Not reported
Notifier:	CARLO PARISI/ENVIRO PRODUCTS		
Notif Tel:	Not reported		
Days/Close:	0		

Release:

Release Tracking Number/Current Status: 3-0011484 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 08/18/1994
Category: 72 HR

MCGINN BUS (Continued) **S101046805**

Status Date: 10/13/1994
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/18/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/18/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/29/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical: DIESEL FUEL
Quantity: 10 gallons
Chemical: OIL
Quantity: 467 parts per million
Chemical: WASTE OIL
Quantity: 10 gallons
Location Type: COMMERCIAL
Source: UST

U71 **PROPERTY** **MA SHWS** **S100537258**
NNW **429 WASHINGTON ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901**
0.308 mi.
1627 ft. **Site 3 of 3 in cluster U**

Relative:
Higher

Actual:
19 ft.

SHWS:

Release Tracking Number/Current Status:	3-0004376 / RAO
Release Town:	LYNN
Notification Date:	07/15/1993
Category:	NONE
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	03/22/1996
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not reported

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not reported

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	7/15/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release:

Release Tracking Number/Current Status:	3-0004376 / RAO
Primary ID:	Not reported
Official City:	LYNN
Notification:	07/15/1993
Category:	NONE
Status Date:	03/22/1996
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/22/1996

PROPERTY (Continued) **S100537258**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

W72 **BASEMENT REAR** **MA LAST** **S106776044**
North **312 UNION ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901** **MA ASBESTOS**
0.312 mi.
1645 ft. **Site 1 of 2 in cluster W**

Relative: Higher
Actual: 35 ft.

LAST:
Release Tracking Number/Current Status: 3-0024445 / RAO
Source Type: AST
Release Town: LYNN
Notification Date: 11/29/2004
Category: TWO HR
Associated ID: Not reported
Status Date: 12/02/2005
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil and Hazardous Material

Chemicals:
Chemical: DIESEL FUEL
Quantity: 50 gallons
Chemical: HEATING OIL
Quantity: 50 gallons
Chemical: LEAD
Quantity: 417 milligrams per kilogram
Location Type: COMMERCIAL
Source: AST

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/10/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/28/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 1/28/2005

BASEMENT REAR (Continued) **S106776044**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/29/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/29/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/29/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/2/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/2/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/5/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/25/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0024445 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 11/29/2004
Category: TWO HR
Status Date: 12/02/2005
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil and Hazardous Material

BASEMENT REAR (Continued) **S106776044**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/10/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	1/28/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	1/28/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/29/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	11/29/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	11/29/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	12/2/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/2/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	12/5/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

BASEMENT REAR (Continued) **S106776044**

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	3/25/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	50 gallons
Chemical:	HEATING OIL
Quantity:	50 gallons
Chemical:	LEAD
Quantity:	417 milligrams per kilogram
Location Type:	COMMERCIAL
Source:	AST

ASBESTOS:

Notification:	100140886
DEP Region:	NE
Notifiers Name:	ALLSTATE ASBESTOS ABATEMENT
Start Date:	01/23/2012
End Date:	01/23/2012
Date Entered:	10/01/2012
Entry Date:	01/10/2012
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	50
Project Description:	Spr
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported

BASEMENT REAR (Continued) **S106776044**

On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

73
ENE
1/4-1/2
0.312 mi.
1646 ft.

LYNN SHORE DRIVE
101-121 NAHANT ST
LYNN, MA 01902

MA LUST **S101506646**
MA RELEASE **N/A**

Relative: Higher

Actual: 44 ft.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0011614 / RAO
Status Date:	09/25/1997
Source Type:	UST
Release Town:	LYNN
Notification Date:	09/21/1994
Category:	72 HR
Associated ID:	Not reported
Phase:	PHASE II
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	#4 FUEL OIL
Quantity:	Not reported
Chemical:	#2 FUEL OIL
Quantity:	279 parts per million
Chemical:	#2 FUEL OIL
Quantity:	Not reported

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/11/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been

LYNN SHORE DRIVE (Continued) **S101506646**

reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/27/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 11/21/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/21/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/21/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 9/21/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 9/23/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/25/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/27/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1

LYNN SHORE DRIVE (Continued) **S101506646**

Action Status: Completion Statement Received
Action Date: 9/27/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 9/27/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0011614 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 09/21/1994
Category: 72 HR
Status Date: 09/25/1997
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/11/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/27/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 11/21/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/21/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LYNN SHORE DRIVE (Continued) **S101506646**

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/21/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 9/21/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 9/23/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/25/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/27/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 9/27/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 9/27/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #4 FUEL OIL
Quantity: Not reported
Chemical: #2 FUEL OIL
Quantity: 279 parts per million
Chemical: #2 FUEL OIL
Quantity: Not reported
Location Type: RESIDNTIAL
Source: UST

74
WSW
1/4-1/2
0.316 mi.
1670 ft.

Relative:
Higher

Actual:
12 ft.

ALL TUNE AND LUBE
361 LYNNWAY
LYNN, MA 01901

MA LUST
MA INST CONTROL
MA RELEASE
MA ASBESTOS
MA ENF
MA HW GEN

S102687314
N/A

LUST:

Facility:

Release Tracking Number/Current Status:	3-0015264 / RAO
Status Date:	06/22/1999
Source Type:	UST
Release Town:	LYNN
Notification Date:	07/01/1997
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	130 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	12/4/1997
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	12/4/1997
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	3/7/2002
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection
Action Date:	5/24/2007
Response Action Outcome:	Remedial actions have not been conducted because a level of No

ALL TUNE AND LUBE (Continued) **S102687314**

Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 5/24/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/22/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/22/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 6/7/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 6/7/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/1/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 7/1/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/30/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more

ALL TUNE AND LUBE (Continued) **S102687314**

AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/19/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

INST CONTROL:
Release Tracking Number: 3-0015264
Action Type: AUL
Action Stat: RECPT
Action Date: 06/22/1999
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0015264
Action Type: AUL
Action Stat: SNAUDI
Action Date: 05/24/2007
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release:
Release Tracking Number/Current Status: 3-0015264 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 07/01/1997
Category: 72 HR
Status Date: 06/22/1999
Phase: Not reported
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/4/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/4/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

ALL TUNE AND LUBE (Continued) **S102687314**

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/7/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 5/24/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 5/24/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/22/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/22/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 6/7/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 6/7/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/1/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Immediate Response Action

ALL TUNE AND LUBE (Continued) **S102687314**

Action Status:	IRA Assessment Only
Action Date:	7/1/1997
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/30/1997
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	8/19/1999
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	130 parts per million
Location Type:	COMMERCIAL
Source:	UST

ASBESTOS:

Notification:	100141611
DEP Region:	NE
Notifiers Name:	MJ ENVIRONMENTAL INC
Start Date:	01/25/2012
End Date:	01/26/2012
Date Entered:	25/01/2012
Entry Date:	01/25/2012
Quantity Materical Removed SF:	1300
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported

ALL TUNE AND LUBE (Continued) **S102687314**

Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

ENFORCEMENT:

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0015264
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	06/07/2007
ENF #:	NON-NE-07-3A077
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Region:	NERO

ALL TUNE AND LUBE (Continued) **S102687314**

DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0015264
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	06/07/2007
ENF #:	Not reported
Document Type:	IDL
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

HW GEN:

EPA Id:	MV7815815000
RCRA Generator Status:	Not reported
State Generator Status:	SQG-MA

EPA Id:	MAD137712824
RCRA Generator Status:	Not reported
State Generator Status:	SQG-MA

T75 **FORMER LYNN GAS & ELECTRIC FACILITY** **MA SHWS** **S109029376**
SW **252 BLOSSOM ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA**
0.318 mi.
1681 ft. **Site 3 of 3 in cluster T**

Relative:
Higher

Actual:
9 ft.

SHWS:

Release Tracking Number/Current Status:	3-0027531 / URAM
Release Town:	LYNN
Notification Date:	03/03/2008
Category:	120 DY
Associated ID:	Not reported
Current Status:	**URAM**
Status Date:	03/06/2008
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	ROADWAY
Location Type:	INDUSTRIAL
Source:	HISTORIC

FORMER LYNN GAS & ELECTRIC FACILITY (Continued) **S109029376**

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	NAPHTHALENE
Quantity:	100 milligrams per kilogram

Actions:

Action Type:	Utility-related Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	3/19/2008
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Notice of Intent to Conduct a URAM
Action Date:	3/3/2008
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/3/2008
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	3/5/2008
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Notification of URAM Received
Action Date:	3/6/2008
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Completion Statement Received
Action Date:	7/3/2008
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	7/9/2008
Response Action Outcome:	Not reported

Release:

Release Tracking Number/Current Status:	3-0027531 / URAM
Primary ID:	Not reported
Official City:	LYNN
Notification:	03/03/2008
Category:	120 DY
Status Date:	03/06/2008
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Hazardous Material

FORMER LYNN GAS & ELECTRIC FACILITY (Continued) **S109029376**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Utility-related Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	3/19/2008
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Notice of Intent to Conduct a URAM
Action Date:	3/3/2008
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/3/2008
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	3/5/2008
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Notification of URAM Received
Action Date:	3/6/2008
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Completion Statement Received
Action Date:	7/3/2008
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	7/9/2008
Response Action Outcome:	Not reported

Chemicals:

Chemical:	NAPHTHALENE
Quantity:	100 milligrams per kilogram
Location Type:	ROADWAY
Location Type:	INDUSTRIAL
Source:	HISTORIC

X76 **NO LOCATION AID** **MA SHWS** **S109489567**
NNW **0 ANDREW 32-36 ANDREW 38-50 CENTRAL** **MA INST CONTROL** **N/A**
1/4-1/2 **LYNN, MA 01901** **MA RELEASE**
0.323 mi.
1708 ft. **Site 1 of 2 in cluster X**

Relative:
Higher

Actual:
19 ft.

SHWS:

Release Tracking Number/Current Status:	3-0028221 / RAO
Release Town:	LYNN
Notification Date:	12/16/2008
Category:	120 DY
Associated ID:	Not reported

NO LOCATION AID (Continued) **S109489567**

Current Status: **Response Action Outcome**
Status Date: 12/17/2009
Phase: Not reported
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil Or Haz Material: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 1100 milligrams per kilogram
Chemical: BENZO(K)FLUORANTHENE
Quantity: 140 micrograms per liter
Chemical: BENZO[A]PYRENE
Quantity: 15 milligrams per kilogram
Chemical: CHROMIUM
Quantity: 59 milligrams per kilogram
Chemical: PHENANTHRENE
Quantity: 96 milligrams per kilogram
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 9200 micrograms per liter
Chemical: CADMIUM
Quantity: 3.4 milligrams per kilogram
Chemical: PYRENE
Quantity: 400 micrograms per liter
Chemical: DIBENZO[A,H]ANTHRACENE
Quantity: 6 milligrams per kilogram
Chemical: NICKEL
Quantity: 45 milligrams per kilogram
Chemical: FLUORANTHENE
Quantity: 540 micrograms per liter
Chemical: BENZO[A]ANTHRACENE
Quantity: 56 milligrams per kilogram
Chemical: INDENO[1,2,3-CD]PYRENE
Quantity: 6.2 milligrams per kilogram
Chemical: CHRYSENE
Quantity: 200 micrograms per liter
Chemical: 2-METHYLNAPHTHALENE
Quantity: 0.8 milligrams per kilogram
Chemical: ACENAPHTHYLENE
Quantity: 4.4 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 33 milligrams per kilogram

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 10/14/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E

NO LOCATION AID (Continued) **S109489567**

Action Date: 12/16/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/16/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/17/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/17/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/21/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/24/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 2/24/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/2/2010
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

INST CONTROL:
Release Tracking Number: 3-0028221

NO LOCATION AID (Continued) **S109489567**

Action Type: AUL
Action Stat: RECPT
Action Date: 12/17/2009
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release:
Release Tracking Number/Current Status: 3-0028221 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 12/16/2008
Category: 120 DY
Status Date: 12/17/2009
Phase: Not reported
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 10/14/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/16/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/16/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/17/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/17/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more

NO LOCATION AID (Continued) **S109489567**

AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/21/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/24/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 2/24/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/2/2010
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Chemicals:
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 1100 milligrams per kilogram
Chemical: BENZO(K)FLUORANTHENE
Quantity: 140 micrograms per liter
Chemical: BENZO[A]PYRENE
Quantity: 15 milligrams per kilogram
Chemical: CHROMIUM
Quantity: 59 milligrams per kilogram
Chemical: PHENANTHRENE
Quantity: 96 milligrams per kilogram
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 9200 micrograms per liter
Chemical: CADMIUM
Quantity: 3.4 milligrams per kilogram
Chemical: PYRENE
Quantity: 400 micrograms per liter
Chemical: DIBENZO[A,H]ANTHRACENE
Quantity: 6 milligrams per kilogram
Chemical: NICKEL
Quantity: 45 milligrams per kilogram
Chemical: FLUORANTHENE
Quantity: 540 micrograms per liter
Chemical: BENZO[A]ANTHRACENE
Quantity: 56 milligrams per kilogram
Chemical: INDENO[1,2,3-CD]PYRENE
Quantity: 6.2 milligrams per kilogram

NO LOCATION AID (Continued) **S109489567**

Chemical:	CHRYSENE
Quantity:	200 micrograms per liter
Chemical:	2-METHYLNAPHTHALENE
Quantity:	0.8 milligrams per kilogram
Chemical:	ACENAPHTHYLENE
Quantity:	4.4 milligrams per kilogram
Chemical:	BENZO[B]FLUORANTHENE
Quantity:	33 milligrams per kilogram

77
WNW
1/4-1/2
0.328 mi.
1731 ft.

Relative:
Higher

Actual:
19 ft.

JB BLOOD BLDG TANK ROOM **MA SHWS** **S107309858**
20 WHEELER ST **MA LUST** **N/A**
LYNN, MA 01903 **MA LAST**
MA INST CONTROL
MA RELEASE
MA ASBESTOS

SHWS:

Release Tracking Number/Current Status:	3-0025838 / RAO
Release Town:	LYNN
Notification Date:	04/24/2006
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	11/26/2008
Phase:	PHASE III
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST
Source:	UNKNOWN
Source:	AST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS
Quantity:	10600 milligrams per kilogram
Chemical:	C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity:	10000 milligrams per kilogram
Chemical:	C19 THRU C36 ALIPHATIC HYDROCARBONS
Quantity:	5280 milligrams per kilogram
Chemical:	FUEL OIL
Quantity:	34.08 inches

Actions:

Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	10/17/2017
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection
Action Date:	10/17/2017

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/22/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 3/7/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/9/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/23/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/23/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 7/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 7/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/1/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/22/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

LUST:

Facility:
Release Tracking Number/Current Status: 3-0025838 / RAO
Status Date: 11/26/2008
Source Type: UST
Release Town: LYNN
Notification Date: 04/24/2006
Category: 72 HR
Associated ID: Not reported
Phase: PHASE III
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST
Source: UNKNOWN
Source: AST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 10600 milligrams per kilogram
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 10000 milligrams per kilogram
Chemical: C19 THRU C36 ALIPHATIC HYDROCARBONS
Quantity: 5280 milligrams per kilogram
Chemical: FUEL OIL

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

Quantity: 34.08 inches

Actions:

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 10/17/2017
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 10/17/2017
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/22/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 3/7/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/9/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/23/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

Action Status: Reportable Release under MGL 21E
Action Date: 6/23/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 7/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 7/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/1/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/22/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

LAST:
Release Tracking Number/Current Status: 3-0025838 / RAO
Source Type: AST
Release Town: LYNN
Notification Date: 04/24/2006
Category: 72 HR
Associated ID: Not reported
Status Date: 11/26/2008
Phase: PHASE III
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material: Oil

Chemicals:
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 10600 milligrams per kilogram
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 10000 milligrams per kilogram
Chemical: C19 THRU C36 ALIPHATIC HYDROCARBONS
Quantity: 5280 milligrams per kilogram
Chemical: FUEL OIL

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

Quantity: 34.08 inches
Location Type: COMMERCIAL
Source: UST
Source: UNKNOWN
Source: AST

Actions:

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 10/17/2017
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 10/17/2017
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/22/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 3/7/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/9/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/23/2006

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/23/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 7/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 7/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/1/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/22/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:
Release Tracking Number: 3-0025838
Action Type: AUL
Action Stat: RECPT
Action Date: 11/26/2008
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0025838
Action Type: AUL
Action Stat: SNAUDI
Action Date: 10/17/2017
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

Release Tracking Number: 3-0025838
Action Type: AUL
Action Stat: TSAUD
Action Date: 07/30/2009
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:
Release Tracking Number/Current Status: 3-0025838 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 04/24/2006
Category: 72 HR
Status Date: 11/26/2008
Phase: PHASE III
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 10/17/2017
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 10/17/2017
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 11/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/22/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 3/7/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/24/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/9/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 6/23/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/23/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 7/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 7/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/1/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 8/22/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

Chemicals:

Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS
Quantity:	10600 milligrams per kilogram
Chemical:	C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity:	10000 milligrams per kilogram
Chemical:	C19 THRU C36 ALIPHATIC HYDROCARBONS
Quantity:	5280 milligrams per kilogram
Chemical:	FUEL OIL
Quantity:	34.08 inches
Location Type:	COMMERCIAL
Source:	UST
Source:	UNKNOWN
Source:	AST

ASBESTOS:

Notification:	557225
DEP Region:	NE
Notifiers Name:	NATIONAL ABATEMENT INC
Start Date:	08/07/2003
End Date:	08/07/2003
Date Entered:	05/08/2003
Entry Date:	08/05/2003
Quantity Materical Removed SF:	Not reported
Quantity Material Removed LF:	8
Project Description:	Corrugated Pipe
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported

JB BLOOD BLDG TANK ROOM (Continued) **S107309858**

Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

W78 **MULBERRY ST** **MA SHWS** **S102087694**
North **305-311 UNION ST** **MA INST CONTROL** **N/A**
1/4-1/2 **LYNN, MA 01905** **MA RELEASE**
0.332 mi.
1755 ft. **Site 2 of 2 in cluster W**

Relative: Higher
Actual: 28 ft.

SHWS:

Release Tracking Number/Current Status:	3-0013920 / RAO
Release Town:	LYNN
Notification Date:	06/20/1996
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	09/05/1997
Phase:	PHASE II
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Oil

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	#4 FUEL OIL
Quantity:	2777000 parts per million

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	1/11/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received
Action Date:	1/2/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation

MULBERRY ST (Continued) **S102087694**

Action Status: Amendment Received or Issued
Action Date: 1/2/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 12/17/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/28/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/28/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/20/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/20/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 6/27/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/27/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification

MULBERRY ST (Continued) **S102087694**

Action Date: 6/27/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 6/28/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/3/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/5/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/5/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/6/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:
Release Tracking Number: 3-0013920
Action Type: AUL
Action Stat: AMEND
Action Date: 01/02/2003
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0013920
Action Type: AUL
Action Stat: LEGNOT
Action Date: 12/17/2002
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

MULBERRY ST (Continued) **S102087694**

Release Tracking Number: 3-0013920
Action Type: AUL
Action Stat: RECPT
Action Date: 09/06/1997
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:
Release Tracking Number/Current Status: 3-0013920 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 06/20/1996
Category: 120 DY
Status Date: 09/05/1997
Phase: PHASE II
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 1/11/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 1/2/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 1/2/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 12/17/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/28/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

MULBERRY ST (Continued) **S102087694**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/28/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/20/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/20/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 6/27/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/27/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/27/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 6/28/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/3/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

MULBERRY ST (Continued) **S102087694**

been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/5/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/5/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/6/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: #4 FUEL OIL
Quantity: 2777000 parts per million

Y79 **WALNUT STREET PUMP STATION** **US BROWNFIELDS** **1016352027**
NW **64 MARKET ST** **FINDS** **N/A**
1/4-1/2 **LYNN, MA 01901**
0.335 mi.
1769 ft. **Site 1 of 3 in cluster Y**

Relative: **Higher**
Actual: **22 ft.**

US BROWNFIELDS:
Property Name: WALNUT STREET PUMP STATION
Recipient Name: Lynn, City of
Grant Type: Assessment
Property Number: Not reported
Parcel size: 1.5
Latitude: 42.4637
Longitude: -70.950219
HCM Label: Not reported
Map Scale: Not reported
Point of Reference: Not reported
Highlights: Not reported
Datum: Not reported
Acres Property ID: 13045
IC Data Access: Not reported
Start Date: 03/31/2004 00:00:00
Redev Completition Date: Not reported
Completed Date: 03/31/2004 00:00:00
Acres Cleaned Up: Not reported
Cleanup Funding: Not reported
Cleanup Funding Source: Not reported
Assessment Funding: Not reported
Assessment Funding Source: Not reported
Redevelopment Funding: Not reported

WALNUT STREET PUMP STATION (Continued) **1016352027**

Redev. Funding Source:	Not reported
Redev. Funding Entity Name:	Not reported
Redevelopment Start Date:	Not reported
Assessment Funding Entity:	Not reported
Cleanup Funding Entity:	Not reported
Grant Type:	N/A
Accomplishment Type:	Phase I Environmental Assessment
Accomplishment Count:	0
Cooperative Agreement Number:	99116001
Start Date:	12/31/2002 00:00:00
Ownership Entity:	Not reported
Completion Date:	12/31/2002 00:00:00
Current Owner:	Not reported
Did Owner Change:	Not reported
Cleanup Required:	Y
Video Available:	Not reported
Photo Available:	Not reported
Institutional Controls Required:	Not reported
IC Category Proprietary Controls:	Not reported
IC Cat. Info. Devices:	Not reported
IC Cat. Gov. Controls:	Not reported
IC Cat. Enforcement Permit Tools:	Not reported
IC in place date:	Not reported
IC in place:	U
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Not reported
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported

WALNUT STREET PUMP STATION (Continued) **1016352027**

VOCs found:	Not reported
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Surface Water:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported
Superfund Fed. landowner flag:	Not reported
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
Nickel Cleaned Up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported
Property Description:	Lynn Water Department pumping station
Below Poverty Number:	4168
Below Poverty Percent:	31.5%
Meidan Income:	3899
Meidan Income Number:	8338
Meidan Income Percent:	63.1%
Vacant Housing Number:	446
Vacant Housing Percent:	7.5%
Unemployed Number:	1024
Unemployed Percent:	7.8%

WALNUT STREET PUMP STATION (Continued) **1016352027**

FINDS:

Registry ID: 110039544348

Environmental Interest/Information System
US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

Y80 **FORMER BEACON CHEVROLET SITE** **US BROWNFIELDS** **1016345203**
NW **64 MARKET ST** **FINDS** **N/A**
1/4-1/2 **LYNN, MA 01901**
0.335 mi.
1769 ft. **Site 2 of 3 in cluster Y**

Relative: **Higher**

Actual: **22 ft.**

US BROWNFIELDS:

Property Name:	FORMER BEACON CHEVROLET SITE
Recipient Name:	R1 Brownfields TBA (previously Superfund TBA)
Grant Type:	TBA
Property Number:	Not reported
Parcel size:	Not reported
Latitude:	42.4633865
Longitude:	-70.9496666
HCM Label:	Not reported
Map Scale:	Not reported
Point of Reference:	Not reported
Highlights:	Not reported
Datum:	Not reported
Acres Property ID:	10030
IC Data Access:	Not reported
Start Date:	Not reported
Redev Completition Date:	Not reported
Completed Date:	Not reported
Acres Cleaned Up:	Not reported
Cleanup Funding:	Not reported
Cleanup Funding Source:	Not reported
Assessment Funding:	1
Assessment Funding Source:	US EPA - TBA Funding
Redevelopment Funding:	Not reported
Redev. Funding Source:	Not reported
Redev. Funding Entity Name:	Not reported
Redevelopment Start Date:	Not reported
Assessment Funding Entity:	EPA
Cleanup Funding Entity:	Not reported
Grant Type:	Hazardous
Accomplishment Type:	Phase I Environmental Assessment
Accomplishment Count:	1
Cooperative Agreement Number:	n/a
Start Date:	07/10/2000 00:00:00
Ownership Entity:	Not reported
Completion Date:	07/10/2000 00:00:00
Current Owner:	Not reported
Did Owner Change:	Not reported

FORMER BEACON CHEVROLET SITE (Continued) **1016345203**

Cleanup Required:	Not reported
Video Available:	Not reported
Photo Available:	Not reported
Institutional Controls Required:	Not reported
IC Category Proprietary Controls:	Not reported
IC Cat. Info. Devices:	Not reported
IC Cat. Gov. Controls:	Not reported
IC Cat. Enforcement Permit Tools:	Not reported
IC in place date:	Not reported
IC in place:	U
State/tribal program date:	Not reported
State/tribal program ID:	Not reported
State/tribal NFA date:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
No media affected:	Not reported
Unknown media affected:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
Other contaminants found:	Not reported
Other contams found description:	Not reported
PAHs found:	Not reported
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water cleaned:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported
Cleanup other description:	Not reported
Num. of cleanup and re-dev. jobs:	Not reported
Past use greenspace acreage:	Not reported
Past use residential acreage:	Not reported
Surface Water:	Not reported
Past use commercial acreage:	Not reported
Past use industrial acreage:	Not reported
Future use greenspace acreage:	Not reported
Future use residential acreage:	Not reported
Future use commercial acreage:	Not reported
Future use industrial acreage:	Not reported
Greenspace acreage and type:	Not reported

FORMER BEACON CHEVROLET SITE (Continued) **1016345203**

Superfund Fed. landowner flag:	Not reported
Arsenic cleaned up:	Not reported
Cadmium cleaned up:	Not reported
Chromium cleaned up:	Not reported
Copper cleaned up:	Not reported
Iron cleaned up:	Not reported
mercury cleaned up:	Not reported
Nickel Cleaned Up:	Not reported
No clean up:	Not reported
Pesticides cleaned up:	Not reported
Selenium cleaned up:	Not reported
SVOCs cleaned up:	Not reported
Unknown clean up:	Not reported
Arsenic contaminant found:	Not reported
Cadmium contaminant found:	Not reported
Chromium contaminant found:	Not reported
Copper contaminant found:	Not reported
Iron contaminant found:	Not reported
Mercury contaminant found:	Not reported
Nickel contaminant found:	Not reported
No contaminant found:	Not reported
Pesticides contaminant found:	Not reported
Selenium contaminant found:	Not reported
SVOCs contaminant found:	Not reported
Unknown contaminant found:	Not reported
Future Use: Multistory	Not reported
Media affected Bluiding Material:	Not reported
Media affected indoor air:	Not reported
Building material media cleaned up:	Not reported
Indoor air media cleaned up:	Not reported
Unknown media cleaned up:	Not reported
Past Use: Multistory	Not reported
Property Description:	Not reported
Below Poverty Number:	4168
Below Poverty Percent:	31.5%
Meidan Income:	3899
Meidan Income Number:	8338
Meidan Income Percent:	63.1%
Vacant Housing Number:	446
Vacant Housing Percent:	7.5%
Unemployed Number:	1024
Unemployed Percent:	7.8%

FINDS:

Registry ID: 110038691216

Environmental Interest/Information System

US EPA Assessment, Cleanup and Redevelopment Exchange System (ACRES) is an federal online database for Brownfields Grantees to electronically submit data directly to EPA.

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

81
NNE
1/4-1/2
0.338 mi.
1786 ft.

EARLHAM REALTY
103-111 BROAD ST
LYNN, MA 01902

MA LUST
MA RELEASE

S102687270
N/A

Relative:
Higher

Actual:
44 ft.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0011901 / RAO
Status Date:	12/20/1994
Source Type:	UST
Release Town:	LYNN
Notification Date:	11/28/1994
Category:	TWO HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Location Type:	RESIDNTIAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	VOCS
Quantity:	286 parts per million
Chemical:	TPH
Quantity:	163 milligrams per kilogram
Chemical:	#2 FUEL OIL
Quantity:	286 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	IRA Assessment Only
Action Date:	11/28/1994
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/28/1994
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/20/1994
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/20/1994
Response Action Outcome:	Remedial actions have not been conducted because a level of No

EARLHAM REALTY (Continued) **S102687270**

Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/9/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/9/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:
Release Tracking Number/Current Status: 3-0011901 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 11/28/1994
Category: TWO HR
Status Date: 12/20/1994
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 11/28/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/28/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/20/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/20/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.

EARLHAM REALTY (Continued) **S102687270**

Action Date: 12/9/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/9/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: VOCS
Quantity: 286 parts per million
Chemical: TPH
Quantity: 163 milligrams per kilogram
Chemical: #2 FUEL OIL
Quantity: 286 parts per million
Location Type: COMMERCIAL
Location Type: RESIDNTIAL
Source: UST

X82 **PARKING LOT** **MA SHWS S113411682**
NNW **380 WASHINGTON ST** **MA RELEASE N/A**
1/4-1/2 **LYNN, MA 01901**
0.342 mi.
1804 ft. **Site 2 of 2 in cluster X**

Relative: Higher
Actual: 22 ft.

SHWS:
Release Tracking Number/Current Status: 3-0030829 / DPS
Release Town: LYNN
Notification Date: 02/26/2013
Category: 120 DY
Associated ID: Not reported
Current Status: **Downgradient Property Status**
Status Date: 02/25/2014
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: TRICHLOROETHYLENE
Quantity: 610 micrograms per liter
Chemical: CIS-1,2-DICHLOROETHYLENE
Quantity: 3900 micrograms per liter
Chemical: TETRACHLOROETHYLENE
Quantity: 240 micrograms per liter

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 12/9/2013
Response Action Outcome: Not reported

Action Type: Downgradient Property Status

PARKING LOT (Continued) **S113411682**

Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/25/2014
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/12/2013
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Level I - Technical Screen Audit
Action Date: 5/22/2014
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0030829 / DPS
Primary ID: Not reported
Official City: LYNN
Notification: 02/26/2013
Category: 120 DY
Status Date: 02/25/2014
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 12/9/2013
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/25/2014
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E

PARKING LOT (Continued) **S113411682**

Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/12/2013
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Level I - Technical Screen Audit
Action Date: 5/22/2014
Response Action Outcome: Not reported

Chemicals:
Chemical: TRICHLOROETHYLENE
Quantity: 610 micrograms per liter
Chemical: CIS-1,2-DICHLOROETHYLENE
Quantity: 3900 micrograms per liter
Chemical: TETRACHLOROETHYLENE
Quantity: 240 micrograms per liter

---

83 **LYNN COMMUNITY HEALTH CENTER** **MA SHWS** **S110303494**
North **269 UNION ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901** **MA ASBESTOS**
0.356 mi.
1878 ft.

Relative:
Higher

Actual:
31 ft.

SHWS:
Release Tracking Number/Current Status: 3-0029263 / RAO
Release Town: LYNN
Notification Date: 05/10/2010
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 10/08/2010
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Hazardous Material
Location Type: UNKNOWN
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: LEAD

LYNN COMMUNITY HEALTH CENTER (Continued) **S110303494**

Quantity: 1200 milligrams per kilogram
Chemical: CADMIUM
Quantity: 3.3 milligrams per kilogram

Actions:

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/14/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/14/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/8/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/8/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 11/4/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/10/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/10/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/25/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 6/10/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

LYNN COMMUNITY HEALTH CENTER (Continued) **S110303494**

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 6/14/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release:
Release Tracking Number/Current Status: 3-0029263 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 05/10/2010
Category: 120 DY
Status Date: 10/08/2010
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/14/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/14/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/8/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/8/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 11/4/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/10/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced

LYNN COMMUNITY HEALTH CENTER (Continued) **S110303494**

to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/10/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/25/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 6/10/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 6/14/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: LEAD
Quantity: 1200 milligrams per kilogram
Chemical: CADMIUM
Quantity: 3.3 milligrams per kilogram
Location Type: UNKNOWN
Source: UNKNOWN

ASBESTOS:
Notification: 100161165
DEP Region: NE
Notifiers Name: LUGO ENVIRONMENTAL LLC
Start Date: 10/22/2012
End Date: 10/29/2012
Date Entered: 10/10/2012
Entry Date: 10/10/2012
Quantity Materical Removed SF: 0
Quantity Material Removed LF: 1800
Project Description: Trns
AR Tracking ID: Not reported
Super Lic Number: Not reported
Monitor Lic Number: Not reported
Lab Lic Number: Not reported
Year: Not reported
Sticker Number: Not reported
Form Type: Not reported
Fee Status: Not reported
Facility Phone: Not reported
Sub Town: Not reported
Worksite: Not reported

LYNN COMMUNITY HEALTH CENTER (Continued) **S110303494**

Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100070765
DEP Region:	NE
Notifiers Name:	NORTHSTAR CONTRACTING GROUP INC
Start Date:	04/16/2008
End Date:	04/16/2008
Date Entered:	16/04/2008
Entry Date:	04/16/2008
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	50
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported

LYNN COMMUNITY HEALTH CENTER (Continued) **S110303494**

Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Z84 **NORTH SHORE NEWS COMPANY INC** **MA LUST** **U003655623**
West **150 BLOSSOM ST** **MA UST** **N/A**
1/4-1/2 **LYNN, MA 01902** **MA RELEASE**
0.358 mi. **MA Financial Assurance**
1888 ft. **Site 1 of 2 in cluster Z**

Relative: Higher
Actual: 16 ft.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0017611 / RAO
Status Date:	03/23/1999
Source Type:	UST
Release Town:	LYNN
Notification Date:	11/20/1998
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST

NORTH SHORE NEWS COMPANY INC (Continued) **U003655623**

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	GASOLINE
Quantity:	100 parts per million
Chemical:	GASOLINE
Quantity:	353 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	1/26/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	11/20/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/20/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/18/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/24/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	3/23/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/23/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

UST:

Facility:

NORTH SHORE NEWS COMPANY INC (Continued) **U003655623**

Facility ID:	20044
Owner Id:	8334
Owner:	NORTH SHORE REALTY TRUST
Owner Address:	150 BLOSSOM ST
Owner City,St,Zip:	LYNN, MA 01902
Telephone:	Not reported
Description:	Non-Retail Motor Vehicle
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.45878
Longitude:	-70.95148
Contact name:	Not reported
Contact address1:	Not reported
Contact address2:	Not reported
Contact city:	Not reported
Contact state:	Not reported
Contact zip:	Not reported
Contact email:	Not reported
Update:	2009-05-12 00:00:00
Update by:	Not reported
Fac status:	CLOSED

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	11/20/1998
Date Installed:	03/06/1979
Capacity:	10000
Contents:	Gasoline
Tank Usage:	Motor Vehi
Tank Leak Detection:	Manual Tank Gauging (1,000G or more capacity tank)
Pipe Leak Detection:	Quarterly visual inspection and annual product line tightness test
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Single-walled metal tank (cathodic protection required)
Pipe construct:	Single-walled metal (Corrosion protection required)
Ptype:	Not reported
Number of compartment:	Not reported
Pipe install date:	Not reported
Pipe leak install date:	Not reported
Submersible sump:	N
Submersible sump install date:	Not reported
Turbine sump:	N
Turbine sump sensor:	N
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported
Overfill protect type:	Not reported
Automatic line leak detect:	Not reported
Tank corrosion type:	Not reported
Leak corrosion type:	Not reported

Release:

Release Tracking Number/Current Status:	3-0017611 / RAO
Primary ID:	Not reported

NORTH SHORE NEWS COMPANY INC (Continued) **U003655623**

Official City:	LYNN
Notification:	11/20/1998
Category:	72 HR
Status Date:	03/23/1999
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	1/26/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	11/20/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/20/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/18/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/24/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	3/23/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/23/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	GASOLINE

NORTH SHORE NEWS COMPANY INC (Continued) **U003655623**

Quantity: 100 parts per million
Chemical: GASOLINE
Quantity: 353 parts per million
Location Type: COMMERCIAL
Source: UST

MA Financial Assurance 2:
Facility Id: 20044
Description: Truck/Transport
Work Phone: (617) 592-1300

Y85 **SUTTON STREET** **MA SHWS** **S121394394**
NW **52-62 MARKET STREET** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA**
0.359 mi.
1896 ft. **Site 3 of 3 in cluster Y**

Relative: Higher

Actual: 23 ft.

SHWS:
Release Tracking Number/Current Status: 3-0034636 / PSNC
Release Town: LYNN
Notification Date: 11/25/2017
Category: TWO HR
Associated ID: Not reported
Current Status: **PSNC**
Status Date: 01/23/2018
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Not reported
Location Type: ROADWAY
Source: LINE
Source: VEHICLE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: HYDRAULIC OIL
Quantity: 30 gallons

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/23/2018
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/23/2018
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 1/23/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action

SUTTON STREET (Continued) **S121394394**

Action Date: 11/25/2017
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/25/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/28/2017
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0034636 / PSNC
Release Town: LYNN
Notification Date: 11/25/2017
Category: TWO HR
Associated ID: Not reported
Current Status: **PSNC**
Status Date: 01/23/2018
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Not reported
Location Type: ROADWAY
Source: LINE
Source: VEHICLE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: HYDRAULIC OIL
Quantity: 30 gallons

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/23/2018
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/23/2018
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 1/23/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/25/2017
Response Action Outcome: Not reported

Action Type: Release Disposition

SUTTON STREET (Continued) **S121394394**

Action Status: Reportable Release under MGL 21E
Action Date: 11/25/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/28/2017
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0034636 / PSNC
Primary ID: Not reported
Official City: LYNN
Notification: 11/25/2017
Category: TWO HR
Status Date: 01/23/2018
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/23/2018
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/23/2018
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 1/23/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/25/2017
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/25/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/28/2017
Response Action Outcome: Not reported

Chemicals:
Chemical: HYDRAULIC OIL

SUTTON STREET (Continued) **S121394394**

Quantity: 30 gallons
Location Type: ROADWAY
Source: LINE
Source: VEHICLE

AA86 **SPEEDWAY #2502** **MA SHWS** **U003000853**
NNW **122 LIBERTY ST** **MA LUST** **N/A**
1/4-1/2 **LYNN, MA 01901** **MA UST**
0.361 mi. **MA RELEASE**
1905 ft. **Site 1 of 2 in cluster AA** **MA Financial Assurance**
MA HW GEN

Relative:
Higher

Actual:
22 ft.

SHWS:
Release Tracking Number/Current Status: 3-0034496 / UNCLSS
Release Town: LYNN
Notification Date: 09/20/2017
Category: 72 HR
Associated ID: Not reported
Current Status: **Unclassified**
Status Date: 09/20/2017
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: USTOTHER
Source: UST
Source: TANK

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 0.05 gallons per hour

Actions:
Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/3/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/5/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received

SPEEDWAY #2502 (Continued) **U003000853**

Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 11/27/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/9/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/20/2017
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/20/2017
Response Action Outcome: Not reported

LUST:

Facility:
Release Tracking Number/Current Status: 3-0034496 / UNCLSS
Status Date: 09/20/2017
Source Type: UST
Release Town: LYNN
Notification Date: 09/20/2017
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: USTOTHER
Source: UST
Source: TANK

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 0.05 gallons per hour

Actions:
Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/3/2018
Response Action Outcome: Not reported

SPEEDWAY #2502 (Continued) **U003000853**

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/5/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 11/27/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/9/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/20/2017
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/20/2017
Response Action Outcome: Not reported

Facility:
Release Tracking Number/Current Status: 3-0034496 / UNCLSS
Status Date: 09/20/2017
Source Type: USTOTHER
Release Town: LYNN
Notification Date: 09/20/2017
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: USTOTHER
Source: UST
Source: TANK

SPEEDWAY #2502 (Continued) **U003000853**

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 0.05 gallons per hour

Actions:
Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/3/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/5/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 11/27/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/9/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/20/2017
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/20/2017
Response Action Outcome: Not reported

UST:

SPEEDWAY #2502 (Continued) **U003000853**

Facility:

Facility ID:	5429
Owner Id:	1025368
Owner:	Speedway LLC
Owner Address:	500 Speedway Drive
Owner City,St,Zip:	Enon, OH 45323
Telephone:	7815999410
Description:	Retail Motor Vehicle Fuel
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.46457
Longitude:	-70.94798
Contact name:	Lea McCleave
Contact address1:	500 Speedway Drive
Contact address2:	Not reported
Contact city:	Enon
Contact state:	OH
Contact zip:	45323
Contact email:	LeMcCleave@Speedway.com
Update:	2016-05-11 00:00:00
Update by:	Not reported
Fac status:	OPEN

Tank ID:	1
Tank Status:	**Tank Temporarily Out**
Status Date:	12/07/2017
Date Installed:	09/07/1982
Capacity:	10000
Contents:	Gasoline
Tank Usage:	Motor Vehi
Tank Leak Detection:	Continuous In-Tank Monitoring System
Pipe Leak Detection:	Continuous Interstitial Space Monitoring
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct:	Double-walled non-corrodible material (No corrosion protection required)
Ptype:	Pressurized piping system with electronic automatic line leak detection
Number of compartment:	Not reported
Pipe install date:	09/07/1992
Pipe leak install date:	Not reported
Submersible sump:	Y
Submersible sump install date:	Not reported
Turbine sump:	Y
Turbine sump sensor:	Y
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported
Overfill protect type:	Automatic shut-off valve
Automatic line leak detect:	Not reported
Tank corrosion type:	Not reported
Leak corrosion type:	Not reported

Tank ID: 2

SPEEDWAY #2502 (Continued) **U003000853**

Tank Status:	**In Use**
Status Date:	Not reported
Date Installed:	09/07/1982
Capacity:	10000
Contents:	Gasoline
Tank Usage:	Motor Vehi
Tank Leak Detection:	Continuous In-Tank Monitoring System
Pipe Leak Detection:	Continuous Interstitial Space Monitoring
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct:	Double-walled non-corrodible material (No corrosion protection required)
Ptype:	Pressurized piping system with electronic automatic line leak detection
Number of compartment:	Not reported
Pipe install date:	09/07/1992
Pipe leak install date:	Not reported
Submersible sump:	Y
Submersible sump install date:	Not reported
Turbine sump:	Y
Turbine sump sensor:	Y
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported
Overfill protect type:	Automatic shut-off valve
Automatic line leak detect:	Not reported
Tank corrosion type:	Not reported
Leak corrosion type:	Not reported

Tank ID:	3
Tank Status:	**In Use**
Status Date:	Not reported
Date Installed:	09/07/1982
Capacity:	10000
Contents:	Gasoline
Tank Usage:	Motor Vehi
Tank Leak Detection:	Continuous In-Tank Monitoring System
Pipe Leak Detection:	Continuous Interstitial Space Monitoring
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct:	Double-walled non-corrodible material (No corrosion protection required)
Ptype:	Pressurized piping system with electronic automatic line leak detection
Number of compartment:	Not reported
Pipe install date:	09/07/1992
Pipe leak install date:	Not reported
Submersible sump:	Y
Submersible sump install date:	Not reported
Turbine sump:	Y
Turbine sump sensor:	Y
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported

SPEEDWAY #2502 (Continued) **U003000853**

Overfill protect type: Automatic shut-off valve
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 4
Tank Status: In Use
Status Date: Not reported
Date Installed: 09/07/1982
Capacity: 10000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Continuous In-Tank Monitoring System
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: Not reported
Longitude: Not reported
Tank construct: Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: Pressurized piping system with electronic automatic line leak detection
Number of compartment: Not reported
Pipe install date: 09/07/1992
Pipe leak install date: Not reported
Submersible sump: Y
Submersible sump install date: Not reported
Turbine sump: Y
Turbine sump sensor: Y
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Automatic shut-off valve
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Release:
Release Tracking Number/Current Status: 3-0034496 / UNCLSS
Primary ID: Not reported
Official City: LYNN
Notification: 09/20/2017
Category: 72 HR
Status Date: 09/20/2017
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/3/2018
Response Action Outcome: Not reported

SPEEDWAY #2502 (Continued) **U003000853**

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/5/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/22/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 11/27/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/9/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/20/2017
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/20/2017
Response Action Outcome: Not reported

Chemicals:
Chemical: GASOLINE
Quantity: 0.05 gallons per hour
Location Type: COMMERCIAL
Source: USTOTHER
Source: UST
Source: TANK

MA Financial Assurance 2:
Facility Id: 5429
Description: Gas Station
Work Phone: (732) 750-6220

HW GEN:
EPA Id: MAD982198020
RCRA Generator Status: VSQG

SPEEDWAY #2502 (Continued) **U003000853**

State Generator Status: Not reported

AB87 **NO LOCATION AID** **MA SHWS** **S101038810**
NNW **83 WILLOW ST** **MA LUST** **N/A**
1/4-1/2 **LYNN, MA 01901** **MA BROWNFIELDS**
0.372 mi. **MA SPILLS**
1963 ft. **Site 1 of 3 in cluster AB** **MA RELEASE**
MA ENF

Relative:
Higher

Actual:
25 ft.

SHWS:

Release Tracking Number/Current Status:	3-0020896 / TIERI
Release Town:	LYNN
Notification Date:	11/08/2002
Category:	120 DY
Associated ID:	3-0020896
Current Status:	**TIERI**
Status Date:	05/26/2009
Phase:	PHASE II
Response Action Outcome:	-
Oil Or Haz Material:	Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	C9 THRU C10 AROMATIC HYDROCARBONS
Quantity:	16000 micrograms per liter
Chemical:	C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity:	67000 micrograms per liter
Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	74000 micrograms per liter
Chemical:	VINYL CHLORIDE
Quantity:	3000 micrograms per liter
Chemical:	TRICHLOROETHENE
Quantity:	520 micrograms per liter
Chemical:	TETRACHLOROETHENE
Quantity:	13000 micrograms per liter

Actions:

Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	1/23/2004
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	1/23/2004
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/23/2004
Response Action Outcome:	Not reported
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	1/23/2004
Response Action Outcome:	Not reported

NO LOCATION AID (Continued) **S101038810**

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 1/3/2006
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 1/3/2006
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 10/31/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/1/2016
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/25/2015
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/4/2014
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/6/2017
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/8/2002
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/8/2002
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/10/2012
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/18/2014
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF

NO LOCATION AID (Continued) **S101038810**

Action Date: 12/23/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/3/2002
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Status or Interim Report Received
Action Date: 12/3/2010
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/4/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/7/2017
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/8/2016
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/14/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/3/2016
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 5/10/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1C Classification
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 5/26/2009
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S101038810**

Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	5/26/2009
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC
Action Date:	6/10/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FLDRUN
Action Date:	7/10/2012
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Permit Effective Date
Action Date:	7/2/2009
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC
Action Date:	7/2/2012
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Level I - Technical Screen Audit
Action Date:	7/21/2010
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FLDRUN
Action Date:	7/24/2012
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPDEN
Action Date:	8/24/2007
Response Action Outcome:	Not reported
Action Type:	BWS03
Action Status:	APPROV
Action Date:	Not reported
Response Action Outcome:	Not reported

Release Tracking Number/Current Status:	3-0027704 / RAONR
Release Town:	LYNN
Notification Date:	05/16/2008
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome Not Required**
Status Date:	05/26/2009
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL

NO LOCATION AID (Continued) **S101038810**

Location Type: VACNTLOT
Source: SUSPECTD
Source: UST
Source: FMR USTS

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #6 FUEL OIL
Quantity: 0.8 inches
Chemical: OIL
Quantity: 0.84 inches

Actions:
Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/23/2004
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/23/2004
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 10/31/2013
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 10/6/2008
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/1/2016
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/25/2015
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/6/2017
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/4/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC

NO LOCATION AID (Continued) **S101038810**

Action Date: 12/7/2017
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/8/2016
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/14/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/3/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 3/12/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/25/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINT
Action Date: 3/25/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 4/1/2009
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 5/16/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 5/26/2009
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S101038810**

Action Type: Tier Classification
Action Status: Tier 1C Classification
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/17/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 7/2/2009
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 7/2/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 7/21/2010
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/27/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 9/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received

NO LOCATION AID (Continued) **S101038810**

Action Date: 9/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 9/2/2008
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 9/3/2008
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/3/2008
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0027704 / RAONR
Release Town: LYNN
Notification Date: 05/16/2008
Category: 72 HR
Associated ID: Not reported
Current Status: **Response Action Outcome Not Required**
Status Date: 05/26/2009
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Location Type: VACNTLOT
Source: SUSPECTD
Source: UST
Source: FMR USTS

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #6 FUEL OIL
Quantity: 0.8 inches
Chemical: OIL
Quantity: 0.84 inches

Actions:
Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/23/2004
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/23/2004
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC

NO LOCATION AID (Continued) **S101038810**

Action Date: 10/31/2013
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 10/6/2008
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/1/2016
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/25/2015
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/6/2017
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/4/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/7/2017
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/8/2016
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/14/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/3/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 3/12/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/25/2009
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S101038810**

Action Type: Immediate Response Action
Action Status: RMRINT
Action Date: 3/25/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 4/1/2009
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 5/16/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1C Classification
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received

NO LOCATION AID (Continued) **S101038810**

Action Date: 7/17/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 7/2/2009
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 7/2/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 7/21/2010
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/27/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 9/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 9/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 9/2/2008
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 9/3/2008
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/3/2008
Response Action Outcome: Not reported

LUST:

Facility:
Release Tracking Number/Current Status: 3-0027704 / RAONR
Status Date: 05/26/2009
Source Type: UST
Release Town: LYNN
Notification Date: 05/16/2008

NO LOCATION AID (Continued) **S101038810**

Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Location Type:	VACNTLOT
Source:	SUSPECTD
Source:	UST
Source:	FMR USTS

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	#6 FUEL OIL
Quantity:	0.8 inches
Chemical:	OIL
Quantity:	0.84 inches

Actions:

Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/23/2004
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	1/23/2004
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC
Action Date:	10/31/2013
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	10/6/2008
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC
Action Date:	11/1/2016
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC
Action Date:	11/25/2015
Response Action Outcome:	Not reported
Action Type:	FTLI
Action Status:	APPREC
Action Date:	11/6/2017
Response Action Outcome:	Not reported

NO LOCATION AID (Continued) **S101038810**

Action Type: FTLI
Action Status: APPACC
Action Date: 12/4/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/7/2017
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/8/2016
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/14/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/3/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 3/12/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/25/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINT
Action Date: 3/25/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 4/1/2009
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 5/16/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal

NO LOCATION AID (Continued) **S101038810**

Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1C Classification
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/17/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 7/2/2009
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 7/2/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 7/21/2010
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/27/2009
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S101038810**

Action Type:	Immediate Response Action
Action Status:	RMRINI
Action Date:	9/16/2008
Response Action Outcome:	Not reported

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	9/16/2008
Response Action Outcome:	Not reported

Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	9/2/2008
Response Action Outcome:	Not reported

Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	9/3/2008
Response Action Outcome:	Not reported

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	9/3/2008
Response Action Outcome:	Not reported

BROWNFIELDS 2:

RTN:	3-0020896
RAO Class:	Not reported
Other RTNs:	Not reported
Current Owner:	Elain Goldsmith
MCP Status:	TIERI
AUL:	Not reported
COCs:	CVOCs, Petroleum
Former Use:	Commercial-Dry Cleaner
Current Use:	Vacant Lot
Total Acreage:	0.344

MA Spills:

Facility ID:	0000	Spill ID:	N91-0316
Staff Lead:	FONKEM, V	Date Entered:	19910916
Last Entered:	19910916	First Response:	19910306
Spill Date:	19910306	Spill Time:	Not reported
Report Date:	19910306	Report Time:	01:15PM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	#2 FUEL OIL	Other Material:	Not reported
Qty Reported:	11-50	Qty Actual:	----------
Qty Reported:	GALLONS	Qty Actual:	GALLONS
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	PIPE/HOSE/LINE	Other Source:	Not reported
Incident:	SPILL	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	NO	LUST Elig:	NO
Report Prep:	Not reported	Category:	1

NO LOCATION AID (Continued) **S101038810**

Notifier: BOB LOVELL/WHALECO OIL
Notif Tel: Not reported
Days/Close: 1

Release:
Release Tracking Number/Current Status: 3-0020896 / TIERI
Primary ID: 3-0020896
Official City: LYNN
Notification: 11/08/2002
Category: 120 DY
Status Date: 05/26/2009
Phase: PHASE II
Response Action Outcome: -
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 1/23/2004
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/23/2004
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/23/2004
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 1/23/2004
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 1/3/2006
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 1/3/2006
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 10/31/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/1/2016

NO LOCATION AID (Continued) **S101038810**

Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/25/2015
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/4/2014
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/6/2017
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/8/2002
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/8/2002
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/10/2012
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/18/2014
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/23/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/3/2002
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Status or Interim Report Received
Action Date: 12/3/2010
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/4/2013
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S101038810**

Action Type: FTLI
Action Status: APPACC
Action Date: 12/7/2017
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/8/2016
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/14/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/3/2016
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 5/10/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1C Classification
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 6/10/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRUN
Action Date: 7/10/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date

NO LOCATION AID (Continued) **S101038810**

Action Date: 7/2/2009
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 7/2/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 7/21/2010
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRUN
Action Date: 7/24/2012
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPDEN
Action Date: 8/24/2007
Response Action Outcome: Not reported

Action Type: BWS03
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: Not reported

Chemicals:
Chemical: C9 THRU C10 AROMATIC HYDROCARBONS
Quantity: 16000 micrograms per liter
Chemical: C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity: 67000 micrograms per liter
Chemical: C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity: 74000 micrograms per liter
Chemical: VINYL CHLORIDE
Quantity: 3000 micrograms per liter
Chemical: TRICHLOROETHENE
Quantity: 520 micrograms per liter
Chemical: TETRACHLOROETHENE
Quantity: 13000 micrograms per liter

Release Tracking Number/Current Status: 3-0027704 / RAONR
Primary ID: Not reported
Official City: LYNN
Notification: 05/16/2008
Category: 72 HR
Status Date: 05/26/2009
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Tier Classification

NO LOCATION AID (Continued) **S101038810**

Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/23/2004
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/23/2004
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 10/31/2013
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 10/6/2008
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/1/2016
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/25/2015
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 11/6/2017
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/4/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/7/2017
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 12/8/2016
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/14/2013
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPACC
Action Date: 2/3/2016

NO LOCATION AID (Continued) **S101038810**

Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 3/12/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/25/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINT
Action Date: 3/25/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 4/1/2009
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 5/16/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via IRA Completion Statement
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 1C Classification
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S101038810**

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/17/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 7/2/2009
Response Action Outcome: Not reported

Action Type: FTLI
Action Status: APPREC
Action Date: 7/2/2012
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 7/21/2010
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/27/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 9/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 9/16/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 9/2/2008
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 9/3/2008
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.

NO LOCATION AID (Continued) **S101038810**

Action Date: 9/3/2008
Response Action Outcome: Not reported

Chemicals:
Chemical: #6 FUEL OIL
Quantity: 0.8 inches
Chemical: OIL
Quantity: 0.84 inches
Location Type: COMMERCIAL
Location Type: VACNTLOT
Source: SUSPECTD
Source: UST
Source: FMR USTS

ENFORCEMENT:
Region: NERO
DEP Region: NERO
DEP Program: 3A
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0020896
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 05/10/2012
ENF #: NON-NE-12-3A035
Document Type: NON
AG Ref (Y/N): Not reported
Doc Archived (Y/N): Not reported
EJ Community (Y/N): Y
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported
Demand $: Not reported
Suspended $: Not reported
Ownership: Individually Owned

Region: NERO
DEP Region: NERO
DEP Program: 3C
DEP Bureau: BWSC
Program: Not reported
Program Id: 3-0027704
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 09/03/2008
ENF #: Not reported
Document Type: IDL

NO LOCATION AID (Continued) **S101038810**

AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

Z88 **GLOBE TESTING LAB** **SEMS-ARCHIVE** **1000162217**
West **77 ALLEY ST** **RCRA NonGen / NLR** **MAD108436205**
1/4-1/2 **LYNN, MA 01902**
0.380 mi.
2007 ft. **Site 2 of 2 in cluster Z**

Relative:
Higher

Actual:
18 ft.

SEMS Archive:

Site ID:	102787
EPA ID:	MAD108436205
Cong District:	6
FIPS Code:	25009
FF:	N
NPL:	Not on the NPL
Non NPL Status:	Removal Only Site (No Site Assessment Work Needed)

SEMS Archive Detail:

Region:	1
Site ID:	102787
EPA ID:	MAD108436205
Site Name:	GLOBE TESTING
NPL:	N
FF:	N
OU:	0
Action Code:	VS
Action Name:	ARCH SITE
SEQ:	1
Start Date:	Not reported
Finish Date:	1996-07-01 00:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf In-Hse

Region:	1
Site ID:	102787
EPA ID:	MAD108436205
Site Name:	GLOBE TESTING
NPL:	N
FF:	N
OU:	0
Action Code:	RS
Action Name:	RV ASSESS
SEQ:	1
Start Date:	1995-03-08 00:00:00
Finish Date:	1995-04-11 00:00:00

GLOBE TESTING LAB (Continued) **1000162217**

Qual: Not reported
Current Action Lead: EPA Perf

RCRA NonGen / NLR:
Date form received by agency: 06/30/1997
Facility name: GLOBE TESTING LAB
Facility address: 77 ALLEY ST
LYNN, MA 01902
EPA ID: MAD108436205
Contact: CHARLES KARABELAS
Contact address: 77 ALLEY ST
LYNN, MA 01902-0000
Contact country: US
Contact telephone: 617-592-7477
Contact email: Not reported
EPA Region: 01
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: GLOBE TESTING LAB
Owner/operator address: 77 ALLEY ST
LYNN, MA 01902
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 06/10/1987
Owner/Op end date: Not reported

Owner/operator name: GLOBE TESTING LAB
Owner/operator address: 77 ALLEY ST
LYNN, MA 01902
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 06/10/1987
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No

GLOBE TESTING LAB (Continued) **1000162217**

Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Historical Generators:
Date form received by agency: 06/10/1987
Site name: GLOBE TESTING LAB
Classification: Small Quantity Generator

Violation Status: No violations found

AC89 **PROPERTY NEAR INTER. OF SOUTH & CENTRAL** **MA SHWS S106132258**
NW **33 SUTTON ST** **MA RELEASE N/A**
1/4-1/2 **LYNN, MA 01901**
0.382 mi.
2017 ft. **Site 1 of 2 in cluster AC**

Relative:
Higher

Actual:
24 ft.

SHWS:
Release Tracking Number/Current Status: 3-0023218 / RAO
Release Town: LYNN
Notification Date: 09/30/2003
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 03/18/2005
Phase: PHASE II
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: PIPE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: FUEL OIL
Quantity: 275 gallons

Actions:
Action Type: RLFA
Action Status: FLDD1A
Action Date: 10/16/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 10/20/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF

PROPERTY NEAR INTER. OF SOUTH & CENTRAL (Continued) **S106132258**

Action Date: 10/27/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/3/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 10/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/7/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/7/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/7/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/7/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 12/14/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/8/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

PROPERTY NEAR INTER. OF SOUTH & CENTRAL (Continued) **S106132258**

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/8/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 3/18/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 3/18/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/30/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 9/30/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/30/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/30/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release:
Release Tracking Number/Current Status: 3-0023218 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 09/30/2003
Category: TWO HR
Status Date: 03/18/2005
Phase: PHASE II
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

PROPERTY NEAR INTER. OF SOUTH & CENTRAL (Continued) **S106132258**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RLFA
Action Status:	FLDD1A
Action Date:	10/16/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	10/20/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/27/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/3/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/31/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	10/31/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	10/7/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/7/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	10/7/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

PROPERTY NEAR INTER. OF SOUTH & CENTRAL (Continued) **S106132258**

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/7/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 12/14/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/8/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/8/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 3/18/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 3/18/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/30/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 9/30/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/30/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/30/2003

PROPERTY NEAR INTER. OF SOUTH & CENTRAL (Continued) **S106132258**

Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: FUEL OIL
Quantity: 275 gallons
Location Type: COMMERCIAL
Source: PIPE

AD90 **THE 395 LYNNWAY PROJECT** **MA BROWNFIELDS** **S112257607**
WSW **394 LYNNWAY** **N/A**
1/4-1/2 **LYNN, MA**
0.389 mi.
2055 ft. **Site 1 of 2 in cluster AD**

Relative: Higher
Actual: 9 ft.

BROWNFIELDS:
SR Num: 32
Year: 2003
Applicants: Not reported
Project: A Brownfields Covenant helped the cleanup and reuse of an idle property on the Lynnway in Lynn. This project involved two new buildings to provide commercial and retail space for two Massachusetts companies in the flooring manufacturing and contracting business.
URL: Not reported

AB91 **WALSH GARAGE** **MA SHWS** **S103546161**
NNW **105 WILLOW ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01903** **MA HW GEN**
0.390 mi.
2057 ft. **Site 2 of 3 in cluster AB**

Relative: Higher
Actual: 27 ft.

SHWS:
Release Tracking Number/Current Status: 3-0017371 / RAO
Release Town: LYNN
Notification Date: 10/02/1998
Category: 72 HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 10/20/2004
Phase: PHASE III
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: NAPL
Quantity: 6 inches
Chemical: GASOLINE
Quantity: Not reported

WALSH GARAGE (Continued) **S103546161**

Actions:

Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	10/12/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/12/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	10/12/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/12/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	IRA Assessment Only
Action Date:	10/2/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/2/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/20/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	10/20/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	11/13/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.

WALSH GARAGE (Continued) **S103546161**

Action Date: 11/13/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 2/12/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0017371 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/02/1998
Category: 72 HR
Status Date: 10/20/2004
Phase: PHASE III
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/12/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 10/2/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

WALSH GARAGE (Continued) **S103546161**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/2/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 10/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 11/13/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/13/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 2/12/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: NAPL
Quantity: 6 inches
Chemical: GASOLINE
Quantity: Not reported
Location Type: COMMERCIAL
Source: UNKNOWN

HW GEN:
EPA Id: MAD981210347
RCRA Generator Status: VSQG
State Generator Status: Not reported

AD92 **NO LOCATION AID** **MA SHWS** **S104482327**
WSW **395 LYNNWAY** **MA LUST** **N/A**
1/4-1/2 **LYNN, MA 01901** **MA INST CONTROL**
0.394 mi. **MA RELEASE**
2078 ft. **Site 2 of 2 in cluster AD** **MA ENF**

Relative: Higher

Actual: 10 ft.

SHWS:

Release Tracking Number/Current Status:	3-0018919 / RAO
Release Town:	LYNN
Notification Date:	10/29/1999
Category:	120 DY
Associated ID:	3-0018919
Current Status:	**Response Action Outcome**
Status Date:	10/01/2008
Phase:	PHASE IV
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Oil and Hazardous Material
Source:	UST
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	VINYL CHLORIDE
Quantity:	420 micrograms per liter
Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS
Quantity:	4890 milligrams per kilogram
Chemical:	NAPHTHALENE
Quantity:	2667.9 milligrams per kilogram

Actions:

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	1/4/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type:	Release Abatement Measure
Action Status:	RMRFIN
Action Date:	1/4/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/6/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type:	Compliance and Enforcement Action
Action Status:	ACOP
Action Date:	1/9/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S104482327**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/1/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/1/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 10/12/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 10/2/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 10/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

NO LOCATION AID (Continued) **S104482327**

been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 10/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/29/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/29/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/31/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/28/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Amendment Received or Issued
Action Date: 12/27/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 12/9/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 2/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

NO LOCATION AID (Continued) **S104482327**

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 2/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 5/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 5/29/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 5/3/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 6/25/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Revised Statement or Transmittal Received
Action Date: 7/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/10/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure

NO LOCATION AID (Continued) **S104482327**

Action Status: Modified Revised or Updated Plan Received
Action Date: 8/10/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 8/24/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 8/28/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 8/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 8/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: RMRINI
Action Date: 8/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 9/1/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference

NO LOCATION AID (Continued) **S104482327**

Action Date: 9/11/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Level II - Audit Inspection
Action Date: 9/13/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 9/13/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 9/19/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 9/28/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 9/3/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 9/6/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 9/8/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

LUST:

NO LOCATION AID (Continued) **S104482327**

Facility:

Release Tracking Number/Current Status:	3-0018919 / RAO
Status Date:	10/01/2008
Source Type:	UST
Release Town:	LYNN
Notification Date:	10/29/1999
Category:	120 DY
Associated ID:	3-0018919
Phase:	PHASE IV
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Oil and Hazardous Material
Source:	UST
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	VINYL CHLORIDE
Quantity:	420 micrograms per liter
Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS
Quantity:	4890 milligrams per kilogram
Chemical:	NAPHTHALENE
Quantity:	2667.9 milligrams per kilogram

Actions:

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	1/4/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Release Abatement Measure
Action Status:	RMRFIN
Action Date:	1/4/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/6/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Compliance and Enforcement Action
Action Status:	ACOP
Action Date:	1/9/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

NO LOCATION AID (Continued) **S104482327**

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/1/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/1/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 10/12/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 10/2/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 10/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification

NO LOCATION AID (Continued) **S104482327**

Action Status: Tier 2 Extension
Action Date: 10/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/29/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/29/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/31/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/28/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Amendment Received or Issued
Action Date: 12/27/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 12/9/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 2/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal

NO LOCATION AID (Continued) **S104482327**

Action Date: 2/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 5/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 5/29/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 5/3/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 6/25/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Revised Statement or Transmittal Received
Action Date: 7/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/10/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 8/10/2006

NO LOCATION AID (Continued) **S104482327**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 8/24/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 8/28/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 8/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 8/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: RMRINI
Action Date: 8/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 9/1/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 9/11/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S104482327**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Level II - Audit Inspection
Action Date: 9/13/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 9/13/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 9/19/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 9/28/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 9/3/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 9/6/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 9/8/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:
Release Tracking Number: 3-0018919
Action Type: AUL
Action Stat: LEGNOT

NO LOCATION AID (Continued) **S104482327**

Action Date: 10/20/2008
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0018919
Action Type: AUL
Action Stat: RECPT
Action Date: 10/01/2008
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:
Release Tracking Number/Current Status: 3-0018919 / RAO
Primary ID: 3-0018919
Official City: LYNN
Notification: 10/29/1999
Category: 120 DY
Status Date: 10/01/2008
Phase: PHASE IV
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 1/4/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: RMRFIN
Action Date: 1/4/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/6/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 1/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

NO LOCATION AID (Continued) **S104482327**

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/1/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/1/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 10/12/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 10/2/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 10/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification

NO LOCATION AID (Continued) **S104482327**

Action Status: Tier 2 Extension
Action Date: 10/26/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/29/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/29/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/31/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/28/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Amendment Received or Issued
Action Date: 12/27/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 12/9/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 2/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal

NO LOCATION AID (Continued) **S104482327**

Action Date: 2/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 5/26/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 5/29/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 5/3/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 6/25/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Revised Statement or Transmittal Received
Action Date: 7/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/10/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 8/10/2006

NO LOCATION AID (Continued) **S104482327**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 8/24/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 8/28/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 8/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 8/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: RMRINI
Action Date: 8/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 8/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 9/1/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 9/11/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S104482327**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Level II - Audit Inspection
Action Date: 9/13/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 9/13/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 9/19/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 9/28/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 9/3/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 9/6/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 9/8/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: VINYL CHLORIDE
Quantity: 420 micrograms per liter
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 4890 milligrams per kilogram

NO LOCATION AID (Continued) **S104482327**

Chemical: NAPHTHALENE
Quantity: 2667.9 milligrams per kilogram
Source: UST
Source: UNKNOWN

ENFORCEMENT:
Region: NERO
DEP Region: NERO
DEP Program: 3A
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0018919
High Or Low Level Enforcement: HLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 12/09/2005
ENF #: ACO-NE-05-3A003
Document Type: ACO
AG Ref (Y/N): Not reported
Doc Archived (Y/N): Not reported
EJ Community (Y/N): Not reported
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported
Demand $: Not reported
Suspended $: Not reported
Ownership: Commercially Owned

Region: NERO
DEP Region: NERO
DEP Program: 3A
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0018919
High Or Low Level Enforcement: HLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 12/27/2007
ENF #: ACOP-NE-06-3A026 AMEND
Document Type: ACOP
AG Ref (Y/N): Not reported
Doc Archived (Y/N): Not reported
EJ Community (Y/N): Not reported
Regional Comment: Not reported
Final Payment Due Date: 12/27/2008
ACOP $: 7000
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported

NO LOCATION AID (Continued) **S104482327**

SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned
Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0018919
High Or Low Level Enforcement:	HLE
FMF #:	Not reported
Comptroller Billing Name:	395 Lynnway, LLC
Town Where Violation Occurred:	Not reported
Date Executed:	01/09/2007
ENF #:	ACOP-NE-06-3A026
Document Type:	ACOP
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	01/09/2008
ACOP $:	17500
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	17500
Ownership:	Commercially Owned

93
North
1/4-1/2
0.399 mi.
2107 ft.

COMMERCIAL PROPERTY
69-73 BUFFUM STREET
LYNN, MA 01902

MA SHWS **S117552795**
MA RELEASE **N/A**

Relative:
Higher

Actual:
35 ft.

SHWS:

Release Tracking Number/Current Status:	3-0033931 / TIER1D
Release Town:	LYNN
Notification Date:	11/14/2016
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Tier 1D, a release where the responsible party fails to provide a required submittal to DEP by a specified deadline.**
Status Date:	11/21/2017
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

COMMERCIAL PROPERTY (Continued) **S117552795**

Chemical: LEAD
Quantity: 2800 milligrams per kilogram

Actions:

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/14/2016
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/14/2016
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/14/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 11/21/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/22/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/1/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 3/21/2017
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/21/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/8/2017
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0032660 / TIERII
Release Town: LYNN
Notification Date: 01/02/2015
Category: 120 DY
Associated ID: Not reported
Current Status: **Tier II, A site/release receiving a total NRS score of less than 350, unless the site meets any of the Tier 1 Inclusionary Criteria (see above). Permits are not required at Tier 2 sites/releases and**

COMMERCIAL PROPERTY (Continued) **S117552795**

response actions may be performed under the supervision of an LSP without prior DEP approval. All pre-1993 transition sites that have accepted waivers are categorically Tier 2 sites.

Status Date: 01/08/2016
Phase: PHASE II
Response Action Outcome: -
Oil Or Haz Material: Oil and Hazardous Material
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity: 715 parts per million
Chemical: MTBE
Quantity: 1.22 parts per million
Chemical: NAPHTHALENE
Quantity: 4.17 parts per million
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 1090 parts per million

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/16/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/16/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/2/2015
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/2/2015
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/2/2015
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 1/8/2016
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/8/2016
Response Action Outcome: Not reported

COMMERCIAL PROPERTY (Continued) **S117552795**

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/8/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 11/21/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/22/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 12/8/2015
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 3/21/2017
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/30/2015
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 4/15/2016
Response Action Outcome: Not reported

Action Type: BOL
Action Status: SHPFAC
Action Date: 7/30/2015
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/21/2017
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0032660 / TIERII
Primary ID: Not reported
Official City: LYNN
Notification: 01/02/2015
Category: 120 DY
Status Date: 01/08/2016
Phase: PHASE II
Response Action Outcome: -
Oil / Haz Material Type: Oil and Hazardous Material

COMMERCIAL PROPERTY (Continued) **S117552795**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/16/2014
Response Action Outcome:	Not reported

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/16/2015
Response Action Outcome:	Not reported

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/2/2015
Response Action Outcome:	Not reported

Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/2/2015
Response Action Outcome:	Not reported

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	1/2/2015
Response Action Outcome:	Not reported

Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	1/8/2016
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/8/2016
Response Action Outcome:	Not reported

Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	1/8/2016
Response Action Outcome:	Not reported

Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	11/21/2016
Response Action Outcome:	Not reported

Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	11/22/2016
Response Action Outcome:	Not reported

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	12/8/2015
Response Action Outcome:	Not reported

COMMERCIAL PROPERTY (Continued) **S117552795**

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 3/21/2017
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/30/2015
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 4/15/2016
Response Action Outcome: Not reported

Action Type: BOL
Action Status: SHPFAC
Action Date: 7/30/2015
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/21/2017
Response Action Outcome: Not reported

Chemicals:
Chemical: C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity: 715 parts per million
Chemical: MTBE
Quantity: 1.22 parts per million
Chemical: NAPHTHALENE
Quantity: 4.17 parts per million
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 1090 parts per million
Source: UNKNOWN

Release Tracking Number/Current Status: 3-0033931 / TIER1D
Primary ID: Not reported
Official City: LYNN
Notification: 11/14/2016
Category: 120 DY
Status Date: 11/21/2017
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/14/2016
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E

COMMERCIAL PROPERTY (Continued) **S117552795**

Action Date: 11/14/2016
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/14/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 11/21/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/22/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/1/2016
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 3/21/2017
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/21/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/8/2017
Response Action Outcome: Not reported

Chemicals:
Chemical: LEAD
Quantity: 2800 milligrams per kilogram
Source: UNKNOWN

AB94 **US POSTAL SERVICE** **MA SHWS S101038922**
NNW **96 BUFFUM ST** **MA LUST N/A**
1/4-1/2 **LYNN, MA 01901** **MA RELEASE**
0.402 mi. **MA SPILLS**
2120 ft. **Site 3 of 3 in cluster AB**

Relative: Higher
Actual: 29 ft.

SHWS:
Release Tracking Number/Current Status: 3-0003618 / RAO
Release Town: LYNN
Notification Date: 07/15/1991
Category: NONE
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 12/19/1996

US POSTAL SERVICE (Continued) **S101038922**

Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil
Location Type: REPAIRYARD
Location Type: POSTOFFICE
Source: PIPE
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: WASTE OIL
Quantity: Not reported

Actions:
Action Type: TREGS
Action Status: WAVSIG
Action Date: 10/20/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: WAVACC
Action Date: 11/5/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/19/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: WAVREC
Action Date: 2/24/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 7/12/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1991
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/7/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

US POSTAL SERVICE (Continued) **S101038922**

reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 8/26/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release Tracking Number/Current Status: 3-0013275 / RAO
Release Town: LYNN
Notification Date: 12/18/1995
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 12/19/1996
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: TPH
Quantity: 710 milligrams per kilogram

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/18/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/18/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/18/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/19/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/20/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

US POSTAL SERVICE (Continued) **S101038922**

reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/29/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LUST:

Facility:
Release Tracking Number/Current Status: 3-0003618 / RAO
Status Date: 12/19/1996
Source Type: UST
Release Town: LYNN
Notification Date: 07/15/1991
Category: NONE
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Location Type: REPAIRYARD
Location Type: POSTOFFICE
Source: PIPE
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: WASTE OIL
Quantity: Not reported

Actions:
Action Type: TREGS
Action Status: WAVSIG
Action Date: 10/20/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: WAVACC
Action Date: 11/5/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/19/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS

US POSTAL SERVICE (Continued) **S101038922**

Action Status: WAVREC
Action Date: 2/24/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 7/12/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1991
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/7/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 8/26/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0003618 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 07/15/1991
Category: NONE
Status Date: 12/19/1996
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: TREGS
Action Status: WAVSIG
Action Date: 10/20/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: WAVACC
Action Date: 11/5/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

US POSTAL SERVICE (Continued) **S101038922**

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/19/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: WAVREC
Action Date: 2/24/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 7/12/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1991
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/7/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 8/26/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: WASTE OIL
Quantity: Not reported
Location Type: REPAIRYARD
Location Type: POSTOFFICE
Source: PIPE
Source: UST

Release Tracking Number/Current Status: 3-0013275 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 12/18/1995
Category: 120 DY
Status Date: 12/19/1996
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

US POSTAL SERVICE (Continued) **S101038922**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/18/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/18/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/18/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/19/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	12/20/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/29/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	TPH
Quantity:	710 milligrams per kilogram

MA Spills:

Facility ID:	0000	Spill ID:	N91-0468
Staff Lead:	MACAFEE, K	Date Entered:	19910919
Last Entered:	19910919	First Response:	19910408
Spill Date:	19910228	Spill Time:	Not reported
Report Date:	19910408	Report Time:	11:00AM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	WASTE	Contam Soil:	Not reported
Env Impact:	SOIL	Other Impact:	Not reported
Material:	HYDRAULIC FLUID	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	----------
Qty Reported:	----------	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	----------

US POSTAL SERVICE (Continued) **S101038922**

Source:	OTHER SOURCE >	Other Source:	CYLINDER
Incident:	LEAK	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	NO	LUST Elig:	NO
Report Prep:	Not reported	Category:	2A
Notifier:	B BAKER/US POSTAL SERV		
Notif Tel:	Not reported		
Days/Close:	68		

AA95 **NO LOCATION AID** **MA LUST S103043509**
NNW **315 WASHINGTON ST** **MA RELEASE N/A**
1/4-1/2 **LYNN, MA 01902**
0.402 mi.
2121 ft. **Site 2 of 2 in cluster AA**

Relative: Higher

Actual: 25 ft.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0016660 / RAO
Status Date:	06/30/1998
Source Type:	UST
Release Town:	LYNN
Notification Date:	04/02/1998
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	GASOLINE
Quantity:	144.5 parts per million
Chemical:	GASOLINE
Quantity:	144 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	4/2/1998
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/2/1998
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.

NO LOCATION AID (Continued) **S103043509**

Action Date: 4/21/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/22/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/22/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/30/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Facility:
Release Tracking Number/Current Status: 3-0004008 / LSPNFA
Status Date: 01/31/1997
Source Type: UST
Release Town: LYNN
Notification Date: 07/15/1992
Category: NONE
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: PETROLEUM
Quantity: Not reported

Actions:
Action Type: TREGS
Action Status: LSPNFA
Action Date: 1/31/1997
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1992
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S103043509**

Release:
Release Tracking Number/Current Status: 3-0004008 / LSPNFA
Primary ID: Not reported
Official City: LYNN
Notification: 07/15/1992
Category: NONE
Status Date: 01/31/1997
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: TREGS
Action Status: LSPNFA
Action Date: 1/31/1997
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1992
Response Action Outcome: Not reported

Chemicals:
Chemical: PETROLEUM
Quantity: Not reported
Location Type: COMMERCIAL
Source: UST

Release Tracking Number/Current Status: 3-0016660 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 04/02/1998
Category: 72 HR
Status Date: 06/30/1998
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/2/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/2/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

NO LOCATION AID (Continued) **S103043509**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/21/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/22/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/22/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/30/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: GASOLINE
Quantity: 144.5 parts per million
Chemical: GASOLINE
Quantity: 144 parts per million
Location Type: COMMERCIAL
Source: UST

96
North
1/4-1/2
0.404 mi.
2135 ft.

COMMERCIAL PROPERTY
69-81 BALDWIN STREET
LYNN, MA 01902

MA SHWS **S117405716**
MA INST CONTROL **N/A**
MA RELEASE

Relative:
Higher

Actual:
36 ft.

SHWS:
Release Tracking Number/Current Status: 3-0032657 / PSC
Release Town: LYNN
Notification Date: 12/30/2014
Category: 120 DY
Associated ID: Not reported
Current Status: **PSC**
Status Date: 03/16/2015
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: LEAD
Quantity: 1500 milligrams per kilogram

COMMERCIAL PROPERTY (Continued) **S117405716**

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/16/2015
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/30/2014
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	12/30/2014
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/30/2014
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/26/2015
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSARCD
Action Date:	3/16/2015
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Fee Received - FMCRA Use Only
Action Date:	3/6/2015
Response Action Outcome:	Not reported
Action Type:	Activity and Use Limitation
Action Status:	Legal Notice Published
Action Date:	3/9/2015
Response Action Outcome:	Not reported

INST CONTROL:

Release Tracking Number:	3-0032657
Action Type:	AUL
Action Stat:	FEEREC
Action Date:	03/06/2015
Response Action Outcome:	-
Release Tracking Number:	3-0032657
Action Type:	AUL
Action Stat:	LEGNOT
Action Date:	03/09/2015
Response Action Outcome:	-
Release Tracking Number:	3-0032657

COMMERCIAL PROPERTY (Continued) **S117405716**

Action Type: AUL
Action Stat: RECPT
Action Date: 02/26/2015
Response Action Outcome: -

Release:
Release Tracking Number/Current Status: 3-0032657 / PSC
Primary ID: Not reported
Official City: LYNN
Notification: 12/30/2014
Category: 120 DY
Status Date: 03/16/2015
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/16/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/30/2014
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/30/2014
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/30/2014
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/26/2015
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSARCD
Action Date: 3/16/2015
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/6/2015
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published

COMMERCIAL PROPERTY (Continued) **S117405716**

Action Date: 3/9/2015
Response Action Outcome: Not reported

Chemicals:
Chemical: LEAD
Quantity: 1500 milligrams per kilogram
Source: UNKNOWN

AE97 **NO LOCATION AID** **MA LAST** **S106030162**
West **96 ALLEY ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA**
0.413 mi.
2179 ft. **Site 1 of 3 in cluster AE**

Relative: Higher
Actual: 15 ft.

LAST:
Release Tracking Number/Current Status: 3-0023295 / RAO
Source Type: AST
Release Town: LYNN
Notification Date: 10/17/2003
Category: TWO HR
Associated ID: Not reported
Status Date: 10/01/2004
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported
Chemical: FUEL OIL #2
Quantity: 200 gallons
Location Type: RESIDNTIAL
Source: AST

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/1/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/17/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 10/17/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S106030162**

reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/24/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/6/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/7/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/7/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/23/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/23/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 12/23/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0023295 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/17/2003
Category: TWO HR
Status Date: 10/01/2004
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

NO LOCATION AID (Continued) **S106030162**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/1/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/17/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FLDD1A
Action Date:	10/17/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/21/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/24/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/6/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/7/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	11/7/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/23/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S106030162**

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/23/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 12/23/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported
Chemical: FUEL OIL #2
Quantity: 200 gallons
Location Type: RESIDNTIAL
Source: AST

AE98 **LYNNWAY** **MA SHWS S105735764**
West **96 ALLEY ST** **MA LAST N/A**
1/4-1/2 **LYNN, MA** **MA RELEASE**
0.413 mi.
2179 ft. **Site 2 of 3 in cluster AE**

Relative:
Higher

Actual:
15 ft.

SHWS:
Release Tracking Number/Current Status: 3-0022454 / RAO
Release Town: LYNN
Notification Date: 01/06/2003
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 10/01/2004
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil
Location Type: RESIDNTIAL
Source: PIPE
Source: AST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: FUEL OIL #2
Quantity: 275 gallons
Chemical: FUEL OIL
Quantity: 240 gallons
Chemical: FUEL OIL #2
Quantity: 240 gallons

Actions:
Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/12/2004

LYNNWAY (Continued) **S105735764**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/12/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 1/12/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/6/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/6/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/7/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/1/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/1/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LYNNWAY (Continued) **S105735764**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/16/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/16/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/6/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/13/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/5/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/7/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Not Required - Fee Credited-FMCRA Use Only
Action Date: 3/7/2005

LYNNWAY (Continued) **S105735764**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/3/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/30/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LAST:
Release Tracking Number/Current Status: 3-0022454 / RAO
Source Type: AST
Release Town: LYNN
Notification Date: 01/06/2003
Category: TWO HR
Associated ID: Not reported
Status Date: 10/01/2004
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Chemicals:
Chemical: FUEL OIL #2
Quantity: 275 gallons
Chemical: FUEL OIL
Quantity: 240 gallons
Chemical: FUEL OIL #2
Quantity: 240 gallons
Location Type: RESIDNTIAL
Source: PIPE
Source: AST

Actions:
Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/12/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/12/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LYNNWAY (Continued) **S105735764**

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 1/12/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/6/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/6/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/7/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/1/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/1/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/16/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/16/2003

LYNNWAY (Continued) **S105735764**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/6/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/13/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/5/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/7/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Not Required - Fee Credited-FMCRA Use Only
Action Date: 3/7/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LYNNWAY (Continued) **S105735764**

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/3/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/30/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0022454 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/06/2003
Category: TWO HR
Status Date: 10/01/2004
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/12/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 1/12/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 1/12/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

LYNNWAY (Continued) **S105735764**

reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/6/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 1/6/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/7/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/1/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/1/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/16/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/16/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA

LYNNWAY (Continued) **S105735764**

Action Status: FOLOFF
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/6/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/13/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/5/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/7/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Not Required - Fee Credited-FMCRA Use Only
Action Date: 3/7/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/3/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/30/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 275 gallons
Chemical: FUEL OIL

LYNNWAY (Continued) **S105735764**

Quantity:	240 gallons
Chemical:	FUEL OIL #2
Quantity:	240 gallons
Location Type:	RESIDNTIAL
Source:	PIPE
Source:	AST

AC99 **LYNN POLICE STATION** **MA LUST** **S103812045**
NW **18 SUTTON ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01905** **MA ASBESTOS**
0.417 mi.
2201 ft. **Site 2 of 2 in cluster AC**

Relative:
Higher

Actual:
24 ft.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0017942 / RAONR
Status Date:	02/09/2000
Source Type:	UST
Release Town:	LYNN
Notification Date:	02/03/1999
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	MUNICIPAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	GASOLINE
Quantity:	0.5 inches
Chemical:	GASOLINE
Quantity:	500 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	1/8/2001
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/22/1999
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	11/23/1999
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan

LYNN POLICE STATION (Continued) **S103812045**

Action Date: 11/23/1999
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/22/2000
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/25/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/3/1999
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/3/1999
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 2/8/2000
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 2/8/2000
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/8/2000
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 2/9/2000
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/9/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/24/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/24/1999
Response Action Outcome: Not reported

LYNN POLICE STATION (Continued) **S103812045**

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/21/2006
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/9/1999
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/2/1999
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/2/1999
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/3/1999
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/9/1999
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0017942 / RAONR
Primary ID: Not reported
Official City: LYNN
Notification: 02/03/1999
Category: 72 HR
Status Date: 02/09/2000
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/8/2001
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/22/1999
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action

LYNN POLICE STATION (Continued) **S103812045**

Action Status: Interim Deadline Letter Issued
Action Date: 11/23/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 11/23/1999
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/22/2000
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/25/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/3/1999
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/3/1999
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 2/8/2000
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 2/8/2000
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/8/2000
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 2/9/2000
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/9/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/24/1999

LYNN POLICE STATION (Continued) **S103812045**

Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/24/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/21/2006
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/9/1999
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/2/1999
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/2/1999
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/3/1999
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/9/1999
Response Action Outcome: Not reported

Chemicals:
Chemical: GASOLINE
Quantity: 0.5 inches
Chemical: GASOLINE
Quantity: 500 parts per million
Location Type: MUNICIPAL
Source: UST

ASBESTOS:
Notification: 100025630
DEP Region: NE
Notifiers Name: SUPERIOR ABATEMENT INC
Start Date: 11/30/2005
End Date: 12/16/2005
Date Entered: 16/11/2005
Entry Date: 11/16/2005
Quantity Materical Removed SF: 6976
Quantity Material Removed LF: 190
Project Description: Spr,Insl,Trns,VAT/MASTIC

LYNN POLICE STATION (Continued) **S103812045**

AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100028721
DEP Region:	NE
Notifiers Name:	SUPERIOR ABATEMENT INC
Start Date:	02/27/2006
End Date:	03/03/2006
Date Entered:	13/02/2006
Entry Date:	02/13/2006
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	50
Project Description:	Other:0
AR Tracking ID:	Not reported

LYNN POLICE STATION (Continued) **S103812045**

Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

100
NNE
1/4-1/2
0.421 mi.
2221 ft.

ELDER SERVICE PLAN OF THE NORTH SHORE IN
37 FRIEND ST
LYNN, MA 01902

MA SHWS **S109146388**
MA RELEASE **N/A**
MA HW GEN

Relative:
Higher

Actual:
36 ft.

SHWS:

Release Tracking Number/Current Status:	3-0027730 / RAO
Release Town:	LYNN
Notification Date:	05/29/2008
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**

ELDER SERVICE PLAN OF THE NORTH SHORE IN (Continued) **S109146388**

Status Date: 10/16/2008
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil and Hazardous Material
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: BENZO[A]PYRENE
Quantity: 4.26 milligrams per kilogram
Chemical: 2-METHYLNAPHTHALENE
Quantity: 1.3 milligrams per kilogram
Chemical: TPH
Quantity: 1300 milligrams per kilogram
Chemical: ARSENIC
Quantity: 24.5 milligrams per kilogram

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 12/1/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/29/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/29/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/12/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

ELDER SERVICE PLAN OF THE NORTH SHORE IN (Continued) **S109146388**

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 6/3/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 6/4/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/6/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0027730 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 05/29/2008
Category: 120 DY
Status Date: 10/16/2008
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 12/1/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/29/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

ELDER SERVICE PLAN OF THE NORTH SHORE IN (Continued) **S109146388**

reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/29/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/12/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 6/3/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 6/4/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/6/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: BENZO[A]PYRENE
Quantity: 4.26 milligrams per kilogram
Chemical: 2-METHYLNAPHTHALENE
Quantity: 1.3 milligrams per kilogram
Chemical: TPH
Quantity: 1300 milligrams per kilogram
Chemical: ARSENIC
Quantity: 24.5 milligrams per kilogram
Source: UNKNOWN

HW GEN:
EPA Id: MAC300097904
RCRA Generator Status: SQG
State Generator Status: Not reported

AE101 **RESIDENTIAL PROPERTY** **MA LAST** **S106030159**
West **102 ALLEY ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901**
0.433 mi.
2284 ft. **Site 3 of 3 in cluster AE**

Relative:
Higher

Actual:
16 ft.

LAST:

Release Tracking Number/Current Status:	3-0023282 / RAO
Source Type:	AST
Release Town:	LYNN
Notification Date:	10/16/2003
Category:	TWO HR
Associated ID:	Not reported
Status Date:	02/20/2004
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	15 gallons
Location Type:	RESIDNTIAL
Source:	AST

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/16/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/26/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/26/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action
Action Status:	Oral Approval of a Modified Plan
Action Date:	1/26/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	1/27/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/16/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been

RESIDENTIAL PROPERTY (Continued) **S106030159**

reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 10/20/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 10/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/3/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/12/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Revised Statement or Transmittal Received
Action Date: 12/26/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO

RESIDENTIAL PROPERTY (Continued) **S106030159**

Action Status: RAO Statement Received
Action Date: 2/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0023282 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/16/2003
Category: TWO HR
Status Date: 02/20/2004
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/16/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/26/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/26/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 1/26/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 1/27/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/16/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

RESIDENTIAL PROPERTY (Continued) **S106030159**

Action Type: RLFA
Action Status: FLDD1U
Action Date: 10/20/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/21/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 10/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/3/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/12/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Revised Statement or Transmittal Received
Action Date: 12/26/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/20/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/20/2004

RESIDENTIAL PROPERTY (Continued) **S106030159**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 15 gallons
Location Type: RESIDNTIAL
Source: AST

---

102 NO LOCATION AID **MA LUST S103812056**
WNW 110 BLOSSOM ST **MA RELEASE N/A**
1/4-1/2 LYNN, MA 01901
0.433 mi.
2286 ft.

Relative: Higher
Actual: 16 ft.

LUST:

Facility:
Release Tracking Number/Current Status: 3-0017955 / RAO
Status Date: 02/11/2000
Source Type: UST
Release Town: LYNN
Notification Date: 02/05/1999
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Location Type: RESIDNTIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 102 parts per million

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/11/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/14/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/5/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S103812056**

reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/5/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/2/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 7/14/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/6/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/6/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0017955 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 02/05/1999
Category: 72 HR
Status Date: 02/11/2000
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/11/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only

NO LOCATION AID (Continued) **S103812056**

Action Date: 2/14/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/5/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/5/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/2/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 7/14/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/6/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/6/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: GASOLINE
Quantity: 102 parts per million
Location Type: RESIDNTIAL
Source: UST

---

103 **NO LOCATION AID** **MA SHWS S106030365**
NNW **286 WASHINGTON ST** **MA RELEASE N/A**
1/4-1/2 **LYNN, MA 01901** **MA ASBESTOS**
0.437 mi.
2307 ft.

Relative: Higher
Actual: 25 ft.

SHWS:
Release Tracking Number/Current Status: 3-0023302 / RAO
Release Town: LYNN
Notification Date: 10/22/2003
Category: 120 DY

NO LOCATION AID (Continued) **S106030365**

Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 06/25/2004
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: TPH
Quantity: 880 milligrams per kilogram

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/28/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 11/7/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 3/5/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S106030365**

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/16/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/25/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 6/25/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0023302 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/22/2003
Category: 120 DY
Status Date: 06/25/2004
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/22/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/28/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S106030365**

reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 11/7/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 3/5/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/16/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/25/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 6/25/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: TPH
Quantity: 880 milligrams per kilogram

ASBESTOS:
Notification: 763377
DEP Region: NE
Notifiers Name: A-PLUS ASBESTOS ABATEMENT CONTRACTOR INC
Start Date: 08/11/2003
End Date: 09/11/2003
Date Entered: 31/07/2003
Entry Date: 07/31/2003
Quantity Materical Removed SF: 3571
Quantity Material Removed LF: 592
Project Description: ALL
AR Tracking ID: Not reported
Super Lic Number: Not reported
Monitor Lic Number: Not reported

NO LOCATION AID (Continued) **S106030365**

Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

AF104 **NO LOCATION AID** **MA SHWS** **S108117466**
WSW **411-417 LYNNWAY** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901**
0.440 mi.
2324 ft. **Site 1 of 2 in cluster AF**

Relative: **Higher**
Actual: **9 ft.**

SHWS:

Release Tracking Number/Current Status:	3-0026290 / RAONR
Release Town:	LYNN
Notification Date:	10/11/2006
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome Not Required**
Status Date:	02/09/2007
Phase:	Not reported

NO LOCATION AID (Continued) **S108117466**

Response Action Outcome: -
Oil Or Haz Material: Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: LEAD
Quantity: 310 milligrams per kilogram
Chemical: VINYL CHLORIDE
Quantity: 44 micrograms per liter

Actions:
Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/10/2000
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/10/2000
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/2006
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 10/26/2006
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/6/2006
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 2/9/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 2/9/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 8/24/2005
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S108117466**

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 8/28/2003
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 9/6/2007
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0026290 / RAONR
Primary ID: Not reported
Official City: LYNN
Notification: 10/11/2006
Category: 120 DY
Status Date: 02/09/2007
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/10/2000
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/10/2000
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/2006
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/2006
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 10/26/2006
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/6/2006
Response Action Outcome: Not reported

Action Type: RAO Not Required

NO LOCATION AID (Continued) **S108117466**

Action Status: Linked to a Tier Classified Site
Action Date: 2/9/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 2/9/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 8/24/2005
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 8/28/2003
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 9/6/2007
Response Action Outcome: Not reported

Chemicals:
Chemical: LEAD
Quantity: 310 milligrams per kilogram
Chemical: VINYL CHLORIDE
Quantity: 44 micrograms per liter

AG105 **LYNN POLICE STA COURT HOUSE** **MA SHWS** **S101048029**
NW **580 ESSEX ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901** **MA SPILLS**
0.454 mi. **MA ASBESTOS**
2396 ft. **Site 1 of 3 in cluster AG**

Relative: Higher
Actual: 25 ft.

SHWS:
Release Tracking Number/Current Status: 3-0006025 / RAO
Release Town: LYNN
Notification Date: 06/02/1994
Category: NONE
Associated ID: 3-0006025
Current Status: **Response Action Outcome**
Status Date: 08/21/2006
Phase: PHASE IV
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Not reported
Location Type: MUNICIPAL
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

LYNN POLICE STA COURT HOUSE (Continued) **S101048029**

Actions:

Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	1/20/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Not Required - Fee Credited-FMCRA Use Only
Action Date:	11/21/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/8/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	2/8/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	2/8/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	2/8/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/16/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	3/16/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	4/9/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Completion Statement Received

LYNN POLICE STA COURT HOUSE (Continued) **S101048029**

Action Date:	4/9/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/2/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	6/2/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Revised Statement or Transmittal Received
Action Date:	8/21/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 3
Action Status:	Revised Statement or Transmittal Received
Action Date:	8/21/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	8/21/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	8/23/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release:

Release Tracking Number/Current Status:	3-0006025 / RAO
Primary ID:	3-0006025
Official City:	LYNN
Notification:	06/02/1994
Category:	NONE
Status Date:	08/21/2006
Phase:	PHASE IV
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

LYNN POLICE STA COURT HOUSE (Continued) **S101048029**

Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	1/20/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Not Required - Fee Credited-FMCRA Use Only
Action Date:	11/21/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/8/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	2/8/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	2/8/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	RTN Linked to TCLASS Via Tier Classification Submittal
Action Date:	2/8/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/16/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	3/16/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	4/9/2004
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	4/9/2004

LYNN POLICE STA COURT HOUSE (Continued) **S101048029**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/2/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 6/2/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Revised Statement or Transmittal Received
Action Date: 8/21/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Revised Statement or Transmittal Received
Action Date: 8/21/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/21/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/23/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported
Location Type: MUNICIPAL
Source: UNKNOWN

MA Spills:

Facility ID:	3-6025	Spill ID:	N93-1256
Staff Lead:	FAGAN, J	Date Entered:	19940422
Last Entered:	19940422	First Response:	19930917
Spill Date:	19930916	Spill Time:	Not reported
Report Date:	19930916	Report Time:	03:45PM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	----------	Other Impact:	Not reported
Material:	GASOLINE	Other Material:	Not reported
Qty Reported:	----------	Qty Actual:	VAPORS

LYNN POLICE STA COURT HOUSE (Continued) **S101048029**

Qty Reported:	----------	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	UNKNOWN	Other Source:	Not reported
Incident:	UNKNOWN	Other Incdnt:	Not reported
Cleanup Type:	Not reported	Contractor:	OTHER - UNSPECIFIED
Referral:	SA	LUST Elig:	---
Report Prep:	Not reported	Category:	Not reported
Notifier:	JUDGE ROBERT CONNETTA		
Notif Tel:	Not reported		
Days/Close:	0		

ASBESTOS:

Notification:	100107209
DEP Region:	NE
Notifiers Name:	THE AULSON COMPANY INC
Start Date:	06/15/2010
End Date:	06/30/2010
Date Entered:	03/06/2010
Entry Date:	06/03/2010
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	20
Project Description:	Blr
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported

LYNN POLICE STA COURT HOUSE (Continued) **S101048029**

Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100110708
DEP Region:	NE
Notifiers Name:	THE AULSON COMPANY INC
Start Date:	08/16/2010
End Date:	09/13/2010
Date Entered:	03/08/2010
Entry Date:	08/03/2010
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	20
Project Description:	Blr
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported

LYNN POLICE STA COURT HOUSE (Continued) **S101048029**

Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

---

106 WNW 1/4-1/2 0.454 mi. 2396 ft.

Relative: Higher

Actual: 24 ft.

WALL PLAZA HOUSING DEVELOPMENT
18 BOND ST
LYNN, MA 01902

MA SHWS **U004107892**
MA LUST **N/A**
MA UST
MA RELEASE
MA ASBESTOS
MA Financial Assurance

SHWS:

Release Tracking Number/Current Status:	3-0026116 / RAO
Release Town:	LYNN
Notification Date:	08/01/2006
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	12/07/2006
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL
Source:	UST
Source:	#2HEATNGFU
Source:	1X15K

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	Not reported
Chemical:	#2 FUEL OIL
Quantity:	0.05 gallons per hour

Actions:

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	10/10/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	12/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Action Date:	12/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	8/1/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/1/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	8/28/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	9/11/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	9/29/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release Tracking Number/Current Status:	3-0026116 / RAO
Release Town:	LYNN
Notification Date:	08/01/2006
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	12/07/2006
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL
Source:	UST
Source:	#2HEATNGFU
Source:	1X15K

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Chemical: #2 FUEL OIL
Quantity: 0.05 gallons per hour

Actions:

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 10/10/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/7/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/7/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/1/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/1/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/28/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/11/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/29/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LUST:

Facility:
Release Tracking Number/Current Status: 3-0026116 / RAO
Status Date: 12/07/2006

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Source Type:	UST
Release Town:	LYNN
Notification Date:	08/01/2006
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL
Source:	UST
Source:	#2HEATNGFU
Source:	1X15K

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	Not reported
Chemical:	#2 FUEL OIL
Quantity:	0.05 gallons per hour

Actions:

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	10/10/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	12/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	8/1/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/1/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	8/28/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	9/11/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	9/29/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

UST:

Facility:

Facility ID:	22543
Owner Id:	9915
Owner:	LYNN HOUSING AUTHORITY
Owner Address:	10 CHURCH ST
Owner City,St,Zip:	LYNN, MA 01902
Telephone:	Not reported
Description:	Not reported
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.46204
Longitude:	-70.95264
Contact name:	Not reported
Contact address1:	Not reported
Contact address2:	Not reported
Contact city:	Not reported
Contact state:	Not reported
Contact zip:	Not reported
Contact email:	Not reported
Update:	2011-05-10 00:00:00
Update by:	Not reported
Fac status:	CLOSED

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	09/05/2006
Date Installed:	Not reported
Capacity:	15000
Contents:	Bulk Heati
Tank Usage:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Not reported
Pipe construct:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Release:
Release Tracking Number/Current Status: 3-0026116 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 08/01/2006
Category: 72 HR
Status Date: 12/07/2006
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 10/10/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/7/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/7/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/1/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	8/1/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	8/28/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	9/11/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	9/29/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	Not reported
Chemical:	#2 FUEL OIL
Quantity:	0.05 gallons per hour
Location Type:	RESIDNTIAL
Source:	UST
Source:	#2HEATNGFU
Source:	1X15K

ASBESTOS:

Notification:	100239295
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	03/31/2016
End Date:	03/31/2016
Date Entered:	18/03/2016
Entry Date:	03/18/2016
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	1
Project Description:	PIPEINSUL
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100077165
DEP Region:	NE
Notifiers Name:	ALL STATE ENVIRONMENTAL INC
Start Date:	09/05/2008
End Date:	09/05/2008
Date Entered:	22/08/2008
Entry Date:	08/22/2008
Quantity Materical Removed SF:	400
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Notification:	100052410
DEP Region:	NE
Notifiers Name:	ALL STATE ENVIRONMENTAL INC
Start Date:	03/28/2007
End Date:	03/28/2007
Date Entered:	05/03/2007
Entry Date:	03/05/2007
Quantity Materical Removed SF:	1050
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100195507
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	04/04/2014
End Date:	04/04/2014
Date Entered:	21/03/2014
Entry Date:	03/21/2014
Quantity Materical Removed SF:	400
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Notification:	100100724
DEP Region:	NE
Notifiers Name:	ALL STATE ENVIRONMENTAL INC
Start Date:	02/10/2010
End Date:	02/11/2010
Date Entered:	26/01/2010
Entry Date:	01/26/2010
Quantity Materical Removed SF:	400
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100145809
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	04/20/2012
End Date:	04/20/2012
Date Entered:	06/04/2012
Entry Date:	04/06/2012
Quantity Materical Removed SF:	150
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100191630
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	01/21/2014
End Date:	01/21/2014
Date Entered:	08/01/2014
Entry Date:	01/08/2014
Quantity Materical Removed SF:	100
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Notification:	100234137
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	12/22/2015
End Date:	12/22/2015
Date Entered:	07/12/2015
Entry Date:	12/07/2015
Quantity Materical Removed SF:	450
Quantity Material Removed LF:	Not reported
Project Description:	OTHER FLOORING
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	03/31/2016
End Date:	03/31/2016
Date Entered:	Not reported
Entry Date:	03/18/2016
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	1
Project Description:	PIPEINSUL
AR Tracking ID:	234213
Super Lic Number:	AS053031
Monitor Lic Number:	AM060297
Lab Lic Number:	AA000131
Year:	2016
Sticker Number:	100239295
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	7816324392
Sub Town:	Not reported
Worksite:	LOBBY
Occupied:	-1
Contractor:	AC000133
Contract Type:	WRITTEN
Hours:	7-5
Project Type:	Renv
Abatement Process:	Glv
Location:	INDOORS
Decon Process:	CHANGE ROOM

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Disposal Methods:	ALL ACM TO BE DOUBLED BAGGED IN 6 MIL LABELED ASBESTOS REMOVAL BAGS.
Facility Usage:	RESIDENTIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	-1
Owner Name:	LYNN HOUSING AUTHORITY
Owner Address:	18 BOND STREET
Owner City:	LYNN
Owner State:	MA
On Site Manager Name:	TIM LEONARD
On Site Manager Phone:	7816324392
Ins Comp:	TRAVELERS
Policy Number:	0753N602
EXP Date:	05/13/2016
Facility Size:	3000
Transporter Name:	ASBESTOS FREE, INC.
Transporter Address:	42 BROADWAY
Transporter City:	WAKEFIELD
Transporter State:	MA
Final Site:	Not reported
Certified Name:	FRANK ARSENAULT
Cert Sign Date:	03/18/2016
Certified Company:	ASBESTOS FREE, INC.
Certified Phone:	7812454403
Entered_by:	MARGARET
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	07/21/2017
End Date:	07/21/2017
Date Entered:	Not reported
Entry Date:	07/10/2017
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	3
Project Description:	PIPEINSUL
AR Tracking ID:	271674
Super Lic Number:	AS053031
Monitor Lic Number:	AM060297
Lab Lic Number:	AA000131
Year:	2017
Sticker Number:	100268432
Form Type:	ANF-001
Fee Status:	EXEMPT
Facility Phone:	7816329363
Sub Town:	Not reported
Worksite:	BOILER ROOM
Occupied:	-1
Contractor:	AC000133
Contract Type:	WRITTEN
Hours:	7-5
Project Type:	Renv
Abatement Process:	Glv
Location:	INDOORS
Decon Process:	CHANGE ROOM
Disposal Methods:	ALL ACM TO BE DOUBLED BAGGED IN 6 MIL LABELLED ASBESTOS REMOVAL BAGS

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Facility Usage:	RESIDENTIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	-1
Owner Name:	LYNN HOUSING AUTHORITY
Owner Address:	18 BOND STREET
Owner City:	LYNN
Owner State:	MA
On Site Manager Name:	PETER OLSON
On Site Manager Phone:	7816329363
Ins Comp:	TRAVELERS INSURANCE
Policy Number:	0753N602
EXP Date:	05/13/2018
Facility Size:	2000
Transporter Name:	ASBESTOS FREE, INC.
Transporter Address:	42 BROADWAY
Transporter City:	WAKEFIELD
Transporter State:	MA
Final Site:	Not reported
Certified Name:	FRANK ARSENAULT
Cert Sign Date:	07/10/2017
Certified Company:	WAKEFIELD
Certified Phone:	7812454403
Entered_by:	MARGARET
Notification:	100160781
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	10/19/2012
End Date:	10/19/2012
Date Entered:	08/10/2012
Entry Date:	10/08/2012
Quantity Materical Removed SF:	20
Quantity Material Removed LF:	0
Project Description:	Blr
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Notification:	100191037
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	01/06/2014
End Date:	01/06/2014
Date Entered:	20/12/2013
Entry Date:	12/20/2013
Quantity Materical Removed SF:	300
Quantity Material Removed LF:	20
Project Description:	Trns,FLOOR TILE
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Notification:	100019801
DEP Region:	NE
Notifiers Name:	ALL STATE ENVIRONMENTAL INC
Start Date:	07/25/2005
End Date:	07/28/2005
Date Entered:	08/07/2005
Entry Date:	07/08/2005
Quantity Materical Removed SF:	700
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Notification:	100060415
DEP Region:	NE
Notifiers Name:	ALL STATE ENVIRONMENTAL INC
Start Date:	09/05/2007
End Date:	09/06/2007
Date Entered:	23/08/2007
Entry Date:	08/23/2007
Quantity Materical Removed SF:	520
Quantity Material Removed LF:	0
Project Description:	Trns
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100228007
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	09/15/2015
End Date:	09/15/2015
Date Entered:	02/09/2015
Entry Date:	09/02/2015
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	1
Project Description:	BOILER
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

Notification:	100228007R1
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	09/21/2015
End Date:	09/21/2015
Date Entered:	15/09/2015
Entry Date:	09/15/2015
Quantity Materical Removed SF:	0
Quantity Material Removed LF:	1
Project Description:	BOILER
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported

WALL PLAZA HOUSING DEVELOPMENT (Continued) **U004107892**

Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

MA Financial Assurance 2:

Facility Id:	22543
Description:	Residential
Work Phone:	(781) 598-3434

---

107 NW 1/4-1/2 0.464 mi. 2450 ft.

COMMERCIAL PROPERTY
16 CITY HALL SQUARE
LYNN, MA 01901

MA SHWS **S121826607**
MA RELEASE **N/A**

Relative: Higher

Actual: 29 ft.

SHWS:

Release Tracking Number/Current Status:	3-0034754 / UNCLSS
Release Town:	LYNN
Notification Date:	02/07/2018
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Unclassified**
Status Date:	02/07/2018
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	2-METHYLNAPHTHALENE
Quantity:	6.04 milligrams per kilogram

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	2/28/2018
Response Action Outcome:	Not reported

COMMERCIAL PROPERTY (Continued) **S121826607**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/7/2018
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/7/2018
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/7/2018
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0034754 / UNCLSS
Primary ID: Not reported
Official City: LYNN
Notification: 02/07/2018
Category: 120 DY
Status Date: 02/07/2018
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/28/2018
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/7/2018
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/7/2018
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/7/2018
Response Action Outcome: Not reported

Chemicals:
Chemical: 2-METHYLNAPHTHALENE
Quantity: 6.04 milligrams per kilogram
Source: UNKNOWN

AG108 **BOMAR REALTY TRUST** **MA SHWS** **S100042929**
NW **597 ESSEX ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901** **MA ENF**
0.475 mi.
2508 ft. **Site 2 of 3 in cluster AG**

Relative: Higher

Actual: 25 ft.

SHWS:

Release Tracking Number/Current Status:	3-0000970 / RAO
Release Town:	LYNN
Notification Date:	01/15/1990
Category:	NONE
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	06/26/2008
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not reported
Location Type:	COMMERCIAL

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not reported

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1990
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	CILS
Action Date:	1/8/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	1/8/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/27/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	CILS
Action Date:	2/15/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action

BOMAR REALTY TRUST (Continued) **S100042929**

Action Status: Interim Deadline Letter Issued
Action Date: 2/15/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/30/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/11/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 7/15/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/27/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0000970 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1990
Category: NONE
Status Date: 06/26/2008
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1990
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

BOMAR REALTY TRUST (Continued) **S100042929**

Action Type: Compliance and Enforcement Action
Action Status: CILS
Action Date: 1/8/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/8/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/27/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: CILS
Action Date: 2/15/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 2/15/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/26/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/30/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/11/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 7/15/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/27/2007

BOMAR REALTY TRUST (Continued) **S100042929**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported
Location Type: COMMERCIAL

ENFORCEMENT:
Region: NERO
DEP Region: NERO
DEP Program: 3C
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0000970
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 01/08/2008
ENF #: Not reported
Document Type: IDL
AG Ref (Y/N): Not reported
Doc Archived (Y/N): Not reported
EJ Community (Y/N): Not reported
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported
Demand $: Not reported
Suspended $: Not reported
Ownership: Commercially Owned

Region: NERO
DEP Region: NERO
DEP Program: 3C
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0000970
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 02/15/2008
ENF #: Not reported
Document Type: IDL
AG Ref (Y/N): Not reported
Doc Archived (Y/N): Not reported
EJ Community (Y/N): Not reported
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported

BOMAR REALTY TRUST (Continued) **S100042929**

PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned
Region:	NERO
DEP Region:	NERO
DEP Program:	3P
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0000970
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	08/27/2007
ENF #:	NON-NE-07-3P015
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

AF109 **RTE 1A RIGHT OF WAY** **MA SHWS** **S108962916**
WSW **RTE 1A AT MARINE BLVD** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA**
0.477 mi.
2517 ft. **Site 2 of 2 in cluster AF**

Relative:
Higher

Actual:
9 ft.

SHWS:

Release Tracking Number/Current Status:	3-0027306 / URAM
Release Town:	LYNN
Notification Date:	12/03/2007
Category:	120 DY
Associated ID:	Not reported
Current Status:	**URAM**
Status Date:	12/10/2007
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	RIGHTOFWAY
Location Type:	UTILEASE
Source:	URBANFILL
Source:	UNKNOWN

RTE 1A RIGHT OF WAY (Continued) **S108962916**

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: LEAD
Quantity: 314 milligrams per kilogram

Actions:
Action Type: Utility-related Abatement Measure
Action Status: Notification of URAM Received
Action Date: 12/10/2007
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 12/11/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/21/2007
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/3/2007
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notice of Intent to Conduct a URAM
Action Date: 12/3/2007
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 2/29/2008
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 4/1/2008
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0027306 / URAM
Release Town: LYNN
Notification Date: 12/03/2007
Category: 120 DY
Associated ID: Not reported
Current Status: **URAM**
Status Date: 12/10/2007
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material
Location Type: RIGHTOFWAY
Location Type: UTILEASE

RTE 1A RIGHT OF WAY (Continued) **S108962916**

Source: URBANFILL
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: LEAD
Quantity: 314 milligrams per kilogram

Actions:
Action Type: Utility-related Abatement Measure
Action Status: Notification of URAM Received
Action Date: 12/10/2007
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 12/11/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/21/2007
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/3/2007
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notice of Intent to Conduct a URAM
Action Date: 12/3/2007
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 2/29/2008
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 4/1/2008
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0027306 / URAM
Primary ID: Not reported
Official City: LYNN
Notification: 12/03/2007
Category: 120 DY
Status Date: 12/10/2007
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

RTE 1A RIGHT OF WAY (Continued) **S108962916**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Utility-related Abatement Measure
Action Status:	Notification of URAM Received
Action Date:	12/10/2007
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	12/11/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	12/21/2007
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/3/2007
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Notice of Intent to Conduct a URAM
Action Date:	12/3/2007
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	2/29/2008
Response Action Outcome:	Not reported
Action Type:	Utility-related Abatement Measure
Action Status:	Completion Statement Received
Action Date:	4/1/2008
Response Action Outcome:	Not reported

Chemicals:

Chemical:	LEAD
Quantity:	314 milligrams per kilogram
Location Type:	RIGHTOFWAY
Location Type:	UTILEASE
Source:	URBANFILL
Source:	UNKNOWN

AH110 **NO LOCATION AID** **MA LUST** **S103250008**
WSW **183 SHEPPARD ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01902**
0.480 mi.
2533 ft. **Site 1 of 3 in cluster AH**

Relative: Higher
Actual: 11 ft.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0016814 / RAO
Status Date:	02/01/1999

NO LOCATION AID (Continued) **S103250008**

Source Type: UST
Release Town: LYNN
Notification Date: 05/18/1998
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Location Type: INDUSTRIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 200 parts per million
Chemical: GASOLINE
Quantity: 100 parts per million

Actions:
Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/30/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 10/30/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 12/22/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/1/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/1/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E

NO LOCATION AID (Continued) **S103250008**

Action Date: 5/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 5/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/20/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/20/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/14/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Denial of Plan
Action Date: 8/6/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0016814 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 05/18/1998
Category: 72 HR
Status Date: 02/01/1999
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

NO LOCATION AID (Continued) **S103250008**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/30/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 10/30/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 12/22/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/1/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/1/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 5/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/20/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/20/1998

NO LOCATION AID (Continued) **S103250008**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/14/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Denial of Plan
Action Date: 8/6/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: GASOLINE
Quantity: 200 parts per million
Chemical: GASOLINE
Quantity: 100 parts per million
Location Type: COMMERCIAL
Location Type: INDUSTRIAL
Source: UST

---

111 NNW 1/4-1/2 0.484 mi. 2555 ft. **REF TRUCKING AT NRT BUS TERMINAL** **MA SHWS S110822259**
41 STEWART STREET **MA RELEASE N/A**
LYNN, MA 01902 **MA HW GEN**

Relative: Higher
Actual: 35 ft.

SHWS:
Release Tracking Number/Current Status: 3-0029906 / RAO
Release Town: LYNN
Notification Date: 04/05/2011
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 06/06/2011
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: VEHICLE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: DIESEL FUEL
Quantity: 10 gallons

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 2/14/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced

REF TRUCKING AT NRT BUS TERMINAL (Continued) **S110822259**

to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/26/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/5/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/5/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release:
Release Tracking Number/Current Status: 3-0029906 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 04/05/2011
Category: TWO HR
Status Date: 06/06/2011
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

REF TRUCKING AT NRT BUS TERMINAL (Continued) **S110822259**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	2/14/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/26/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	4/5/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/5/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/6/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	6/6/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/6/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	6/6/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	10 gallons
Location Type:	COMMERCIAL
Source:	VEHICLE

REF TRUCKING AT NRT BUS TERMINAL (Continued) **S110822259**

HW GEN:
EPA Id: MV7815988780
RCRA Generator Status: VSQG
State Generator Status: SQG-MA

---

112 North 1/4-1/2 0.484 mi. 2556 ft. **PROPERTY** **MA SHWS S100363044**
181 UNION ST **MA RELEASE N/A**
LYNN, MA 01901 **MA ASBESTOS**

Relative: Higher

Actual: 43 ft.

SHWS:
Release Tracking Number/Current Status: 3-0001851 / RAO
Release Town: LYNN
Notification Date: 01/15/1989
Category: NONE
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 03/10/1997
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Not reported

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1989
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: RAOEQ
Action Date: 3/10/1997
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0001851 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1989
Category: NONE
Status Date: 03/10/1997
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:

PROPERTY (Continued) **S100363044**

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1989
Response Action Outcome:	Not reported
Action Type:	TREGS
Action Status:	RAOEQ
Action Date:	3/10/1997
Response Action Outcome:	Not reported

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not reported

ASBESTOS:

Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	04/07/2016
End Date:	04/07/2016
Date Entered:	Not reported
Entry Date:	03/25/2016
Quantity Materical Removed SF:	300
Quantity Material Removed LF:	Not reported
Project Description:	OTHER FLOOR TILES
AR Tracking ID:	234710
Super Lic Number:	AS053031
Monitor Lic Number:	AM060275
Lab Lic Number:	AA000122
Year:	2016
Sticker Number:	100239709
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	7815131506
Sub Town:	Not reported
Worksite:	2ND FLOOR
Occupied:	-1
Contractor:	AC000133
Contract Type:	WRITTEN
Hours:	7-5
Project Type:	Renv
Abatement Process:	Fcontain
Location:	INDOORS
Decon Process:	3 STAGE DECON
Disposal Methods:	ALL ACM TO BE DOUBLED BAGGED IN 6 MIL LABELED ASBESTOS REMOVAL BAGS.
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	MAOLIS REALTY TRUST
Owner Address:	181 UNION STREET
Owner City:	LYNN
Owner State:	MA
On Site Manager Name:	GORDON HALL
On Site Manager Phone:	7815131506

PROPERTY (Continued) **S100363044**

Ins Comp:	TRAVELERS
Policy Number:	0753N602
EXP Date:	05/13/2016
Facility Size:	48000
Transporter Name:	ASBESTSO FREE, INC.
Transporter Address:	42 BROADWAY
Transporter City:	WAKEFIELD
Transporter State:	MA
Final Site:	Not reported
Certified Name:	FRANK ARSENAULT
Cert Sign Date:	03/25/2016
Certified Company:	ASBESTOS FREE, INC.
Certified Phone:	7812454403
Entered_by:	MARGARET
Notification:	768886
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	05/15/2003
End Date:	05/20/2003
Date Entered:	15/05/2003
Entry Date:	05/15/2003
Quantity Materical Removed SF:	3500
Quantity Material Removed LF:	Not reported
Project Description:	FLOOR TILE
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported

PROPERTY (Continued) **S100363044**

Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported
Notification:	100239709
DEP Region:	NE
Notifiers Name:	ASBESTOS FREE INC
Start Date:	04/07/2016
End Date:	04/07/2016
Date Entered:	25/03/2016
Entry Date:	03/25/2016
Quantity Materical Removed SF:	300
Quantity Material Removed LF:	Not reported
Project Description:	OTHER FLOOR TILES
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported

PROPERTY (Continued) **S100363044**

EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

AG113 **BILL WOODS TOWING SERVICE** **MA SHWS** **S108117188**
NW **585 ESSEX ST** **MA RELEASE** **N/A**
1/4-1/2 **LYNN, MA 01901**
0.486 mi.
2567 ft. **Site 3 of 3 in cluster AG**

Relative:
Higher

Actual:
25 ft.

SHWS:

Release Tracking Number/Current Status:	3-0026221 / RAO
Release Town:	LYNN
Notification Date:	09/12/2006
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	09/21/2010
Phase:	PHASE II
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil and Hazardous Material
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	CHROMIUM
Quantity:	34 milligrams per kilogram
Chemical:	C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity:	1250 milligrams per kilogram
Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS
Quantity:	698 milligrams per kilogram
Chemical:	NAPHTHALENE
Quantity:	4.3 milligrams per kilogram
Chemical:	METHYL TERT-BUTYL ETHER
Quantity:	1.6 milligrams per liter
Chemical:	2-METHYLNAPHTHALENE
Quantity:	10.4 milligrams per kilogram

Actions:

Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	3/19/2010
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure

BILL WOODS TOWING SERVICE (Continued) **S108117188**

Action Status: Level I - Technical Screen Audit
Action Date: 3/22/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/23/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 3/9/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/17/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 6/25/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: EPETOP
Action Date: 6/30/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 6/30/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/30/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/4/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/4/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

BILL WOODS TOWING SERVICE (Continued) **S108117188**

reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/6/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/12/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/12/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/19/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/19/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 9/19/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 9/19/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/21/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0026221 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 09/12/2006
Category: 120 DY

BILL WOODS TOWING SERVICE (Continued) **S108117188**

Status Date: 09/21/2010
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/19/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 3/22/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/23/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 3/9/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/17/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 6/25/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: EPETOP
Action Date: 6/30/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Revised Statement or Transmittal Received
Action Date: 6/30/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

BILL WOODS TOWING SERVICE (Continued) **S108117188**

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/30/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/4/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/4/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/6/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/12/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/12/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/19/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/19/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 9/19/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 9/19/2007

BILL WOODS TOWING SERVICE (Continued) **S108117188**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/21/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: CHROMIUM
Quantity: 34 milligrams per kilogram
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 1250 milligrams per kilogram
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 698 milligrams per kilogram
Chemical: NAPHTHALENE
Quantity: 4.3 milligrams per kilogram
Chemical: METHYL TERT-BUTYL ETHER
Quantity: 1.6 milligrams per liter
Chemical: 2-METHYLNAPHTHALENE
Quantity: 10.4 milligrams per kilogram
Source: UNKNOWN

AI114 **BOSTON GAS CO** **EDR MGP** **1008408453**
WSW **436 LYNNWAY** **N/A**
1/4-1/2 **LYNN, MA 1901**
0.493 mi.
2604 ft. **Site 1 of 2 in cluster AI**

Relative: Higher
Actual: 9 ft.

Manufactured Gas Plants:
Alternate Name:LYNN GAS AND ELECTRIC CO. No additional information available

---

AI115 **BOSTON GAS CO OPERATIONS CTR** **SEMS-ARCHIVE** **1015734368**
WSW **436 LYNNWAY** **RCRA NonGen / NLR** **MAD980520787**
1/4-1/2 **LYNN, MA 01901** **NY MANIFEST**
0.493 mi.
2604 ft. **Site 2 of 2 in cluster AI**

Relative: Higher
Actual: 9 ft.

SEMS Archive:
Site ID: 100695
EPA ID: MAD980520787
Cong District: 6
FIPS Code: 25009
FF: N
NPL: Not on the NPL
Non NPL Status: NFRAP-Site does not qualify for the NPL based on existing information

SEMS Archive Detail:
Region: 1
Site ID: 100695
EPA ID: MAD980520787
Site Name: BOSTON GAS CO OPERATIONS CTR
NPL: N

BOSTON GAS CO OPERATIONS CTR (Continued) **1015734368**

FF:	N
OU:	0
Action Code:	VS
Action Name:	ARCH SITE
SEQ:	1
Start Date:	Not reported
Finish Date:	1983-08-01 00:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf In-Hse
Region:	1
Site ID:	100695
EPA ID:	MAD980520787
Site Name:	BOSTON GAS CO OPERATIONS CTR
NPL:	N
FF:	N
OU:	0
Action Code:	DS
Action Name:	DISCVRY
SEQ:	1
Start Date:	1981-06-01 00:00:00
Finish Date:	1981-06-01 00:00:00
Qual:	Not reported
Current Action Lead:	EPA Perf
Region:	1
Site ID:	100695
EPA ID:	MAD980520787
Site Name:	BOSTON GAS CO OPERATIONS CTR
NPL:	N
FF:	N
OU:	0
Action Code:	PA
Action Name:	PA
SEQ:	1
Start Date:	Not reported
Finish Date:	1983-08-01 00:00:00
Qual:	N
Current Action Lead:	EPA Perf

RCRA NonGen / NLR:

Date form received by agency:	09/22/1982
Facility name:	BOSTON GAS CO
Facility address:	LYNNWAY WILBRAHAM, MA 01095
EPA ID:	MAD980520787
Mailing address:	1 BEACON ST BOSTON, MA 01901
Contact:	JAMES TOBIN
Contact address:	1 BEACON ST BOSTON, MA 01901
Contact country:	US
Contact telephone:	617-742-8400
Contact email:	Not reported
EPA Region:	01
Classification:	Non-Generator

BOSTON GAS CO OPERATIONS CTR (Continued) **1015734368**

Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: BOSTON GAS CO
Owner/operator address: 1 BEACON ST
BOSTON, MA 01901
Owner/operator country: US
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 12/08/1991
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

. Waste code: U151
. Waste name: MERCURY

Violation Status: No violations found

NY MANIFEST:
Country: USA
EPA ID: MAD980520787
Facility Status: Not reported
Location Address 1: 436 GLENN WAY
Code: BP
Location Address 2: Not reported
Total Tanks: Not reported
Location City: LENA
Location State: MA
Location Zip: Not reported
Location Zip 4: Not reported

NY MANIFEST:
EPAID: MAD980520787
Mailing Name: BOSTON GAS CO
Mailing Contact: ALEXANDER G TAFT
Mailing Address 1: ONE BEACN STREET
Mailing Address 2: Not reported

BOSTON GAS CO OPERATIONS CTR (Continued) **1015734368**

Mailing City:	BOSTON
Mailing State:	MA
Mailing Zip:	02108
Mailing Zip 4:	Not reported
Mailing Country:	USA
Mailing Phone:	6177428400

NY MANIFEST:

Document ID:	NYB7315227
Manifest Status:	K
seq:	Not reported
Year:	1996
Trans1 State ID:	81116VNY
Trans2 State ID:	Not reported
Generator Ship Date:	12/18/1996
Trans1 Recv Date:	12/18/1996
Trans2 Recv Date:	/ /
TSD Site Recv Date:	12/19/1996
Part A Recv Date:	01/08/1997
Part B Recv Date:	01/08/1997
Generator EPA ID:	MAD980520787
Trans1 EPA ID:	NYD982792814
Trans2 EPA ID:	Not reported
TSDF ID 1:	NYD000632372
TSDF ID 2:	Not reported
Manifest Tracking Number:	Not reported
Import Indicator:	Not reported
Export Indicator:	Not reported
Discr Quantity Indicator:	Not reported
Discr Type Indicator:	Not reported
Discr Residue Indicator:	Not reported
Discr Partial Reject Indicator:	Not reported
Discr Full Reject Indicator:	Not reported
Manifest Ref Number:	Not reported
Alt Facility RCRA ID:	Not reported
Alt Facility Sign Date:	Not reported
MGMT Method Type Code:	Not reported
Waste Code:	D001 - NON-LISTED IGNITABLE WASTES
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Waste Code:	Not reported
Quantity:	00060
Units:	P - Pounds
Number of Containers:	003
Container Type:	CY - Cylinders
Handling Method:	B Incineration, heat recovery, burning.
Specific Gravity:	100

Click this hyperlink while viewing on your computer to access additional NY_MANIFEST: detail in the EDR Site Report.

AH116
WSW
1/4-1/2
0.495 mi.
2612 ft.

NO LOCATION AID
GAS WHARF RD
LYNN, MA

Site 2 of 3 in cluster AH

MA LUST
MA RELEASE

S103812164
N/A

Relative:
Higher

Actual:
12 ft.

LUST:

Facility:

Release Tracking Number/Current Status:	3-0018100 / TIER1D
Status Date:	03/30/2000
Source Type:	UST
Release Town:	LYNN
Notification Date:	03/23/1999
Category:	120 DY
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	ROADWAY
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	TPH
Quantity:	4000 parts per million

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/23/1999
Response Action Outcome:	Not reported

Release:

Release Tracking Number/Current Status:	3-0018100 / TIER1D
Primary ID:	Not reported
Official City:	LYNN
Notification:	03/23/1999
Category:	120 DY
Status Date:	03/30/2000
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/23/1999
Response Action Outcome:	Not reported

Chemicals:

NO LOCATION AID (Continued) **S103812164**

Chemical:	TPH
Quantity:	4000 parts per million
Location Type:	ROADWAY
Source:	UST

AH117 **FORCE MAIN PROJECT** **MA SHWS** **S100829764**
WSW **GAS WHARF RD** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA 01901**
0.502 mi.
2652 ft. **Site 3 of 3 in cluster AH**

Relative:
Higher

Actual:
9 ft.

SHWS:

Release Tracking Number/Current Status:	3-0003592 / URAM
Release Town:	LYNN
Notification Date:	07/15/1991
Category:	NONE
Associated ID:	Not reported
Current Status:	**URAM**
Status Date:	10/01/1993
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Not reported
Location Type:	MUNICIPAL
Location Type:	ROADWAY

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not reported

Actions:

Action Type:	Utility-related Abatement Measure
Action Status:	Notice of Intent to Conduct a URAM
Action Date:	10/1/1993
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	7/15/1991
Response Action Outcome:	Not reported

Release:

Release Tracking Number/Current Status:	3-0003592 / URAM
Primary ID:	Not reported
Official City:	LYNN
Notification:	07/15/1991
Category:	NONE
Status Date:	10/01/1993
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Not reported

FORCE MAIN PROJECT (Continued) **S100829764**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Utility-related Abatement Measure
Action Status:	Notice of Intent to Conduct a URAM
Action Date:	10/1/1993
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	7/15/1991
Response Action Outcome:	Not reported

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not reported
Location Type:	MUNICIPAL
Location Type:	ROADWAY

118
ENE
1/2-1
0.504 mi.
2659 ft.

RESIDENTIAL PROPERTY **MA SHWS S102687414**
11 BALTIMORE ST **MA RELEASE N/A**
LYNN, MA 01902

Relative:
Higher

Actual:
48 ft.

SHWS:

Release Tracking Number/Current Status:	3-0015455 / RAO
Release Town:	LYNN
Notification Date:	08/18/1997
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	10/16/1997
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	TPH
Quantity:	18000 parts per million
Chemical:	#2 FUEL OIL
Quantity:	Not reported

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/16/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E

RESIDENTIAL PROPERTY (Continued) **S102687414**

Action Date: 8/18/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Oral Approval of Plan or Action
Action Date: 8/18/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 8/22/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/22/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0015455 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 08/18/1997
Category: 120 DY
Status Date: 10/16/1997
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/16/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/18/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Oral Approval of Plan or Action
Action Date: 8/18/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

RESIDENTIAL PROPERTY (Continued) **S102687414**

Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	8/22/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	8/22/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	TPH
Quantity:	18000 parts per million
Chemical:	#2 FUEL OIL
Quantity:	Not reported
Location Type:	RESIDNTIAL

---

119 SW 1/2-1 0.517 mi. 2731 ft. **LYNN GAS & ELECTRIC (FMR)** **MA SHWS S106953924**
MARINE BOULEVARD AND RILEY WAY **MA INST CONTROL N/A**
LYNN, MA **MA RELEASE**

Relative: Higher

Actual: 9 ft.

SHWS:

Release Tracking Number/Current Status:	3-0001308 / RAO
Release Town:	LYNN
Notification Date:	01/15/1987
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	10/02/2003
Phase:	Not reported
Response Action Outcome:	C1 - C1
Oil Or Haz Material:	Oil and Hazardous Material
Location Type:	COGASPLANT
Location Type:	INDUSTRIAL
Location Type:	FORMER
Source:	UNKNOWN
Source:	UNCONTAIN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	OIL
Quantity:	Not reported
Chemical:	COAL TAR PITCH
Quantity:	Not reported
Chemical:	TPH
Quantity:	6500 milligrams per kilogram

Actions:

Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	1/11/2007

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 1/14/2015
Response Action Outcome: C1

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1987
Response Action Outcome: C1

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 1/15/1999
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 1/15/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 1/15/2015
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 1/16/2014
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/22/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 1/25/2010
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: LSP of Record Change via Minor Permit Mod
Action Date: 1/25/2010
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 1/26/2010
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 1/8/2002
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/1/2008
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/1/2009
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/1/2010
Response Action Outcome:	C1
Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	10/17/2017
Response Action Outcome:	C1
Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection
Action Date:	10/17/2017
Response Action Outcome:	C1
Action Type:	Tier Classification
Action Status:	Permit Effective Date
Action Date:	10/2/2001
Response Action Outcome:	C1
Action Type:	Partial RAO for this RTN
Action Status:	RAO Statement Received
Action Date:	10/2/2003
Response Action Outcome:	C1
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/2/2003
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/2/2003
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Periodic Review Opinion Evaluating Temp Solution
Action Date:	10/2/2008
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT
Action Date:	10/2/2017
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 10/2/2017
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 10/21/2016
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/22/1996
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/23/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 10/23/2017
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/3/2005
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/5/2007
Response Action Outcome: C1

Action Type: RLFA
Action Status: FOLFLD
Action Date: 10/5/2017
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/6/2004
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/6/2006
Response Action Outcome: C1

Action Type: BOL
Action Status: SHPFAC
Action Date: 11/12/2014
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 11/13/2001
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/14/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/16/2015
Response Action Outcome: C1

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/17/2004
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 11/17/2004
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 11/19/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/19/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/2/2007
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/20/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/21/2011
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 11/23/2004
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/25/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 11/26/2012
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/27/2010
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/3/2009
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/3/2009
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/4/2013
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 11/5/2001
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/7/2008
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/8/1994
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 12/11/2003
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 12/11/2003
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 12/21/2009
Response Action Outcome: C1

Action Type: TREGS
Action Status: LSPFA
Action Date: 12/3/1993
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	12/6/1993
Response Action Outcome:	C1
Action Type:	TREGS
Action Status:	LSPFA
Action Date:	12/6/1993
Response Action Outcome:	C1
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	2/12/1999
Response Action Outcome:	C1
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	2/12/2001
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	2/20/1996
Response Action Outcome:	C1
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	2/21/1992
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	Completion Statement Received
Action Date:	2/23/2005
Response Action Outcome:	C1
Action Type:	Phase 4
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	2/8/2000
Response Action Outcome:	C1
Action Type:	Phase 4
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	3/10/2000
Response Action Outcome:	C1
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/10/2000
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	3/12/2002
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Modified Revised or Updated Plan Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 3/13/2007
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 3/13/2014
Response Action Outcome: C1

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 3/17/1998
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/28/2014
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 3/28/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 3/28/2016
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/29/2012
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/29/2013
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/30/2007
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/30/2016
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 3/30/2016
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/31/2009
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/31/2010
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/31/2011
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT
Action Date:	3/31/2015
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/31/2015
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/31/2017
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT
Action Date:	3/31/2017
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	3/6/1997
Response Action Outcome:	C1
Action Type:	Phase 4
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	4/14/2000
Response Action Outcome:	C1
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	4/15/2010
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	4/16/1996
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	4/18/2014
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 4/2/2018
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/2/2018
Response Action Outcome: C1

Action Type: Partial RAO for this RTN
Action Status: Inspection and Monitoring Report Received
Action Date: 4/21/2005
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/21/2005
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 4/24/2017
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/3/2006
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/3/2008
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 4/4/1997
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/8/2004
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/8/2005
Response Action Outcome: C1

Action Type: BOL
Action Status: SHPFAC
Action Date: 4/9/2014
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 5/1/2001
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/10/2007
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/14/2015
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 5/14/2015
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/15/2014
Response Action Outcome: C1

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 5/19/2000
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/23/2012
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/24/2011
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/24/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/25/2010
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 5/30/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/4/2009
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 5/7/2001
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/7/2008
Response Action Outcome: C1

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/9/2005
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 6/1/1999
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 6/1/2001
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 6/20/2002
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 6/23/2016
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 6/23/2016
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/3/2014
Response Action Outcome: C1

Action Type: BOL
Action Status: SHPFAC
Action Date: 6/3/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/10/2009
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 7/16/2009
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	Utility-related Abatement Measure
Action Status:	NPERTN
Action Date:	7/21/2003
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	NPERTN
Action Date:	7/28/2003
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	7/7/1994
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	7/8/1994
Response Action Outcome:	C1
Action Type:	Tier Classification
Action Status:	REVMP
Action Date:	7/9/2009
Response Action Outcome:	C1
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	8/22/1994
Response Action Outcome:	C1
Action Type:	Partial RAO for this RTN
Action Status:	RAO Statement Received
Action Date:	8/23/1999
Response Action Outcome:	C1
Action Type:	Tier Classification
Action Status:	Tier 1B Classification
Action Date:	8/30/1994
Response Action Outcome:	C1
Action Type:	Tier Classification
Action Status:	Permit Effective Date
Action Date:	8/30/1994
Response Action Outcome:	C1
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/5/2016
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	Completion Statement Received
Action Date:	9/16/2003
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	Completion Statement Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 9/17/2001
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 9/2/1999
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 9/20/1994
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/24/2016
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 9/26/2014
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/26/2014
Response Action Outcome: C1

Action Type: BOL
Action Status: SHPFAC
Action Date: 9/27/2016
Response Action Outcome: C1

Action Type: Phase 4
Action Status: As-Built Construction Report Received
Action Date: 9/29/2003
Response Action Outcome: C1

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 9/29/2003
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/29/2011
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/29/2015
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 9/29/2015
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/30/2012
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 9/30/2013
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINI
Action Date: 9/30/2013
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/30/2013
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/30/2014
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/30/2016
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 9/30/2016
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/30/2016
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 9/5/2001
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 9/6/1996
Response Action Outcome: C1

Action Type: BWS20
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: C1

Release Tracking Number/Current Status: 3-0001308 / RAO

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Release Town:	LYNN
Notification Date:	01/15/1987
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	10/02/2003
Phase:	Not reported
Response Action Outcome:	C1 - C1
Oil Or Haz Material:	Oil and Hazardous Material
Location Type:	COGASPLANT
Location Type:	INDUSTRIAL
Location Type:	FORMER
Source:	UNKNOWN
Source:	UNCONTAIN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	OIL
Quantity:	Not reported
Chemical:	COAL TAR PITCH
Quantity:	Not reported
Chemical:	TPH
Quantity:	6500 milligrams per kilogram

Actions:

Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	1/11/2007
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	1/14/2015
Response Action Outcome:	C1
Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1987
Response Action Outcome:	C1
Action Type:	Phase 3
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	1/15/1999
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	1/15/2014
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	1/15/2015
Response Action Outcome:	C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	1/16/2014
Response Action Outcome:	C1
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/22/2014
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	1/25/2010
Response Action Outcome:	C1
Action Type:	Tier Classification
Action Status:	LSP of Record Change via Minor Permit Mod
Action Date:	1/25/2010
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	1/26/2010
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	1/8/2002
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/1/2008
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/1/2009
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/1/2010
Response Action Outcome:	C1
Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	10/17/2017
Response Action Outcome:	C1
Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection
Action Date:	10/17/2017
Response Action Outcome:	C1
Action Type:	Tier Classification
Action Status:	Permit Effective Date

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 10/2/2001
Response Action Outcome: C1

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 10/2/2003
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/2/2003
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/2/2003
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 10/2/2008
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 10/2/2017
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/2/2017
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 10/21/2016
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/22/1996
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/23/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 10/23/2017
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/3/2005
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/5/2007
Response Action Outcome:	C1
Action Type:	RLFA
Action Status:	FOLFLD
Action Date:	10/5/2017
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/6/2004
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/6/2006
Response Action Outcome:	C1
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	11/12/2014
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	NPERTN
Action Date:	11/13/2001
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	11/14/2014
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/16/2015
Response Action Outcome:	C1
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/17/2004
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	NPERTN
Action Date:	11/17/2004
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	11/19/2013
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 11/19/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/2/2007
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/20/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/21/2011
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 11/23/2004
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/25/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/26/2012
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/27/2010
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/3/2009
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/3/2009
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/4/2013
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 11/5/2001
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/7/2008
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/8/1994
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 12/11/2003
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 12/11/2003
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 12/21/2009
Response Action Outcome: C1

Action Type: TREGS
Action Status: LSPFA
Action Date: 12/3/1993
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/6/1993
Response Action Outcome: C1

Action Type: TREGS
Action Status: LSPFA
Action Date: 12/6/1993
Response Action Outcome: C1

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 2/12/1999
Response Action Outcome: C1

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/12/2001
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 2/20/1996
Response Action Outcome: C1

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 2/21/1992
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 2/23/2005
Response Action Outcome: C1

Action Type: Phase 4
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 2/8/2000
Response Action Outcome: C1

Action Type: Phase 4
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 3/10/2000
Response Action Outcome: C1

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 3/10/2000
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 3/12/2002
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 3/13/2007
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 3/13/2014
Response Action Outcome: C1

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 3/17/1998
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/28/2014
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 3/28/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 3/28/2016
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/29/2012
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/29/2013
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/30/2007
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/30/2016
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 3/30/2016
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/31/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/31/2010
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/31/2011
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 3/31/2015
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/31/2015
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/31/2017
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 3/31/2017
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 3/6/1997
Response Action Outcome: C1

Action Type: Phase 4
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 4/14/2000
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/15/2010
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 4/16/1996
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 4/18/2014
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 4/2/2018
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/2/2018
Response Action Outcome: C1

Action Type: Partial RAO for this RTN
Action Status: Inspection and Monitoring Report Received
Action Date: 4/21/2005
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/21/2005
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 4/24/2017
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/3/2006
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	4/3/2008
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	4/4/1997
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	4/8/2004
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	4/8/2005
Response Action Outcome:	C1
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	4/9/2014
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	NPERTN
Action Date:	5/1/2001
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/10/2007
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/14/2015
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Modified Revised or Updated Plan Received
Action Date:	5/14/2015
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/15/2014
Response Action Outcome:	C1
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	5/19/2000
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 5/23/2012
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/24/2011
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/24/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/25/2010
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 5/30/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/4/2009
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 5/7/2001
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/7/2008
Response Action Outcome: C1

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/9/2005
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 6/1/1999
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 6/1/2001
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 6/20/2002
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 6/23/2016
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 6/23/2016
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/3/2014
Response Action Outcome: C1

Action Type: BOL
Action Status: SHPFAC
Action Date: 6/3/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/10/2009
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 7/16/2009
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 7/21/2003
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 7/28/2003
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/7/1994
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 7/8/1994
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: REVMP
Action Date: 7/9/2009
Response Action Outcome: C1

Action Type: Phase 1
Action Status: Completion Statement Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 8/22/1994
Response Action Outcome: C1

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 8/23/1999
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Tier 1B Classification
Action Date: 8/30/1994
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 8/30/1994
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/5/2016
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/16/2003
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/17/2001
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 9/2/1999
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 9/20/1994
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/24/2016
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 9/26/2014
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/26/2014
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type: BOL
Action Status: SHPFAC
Action Date: 9/27/2016
Response Action Outcome: C1

Action Type: Phase 4
Action Status: As-Built Construction Report Received
Action Date: 9/29/2003
Response Action Outcome: C1

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 9/29/2003
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/29/2011
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/29/2015
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 9/29/2015
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/30/2012
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 9/30/2013
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINI
Action Date: 9/30/2013
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/30/2013
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/30/2014
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 9/30/2016
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 9/30/2016
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/30/2016
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 9/5/2001
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 9/6/1996
Response Action Outcome: C1

Action Type: BWS20
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: C1

INST CONTROL:
Release Tracking Number: 3-0001308
Action Type: AUL
Action Stat: RECPT
Action Date: 10/02/2003
Response Action Outcome: C1 - C1

Release Tracking Number: 3-0001308
Action Type: AUL
Action Stat: SNAUDI
Action Date: 10/17/2017
Response Action Outcome: C1 - C1

Release Tracking Number: 3-0001308
Action Type: AUL
Action Stat: TSAUD
Action Date: 12/11/2003
Response Action Outcome: C1 - C1

Release:
Release Tracking Number/Current Status: 3-0001308 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1987
Category: 120 DY
Status Date: 10/02/2003
Phase: Not reported

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Response Action Outcome: C1 - C1
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 1/11/2007
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 1/14/2015
Response Action Outcome: C1

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1987
Response Action Outcome: C1

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 1/15/1999
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 1/15/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 1/15/2015
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 1/16/2014
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/22/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 1/25/2010
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: LSP of Record Change via Minor Permit Mod
Action Date: 1/25/2010
Response Action Outcome: C1

Action Type: Release Abatement Measure

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Status: Level I - Technical Screen Audit
Action Date: 1/26/2010
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 1/8/2002
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/1/2008
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/1/2009
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/1/2010
Response Action Outcome: C1

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 10/17/2017
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 10/17/2017
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 10/2/2001
Response Action Outcome: C1

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 10/2/2003
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/2/2003
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/2/2003
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Periodic Review Opinion Evaluating Temp Solution
Action Date: 10/2/2008

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 10/2/2017
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/2/2017
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 10/21/2016
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/22/1996
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/23/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 10/23/2017
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/3/2005
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/5/2007
Response Action Outcome: C1

Action Type: RLFA
Action Status: FOLFLD
Action Date: 10/5/2017
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/6/2004
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 10/6/2006
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	BOL
Action Status:	SHPFAC
Action Date:	11/12/2014
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	NPERTN
Action Date:	11/13/2001
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	11/14/2014
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/16/2015
Response Action Outcome:	C1
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/17/2004
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	NPERTN
Action Date:	11/17/2004
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	11/19/2013
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/19/2013
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/2/2007
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	11/20/2013
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/21/2011
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	NPERTN

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 11/23/2004
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/25/2013
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/26/2012
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/27/2010
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/3/2009
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/3/2009
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/4/2013
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 11/5/2001
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 11/7/2008
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/8/1994
Response Action Outcome: C1

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 12/11/2003
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 12/11/2003
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	12/21/2009
Response Action Outcome:	C1
Action Type:	TREGS
Action Status:	LSPFA
Action Date:	12/3/1993
Response Action Outcome:	C1
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	12/6/1993
Response Action Outcome:	C1
Action Type:	TREGS
Action Status:	LSPFA
Action Date:	12/6/1993
Response Action Outcome:	C1
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	2/12/1999
Response Action Outcome:	C1
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	2/12/2001
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	2/20/1996
Response Action Outcome:	C1
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	2/21/1992
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	Completion Statement Received
Action Date:	2/23/2005
Response Action Outcome:	C1
Action Type:	Phase 4
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	2/8/2000
Response Action Outcome:	C1
Action Type:	Phase 4
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	3/10/2000
Response Action Outcome:	C1
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 3/10/2000
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 3/12/2002
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 3/13/2007
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 3/13/2014
Response Action Outcome: C1

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 3/17/1998
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/28/2014
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 3/28/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 3/28/2016
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/29/2012
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/29/2013
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/30/2007
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 3/30/2016
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT
Action Date:	3/30/2016
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/31/2009
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/31/2010
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/31/2011
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT
Action Date:	3/31/2015
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/31/2015
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	3/31/2017
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT
Action Date:	3/31/2017
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	3/6/1997
Response Action Outcome:	C1
Action Type:	Phase 4
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	4/14/2000
Response Action Outcome:	C1
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	4/15/2010
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 4/16/1996
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 4/18/2014
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 4/2/2018
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/2/2018
Response Action Outcome: C1

Action Type: Partial RAO for this RTN
Action Status: Inspection and Monitoring Report Received
Action Date: 4/21/2005
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/21/2005
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 4/24/2017
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/3/2006
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/3/2008
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 4/4/1997
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/8/2004
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 4/8/2005
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	BOL
Action Status:	SHPFAC
Action Date:	4/9/2014
Response Action Outcome:	C1
Action Type:	Utility-related Abatement Measure
Action Status:	NPERTN
Action Date:	5/1/2001
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/10/2007
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/14/2015
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Modified Revised or Updated Plan Received
Action Date:	5/14/2015
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/15/2014
Response Action Outcome:	C1
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	5/19/2000
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/23/2012
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/24/2011
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/24/2013
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	5/25/2010
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 5/30/2014
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/4/2009
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 5/7/2001
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/7/2008
Response Action Outcome: C1

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/9/2005
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 6/1/1999
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Extension Received
Action Date: 6/1/2001
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 6/20/2002
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 6/23/2016
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 6/23/2016
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/3/2014
Response Action Outcome: C1

Action Type: BOL
Action Status: SHPFAC
Action Date: 6/3/2014
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/10/2009
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 7/16/2009
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 7/21/2003
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: NPERTN
Action Date: 7/28/2003
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/7/1994
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 7/8/1994
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: REVMP
Action Date: 7/9/2009
Response Action Outcome: C1

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/22/1994
Response Action Outcome: C1

Action Type: Partial RAO for this RTN
Action Status: RAO Statement Received
Action Date: 8/23/1999
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Tier 1B Classification
Action Date: 8/30/1994
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 8/30/1994
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 8/5/2016
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/16/2003
Response Action Outcome: C1

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/17/2001
Response Action Outcome: C1

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 9/2/1999
Response Action Outcome: C1

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 9/20/1994
Response Action Outcome: C1

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/24/2016
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: RMRINT
Action Date: 9/26/2014
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/26/2014
Response Action Outcome: C1

Action Type: BOL
Action Status: SHPFAC
Action Date: 9/27/2016
Response Action Outcome: C1

Action Type: Phase 4
Action Status: As-Built Construction Report Received
Action Date: 9/29/2003
Response Action Outcome: C1

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 9/29/2003
Response Action Outcome: C1

Action Type: Response Action Outcome - RAO
Action Status: Inspection and Monitoring Report Received
Action Date: 9/29/2011
Response Action Outcome: C1

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	9/29/2015
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT
Action Date:	9/29/2015
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	9/30/2012
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Periodic Review Opinion Evaluating Temp Solution
Action Date:	9/30/2013
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINI
Action Date:	9/30/2013
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	9/30/2013
Response Action Outcome:	C1
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	9/30/2014
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	Inspection and Monitoring Report Received
Action Date:	9/30/2016
Response Action Outcome:	C1
Action Type:	Response Action Outcome - RAO
Action Status:	RMRINT
Action Date:	9/30/2016
Response Action Outcome:	C1
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	9/30/2016
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	9/5/2001
Response Action Outcome:	C1
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received

LYNN GAS & ELECTRIC (FMR) (Continued) **S106953924**

Action Date: 9/6/1996
Response Action Outcome: C1

Action Type: BWS20
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: C1

Chemicals:
Chemical: OIL
Quantity: Not reported
Chemical: COAL TAR PITCH
Quantity: Not reported
Chemical: TPH
Quantity: 6500 milligrams per kilogram
Location Type: COGASPLANT
Location Type: INDUSTRIAL
Location Type: FORMER
Source: UNKNOWN
Source: UNCONTAIN

---

120 WSW 1/2-1 0.553 mi. 2921 ft. **NO LOCATION AID** **MA SHWS S101024169**
451 LYNNWAY **MA RELEASE N/A**
LYNN, MA 01905 **MA SPILLS**

Relative: Higher
Actual: 9 ft.

SHWS:
Release Tracking Number/Current Status: 3-0017639 / RAO
Release Town: LYNN
Notification Date: 11/25/1998
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 06/07/1999
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: BENZO(K)FLUORANTHENE
Quantity: 8.8 milligrams per kilogram
Chemical: VPH
Quantity: Not reported
Chemical: CHRYSENE
Quantity: 66 milligrams per kilogram
Chemical: PAH
Quantity: Not reported
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 1400 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 4.3 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE

NO LOCATION AID (Continued) **S101024169**

Quantity: 39 milligrams per kilogram

Actions:

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/25/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/25/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/17/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/7/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/8/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:

Release Tracking Number/Current Status: 3-0017639 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 11/25/1998
Category: 120 DY
Status Date: 06/07/1999
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/25/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E

NO LOCATION AID (Continued) **S101024169**

Action Date: 11/25/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/17/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/7/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/8/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: BENZO(K)FLUORANTHENE
Quantity: 8.8 milligrams per kilogram
Chemical: VPH
Quantity: Not reported
Chemical: CHRYSENE
Quantity: 66 milligrams per kilogram
Chemical: PAH
Quantity: Not reported
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 1400 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 4.3 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 39 milligrams per kilogram

MA Spills:

Facility ID:	0000		Spill ID:	N89-1167
Staff Lead:	MACAFEE, K		Date Entered:	19891003
Last Entered:	19900416		First Response:	19890713
Spill Date:	19890713		Spill Time:	Not reported
Report Date:	19890713		Report Time:	01:40PM
Case Closed:	YES		Mat Type:	HAZARDOUS
Virgin Waste:	------		Contam Soil:	Not reported
Env Impact:	Not reported		Other Impact:	Not reported
Material:	OTHER MATERIAL	-->	Other Material:	A/FREEZE,OILS,PAINTS
Qty Reported:	UNKNOWN		Qty Actual:	UNKNOWN
Qty Reported:	----------		Qty Actual:	----------
CAS No:	Not reported		PCB Lev (ppm):	----------
Source:	OTHER SOURCE >		Other Source:	SLOPPY HSKPNG
Incident:	SPILL		Other Incdnt:	Not reported
Cleanup Type:	---		Contractor:	NOT USED
Referral:	NO		LUST Elig:	NO
Report Prep:	Not reported		Category:	Not reported

NO LOCATION AID (Continued) **S101024169**

Notifier: CHIEF BUCCANON
Notif Tel: Not reported
Days/Close: 1

Facility ID:	0000	Spill ID:	N89-1782
Staff Lead:	MACAFEE, K	Date Entered:	19891102
Last Entered:	19891102	First Response:	19891023
Spill Date:	19891023	Spill Time:	10:40PM
Report Date:	19891023	Report Time:	12:50PM
Case Closed:	YES	Mat Type:	HAZARDOUS
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	MINERAL SPIRITS	Other Material:	Not reported
Qty Reported:	1-10	Qty Actual:	UNKNOWN
Qty Reported:	GALLONS	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	DRUM	Other Source:	Not reported
Incident:	LEAK	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	NO	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported

Notifier: T HEATON/SAFETY KLEEN
Notif Tel: Not reported
Days/Close: 1

Facility ID:	0000	Spill ID:	N89-1299
Staff Lead:	OTTENHEIMER, D	Date Entered:	19890928
Last Entered:	19891228	First Response:	19890802
Spill Date:	19890802	Spill Time:	Not reported
Report Date:	19890802	Report Time:	Not reported
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	HYDRAULIC FLUID	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	UNKNOWN
Qty Reported:	----------	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	----------	Other Source:	Not reported
Incident:	DUMPING	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	NO	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported

Notifier: ANONYMOUS
Notif Tel: Not reported
Days/Close: 1

Facility ID:	0000	Spill ID:	N91-1180
Staff Lead:	MACAFEE, K	Date Entered:	19911107
Last Entered:	19920430	First Response:	19910826
Spill Date:	Not reported	Spill Time:	Not reported
Report Date:	19910826	Report Time:	11:10AM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	WASTE	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	MISCELLANEOUS OIL	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	----------
Qty Reported:	----------	Qty Actual:	----------

NO LOCATION AID (Continued) **S101024169**

CAS No:	Not reported	PCB Lev (ppm):	----------
Source:	OTHER SOURCE >	Other Source:	VEHICLES
Incident:	DUMPING	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	NO	LUST Elig:	NO
Report Prep:	Not reported	Category:	5
Notifier:	ANON		
Notif Tel:	Not reported		
Days/Close:	1		

Facility ID:	0000	Spill ID:	N90-1325
Staff Lead:	MICHAUD, J	Date Entered:	19900911
Last Entered:	19900911	First Response:	19900810
Spill Date:	Not reported	Spill Time:	Not reported
Report Date:	19900810	Report Time:	01:35PM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	WASTE	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	MISCELLANEOUS OIL	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	UNKNOWN
Qty Reported:	GALLONS	Qty Actual:	GALLONS
CAS No:	Not reported	PCB Lev (ppm):	UNKNOWN
Source:	VEH. FUEL TANK	Other Source:	Not reported
Incident:	OTHER RELEASE >	Other Incdnt:	SLOPPY HOUSEKEE
Cleanup Type:	---	Contractor:	NOT USED
Referral:	NO	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported
Notifier:	ANONYMOUS		
Notif Tel:	Not reported		
Days/Close:	1		

AJ121 **POLE #203** **MA SHWS** **S122423102**
NE **7 CHESTNUT STREET** **N/A**
1/2-1 **LYNN, MA**
0.561 mi.
2962 ft. **Site 1 of 2 in cluster AJ**

Relative:
Higher

Actual:
48 ft.

SHWS:

Release Tracking Number/Current Status:	3-0034816 / UNCLSS
Release Town:	LYNN
Notification Date:	03/09/2018
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Unclassified**
Status Date:	03/09/2018
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Not reported
Location Type:	ROADWAY
Source:	TRANSFORM

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	MODF
Quantity:	42 gallons

POLE #203 (Continued) **S122423102**

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/27/2018
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/9/2018
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/9/2018
Response Action Outcome:	Not reported

122
NNW
1/2-1
0.566 mi.
2990 ft.

NO LOCATION AID
15-17 ROGERS AVE
LYNN, MA

MA SHWS **S103250018**
MA LAST **N/A**
MA RELEASE
MA ENF

Relative:
Higher

Actual:
48 ft.

SHWS:

Release Tracking Number/Current Status:	3-0016827 / RAO
Release Town:	LYNN
Notification Date:	04/14/1998
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	12/28/2009
Phase:	Not reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL
Location Type:	ROADWAY
Location Type:	UTILITY
Location Type:	MUNICIPAL
Source:	UNKNOWN
Source:	PIPE
Source:	AST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	Not reported

Actions:

Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	1/8/2008
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

NO LOCATION AID (Continued) **S103250018**

Action Type: Compliance and Enforcement Action
Action Status: CILS
Action Date: 1/8/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 11/18/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 12/17/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/28/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/14/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/14/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/16/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/23/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/26/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/17/2007

NO LOCATION AID (Continued) **S103250018**

Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/20/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/2/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/21/2010
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release Tracking Number/Current Status: 3-0016827 / RAO
Release Town: LYNN
Notification Date: 04/14/1998
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 12/28/2009
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Oil
Location Type: RESIDNTIAL
Location Type: ROADWAY
Location Type: UTILITY
Location Type: MUNICIPAL
Source: UNKNOWN
Source: PIPE
Source: AST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: FUEL OIL #2
Quantity: Not reported

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/8/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: CILS

NO LOCATION AID (Continued) **S103250018**

Action Date: 1/8/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 11/18/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 12/17/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/28/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/14/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/14/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/16/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/23/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/26/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/17/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

NO LOCATION AID (Continued) **S103250018**

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/20/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/2/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/21/2010
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

LAST:
Release Tracking Number/Current Status: 3-0016827 / RAO
Source Type: AST
Release Town: LYNN
Notification Date: 04/14/1998
Category: TWO HR
Associated ID: Not reported
Status Date: 12/28/2009
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Oil

Chemicals:
Chemical: FUEL OIL #2
Quantity: Not reported
Location Type: RESIDNTIAL
Location Type: ROADWAY
Location Type: UTILITY
Location Type: MUNICIPAL
Source: UNKNOWN
Source: PIPE
Source: AST

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/8/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: CILS
Action Date: 1/8/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued

NO LOCATION AID (Continued) **S103250018**

Action Date: 11/18/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 12/17/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/28/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/14/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/14/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/16/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/23/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/26/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/17/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/20/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

NO LOCATION AID (Continued) **S103250018**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/2/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/21/2010
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:
Release Tracking Number/Current Status: 3-0016827 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 04/14/1998
Category: TWO HR
Status Date: 12/28/2009
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 1/8/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: CILS
Action Date: 1/8/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 11/18/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 12/17/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/28/2009
Response Action Outcome: Remedial actions have not been conducted because a level of No

NO LOCATION AID (Continued) **S103250018**

Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/14/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/14/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/16/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 4/23/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/26/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/17/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/20/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/2/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/21/2010
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

NO LOCATION AID (Continued) **S103250018**

Chemicals:

Chemical:	FUEL OIL #2
Quantity:	Not reported
Location Type:	RESIDNTIAL
Location Type:	ROADWAY
Location Type:	UTILITY
Location Type:	MUNICIPAL
Source:	UNKNOWN
Source:	PIPE
Source:	AST

ENFORCEMENT:

Region:	NERO
DEP Region:	NERO
DEP Program:	3C
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0016827
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	01/08/2008
ENF #:	Not reported
Document Type:	IDL
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0016827
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	11/18/2008
ENF #:	NON-NE-08-3A128
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported

NO LOCATION AID (Continued) **S103250018**

Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned
Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0016827
High Or Low Level Enforcement:	HLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	12/17/2009
ENF #:	ACO-NE-09-3A021
Document Type:	ACO
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

AJ123 **NO LOCATION AID** **MA SHWS** **S103383770**
NE **208 LEWIS ST** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA**
0.593 mi.
3129 ft. **Site 2 of 2 in cluster AJ**

Relative:
Higher

Actual:
48 ft.

SHWS:

Release Tracking Number/Current Status:	3-0017121 / RAO
Release Town:	LYNN
Notification Date:	08/05/1998
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	10/01/1998
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Oil

NO LOCATION AID (Continued) **S103383770**

Location Type: COMMERCIAL
Source: VEHICLE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: DIESEL FUEL
Quantity: 30 gallons

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/5/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/5/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/16/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release:
Release Tracking Number/Current Status: 3-0017121 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 08/05/1998
Category: TWO HR
Status Date: 10/01/1998
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

NO LOCATION AID (Continued) **S103383770**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/5/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 8/5/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/16/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: DIESEL FUEL
Quantity: 30 gallons
Location Type: COMMERCIAL
Source: VEHICLE

---

124 SW 1/2-1 0.598 mi. 3160 ft.

NO LOCATION AID
34-36 RILEY WAY
LYNN, MA 01905

MA SHWS S111085982
MA RELEASE N/A

Relative: Higher

Actual: 9 ft.

SHWS:
Release Tracking Number/Current Status: 3-0030122 / URAM
Release Town: LYNN
Notification Date: 07/05/2011
Category: 120 DY
Associated ID: Not reported
Current Status: **URAM**
Status Date: 07/07/2011
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material
Location Type: PRIVPROP
Location Type: INDUSTRIAL
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: BENZO[A]PYRENE
Quantity: 10 milligrams per kilogram
Chemical: NAPHTHALENE
Quantity: 4 milligrams per kilogram

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: URAMLR

NO LOCATION AID (Continued) **S111085982**

Action Date: 7/19/2011
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/29/2011
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notice of Intent to Conduct a URAM
Action Date: 7/5/2011
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/5/2011
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notification of URAM Received
Action Date: 7/7/2011
Response Action Outcome: Not reported

Action Type: BOL
Action Status: SHPFAC
Action Date: 8/4/2011
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/29/2011
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0030122 / URAM
Primary ID: Not reported
Official City: LYNN
Notification: 07/05/2011
Category: 120 DY
Status Date: 07/07/2011
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: URAMLR
Action Date: 7/19/2011
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/29/2011

NO LOCATION AID (Continued) **S111085982**

Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notice of Intent to Conduct a URAM
Action Date: 7/5/2011
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/5/2011
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notification of URAM Received
Action Date: 7/7/2011
Response Action Outcome: Not reported

Action Type: BOL
Action Status: SHPFAC
Action Date: 8/4/2011
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/29/2011
Response Action Outcome: Not reported

Chemicals:
Chemical: BENZO[A]PYRENE
Quantity: 10 milligrams per kilogram
Chemical: NAPHTHALENE
Quantity: 4 milligrams per kilogram
Location Type: PRIVPROP
Location Type: INDUSTRIAL
Source: UNKNOWN

125
NE
1/2-1
0.605 mi.
3193 ft.

WRIGHT, LYSANDER
18 LANDER STREET
LYNN, MA 01902

MA SHWS **S110684380**
MA LAST **N/A**
MA RELEASE
MA ENF

Relative:
Higher

Actual:
46 ft.

SHWS:
Release Tracking Number/Current Status: 3-0029594 / RAO
Release Town: LYNN
Notification Date: 10/20/2010
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 04/09/2014
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil
Location Type: PRIVPROP
Location Type: RESIDNTIAL
Source: AST

WRIGHT, LYSANDER (Continued) **S110684380**

Source: LINE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 20 gallons

Actions:
Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/10/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/30/2015
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 1/30/2015
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/4/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/6/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 1/8/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/8/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

WRIGHT, LYSANDER (Continued) **S110684380**

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 10/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 10/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 10/21/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/16/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/20/2010

WRIGHT, LYSANDER (Continued) **S110684380**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 12/21/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/7/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 2/7/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 4/21/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 4/9/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 4/9/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/23/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/24/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 6/21/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

WRIGHT, LYSANDER (Continued) **S110684380**

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/3/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/9/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/9/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 8/6/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LAST:
Release Tracking Number/Current Status: 3-0029594 / RAO
Source Type: AST
Release Town: LYNN
Notification Date: 10/20/2010
Category: TWO HR
Associated ID: Not reported
Status Date: 04/09/2014
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 20 gallons
Location Type: PRIVPROP
Location Type: RESIDNTIAL
Source: AST
Source: LINE

Actions:
Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/10/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

WRIGHT, LYSANDER (Continued) **S110684380**

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/30/2015
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 1/30/2015
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/4/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/6/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 1/8/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/8/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 10/20/2010

WRIGHT, LYSANDER (Continued) **S110684380**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 10/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 10/21/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/16/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 12/21/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/7/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

WRIGHT, LYSANDER (Continued) **S110684380**

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 2/7/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 4/21/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 4/9/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 4/9/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/23/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/24/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 6/21/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/3/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/9/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/9/2012

WRIGHT, LYSANDER (Continued) **S110684380**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 8/6/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0029594 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/20/2010
Category: TWO HR
Status Date: 04/09/2014
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RLFA
Action Status: FLDRAN
Action Date: 1/10/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/30/2015
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 1/30/2015
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 1/4/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action

WRIGHT, LYSANDER (Continued) **S110684380**

Action Status: Status or Interim Report Received
Action Date: 1/6/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 1/8/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/8/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 10/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 10/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 10/21/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

WRIGHT, LYSANDER (Continued) **S110684380**

reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/16/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/20/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 12/21/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/7/2010
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 2/7/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 4/21/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 4/9/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO

WRIGHT, LYSANDER (Continued) **S110684380**

Action Status: RAO Statement Received
Action Date: 4/9/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/23/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/24/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 6/21/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/3/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 7/9/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 7/9/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 8/6/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 20 gallons
Location Type: PRIVPROP

WRIGHT, LYSANDER (Continued) **S110684380**

Location Type: RESIDNTIAL
Source: AST
Source: LINE

ENFORCEMENT:
Region: NERO
DEP Region: NERO
DEP Program: 3R
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0029594
High Or Low Level Enforcement: HLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Lynn
Date Executed: 08/06/2012
ENF #: ACOP-NE-12-3R005
Document Type: ACOP
AG Ref (Y/N): Not reported
Doc Archived (Y/N): Not reported
EJ Community (Y/N): Y
Regional Comment: Not reported
Final Payment Due Date: 07/30/2013
ACOP $: 4500
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported
Demand $: Not reported
Suspended $: 26360
Ownership: Individually Owned

Region: NERO
DEP Region: NERO
DEP Program: 3A
DEP Bureau: BWSC
Program: BWSC
Program Id: 3-0029594
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: Not reported
Date Executed: 02/07/2012
ENF #: NON-NE-12-3A010
Document Type: NON
AG Ref (Y/N): Not reported
Doc Archived (Y/N): Not reported
EJ Community (Y/N): Y
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported
EMS$: Not reported
SEP (Y/N): Not reported
SEP $: Not reported

WRIGHT, LYSANDER (Continued) **S110684380**

Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned
Region:	NERO
DEP Region:	NERO
DEP Program:	3C
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0029594
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	04/21/2011
ENF #:	NON-NE-11-3C018
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

126
ENE
1/2-1
0.634 mi.
3346 ft.

PRIVATE RESIDENCE
10 DEER COVE ST
LYNN, MA 01902

MA SHWS **S107678351**
MA RELEASE **N/A**

Relative:
Higher

Actual:
43 ft.

SHWS:

Release Tracking Number/Current Status:	3-0025757 / RAO
Release Town:	LYNN
Notification Date:	03/24/2006
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	03/30/2007
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	5600 milligrams per kilogram

PRIVATE RESIDENCE (Continued) **S107678351**

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	2/12/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	2/13/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/24/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/24/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/30/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/30/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	5/31/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Release:

Release Tracking Number/Current Status:	3-0025757 / RAO
Primary ID:	Not reported
Official City:	LYNN
Notification:	03/24/2006
Category:	120 DY
Status Date:	03/30/2007
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

PRIVATE RESIDENCE (Continued) **S107678351**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	2/12/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	2/13/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/24/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/24/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/30/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/30/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	5/31/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	5600 milligrams per kilogram

AK127 **LYNNWAY BOWL** **MA SHWS** **S104482457**
WSW **497 LYNNWAY** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA 01905**
0.641 mi.
3382 ft. **Site 1 of 4 in cluster AK**

Relative:
Higher

Actual:
9 ft.

SHWS:

Release Tracking Number/Current Status:	3-0019086 / RAO
Release Town:	LYNN
Notification Date:	12/17/1999
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	12/22/2000
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	31500 parts per million

Actions:

Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	10/27/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	10/30/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/17/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/17/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/22/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only

LYNNWAY BOWL (Continued) **S104482457**

Action Date: 12/28/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: RFI
Action Date: 4/25/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0019086 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 12/17/1999
Category: 120 DY
Status Date: 12/22/2000
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/30/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/17/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/17/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/22/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LYNNWAY BOWL (Continued) **S104482457**

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/28/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: RFI
Action Date: 4/25/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 31500 parts per million

---

128 NW 1/2-1 0.661 mi. 3488 ft. **NO LOCATION AID** **73 HANOVER ST** **LYNN, MA** **MA SHWS S102085922** **MA LUST N/A** **MA RELEASE**

Relative: Higher

Actual: 35 ft.

SHWS:
Release Tracking Number/Current Status: 3-0011456 / RAO
Release Town: LYNN
Notification Date: 08/11/1994
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 12/26/2007
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Oil
Location Type: RESIDNTIAL
Source: UST
Source: PIPE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 100 gallons

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 10/26/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/14/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

NO LOCATION AID (Continued) **S102085922**

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/26/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/22/1995
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/26/1995
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 6/26/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/11/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/11/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/17/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 8/17/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

LUST:

Facility:
Release Tracking Number/Current Status: 3-0011456 / RAO
Status Date: 12/26/2007
Source Type: UST
Release Town: LYNN
Notification Date: 08/11/1994

NO LOCATION AID (Continued) **S102085922**

Category: TWO HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Oil

Location Type: RESIDNTIAL
Source: UST
Source: PIPE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 100 gallons

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 10/26/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/14/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/26/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/22/1995
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/26/1995
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 6/26/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)

NO LOCATION AID (Continued) **S102085922**

Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/11/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/11/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/17/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 8/17/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:
Release Tracking Number/Current Status: 3-0011456 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 08/11/1994
Category: TWO HR
Status Date: 12/26/2007
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 10/26/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/14/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/26/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

NO LOCATION AID (Continued) **S102085922**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/22/1995
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/26/1995
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 6/26/2008
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/11/2007
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/11/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/17/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 8/17/1994
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 100 gallons
Location Type: RESIDNTIAL
Source: UST
Source: PIPE

129
North
1/2-1
0.666 mi.
3515 ft.

APT BLDG
26-28 ESSEX CIR
LYNN, MA 01902

MA SHWS **S102086563**
MA RELEASE **N/A**

Relative:
Higher

Actual:
66 ft.

SHWS:

Release Tracking Number/Current Status:	3-0012328 / RAO
Release Town:	LYNN
Notification Date:	01/28/1995
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	03/22/1996
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	RESIDNTIAL

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	50 gallons
Chemical:	#2 FUEL OIL
Quantity:	100 gallons

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/28/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	2/17/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	3/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/22/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	3/26/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

APT BLDG (Continued) **S102086563**

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/11/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/26/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/11/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 9/1/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/18/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/19/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/19/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/19/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0012328 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/28/1995
Category: TWO HR
Status Date: 03/22/1996
Phase: Not reported

APT BLDG (Continued) **S102086563**

Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/28/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/17/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 3/22/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 3/22/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 3/26/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/11/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/26/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/11/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received

APT BLDG (Continued) **S102086563**

Action Date:	9/1/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	9/18/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	9/19/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	9/19/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	9/19/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	50 gallons
Chemical:	#2 FUEL OIL
Quantity:	100 gallons
Location Type:	RESIDNTIAL

AK130 **NEAR COMMERCIAL ST** **MA SHWS** **S101024278**
WSW **517 LYNNWAY** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA 01901** **MA SPILLS**
0.677 mi.
3572 ft. **Site 2 of 4 in cluster AK**

Relative:
Higher

Actual:
6 ft.

SHWS:

Release Tracking Number/Current Status:	3-0011837 / RAO
Release Town:	LYNN
Notification Date:	11/08/1994
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	11/08/1994
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil

Click here to access the MA DEP site for this facility:

NEAR COMMERCIAL ST (Continued) **S101024278**

Chemicals:
Chemical: GASOLINE
Quantity: 121 parts per million

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/8/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/8/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/8/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0011837 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 11/08/1994
Category: 72 HR
Status Date: 11/08/1994
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/8/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/8/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/8/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

NEAR COMMERCIAL ST (Continued) **S101024278**

Chemicals:
Chemical: GASOLINE
Quantity: 121 parts per million

MA Spills:

Facility ID:	0000	Spill ID:	N89-1120
Staff Lead:	BOYLE, T	Date Entered:	19891003
Last Entered:	19900416	First Response:	19890707
Spill Date:	19890707	Spill Time:	Not reported
Report Date:	19890707	Report Time:	09:40AM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	WASTE	Contam Soil:	Not reported
Env Impact:	SOIL	Other Impact:	Not reported
Material:	HYDRAULIC FLUID	Other Material:	Not reported
Qty Reported:	10-50	Qty Actual:	1-10
Qty Reported:	GALLONS	Qty Actual:	GALLONS
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	PIPE/HOSE/LINE	Other Source:	Not reported
Incident:	LEAK	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	NO	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported
Notifier:	OPERATOR 9 LYNN FD		
Notif Tel:	Not reported		
Days/Close:	111		

AK131 **SHELL STATION FMR** **MA SHWS** **S101020192**
WSW **514-516 LYNNWAY** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA 01901** **MA SPILLS**
0.677 mi.
3574 ft. **Site 3 of 4 in cluster AK**

Relative:
Higher

Actual:
9 ft.

SHWS:

Release Tracking Number/Current Status:	3-0002146 / DEPNDS
Release Town:	LYNN
Notification Date:	04/15/1989
Category:	NONE
Associated ID:	Not reported
Current Status:	**Not a Disposal Site (DEP)**
Status Date:	04/09/1996
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Not reported

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 4/15/1989
Response Action Outcome: Not reported

SHELL STATION FMR (Continued) **S101020192**

Action Type: TREGS
Action Status: DEPNDS
Action Date: 4/9/1996
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0002146 / DEPNDS
Primary ID: Not reported
Official City: LYNN
Notification: 04/15/1989
Category: NONE
Status Date: 04/09/1996
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 4/15/1989
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: DEPNDS
Action Date: 4/9/1996
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

MA Spills:

Facility ID:	3-2146	Spill ID:	N89-0192
Staff Lead:	OTHER	Date Entered:	19890301
Last Entered:	19931122	First Response:	19890208
Spill Date:	19931122	Spill Time:	Not reported
Report Date:	19931122	Report Time:	09:20AM
Case Closed:	YES	Mat Type:	HAZARDOUS
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	----------	Other Impact:	Not reported
Material:	UNKNOWN	Other Material:	Not reported
Qty Reported:	NONE	Qty Actual:	NONE
Qty Reported:	GALLONS	Qty Actual:	GALLONS
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	----------	Other Source:	Not reported
Incident:	----------	Other Incdnt:	Not reported
Cleanup Type:	Not reported	Contractor:	NOT USED
Referral:	SA	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported
Notifier:	Not reported		
Notif Tel:	Not reported		
Days/Close:	0		

AK132 **SHELL OIL CO** **MA SHWS** **U001005224**
WSW **514 LYNNWAY** **MA UST** **N/A**
1/2-1 **LYNN, MA 01904** **MA RELEASE**
0.677 mi. **MA Financial Assurance**
3574 ft. **Site 4 of 4 in cluster AK**

Relative: Higher

Actual: 9 ft.

SHWS:

Release Tracking Number/Current Status:	3-0013963 / RAO
Release Town:	LYNN
Notification Date:	06/28/1996
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	04/12/2002
Phase:	PHASE III
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	BENZO[B]FLUORANTHENE
Quantity:	1100

Actions:

Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	12/3/2001
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	12/7/2001
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	4/12/2002
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Phase 3
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	6/1/2001
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Phase 2
Action Status:	Notice of Delay in Meeting RA Deadline Received
Action Date:	6/1/2001
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Phase 4
Action Status:	Notice of Delay in Meeting RA Deadline Received

SHELL OIL CO (Continued) **U001005224**

Action Date: 6/1/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 6/26/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/26/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/26/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/28/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/28/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 7/10/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 4
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 7/10/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 7/10/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/24/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

SHELL OIL CO (Continued) **U001005224**

UST:

Facility:

Facility ID:	5431
Owner Id:	51712
Owner:	O'CONNELL OIL ASSOCIATES INC
Owner Address:	545 Merrill Rd.
Owner City,St,Zip:	PITTSFIELD, MA 01202
Telephone:	Not reported
Description:	Retail Motor Vehicle Fuel
Facility address 2:	Not reported
Owner address 2:	PO BOX 1387
Latitude:	42.45564
Longitude:	-70.95700
Contact name:	John Gaudrault
Contact address1:	P.O. 1387
Contact address2:	Not reported
Contact city:	Pittsfield
Contact state:	MA
Contact zip:	01202
Contact email:	Not reported
Update:	1997-12-18 00:00:00
Update by:	Not reported
Fac status:	CLOSED

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	08/29/1991
Date Installed:	05/02/1975
Capacity:	4000
Contents:	Gasoline
Tank Usage:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Not reported
Pipe construct:	Not reported
Ptype:	Not reported
Number of compartment:	Not reported
Pipe install date:	Not reported
Pipe leak install date:	Not reported
Submersible sump:	N
Submersible sump install date:	Not reported
Turbine sump:	N
Turbine sump sensor:	N
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported
Overfill protect type:	Not reported
Automatic line leak detect:	Not reported
Tank corrosion type:	Not reported
Leak corrosion type:	Not reported

SHELL OIL CO (Continued) **U001005224**

Tank ID: 2
Tank Status: Tank Removed
Status Date: 08/29/1991
Date Installed: 05/02/1975
Capacity: 4000
Contents: Gasoline
Tank Usage: Not reported
Tank Leak Detection: Not reported
Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 3
Tank Status: Tank Removed
Status Date: 08/29/1991
Date Installed: 05/01/1980
Capacity: 10000
Contents: Gasoline
Tank Usage: Not reported
Tank Leak Detection: Not reported
Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N

SHELL OIL CO (Continued) **U001005224**

Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 4
Tank Status: Tank Removed
Status Date: 08/29/1991
Date Installed: 05/01/1980
Capacity: 12000
Contents: Gasoline
Tank Usage: Not reported
Tank Leak Detection: Not reported
Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Release:
Release Tracking Number/Current Status: 3-0013963 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 06/28/1996
Category: 120 DY
Status Date: 04/12/2002
Phase: PHASE III
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 12/3/2001

SHELL OIL CO (Continued) **U001005224**

Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 12/7/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 4/12/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 6/1/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 6/1/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 4
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 6/1/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 6/26/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/26/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/26/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/28/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

SHELL OIL CO (Continued) **U001005224**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/28/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 3
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 7/10/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 4
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 7/10/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Notice of Delay in Meeting RA Deadline Received
Action Date: 7/10/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/24/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: BENZO[B]FLUORANTHENE
Quantity: 1100

MA Financial Assurance 2:
Facility Id: 5431
Description: Gas Station
Work Phone: (617) 461-4660

AL133 **GE RIVER WORKS SOUTH** **MA SHWS S100042942**
WSW **COMMERCIAL ST** **MA RELEASE N/A**
1/2-1 **LYNN, MA 01901**
0.692 mi.
3655 ft. **Site 1 of 5 in cluster AL**

Relative: Higher
Actual: 6 ft.

SHWS:
Release Tracking Number/Current Status: 3-0002160 / LSPNFA
Release Town: LYNN
Notification Date: 04/15/1989
Category: NONE
Associated ID: Not reported
Current Status: **LSP No Further Action**
Status Date: 12/30/1996
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Not reported

GE RIVER WORKS SOUTH (Continued) **S100042942**

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: TREGS
Action Status: LSPNFA
Action Date: 12/30/1996
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 4/15/1989
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0002160 / LSPNFA
Primary ID: Not reported
Official City: LYNN
Notification: 04/15/1989
Category: NONE
Status Date: 12/30/1996
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: TREGS
Action Status: LSPNFA
Action Date: 12/30/1996
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 4/15/1989
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

AM134 **DPW** **MA SHWS** **S103546223**
WSW **250 COMMERCIAL ST** **MA SWF/LF** **N/A**
1/2-1 **LYNN, MA 01905** **MA LUST**
0.696 mi. **MA INST CONTROL**
3676 ft. **Site 1 of 2 in cluster AM** **MA RELEASE**
MA ASBESTOS
Relative: **MA HW GEN**
Higher

Actual: SHWS:
13 ft.

Release Tracking Number/Current Status:	3-0021126 / RAO
Release Town:	LYNN
Notification Date:	10/03/2001
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	12/10/2001
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Location Type:	ROADWAY
Location Type:	MUNICIPAL
Location Type:	RESIDNTIAL
Source:	SADDLE TAN
Source:	VEHICLE

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	70 gallons
Chemical:	DIESEL FUEL
Quantity:	80 gallons

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/3/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/3/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	11/16/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/10/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced

DPW (Continued) **S103546223**

to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/10/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release Tracking Number/Current Status: 3-0021126 / RAO
Release Town: LYNN
Notification Date: 10/03/2001
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 12/10/2001
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Location Type: ROADWAY
Location Type: MUNICIPAL
Location Type: RESIDNTIAL
Source: SADDLE TAN
Source: VEHICLE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: DIESEL FUEL
Quantity: 70 gallons
Chemical: DIESEL FUEL
Quantity: 80 gallons

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/3/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/3/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/16/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received

DPW (Continued) **S103546223**

Action Date:	12/10/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/10/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Release Tracking Number/Current Status:	3-0018171 / RAO
Release Town:	LYNN
Notification Date:	04/06/1999
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	10/21/1999
Phase:	Not reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	LEAD
Quantity:	3560 milligrams per kilogram
Chemical:	ARSENIC
Quantity:	62 milligrams per kilogram

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/21/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/21/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	Activity and Use Limitation
Action Status:	Legal Notice Published
Action Date:	10/29/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received

DPW (Continued) **S103546223**

Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/8/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/6/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/6/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 5/27/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/23/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

LF:
Facility Phone: Not reported

DPW (Continued) **S103546223**

Annual Tons for 1995:	Not reported
Annual Tons for 1996:	Not reported
Annual Tons for 1997:	Not reported
Annual Tons for 1998:	Not reported
Annual Tons for 1999:	Not reported
Annual Tons for 2000:	Not reported
Annual Tons for 2001:	Not reported
Annual Tons for 2002:	Not reported
Annual Tons for 2003:	Not reported
Annual Tons for 2004:	Not reported
Annual Tons for 2005:	Not reported
Annual Tons for 2006:	Not reported
Annual Tons for 2007:	Not reported
Annual Tons for 2008:	Not reported
Annual Tons for 2009:	Not reported
Annual Tons for 2010:	Not reported
Annual Tons for 2011:	Not reported
Annual Tons for 2012:	Not reported
Annual Tons for 2013:	Not reported
Annual Tons for 2014:	Not reported
Annual Tons for 2015:	Not reported
Reg Obj Acct ID Num For Each Solid Waste Operation:	172678
Days of Operation:	Not reported
Note On The Physical Location Of The Site:	Not reported
Acres:	50
Active Year:	1945
Classification Group:	Land Disposal
Current Or Most Recent Closed Classification:	CLF
Description Of The Last Classification:	Closed Landfill with Env Monitoring Required
Close Year:	1988
Name Of The Organization:	SOUTH HARBOR REALTY TRUST
Contacts Organization Type:	Private
Contact Persons Name And Title:	Not reported
Contact Phone Including Extension:	Not reported
Contact Mailing Street Address:	240 COMMERCIAL ST
Contacts Mailing City, State, Zip:	LYNN, MA 01905
Inactive Year:	1979
Land Disposal Closure Status:	Capped
Land Disposal Only, Category Waste Disposed:	MSW
Landfills Liner:	Not Lined
Municipality That The Operation Is Located In:	LYNN
Alpha-Numeric Identification Code:	SL0163.001
Numeric-Only Portion Of The Identification Code:	0163.001
Region:	Northeast (Wilmington)
Org That Pays Any Annual Compliance Fee And/Or Permittee:	Not reported
Responsible Party Organization Type:	Not reported
Responsible Party Mailing Street Address Line 1:	Not reported
Responsible Party Mailing Street Address Line 2:	Not reported
Responsible Party Mailing City, State, Zip:	Not reported
Responsible Party Telephone Inc Extension:	Not reported
Maximum Permitted Tons Per Day:	Not reported
Current Operational Status:	Closed

LF PROFILES:

Site Type Code:	MSW
Site Type Desc:	Municipal Solid Waste
Status:	Closed

DPW (Continued) **S103546223**

Owner Type:	Private
Stat Active Yr:	0:00
Stat Inactive Yr:	1979
Stat Close Yr:	01/01/1988
Lined?:	Not Lined
Cap Status:	Capped
Cap Cert Date:	Not reported
Post Closure Permit:	APPROV 5/28/2010
Post Closure Use:	Not reported
LF Gas Energy:	Not reported
Acres:	32.18
Acres Doc:	UNK
Acres Doc Desc:	Unknown
Electrical Provider:	National Grid
Dist To Trans Miles:	3.39
Wind Speed 30m:	5.6697
Wind Speed 50m:	6.0837
Wind Speed 100m:	6.8673
Wind Speed 70m:	6.4424
Mass DEP FMF DB Id:	39445

LUST:

Facility:

Release Tracking Number/Current Status:	3-0017457 / RAO
Status Date:	10/21/1999
Source Type:	UST
Release Town:	LYNN
Notification Date:	10/21/1998
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Oil
Location Type:	MUNICIPAL
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	DIESEL
Quantity:	410 parts per million
Chemical:	DIESEL FUEL
Quantity:	275 parts per million
Chemical:	GASOLINE
Quantity:	Not reported

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/21/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been

DPW (Continued) **S103546223**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/21/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 10/22/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/22/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 10/29/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

DPW (Continued) **S103546223**

been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/24/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/8/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/7/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 2/1/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 2/25/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 3/11/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

DPW (Continued) **S103546223**

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 5/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 5/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 5/27/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Facility:
Release Tracking Number/Current Status: 3-0017458 / RAO
Status Date: 10/21/1999
Source Type: UST
Release Town: LYNN
Notification Date: 10/21/1998
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material: Oil

Location Type: MUNICIPAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: Not reported
Chemical: DIESEL
Quantity: 170 parts per million
Chemical: DIESEL FUEL
Quantity: 150 parts per million

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/21/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

DPW (Continued) **S103546223**

been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/21/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 10/22/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 10/29/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

DPW (Continued) **S103546223**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/24/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/8/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/7/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 2/1/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 2/25/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 3/11/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 5/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit

DPW (Continued) **S103546223**

Action Status: NAFNVD
Action Date: 5/27/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:
Release Tracking Number: 3-0017457
Action Type: AUL
Action Stat: AMEND
Action Date: 10/31/2002
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0017457
Action Type: AUL
Action Stat: LEGNOT
Action Date: 10/29/2002
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0017457
Action Type: AUL
Action Stat: RECPT
Action Date: 10/21/1999
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0017457
Action Type: AUL
Action Stat: SNAUDI
Action Date: 05/19/2008
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0017458
Action Type: AUL
Action Stat: AMEND
Action Date: 10/31/2002
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0017458
Action Type: AUL
Action Stat: LEGNOT
Action Date: 10/29/2002
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0017458

DPW (Continued) **S103546223**

Action Type: AUL
Action Stat: RECPT
Action Date: 10/21/1999
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0017458
Action Type: AUL
Action Stat: SNAUDI
Action Date: 05/19/2008
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0018171
Action Type: AUL
Action Stat: AMEND
Action Date: 10/31/2002
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0018171
Action Type: AUL
Action Stat: LEGNOT
Action Date: 10/29/2002
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0018171
Action Type: AUL
Action Stat: RECPT
Action Date: 10/21/1999
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:
Release Tracking Number/Current Status: 3-0017457 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/21/1998
Category: 72 HR
Status Date: 10/21/1999
Phase: Not reported
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action

DPW (Continued) **S103546223**

Action Status: Oral Approval of Plan or Action
Action Date: 10/21/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/21/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 10/22/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/22/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 10/29/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received

DPW (Continued) **S103546223**

Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/24/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/8/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/7/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 2/1/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 2/25/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 3/11/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/30/2002

DPW (Continued) **S103546223**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 5/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 5/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 5/27/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: DIESEL
Quantity: 410 parts per million
Chemical: DIESEL FUEL
Quantity: 275 parts per million
Chemical: GASOLINE
Quantity: Not reported
Location Type: MUNICIPAL
Source: UST

Release Tracking Number/Current Status: 3-0017458 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/21/1998
Category: 72 HR
Status Date: 10/21/1999
Phase: Not reported
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/21/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

DPW (Continued) **S103546223**

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/21/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 10/22/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 10/29/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)

DPW (Continued) **S103546223**

Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/24/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/8/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/7/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 2/1/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Modified Revised or Updated Plan Received
Action Date: 2/25/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 3/11/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 5/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD

DPW (Continued) **S103546223**

Action Date: 5/27/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: GASOLINE
Quantity: Not reported
Chemical: DIESEL
Quantity: 170 parts per million
Chemical: DIESEL FUEL
Quantity: 150 parts per million
Location Type: MUNICIPAL
Source: UST

Release Tracking Number/Current Status: 3-0018171 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 04/06/1999
Category: 120 DY
Status Date: 10/21/1999
Phase: Not reported
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/21/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 10/29/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

DPW (Continued) **S103546223**

been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 10/31/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/8/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/6/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/6/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 5/27/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/23/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: LEAD
Quantity: 3560 milligrams per kilogram
Chemical: ARSENIC
Quantity: 62 milligrams per kilogram

DPW (Continued) **S103546223**

Release Tracking Number/Current Status: 3-0021126 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/03/2001
Category: TWO HR
Status Date: 12/10/2001
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/3/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/3/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/16/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/10/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/10/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical: DIESEL FUEL
Quantity: 70 gallons
Chemical: DIESEL FUEL
Quantity: 80 gallons
Location Type: COMMERCIAL
Location Type: ROADWAY
Location Type: MUNICIPAL
Location Type: RESIDNTIAL
Source: SADDLE TAN
Source: VEHICLE

DPW (Continued) **S103546223**

ASBESTOS:

Notification:	774499
DEP Region:	NE
Notifiers Name:	NEW ENGLAND SURFACE MAINTENANCE LLP
Start Date:	12/19/2013
End Date:	12/20/2013
Date Entered:	23/12/2013
Entry Date:	12/23/2013
Quantity Materical Removed SF:	360
Quantity Material Removed LF:	Not reported
Project Description:	SIDING
AR Tracking ID:	Not reported
Super Lic Number:	Not reported
Monitor Lic Number:	Not reported
Lab Lic Number:	Not reported
Year:	Not reported
Sticker Number:	Not reported
Form Type:	Not reported
Fee Status:	Not reported
Facility Phone:	Not reported
Sub Town:	Not reported
Worksite:	Not reported
Occupied:	Not reported
Contractor:	Not reported
Contract Type:	Not reported
Hours:	Not reported
Project Type:	Not reported
Abatement Process:	Not reported
Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

DPW (Continued) **S103546223**

HW GEN:
EPA Id: MAR000503763
RCRA Generator Status: Not reported
State Generator Status: LQG-MA

AM135 **LYNN TRANSFER STATION** **MA SHWS** **S106509252**
WSW **247A COMMERCIAL ST** **MA SWF/LF** **N/A**
1/2-1 **LYNN, MA 01901** **MA RELEASE**
0.712 mi.
3761 ft. **Site 2 of 2 in cluster AM**

Relative: Higher

Actual: 12 ft.

SHWS:
Release Tracking Number/Current Status: 3-0021477 / RAO
Release Town: LYNN
Notification Date: 02/08/2002
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 12/27/2002
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: C19 THRU C36 ALIPHATIC HYDROCARBONS
Quantity: 10200 parts per million
Chemical: PCB
Quantity: 4250 parts per billion
Chemical: MERCURY
Quantity: 110 parts per million

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 12/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/30/2002

LYNN TRANSFER STATION (Continued) **S106509252**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/8/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/8/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/12/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 4/18/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/3/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LF:
Facility Phone: (781)693-8106
Annual Tons for 1995: Not reported
Annual Tons for 1996: Not reported
Annual Tons for 1997: Not reported
Annual Tons for 1998: 109990
Annual Tons for 1999: 90871
Annual Tons for 2000: 105404
Annual Tons for 2001: 72002
Annual Tons for 2002: 149833
Annual Tons for 2003: 209344
Annual Tons for 2004: 231981
Annual Tons for 2005: 233988
Annual Tons for 2006: 248740
Annual Tons for 2007: 253316
Annual Tons for 2008: 195299
Annual Tons for 2009: 207607

LYNN TRANSFER STATION (Continued) **S106509252**

Annual Tons for 2010:	214342
Annual Tons for 2011:	227017
Annual Tons for 2012:	230287
Annual Tons for 2013:	228119
Annual Tons for 2014:	237165
Annual Tons for 2015:	247731
Reg Obj Acct ID Num For Each Solid Waste Operation:	360908
Days of Operation:	303
Note On The Physical Location Of The Site:	Not reported
Acres:	Not reported
Active Year:	2001
Classification Group:	Handling/Transfer
Current Or Most Recent Closed Classification:	LGTRAN
Description Of The Last Classification:	Large Transfer Station
Close Year:	Not reported
Name Of The Organization:	COVANTA ENERGY
Contacts Organization Type:	Private
Contact Persons Name And Title:	LAURIE COOPER, ENV COMPL SPECIALIST
Contact Phone Including Extension:	(978)241-3015
Contact Mailing Street Address:	100 RECOVERY WAY
Contacts Mailing City, State, Zip:	HAVERHILL, MA 01835
Inactive Year:	Not reported
Land Disposal Closure Status:	n/a
Land Disposal Only, Category Waste Disposed:	n/a
Landfills Liner:	n/a
Municipality That The Operation Is Located In:	LYNN
Alpha-Numeric Identification Code:	TR0163.005
Numeric-Only Portion Of The Identification Code:	0163.005
Region:	Northeast (Wilmington)
Org That Pays Any Annual Compliance Fee And/Or Permittee:	COVANTA 4RECOVERY I LLC
Responsible Party Organization Type:	Private
Responsible Party Mailing Street Address Line 1:	445 SOUTH STREET
Responsible Party Mailing Street Address Line 2:	Not reported
Responsible Party Mailing City, State, Zip:	MORRISTOWN, NJ 07960
Responsible Party Telephone Inc Extension:	Not reported
Maximum Permitted Tons Per Day:	1150
Current Operational Status:	Active

Release:

Release Tracking Number/Current Status:	3-0021477 / RAO
Primary ID:	Not reported
Official City:	LYNN
Notification:	02/08/2002
Category:	120 DY
Status Date:	12/27/2002
Phase:	PHASE II
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/27/2002

LYNN TRANSFER STATION (Continued) **S106509252**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 12/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/8/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/8/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/12/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 4/18/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/3/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 5/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LYNN TRANSFER STATION (Continued) **S106509252**

Chemicals:
Chemical: C19 THRU C36 ALIPHATIC HYDROCARBONS
Quantity: 10200 parts per million
Chemical: PCB
Quantity: 4250 parts per billion
Chemical: MERCURY
Quantity: 110 parts per million

AL136 **188 COMMERCIAL ST** **MA SHWS** **S101025149**
WSW **525 LYNNWAY** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA 01905** **MA SPILLS**
0.722 mi. **MA HW GEN**
3810 ft. **Site 2 of 5 in cluster AL**

Relative: Higher
Actual: 6 ft.

SHWS:
Release Tracking Number/Current Status: 3-0020622 / RAO
Release Town: LYNN
Notification Date: 05/24/2001
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 12/27/2001
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Hazardous Material
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: MTBE
Quantity: 540000 micrograms per liter
Chemical: BENZENE
Quantity: 2086 micrograms per liter

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/27/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/24/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/24/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action

188 COMMERCIAL ST (Continued) **S101025149**

Action Status: Interim Deadline Letter Issued
Action Date: 5/24/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0020622 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 05/24/2001
Category: 120 DY
Status Date: 12/27/2001
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/27/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/24/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/24/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 5/24/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

188 COMMERCIAL ST (Continued) **S101025149**

Chemicals:

Chemical:	MTBE
Quantity:	540000 micrograms per liter
Chemical:	BENZENE
Quantity:	2086 micrograms per liter
Source:	UNKNOWN

MA Spills:

Facility ID:	0000	Spill ID:	N89-1652
Staff Lead:	OTTENHEIMER, D	Date Entered:	19891109
Last Entered:	19900111	First Response:	19891002
Spill Date:	19891002	Spill Time:	11:00AM
Report Date:	19891002	Report Time:	11:20AM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	SOIL	Other Impact:	Not reported
Material:	GASOLINE	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	UNKNOWN
Qty Reported:	----------	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	U.S.T.	Other Source:	Not reported
Incident:	LEAK	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	NO	LUST Elig:	YES
Report Prep:	Not reported	Category:	Not reported
Notifier:	LT. PATTEN FD		
Notif Tel:	Not reported		
Days/Close:	1		

Facility ID:	0000	Spill ID:	N90-1261
Staff Lead:	BOYLE, T	Date Entered:	19900829
Last Entered:	19910109	First Response:	19900801
Spill Date:	19900801	Spill Time:	Not reported
Report Date:	19900801	Report Time:	11:30AM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	WASTE	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	WASTE OIL	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	UNKNOWN
Qty Reported:	----------	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	UNKNOWN
Source:	OTHER SOURCE >	Other Source:	VANDALISM
Incident:	SPILL	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	NO	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported
Notifier:	T PRIMUS		
Notif Tel:	Not reported		
Days/Close:	138		

HW GEN:

EPA Id:	MAD081579377
RCRA Generator Status:	VSQG
State Generator Status:	SQG-MA

AL137 **NO LOCATION AID** **MA SHWS** **S103043422**
WSW **525 LYNNWAY 188 COMMERCIAL ST** **MA INST CONTROL** **N/A**
1/2-1 **LYNN, MA 01905** **MA RELEASE**
0.722 mi.
3810 ft. **Site 3 of 5 in cluster AL**

Relative: Higher

Actual: 6 ft.

SHWS:

Release Tracking Number/Current Status:	3-0016542 / RAO
Release Town:	LYNN
Notification Date:	02/25/1998
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	12/28/2001
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity:	1092 milligrams per kilogram

Actions:

Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received
Action Date:	12/28/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Response Action Outcome - RAO
Action Status:	Submittal Retracted
Action Date:	12/28/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/28/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Activity and Use Limitation
Action Status:	Action Status or AUL Terminated
Action Date:	12/28/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	2/25/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E

NO LOCATION AID (Continued) **S103043422**

Action Date: 2/25/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/25/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/25/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 5/30/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 7/27/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

INST CONTROL:
Release Tracking Number: 3-0016542
Action Type: AUL
Action Stat: RECPT
Action Date: 02/25/1998
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.

Release Tracking Number: 3-0016542
Action Type: AUL
Action Stat: TERMIN
Action Date: 12/28/2001
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0016542 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 02/25/1998
Category: 72 HR
Status Date: 12/28/2001
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

NO LOCATION AID (Continued) **S103043422**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	An activity type that is related to an Audit
Action Status:	Audit Follow-up Completion Statement Received
Action Date:	12/28/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Submittal Retracted
Action Date:	12/28/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/28/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Activity and Use Limitation
Action Status:	Action Status or AUL Terminated
Action Date:	12/28/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	2/25/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	2/25/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/25/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/25/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	An activity type that is related to an Audit
Action Status:	Notice of Non-compliance related to an Audit
Action Date:	5/30/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S103043422**

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 7/27/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 1092 milligrams per kilogram

---

138 NNE 1/2-1 0.725 mi. 3827 ft.
SAID, MASUDI
139 CHESTNUT ST
LYNN, MA 01902
MA SHWS S108640695
MA LAST N/A
MA RELEASE
MA ENF

Relative: Higher
Actual: 45 ft.

SHWS:
Release Tracking Number/Current Status: 3-0026993 / TIER1D
Release Town: LYNN
Notification Date: 06/14/2007
Category: TWO HR
Associated ID: Not reported
Current Status: **Tier 1D, a release where the responsible party fails to provide a required submittal to DEP by a specified deadline.**
Status Date: 06/23/2008
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil
Location Type: RESIDNTIAL
Source: AST
Source: VEHICLE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: FUEL OIL
Quantity: 100 gallons
Chemical: #2 FUEL OIL
Quantity: 200 gallons

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 10/11/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 10/20/2008
Response Action Outcome: Not reported

SAID, MASUDI (Continued) **S108640695**

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/22/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 12/3/2009
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 4/14/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/12/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/14/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1A
Action Date: 6/14/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/14/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 6/14/2007
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/14/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/15/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/15/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN

SAID, MASUDI (Continued) **S108640695**

Action Date: 6/19/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/11/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/19/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/13/2007
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/13/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 9/11/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/18/2009
Response Action Outcome: Not reported

LAST:
Release Tracking Number/Current Status: 3-0026993 / TIER1D
Source Type: AST
Release Town: LYNN
Notification Date: 06/14/2007
Category: TWO HR
Associated ID: Not reported
Status Date: 06/23/2008
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil

Chemicals:
Chemical: FUEL OIL
Quantity: 100 gallons
Chemical: #2 FUEL OIL
Quantity: 200 gallons
Location Type: RESIDNTIAL
Source: AST
Source: VEHICLE

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E

SAID, MASUDI (Continued) **S108640695**

Action Date: 10/11/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 10/11/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 10/20/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/22/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 12/3/2009
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 4/14/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 5/12/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/14/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1A
Action Date: 6/14/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/14/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 6/14/2007
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/14/2007
Response Action Outcome: Not reported

SAID, MASUDI (Continued) **S108640695**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/15/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/15/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 6/19/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/11/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/19/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/13/2007
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/13/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 9/11/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/18/2009
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0026993 / TIER1D
Primary ID: Not reported
Official City: LYNN
Notification: 06/14/2007
Category: TWO HR
Status Date: 06/23/2008
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

SAID, MASUDI (Continued) **S108640695**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/11/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	10/11/2007
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	10/20/2008
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	10/22/2007
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Enforcement Conference
Action Date:	12/3/2009
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	4/14/2008
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	5/12/2008
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	6/14/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FLDD1A
Action Date:	6/14/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	6/14/2007
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	FLDISS
Action Date:	6/14/2007
Response Action Outcome:	Not reported

SAID, MASUDI (Continued) **S108640695**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/14/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/15/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 6/15/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 6/19/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/11/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/19/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 8/13/2007
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/13/2007
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 9/11/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/18/2009
Response Action Outcome: Not reported

Chemicals:
Chemical: FUEL OIL
Quantity: 100 gallons
Chemical: #2 FUEL OIL
Quantity: 200 gallons
Location Type: RESIDNTIAL
Source: AST

SAID, MASUDI (Continued) **S108640695**

Source: VEHICLE

ENFORCEMENT:

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0026993
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	09/18/2009
ENF #:	NON-NE-09-3A081
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0026993
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	10/20/2008
ENF #:	NON-NE-08-3A110
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported

SAID, MASUDI (Continued) **S108640695**

Ownership: Individually Owned

---

139 **NO LOCATION AID** **MA SHWS** **S103383657**
North **72 HIGHLAND AVE** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA**
0.730 mi.
3853 ft.

Relative:
Higher

Actual:
143 ft.

SHWS:
Release Tracking Number/Current Status: 3-0016961 / RAO
Release Town: LYNN
Notification Date: 06/24/1998
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 01/25/2002
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Oil
Location Type: RESIDNTIAL
Source: PIPE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 50 gallons

Actions:
Action Type: RAO - DEP Lead
Action Status: RAO Statement Received
Action Date: 1/25/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action - DEP Lead
Action Status: Completion Statement Received
Action Date: 11/9/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/16/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/11/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/11/1999

NO LOCATION AID (Continued) **S103383657**

Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/24/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action - DEP Lead
Action Status: Oral Approval of Plan or Action
Action Date: 6/24/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 6/24/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/30/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release:
Release Tracking Number/Current Status: 3-0016961 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 06/24/1998
Category: TWO HR
Status Date: 01/25/2002
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RAO - DEP Lead
Action Status: RAO Statement Received
Action Date: 1/25/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action - DEP Lead

NO LOCATION AID (Continued) **S103383657**

Action Status: Completion Statement Received
Action Date: 11/9/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 12/16/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/11/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/11/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/24/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action - DEP Lead
Action Status: Oral Approval of Plan or Action
Action Date: 6/24/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 6/24/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/30/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 50 gallons
Location Type: RESIDNTIAL

NO LOCATION AID (Continued) **S103383657**

Source: PIPE

AL140 **NOURIA #04032** **MA SHWS** **U004179047**
WSW **535 LYNNWAY** **MA UST** **N/A**
1/2-1 **LYNN, MA 01905** **MA RELEASE**
0.731 mi. **MA Financial Assurance**
3860 ft. **Site 4 of 5 in cluster AL**

Relative: Higher
Actual: 6 ft.

SHWS:
Release Tracking Number/Current Status: 3-0029899 / RAO
Release Town: LYNN
Notification Date: 03/28/2011
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 12/20/2012
Phase: PHASE II
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: TRICHLOROETHENE
Quantity: 0.4 milligrams per kilogram
Chemical: VINYL CHLORIDE
Quantity: 11.5 micrograms per liter
Chemical: DICHLOROETHYLENE-CIS
Quantity: 1.31 milligrams per kilogram

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 1/9/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/20/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/28/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/28/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF

NOURIA #04032 (Continued) **U004179047**

Action Status: Reportable Release under MGL 21E
Action Date: 3/28/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/28/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 3/28/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 3/28/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/28/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/7/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/13/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 4/14/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

UST:

Facility:
Facility ID: 5432
Owner Id: 10412
Owner: NOURIA ENERGY VENTURES 1 LLC
Owner Address: 326 CLARK ST
Owner City,St,Zip: WORCESTER, MA 01606
Telephone: 7815951170

NOURIA #04032 (Continued) **U004179047**

Description:	Retail Motor Vehicle Fuel
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.45544
Longitude:	-70.95849
Contact name:	Bob Farr
Contact address1:	326 Clark St
Contact address2:	Not reported
Contact city:	Worcester
Contact state:	MA
Contact zip:	01606
Contact email:	bob.farr@nouriaenergy.com
Update:	2015-11-22 00:00:00
Update by:	Not reported
Fac status:	OPEN

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	11/30/1991
Date Installed:	05/02/1974
Capacity:	5000
Contents:	Gasoline
Tank Usage:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Not reported
Pipe construct:	Not reported
Ptype:	Not reported
Number of compartment:	Not reported
Pipe install date:	Not reported
Pipe leak install date:	Not reported
Submersible sump:	N
Submersible sump install date:	Not reported
Turbine sump:	N
Turbine sump sensor:	N
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported
Overfill protect type:	Not reported
Automatic line leak detect:	Not reported
Tank corrosion type:	Not reported
Leak corrosion type:	Not reported

Tank ID:	2
Tank Status:	**Tank Removed**
Status Date:	11/30/1991
Date Installed:	05/02/1974
Capacity:	5000
Contents:	Gasoline
Tank Usage:	Not reported
Tank Leak Detection:	Not reported

NOURIA #04032 (Continued) **U004179047**

Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 3
Tank Status: Tank Removed
Status Date: 11/30/1991
Date Installed: 05/02/1981
Capacity: 8000
Contents: Gasoline
Tank Usage: Not reported
Tank Leak Detection: Not reported
Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 4

NOURIA #04032 (Continued) **U004179047**

Tank Status:	**Tank Removed**
Status Date:	11/30/1991
Date Installed:	05/02/1981
Capacity:	10000
Contents:	Gasoline
Tank Usage:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Not reported
Pipe construct:	Not reported
Ptype:	Not reported
Number of compartment:	Not reported
Pipe install date:	Not reported
Pipe leak install date:	Not reported
Submersible sump:	N
Submersible sump install date:	Not reported
Turbine sump:	N
Turbine sump sensor:	N
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported
Overfill protect type:	Not reported
Automatic line leak detect:	Not reported
Tank corrosion type:	Not reported
Leak corrosion type:	Not reported

Tank ID:	5
Tank Status:	**In Use**
Status Date:	Not reported
Date Installed:	12/31/1991
Capacity:	12000
Contents:	Gasoline
Tank Usage:	Motor Vehi
Tank Leak Detection:	Continuous Interstitial Monitoring
Pipe Leak Detection:	Continuous Interstitial Space Monitoring
Latitude:	42.45544
Longitude:	-70.95849
Tank construct:	Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct:	Double-walled non-corrodible material (No corrosion protection required)
Ptype:	Pressurized piping system with electronic automatic line leak detection
Number of compartment:	Not reported
Pipe install date:	01/01/1991
Pipe leak install date:	Not reported
Submersible sump:	Y
Submersible sump install date:	Not reported
Turbine sump:	Y
Turbine sump sensor:	Y
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported

NOURIA #04032 (Continued) **U004179047**

Overfill protect type: Automatic shut-off valve
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 6
Tank Status: **In Use**
Status Date: Not reported
Date Installed: 12/31/1991
Capacity: 12000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: 42.45544
Longitude: -70.95849
Tank construct: Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: Pressurized piping system with electronic automatic line leak detection
Number of compartment: Not reported
Pipe install date: 01/01/1991
Pipe leak install date: Not reported
Submersible sump: Y
Submersible sump install date: Not reported
Turbine sump: Y
Turbine sump sensor: Y
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Automatic shut-off valve
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 7
Tank Status: **In Use**
Status Date: Not reported
Date Installed: 12/31/1991
Capacity: 12000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: 42.45544
Longitude: -70.95849
Tank construct: Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: Pressurized piping system with electronic automatic line leak detection
Number of compartment: Not reported
Pipe install date: 01/01/1991
Pipe leak install date: Not reported
Submersible sump: Y
Submersible sump install date: Not reported

NOURIA #04032 (Continued) **U004179047**

Turbine sump: Y
Turbine sump sensor: Y
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Automatic shut-off valve
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Release:
Release Tracking Number/Current Status: 3-0029899 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 03/28/2011
Category: 120 DY
Status Date: 12/20/2012
Phase: PHASE II
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 1/9/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/20/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/28/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/28/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/28/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

NOURIA #04032 (Continued) **U004179047**

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/28/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 3/28/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 3/28/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/28/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/7/2013
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/13/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 4/14/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: TRICHLOROETHENE
Quantity: 0.4 milligrams per kilogram
Chemical: VINYL CHLORIDE
Quantity: 11.5 micrograms per liter
Chemical: DICHLOROETHYLENE-CIS
Quantity: 1.31 milligrams per kilogram

MA Financial Assurance 2:
Facility Id: 5432
Description: Gas Station
Work Phone: (508) 762-3700

AL141 **SHELL STATION** **MA SHWS** **S101037724**
WSW **535-545 LYNNWAY** **MA LUST** **N/A**
1/2-1 **LYNN, MA 01901** **MA RELEASE**
0.731 mi. **MA SPILLS**
3860 ft. **Site 5 of 5 in cluster AL**

Relative: Higher

Actual: 6 ft.

SHWS:

Release Tracking Number/Current Status:	3-0013477 / RAO
Release Town:	LYNN
Notification Date:	02/22/1996
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	10/18/2000
Phase:	PHASE III
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	VINYL CHLORIDE
Quantity:	0.022 milligrams per liter

Actions:

Action Type:	Tier Classification
Action Status:	Tier 2 Transfer
Action Date:	10/1/1998
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	10/18/2000
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/18/2000
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	10/18/2000
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	2/22/1996
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E

SHELL STATION (Continued) **S101037724**

Action Date: 2/22/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 2/28/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 2/28/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/28/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/5/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

LUST:

Facility:
Release Tracking Number/Current Status: 3-0003475 / DEPNDS
Status Date: 04/10/1996
Source Type: UST
Release Town: LYNN
Notification Date: 01/15/1991
Category: NONE
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil

Location Type: GASSTATION
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: PETROLEUM
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site

SHELL STATION (Continued) **S101037724**

Action Date: 1/15/1991
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: DEPNDS
Action Date: 4/10/1996
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0003475 / DEPNDS
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1991
Category: NONE
Status Date: 04/10/1996
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1991
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: DEPNDS
Action Date: 4/10/1996
Response Action Outcome: Not reported

Chemicals:
Chemical: PETROLEUM
Quantity: Not reported
Location Type: GASSTATION
Source: UST

Release Tracking Number/Current Status: 3-0013477 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 02/22/1996
Category: 120 DY
Status Date: 10/18/2000
Phase: PHASE III
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Tier Classification
Action Status: Tier 2 Transfer

SHELL STATION (Continued) **S101037724**

Action Date: 10/1/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 10/18/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/18/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 10/18/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/22/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/22/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 2/28/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 2/28/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/28/1997
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/5/1996
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

SHELL STATION (Continued) **S101037724**

Chemicals:
Chemical: VINYL CHLORIDE
Quantity: 0.022 milligrams per liter

MA Spills:

Facility ID:	3-3475	Spill ID:	N90-1774
Staff Lead:	MACAFEE, K	Date Entered:	19910530
Last Entered:	19931209	First Response:	19901024
Spill Date:	19901024	Spill Time:	Not reported
Report Date:	19901024	Report Time:	01:40PM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	SOIL	Other Impact:	Not reported
Material:	GASOLINE	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	UNKNOWN
Qty Reported:	GALLONS	Qty Actual:	GALLONS
CAS No:	Not reported	PCB Lev (ppm):	----------
Source:	U.S.T.	Other Source:	Not reported
Incident:	LEAK	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	SA	LUST Elig:	YES
Report Prep:	Not reported	Category:	Not reported
Notifier:	TOM CARR, SHELL		
Notif Tel:	Not reported		
Days/Close:	0		

---

142 **PROPERTY** **MA SHWS** **S101045568**
NNE **310 ESSEX ST** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA 01901** **MA SPILLS**
0.735 mi.
3880 ft.

Relative: Higher
Actual: 56 ft.

SHWS:
Release Tracking Number/Current Status: 3-0004698 / DEPNFA
Release Town: LYNN
Notification Date: 10/01/1993
Category: NONE
Associated ID: Not reported
Current Status: **No Further Action (DEP Determined)**
Status Date: 02/17/2011
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Not reported
Location Type: RESIDNTIAL
Source: PIPE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 10/1/1993

PROPERTY (Continued) **S101045568**

Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: DEPNFA
Action Date: 2/17/2011
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 2/17/2011
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLFLD
Action Date: 2/17/2011
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0004698 / DEPNFA
Primary ID: Not reported
Official City: LYNN
Notification: 10/01/1993
Category: NONE
Status Date: 02/17/2011
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 10/1/1993
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: DEPNFA
Action Date: 2/17/2011
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 2/17/2011
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLFLD
Action Date: 2/17/2011
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported
Location Type: RESIDNTIAL

PROPERTY (Continued) **S101045568**

Source: PIPE

MA Spills:

Facility ID:	3-4698	Spill ID:	N93-0118
Staff Lead:	FAGAN, J	Date Entered:	Not reported
Last Entered:	19930210	First Response:	19930201
Spill Date:	19930201	Spill Time:	Not reported
Report Date:	19930201	Report Time:	01:30PM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	#2 FUEL OIL	Other Material:	Not reported
Qty Reported:	11-50	Qty Actual:	----------
Qty Reported:	GALLONS	Qty Actual:	GALLONS
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	A.S.T.	Other Source:	Not reported
Incident:	OVERFILL	Other Incdnt:	Not reported
Cleanup Type:	Not reported	Contractor:	NOT USED
Referral:	SA	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported
Notifier:	LT BURKE/FD		
Notif Tel:	Not reported		
Days/Close:	0		

AN143 **MCMANUS PARK** **MA SHWS** **S103250066**
West **90 COMMERCIAL STREET** **MA INST CONTROL** **N/A**
1/2-1 **LYNN, MA 09105** **MA RELEASE**
0.738 mi.
3895 ft. **Site 1 of 2 in cluster AN**

Relative:
Higher

Actual:
21 ft.

SHWS:

Release Tracking Number/Current Status:	3-0016896 / DPS
Release Town:	LYNN
Notification Date:	06/05/1998
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Downgradient Property Status**
Status Date:	06/08/1999
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	NICKEL
Quantity:	110 micrograms per liter

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/8/1998
Response Action Outcome:	Not reported

Action Type:	Downgradient Property Status
Action Status:	Fee Received - FMCRA Use Only

MCMANUS PARK (Continued) **S103250066**

Action Date: 6/4/1999
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/5/1998
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/5/1998
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/8/1999
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0034079 / TIERII
Release Town: LYNN
Notification Date: 03/28/2017
Category: 120 DY
Associated ID: Not reported
Current Status: **Tier II, A site/release receiving a total NRS score of less than 350, unless the site meets any of the Tier 1 Inclusionary Criteria (see above). Permits are not required at Tier 2 sites/releases and response actions may be performed under the supervision of an LSP without prior DEP approval. All pre-1993 transition sites that have accepted waivers are categorically Tier 2 sites.**
Status Date: 03/30/2018
Phase: PHASE II
Response Action Outcome: -
Oil Or Haz Material: Oil and Hazardous Material
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: C9 THRU C10 AROMATIC HYDROCARBONS
Quantity: 180 milligrams per kilogram
Chemical: C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity: 141 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 19.2 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 16.3 milligrams per kilogram
Chemical: PHENANTHRENE
Quantity: 24.5 milligrams per kilogram
Chemical: BENZO[A]PYRENE
Quantity: 14 milligrams per kilogram
Chemical: DIBENZ[A,H]ANTHRACENE
Quantity: 5.25 milligrams per kilogram
Chemical: INDENO(1,2,3-CD)PYRENE
Quantity: 7.79 milligrams per kilogram

MCMANUS PARK (Continued) **S103250066**

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	1/10/2018
Response Action Outcome:	Not reported
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/28/2017
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/28/2017
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/28/2017
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/30/2018
Response Action Outcome:	Not reported
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	3/30/2018
Response Action Outcome:	Not reported
Action Type:	Phase 2
Action Status:	Scope of Work Received
Action Date:	3/30/2018
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	3/30/2018
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/14/2017
Response Action Outcome:	Not reported

Release Tracking Number/Current Status:	3-0016898 / RAO
Release Town:	LYNN
Notification Date:	06/04/1998
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	06/09/1999
Phase:	PHASE IV
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL)

MCMANUS PARK (Continued) **S103250066**

has been implemented.
Oil Or Haz Material: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: CHRYSENE
Quantity: 24 milligrams per kilogram
Chemical: LEAD
Quantity: 360 milligrams per kilogram
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 1100 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 17 milligrams per kilogram
Chemical: BENZO[A]PYRENE
Quantity: 19 milligrams per kilogram
Chemical: BERYLLIUM
Quantity: 2.1 milligrams per kilogram
Chemical: INDENO(1,2,3-CD)PYRENE
Quantity: 11 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 5 milligrams per kilogram
Chemical: TPH
Quantity: 5900 milligrams per kilogram

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/10/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 6/3/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/4/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/4/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received

MCMANUS PARK (Continued) **S103250066**

Action Date: 6/9/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/9/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 7/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 7/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 7/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 7/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 7/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 8/22/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 8/22/2008

MCMANUS PARK (Continued) **S103250066**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 9/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:
Release Tracking Number: 3-0016898
Action Type: AUL
Action Stat: RECPT
Action Date: 06/09/1999
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0016898
Action Type: AUL
Action Stat: SNAUDI
Action Date: 08/22/2008
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:
Release Tracking Number/Current Status: 3-0016896 / DPS
Primary ID: Not reported
Official City: LYNN
Notification: 06/05/1998
Category: 120 DY
Status Date: 06/08/1999
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/8/1998
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/4/1999
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/5/1998

MCMANUS PARK (Continued) **S103250066**

Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/5/1998
Response Action Outcome: Not reported

Action Type: Downgradient Property Status
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/8/1999
Response Action Outcome: Not reported

Chemicals:
Chemical: NICKEL
Quantity: 110 micrograms per liter

Release Tracking Number/Current Status: 3-0016898 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 06/04/1998
Category: 120 DY
Status Date: 06/09/1999
Phase: PHASE IV
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/10/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 6/3/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/4/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/4/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

MCMANUS PARK (Continued) **S103250066**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/9/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/9/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 7/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 7/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 7/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 7/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 7/1/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 8/22/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

MCMANUS PARK (Continued) **S103250066**

been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 8/22/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 9/19/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: CHRYSENE
Quantity: 24 milligrams per kilogram
Chemical: LEAD
Quantity: 360 milligrams per kilogram
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 1100 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 17 milligrams per kilogram
Chemical: BENZO[A]PYRENE
Quantity: 19 milligrams per kilogram
Chemical: BERYLLIUM
Quantity: 2.1 milligrams per kilogram
Chemical: INDENO(1,2,3-CD)PYRENE
Quantity: 11 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 5 milligrams per kilogram
Chemical: TPH
Quantity: 5900 milligrams per kilogram

Release Tracking Number/Current Status: 3-0034079 / TIERII
Primary ID: Not reported
Official City: LYNN
Notification: 03/28/2017
Category: 120 DY
Status Date: 03/30/2018
Phase: PHASE II
Response Action Outcome: -
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 1/10/2018
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E

MCMANUS PARK (Continued) **S103250066**

Action Date: 3/28/2017
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/28/2017
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/28/2017
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/30/2018
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 3/30/2018
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 3/30/2018
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/30/2018
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/14/2017
Response Action Outcome: Not reported

Chemicals:
Chemical: C9 THRU C10 AROMATIC HYDROCARBONS
Quantity: 180 milligrams per kilogram
Chemical: C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity: 141 milligrams per kilogram
Chemical: BENZO[A]ANTHRACENE
Quantity: 19.2 milligrams per kilogram
Chemical: BENZO[B]FLUORANTHENE
Quantity: 16.3 milligrams per kilogram
Chemical: PHENANTHRENE
Quantity: 24.5 milligrams per kilogram
Chemical: BENZO[A]PYRENE
Quantity: 14 milligrams per kilogram
Chemical: DIBENZ[A,H]ANTHRACENE
Quantity: 5.25 milligrams per kilogram
Chemical: INDENO(1,2,3-CD)PYRENE
Quantity: 7.79 milligrams per kilogram
Source: UNKNOWN

AN144 **MARSHALLS WHARF 2** **MA SHWS** **S100830544**
West **NEPTUNE BLVD** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA 01901**
0.738 mi.
3895 ft. **Site 2 of 2 in cluster AN**

Relative:
Higher

Actual:
21 ft.

SHWS:

Release Tracking Number/Current Status:	3-0001425 / DEPNDS
Release Town:	LYNN
Notification Date:	01/15/1990
Category:	NONE
Associated ID:	Not reported
Current Status:	**Not a Disposal Site (DEP)**
Status Date:	04/10/1996
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Not reported

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not reported

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1990
Response Action Outcome:	Not reported

Action Type:	TREGS
Action Status:	DEPNDS
Action Date:	4/10/1996
Response Action Outcome:	Not reported

Release:

Release Tracking Number/Current Status:	3-0001425 / DEPNDS
Primary ID:	Not reported
Official City:	LYNN
Notification:	01/15/1990
Category:	NONE
Status Date:	04/10/1996
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1990
Response Action Outcome:	Not reported

Action Type:	TREGS
Action Status:	DEPNDS

MARSHALLS WHARF 2 (Continued) **S100830544**

Action Date: 4/10/1996
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

---

145 West 1/2-1 0.738 mi. 3899 ft.

CEFALO INC
159 COMMERCIAL ST
LYNN, MA 01901

MA SHWS **S101022496**
MA RELEASE **N/A**
MA SPILLS
MA ENF
MA HW GEN

Relative: Higher

Actual: 10 ft.

SHWS:
Release Tracking Number/Current Status: 3-0003505 / TIERII
Release Town: LYNN
Notification Date: 10/24/1990
Category: NONE
Associated ID: Not reported
Current Status: **Tier II, A site/release receiving a total NRS score of less than 350, unless the site meets any of the Tier 1 Inclusionary Criteria (see above). Permits are not required at Tier 2 sites/releases and response actions may be performed under the supervision of an LSP without prior DEP approval. All pre-1993 transition sites that have accepted waivers are categorically Tier 2 sites.**
Status Date: 07/21/2009
Phase: PHASE II
Response Action Outcome: -
Oil Or Haz Material: Not reported
Location Type: COMMERCIAL

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 1/26/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/24/1990
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 10/24/1990
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 6/21/2007

CEFALO INC (Continued) **S101022496**

Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 7/21/2009
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 7/21/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/21/2009
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 7/21/2009
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 8/21/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/22/2013
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/17/2013
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0003505 / TIERII
Primary ID: Not reported
Official City: LYNN
Notification: 10/24/1990
Category: NONE
Status Date: 07/21/2009
Phase: PHASE II
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 1/26/2007
Response Action Outcome: Not reported

CEFALO INC (Continued) **S101022496**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/24/1990
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 10/24/1990
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 6/21/2007
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 7/21/2009
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 7/21/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/21/2009
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 7/21/2009
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 8/21/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/22/2013
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/17/2013
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported
Location Type: COMMERCIAL

MA Spills:

CEFALO INC (Continued) **S101022496**

Facility ID:	3-3505	Spill ID:	N89-0381
Staff Lead:	LUTHER, W	Date Entered:	19890523
Last Entered:	19940113	First Response:	19890320
Spill Date:	19890320	Spill Time:	Not reported
Report Date:	19890320	Report Time:	09:50AM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	SOIL	Other Impact:	Not reported
Material:	#2 FUEL OIL	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	UNKNOWN
Qty Reported:	----------	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	----------
Source:	U.S.T.	Other Source:	Not reported
Incident:	TANK REMOVAL	Other Incdnt:	Not reported
Cleanup Type:	___	Contractor:	NOT USED
Referral:	SA	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported
Notifier:	BILL KENNEDY		
Notif Tel:	Not reported		
Days/Close:	0		

ENFORCEMENT:

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0003505
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Lynn
Date Executed:	09/17/2013
ENF #:	NON-NE-13-3R022
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0003505
High Or Low Level Enforcement:	LLE

CEFALO INC (Continued) **S101022496**

FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Lynn
Date Executed:	09/17/2013
ENF #:	NON-NE-13-3R029
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0003505
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Lynn
Date Executed:	08/22/2013
ENF #:	NON-NE-13-3R022
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0003505
High Or Low Level Enforcement:	LLE
FMF #:	Not reported

CEFALO INC (Continued) **S101022496**

Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	01/26/2007
ENF #:	NON-NE-07-3A005
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0003505
High Or Low Level Enforcement:	HLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	08/21/2007
ENF #:	ACOP-NE-07-3A001
Document Type:	ACOP
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	07/31/2008
ACOP $:	10000
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	20000
Ownership:	Individually Owned

HW GEN:

EPA Id:	MV7815961907
RCRA Generator Status:	Not reported
State Generator Status:	SQG-MA

AO146 **KELLY HONDA** **MA SHWS** **S106954100**
WSW **540 LYNNWAY** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA 01905** **MA ASBESTOS**
0.741 mi. **MA ENF**
3914 ft. **Site 1 of 2 in cluster AO** **MA HW GEN**

Relative: Higher

Actual: 9 ft.

SHWS:

Release Tracking Number/Current Status:	3-0000048 / RAO
Release Town:	LYNN
Notification Date:	01/15/1987
Category:	NONE
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	12/04/1995
Phase:	PHASE II
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not reported

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not reported

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1987
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/4/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	12/4/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	8/17/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	8/18/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	TREGS
Action Status:	LSPFA

KELLY HONDA (Continued) **S106954100**

Action Date:	8/6/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/7/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/7/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	8/7/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Release Tracking Number/Current Status:	3-0024113 / RAO
Release Town:	LYNN
Notification Date:	08/02/2004
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	10/27/2006
Phase:	PHASE II
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Oil

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity:	15000 micrograms per liter

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/27/2006
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	10/27/2006
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued

KELLY HONDA (Continued) **S106954100**

Action Date: 12/14/2005
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/2/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/2/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/22/2006
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/23/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release Tracking Number/Current Status: 3-0025044 / RAO
Release Town: LYNN
Notification Date: 07/15/2005
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 06/21/2006
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: BENZO[B]FLUORANTHENE
Quantity: 1.9 parts per million
Chemical: BENZO[A]ANTHRACENE
Quantity: 1.4 parts per million
Chemical: CHROMIUM
Quantity: 2700 parts per million

Actions:
Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 6/21/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

KELLY HONDA (Continued) **S106954100**

reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/21/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/22/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 6/5/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/15/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/15/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/15/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/22/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0000048 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1987
Category: NONE
Status Date: 12/04/1995
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

KELLY HONDA (Continued) **S106954100**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	1/15/1987
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/4/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	12/4/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	8/17/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	8/18/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	TREGS
Action Status:	LSPFA
Action Date:	8/6/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	8/7/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/7/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	8/7/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

KELLY HONDA (Continued) **S106954100**

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Release Tracking Number/Current Status: 3-0024113 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 08/02/2004
Category: 120 DY
Status Date: 10/27/2006
Phase: PHASE II
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/27/2006
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/27/2006
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 12/14/2005
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/2/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/2/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 8/22/2006
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.

KELLY HONDA (Continued) **S106954100**

Action Date: 8/23/2004
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity: 15000 micrograms per liter

Release Tracking Number/Current Status: 3-0025044 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 07/15/2005
Category: 120 DY
Status Date: 06/21/2006
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 6/21/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/21/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/22/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 6/5/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/15/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/15/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

KELLY HONDA (Continued) **S106954100**

reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/15/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/22/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: BENZO[B]FLUORANTHENE
Quantity: 1.9 parts per million
Chemical: BENZO[A]ANTHRACENE
Quantity: 1.4 parts per million
Chemical: CHROMIUM
Quantity: 2700 parts per million

ASBESTOS:
Notification: 100010122
DEP Region: NE
Notifiers Name: ENVIRONMENTAL COMPLIANCE SPECIALIST
Start Date: 10/21/2004
End Date: 10/29/2004
Date Entered: 08/10/2004
Entry Date: 10/08/2004
Quantity Materical Removed SF: 300
Quantity Material Removed LF: 1150
Project Description: Spr,Trns,ROOFING
AR Tracking ID: Not reported
Super Lic Number: Not reported
Monitor Lic Number: Not reported
Lab Lic Number: Not reported
Year: Not reported
Sticker Number: Not reported
Form Type: Not reported
Fee Status: Not reported
Facility Phone: Not reported
Sub Town: Not reported
Worksite: Not reported
Occupied: Not reported
Contractor: Not reported
Contract Type: Not reported
Hours: Not reported
Project Type: Not reported
Abatement Process: Not reported
Location: Not reported
Decon Process: Not reported
Disposal Methods: Not reported
Facility Usage: Not reported
Waiver Given: Not reported
DEP Waiver Number: Not reported

KELLY HONDA (Continued) **S106954100**

DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

ENFORCEMENT:

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0024113
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	08/22/2006
ENF #:	NON-NE-06-3A145
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

HW GEN:

EPA Id:	MAR000015289
RCRA Generator Status:	VSQG
State Generator Status:	SQG-MA

AO147 **540 LYNNWAY** **MA SHWS** **S102086717**
WSW **PERLOW FRD DEALERSHIP** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA**
0.761 mi.
4018 ft. **Site 2 of 2 in cluster AO**

Relative: Higher

Actual: 8 ft.

SHWS:

Release Tracking Number/Current Status:	3-0012518 / RAO
Release Town:	LYNN
Notification Date:	05/26/1995
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	12/04/1995
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	HYDRAULIC FLUID
Quantity:	Not reported
Chemical:	HYDRAULIC OIL
Quantity:	11000 parts per million
Chemical:	TPH
Quantity:	2500 milligrams per kilogram

Actions:

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	12/4/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/4/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	12/5/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Oral Approval of Plan or Action
Action Date:	5/26/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/26/1995

540 LYNNWAY (Continued) **S102086717**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/14/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/26/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/26/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 7/27/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/31/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0012518 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 05/26/1995
Category: 120 DY
Status Date: 12/04/1995
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 12/4/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO

540 LYNNWAY (Continued) **S102086717**

Action Status: RAO Statement Received
Action Date: 12/4/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/5/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Oral Approval of Plan or Action
Action Date: 5/26/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/26/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/14/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/26/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 7/26/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 7/27/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/31/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: HYDRAULIC FLUID
Quantity: Not reported
Chemical: HYDRAULIC OIL

540 LYNNWAY (Continued) **S102086717**

Quantity: 11000 parts per million
Chemical: TPH
Quantity: 2500 milligrams per kilogram
Source: UNKNOWN

148
West
1/2-1
0.785 mi.
4146 ft.

Relative:
Higher

Actual:
15 ft.

VELCAR TOOL & DIE CO INC
22 BENNETT ST
LYNN, MA 01905

MA SHWS **1000167895**
MA RELEASE **MAD001069491**
RCRA NonGen / NLR
FINDS
ECHO
MA HW GEN

SHWS:
Release Tracking Number/Current Status: 3-0000893 / DEPNDS
Release Town: LYNN
Notification Date: 01/15/1990
Category: NONE
Associated ID: Not reported
Current Status: **Not a Disposal Site (DEP)**
Status Date: 04/08/1996
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Not reported

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1990
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: DEPNDS
Action Date: 4/8/1996
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0000893 / DEPNDS
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1990
Category: NONE
Status Date: 04/08/1996
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

VELCAR TOOL & DIE CO INC (Continued) **1000167895**

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1990
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: DEPNDS
Action Date: 4/8/1996
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

RCRA NonGen / NLR:
Date form received by agency: 06/23/1980
Facility name: VELCAR TOOL & DIE CO INC
Facility address: 22 BENNETT ST
LYNN, MA 01905
EPA ID: MAD001069491
Contact: UNKNOWN UNKNOWN
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: 999-999-9999
Contact email: Not reported
EPA Region: 01
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: VELCAR TOOL & DIE CO INC
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Owner/operator email: Not reported
Owner/operator fax: Not reported
Owner/operator extension: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 12/08/1991
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No

VELCAR TOOL & DIE CO INC (Continued) **1000167895**

Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No

Violation Status: No violations found

FINDS:

Registry ID: 110003419382

Environmental Interest/Information System
RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

MA-EPICS - Massachussetts Environmental Protection Integrated Computer System

Click this hyperlink while viewing on your computer to access additional FINDS: detail in the EDR Site Report.

ECHO:
Envid: 1000167895
Registry ID: 110003419382
DFR URL: http://echo.epa.gov/detailed-facility-report?fid=110003419382

HW GEN:
EPA Id: MV6176019887
RCRA Generator Status: VSQG
State Generator Status: Not reported

149
NNE
1/2-1
0.790 mi.
4170 ft.

NO LOCATION AID
19 SHERIDAN ST
LYNN, MA

MA SHWS **S102084843**
MA LAST **N/A**
MA RELEASE

Relative:
Higher

Actual:
55 ft.

SHWS:
Release Tracking Number/Current Status: 3-0010024 / RAO
Release Town: LYNN
Notification Date: 10/06/1993
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 09/07/1994
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Oil
Location Type: ROADWAY

NO LOCATION AID (Continued) **S102084843**

Location Type: RESIDNTIAL
Location Type: CATCH BASN
Source: AST
Source: VEHICLE

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 100 gallons

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/8/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/15/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF

NO LOCATION AID (Continued) **S102084843**

Action Date: 2/25/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 4/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/21/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/7/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/7/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

LAST:
Release Tracking Number/Current Status: 3-0010024 / RAO
Source Type: AST
Release Town: LYNN
Notification Date: 10/06/1993
Category: TWO HR
Associated ID: Not reported
Status Date: 09/07/1994
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Oil

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 100 gallons
Location Type: ROADWAY
Location Type: RESIDNTIAL
Location Type: CATCH BASN
Source: AST
Source: VEHICLE

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

NO LOCATION AID (Continued) **S102084843**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/8/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/15/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 2/25/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 4/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/21/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/7/1994

NO LOCATION AID (Continued) **S102084843**

Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/7/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release:
Release Tracking Number/Current Status: 3-0010024 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/06/1993
Category: TWO HR
Status Date: 09/07/1994
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 10/11/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/6/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA

NO LOCATION AID (Continued) **S102084843**

Action Status: FOLOFF
Action Date: 10/8/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/15/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 2/25/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 4/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 4/21/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/7/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/7/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 100 gallons
Location Type: ROADWAY
Location Type: RESIDNTIAL
Location Type: CATCH BASN
Source: AST
Source: VEHICLE

150 NNE 1/2-1 0.806 mi. 4255 ft. | **7-11 CONVENIENCE STORE**
264 ESSEX ST
LYNN, MA 01901 | **MA SHWS** **MA LUST** **MA RELEASE** | **S105199729** **N/A**

Relative: Higher

Actual: 45 ft.

SHWS:

Release Tracking Number/Current Status:	3-0004023 / RAO
Release Town:	LYNN
Notification Date:	07/15/1992
Category:	NONE
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	07/01/1999
Phase:	PHASE III
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Oil
Location Type:	GASSTATION
Location Type:	FORMER
Source:	PIPE
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	PETROLEUM
Quantity:	Not reported

Actions:

Action Type:	TREGS
Action Status:	WAVREC
Action Date:	10/19/1992
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	12/14/1998
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	TREGS
Action Status:	WAVSIG
Action Date:	2/1/1993
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	2/25/1998
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	TREGS
Action Status:	WAVACC
Action Date:	3/8/1993
Response Action Outcome:	Remedial actions have not been conducted because a level of No

7-11 CONVENIENCE STORE (Continued) **S105199729**

Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/8/1993
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/8/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 5/10/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 6/23/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/1/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1992
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

LUST:

Facility:
Release Tracking Number/Current Status: 3-0004023 / RAO
Status Date: 07/01/1999
Source Type: UST
Release Town: LYNN
Notification Date: 07/15/1992
Category: NONE
Associated ID: Not reported
Phase: PHASE III
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Oil

Location Type: GASSTATION
Location Type: FORMER
Source: PIPE

7-11 CONVENIENCE STORE (Continued) **S105199729**

Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: PETROLEUM
Quantity: Not reported

Actions:
Action Type: TREGS
Action Status: WAVREC
Action Date: 10/19/1992
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 12/14/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: TREGS
Action Status: WAVSIG
Action Date: 2/1/1993
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/25/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: TREGS
Action Status: WAVACC
Action Date: 3/8/1993
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/8/1993
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/8/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 5/10/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No

7-11 CONVENIENCE STORE (Continued) **S105199729**

Significant Risk exists.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 6/23/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/1/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1992
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:
Release Tracking Number/Current Status: 3-0004023 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 07/15/1992
Category: NONE
Status Date: 07/01/1999
Phase: PHASE III
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: TREGS
Action Status: WAVREC
Action Date: 10/19/1992
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 12/14/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: TREGS
Action Status: WAVSIG
Action Date: 2/1/1993
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Extension

7-11 CONVENIENCE STORE (Continued) **S105199729**

Action Date: 2/25/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: TREGS
Action Status: WAVACC
Action Date: 3/8/1993
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/8/1993
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 3/8/1998
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 5/10/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 6/23/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/1/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1992
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: PETROLEUM
Quantity: Not reported
Location Type: GASSTATION
Location Type: FORMER
Source: PIPE
Source: UST

151
WSW
1/2-1
0.813 mi.
4294 ft.

ROSE MARY TRUST
41 CAROLYN RD
LYNN, MA 01905

MA SHWS **U002007659**
MA LUST **N/A**
MA UST
MA RELEASE
MA Financial Assurance

Relative:
Higher

Actual:
15 ft.

SHWS:

Release Tracking Number/Current Status:	3-0023330 / RAO
Release Town:	LYNN
Notification Date:	10/31/2003
Category:	72 HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	12/30/2003
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST
Source:	PIPE

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	FUEL OIL
Quantity:	174 gallons

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/31/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/31/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	11/14/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/30/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/30/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

ROSE MARY TRUST (Continued) **U002007659**

LUST:

Facility:

Release Tracking Number/Current Status:	3-0023330 / RAO
Status Date:	12/30/2003
Source Type:	UST
Release Town:	LYNN
Notification Date:	10/31/2003
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST
Source:	PIPE

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	FUEL OIL
Quantity:	174 gallons

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/31/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/31/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	11/14/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/30/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	12/30/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

ROSE MARY TRUST (Continued) **U002007659**

UST:

Facility:

Facility ID:	8414
Owner Id:	644
Owner:	ROSE MARY TRUST
Owner Address:	41 CAROLYN RD
Owner City,St,Zip:	LYNN, MA 01905
Telephone:	Not reported
Description:	Commercial
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.45336
Longitude:	-70.95906
Contact name:	Not reported
Contact address1:	Not reported
Contact address2:	Not reported
Contact city:	Not reported
Contact state:	Not reported
Contact zip:	Not reported
Contact email:	Not reported
Update:	2005-02-23 00:00:00
Update by:	Not reported
Fac status:	CLOSED

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	12/01/2003
Date Installed:	Not reported
Capacity:	2000
Contents:	Gasoline
Tank Usage:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Not reported
Pipe construct:	Not reported
Ptype:	Not reported
Number of compartment:	Not reported
Pipe install date:	Not reported
Pipe leak install date:	Not reported
Submersible sump:	N
Submersible sump install date:	Not reported
Turbine sump:	N
Turbine sump sensor:	N
Intermediate sump:	N
Intermediate sump sensor:	N
Spill bucket installed date:	Not reported
Spill bucket sensor:	N
Overfill protect install:	Not reported
Overfill protect type:	Not reported
Automatic line leak detect:	Not reported
Tank corrosion type:	Not reported
Leak corrosion type:	Not reported

ROSE MARY TRUST (Continued) **U002007659**

Tank ID: 2
Tank Status: Tank Removed
Status Date: 12/01/2003
Date Installed: Not reported
Capacity: 2000
Contents: Diesel
Tank Usage: Not reported
Tank Leak Detection: Not reported
Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Release:
Release Tracking Number/Current Status: 3-0023330 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/31/2003
Category: 72 HR
Status Date: 12/30/2003
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

ROSE MARY TRUST (Continued) **U002007659**

reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/14/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/30/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/30/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL
Quantity: 174 gallons
Location Type: COMMERCIAL
Source: UST
Source: PIPE

MA Financial Assurance 2:
Facility Id: 8414
Description: Contractor
Work Phone: (617) 595-0589

---

152 NW 1/2-1 0.825 mi. 4356 ft.

APARTMENT BUILDING
110 FRANKLIN STREET
LYNN, MA 01903

MA SHWS S116358049
MA RELEASE N/A

Relative: Higher

Actual: 35 ft.

SHWS:
Release Tracking Number/Current Status: 3-0032043 / PSNC
Release Town: LYNN
Notification Date: 03/06/2014
Category: 120 DY
Associated ID: Not reported
Current Status: **PSNC**
Status Date: 05/21/2014
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: HEATING OIL

APARTMENT BUILDING (Continued) **S116358049**

Quantity: 6800 milligrams per kilogram

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/20/2014
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/6/2014
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/6/2014
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/6/2014
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 5/21/2014
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/26/2014
Response Action Outcome: Not reported

Release:

Release Tracking Number/Current Status: 3-0032043 / PSNC
Primary ID: Not reported
Official City: LYNN
Notification: 03/06/2014
Category: 120 DY
Status Date: 05/21/2014
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/20/2014
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/6/2014
Response Action Outcome: Not reported

APARTMENT BUILDING (Continued) **S116358049**

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 3/6/2014
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/6/2014
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 5/21/2014
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/26/2014
Response Action Outcome: Not reported

Chemicals:
Chemical: HEATING OIL
Quantity: 6800 milligrams per kilogram
Source: UNKNOWN

---

153 West 1/2-1 0.829 mi. 4378 ft.

NO LOCATION AID
37 BENNETT ST
LYNN, MA 01905

MA SHWS S100537261
MA LUST N/A
MA RELEASE

Relative: Higher

Actual: 11 ft.

SHWS:
Release Tracking Number/Current Status: 3-0004325 / RAO
Release Town: LYNN
Notification Date: 07/15/1993
Category: NONE
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 08/07/1997
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Not reported

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S100537261**

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/7/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LUST:

Facility:
Release Tracking Number/Current Status: 3-0014191 / RAO
Status Date: 08/08/1997
Source Type: UST
Release Town: LYNN
Notification Date: 09/04/1996
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: FUEL OIL #2
Quantity: 140 parts per million

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/21/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/21/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/13/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/12/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

NO LOCATION AID (Continued) **S100537261**

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/7/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/8/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 9/25/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/25/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/4/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/4/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 9/4/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 9/4/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/4/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0004325 / RAO

NO LOCATION AID (Continued) **S100537261**

Primary ID: Not reported
Official City: LYNN
Notification: 07/15/1993
Category: NONE
Status Date: 08/07/1997
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/15/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/7/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Release Tracking Number/Current Status: 3-0014191 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 09/04/1996
Category: 72 HR
Status Date: 08/08/1997
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/21/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/21/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition

NO LOCATION AID (Continued) **S100537261**

Action Status: Reportable Release under MGL 21E
Action Date: 12/13/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/12/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 8/7/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/8/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 9/25/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 9/25/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/4/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 9/4/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 9/4/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 9/4/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S100537261**

reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/4/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 140 parts per million
Location Type: COMMERCIAL
Source: UST

---

154 WNW 1/2-1 0.841 mi. 4439 ft. **LYNN HOUSING AUTHORITY** **MA SHWS S100830543**
MEADOW CT **MA RELEASE N/A**
LYNN, MA 01901

Relative: Higher
Actual: 29 ft.

SHWS:
Release Tracking Number/Current Status: 3-0003718 / DEPNDS
Release Town: LYNN
Notification Date: 10/15/1991
Category: NONE
Associated ID: Not reported
Current Status: **Not a Disposal Site (DEP)**
Status Date: 07/23/1993
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Not reported
Source: UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: HYDRAULIC OIL
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 10/15/1991
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: DEPNDS
Action Date: 7/23/1993
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0003718 / DEPNDS
Primary ID: Not reported
Official City: LYNN
Notification: 10/15/1991

LYNN HOUSING AUTHORITY (Continued) **S100830543**

Category:	NONE
Status Date:	07/23/1993
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	10/15/1991
Response Action Outcome:	Not reported

Action Type:	TREGS
Action Status:	DEPNDS
Action Date:	7/23/1993
Response Action Outcome:	Not reported

Chemicals:

Chemical:	HYDRAULIC OIL
Quantity:	Not reported
Source:	UNKNOWN

---

155 **CORNER OF LYNNWAY & COMMERCIAL** **MA SHWS** **S102403717**
WSW **577-591 LYNNWAY** **MA INST CONTROL** **N/A**
1/2-1 **LYNN, MA 01901** **MA RELEASE**
0.847 mi.
4472 ft.

Relative:
Higher

Actual:
6 ft.

SHWS:

Release Tracking Number/Current Status:	3-0013409 / RAO
Release Town:	LYNN
Notification Date:	02/02/1996
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	07/11/2001
Phase:	PHASE II
Response Action Outcome:	A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material:	Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	NAPHTHALENE
Quantity:	3480 milligrams per kilogram
Chemical:	CADMIUM
Quantity:	0.01 milligrams per liter
Chemical:	LEAD
Quantity:	2350 milligrams per kilogram
Chemical:	SELENIUM
Quantity:	0.26 milligrams per liter

CORNER OF LYNNWAY & COMMERCIAL (Continued) **S102403717**

Chemical: TPH
Quantity: 3060 milligrams per kilogram

Actions:

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 10/12/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/5/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 2/10/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 2/10/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/10/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 2/10/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/2/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/2/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

CORNER OF LYNNWAY & COMMERCIAL (Continued) **S102403717**

been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/22/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 3/13/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 3/13/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 3/24/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/11/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/11/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 7/11/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 7/11/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

CORNER OF LYNNWAY & COMMERCIAL (Continued) **S102403717**

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/11/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 7/30/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/13/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:
Release Tracking Number: 3-0013409
Action Type: AUL
Action Stat: AMEND
Action Date: 07/30/2001
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0013409
Action Type: AUL
Action Stat: LEGNOT
Action Date: 10/12/2000
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0013409
Action Type: AUL
Action Stat: RECPT
Action Date: 07/11/2001
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0013409
Action Type: AUL
Action Stat: SNAUDI
Action Date: 03/13/2008
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:

CORNER OF LYNNWAY & COMMERCIAL (Continued) **S102403717**

Release Tracking Number/Current Status: 3-0013409 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 02/02/1996
Category: 120 DY
Status Date: 07/11/2001
Phase: PHASE II
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 10/12/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/5/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 2/10/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 2/10/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/10/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 2/10/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

CORNER OF LYNNWAY & COMMERCIAL (Continued) **S102403717**

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 2/2/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/2/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/22/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 3/13/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 3/13/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 3/24/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/11/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/11/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure

CORNER OF LYNNWAY & COMMERCIAL (Continued) **S102403717**

Action Status: Completion Statement Received
Action Date: 7/11/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 7/11/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/11/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 7/30/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/13/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: NAPHTHALENE
Quantity: 3480 milligrams per kilogram
Chemical: CADMIUM
Quantity: 0.01 milligrams per liter
Chemical: LEAD
Quantity: 2350 milligrams per kilogram
Chemical: SELENIUM
Quantity: 0.26 milligrams per liter
Chemical: TPH
Quantity: 3060 milligrams per kilogram

AP156 **NO LOCATION AID** **MA SHWS** **S102085584**
WSW **599 LYNNWAY** **MA INST CONTROL** **N/A**
1/2-1 **LYNN, MA 01901** **MA RELEASE**
0.910 mi. **MA HW GEN**
4803 ft. **Site 1 of 2 in cluster AP**

Relative: Higher
Actual: 8 ft.

SHWS:
Release Tracking Number/Current Status: 3-0011034 / RAO
Release Town: LYNN
Notification Date: 05/13/1994
Category: 120 DY

NO LOCATION AID (Continued) **S102085584**

Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 01/31/1995
Phase: PHASE IV
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil Or Haz Material: Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: LEAD
Quantity: 2425 milligrams per kilogram

Actions:
Action Type: Compliance and Enforcement Action
Action Status: RFIRSP
Action Date: 1/15/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 1/20/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 1/23/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 1/23/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 1/24/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/31/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has

NO LOCATION AID (Continued) **S102085584**

been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/31/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 10/11/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 12/19/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: RFI
Action Date: 12/2/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: RFI
Action Date: 12/3/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/3/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 3/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 3/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

NO LOCATION AID (Continued) **S102085584**

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 3/27/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/20/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 7/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/15/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 8/19/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 8/8/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action

NO LOCATION AID (Continued) **S102085584**

Action Status: ACOP
Action Date: 9/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

INST CONTROL:
Release Tracking Number: 3-0011034
Action Type: AUL
Action Stat: RECPT
Action Date: 01/31/1995
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release Tracking Number: 3-0011034
Action Type: AUL
Action Stat: SNAUDI
Action Date: 03/20/2008
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Release:
Release Tracking Number/Current Status: 3-0011034 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 05/13/1994
Category: 120 DY
Status Date: 01/31/1995
Phase: PHASE IV
Response Action Outcome: A3 - A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Compliance and Enforcement Action
Action Status: RFIRSP
Action Date: 1/15/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 1/20/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received

NO LOCATION AID (Continued) **S102085584**

Action Date: 1/23/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 1/23/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 1/24/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/31/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/31/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 10/11/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 12/19/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: RFI
Action Date: 12/2/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: RFI
Action Date: 12/3/2002

NO LOCATION AID (Continued) **S102085584**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 2/3/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 3/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 3/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 3/27/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/13/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/20/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 7/31/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

NO LOCATION AID (Continued) **S102085584**

reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 8/15/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 8/19/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 8/8/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 9/29/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background and an Activity and use Limitation (AUL) has been implemented.

Chemicals:
Chemical: LEAD
Quantity: 2425 milligrams per kilogram

HW GEN:
EPA Id: MV7814797680
RCRA Generator Status: Not reported
State Generator Status: SQG-MA

AQ157 **J STONE & SON INC** **MA SHWS** **U000227317**
WSW **86 BENNETT ST** **MA UST** **N/A**
1/2-1 **LYNN, MA 01905** **MA INST CONTROL**
0.917 mi. **MA RELEASE**
4843 ft. **Site 1 of 2 in cluster AQ** **MA Financial Assurance**

Relative: Higher
Actual: 19 ft.

SHWS:
Release Tracking Number/Current Status: 3-0029746 / RAO
Release Town: LYNN
Notification Date: 01/07/2011
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 12/13/2011
Phase: PHASE II
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more

J STONE & SON INC (Continued) **U000227317**

AULs that have been implemented.
Oil Or Haz Material: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 6440 milligrams per kilogram
Chemical: LEAD
Quantity: 1200 milligrams per kilogram
Chemical: 2-METHYLNAPHTHALENE
Quantity: 28.7 milligrams per kilogram
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 2500 milligrams per kilogram
Chemical: ACENAPHTHYLENE
Quantity: 3.97 milligrams per kilogram
Chemical: C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity: 1940 milligrams per kilogram
Chemical: C9 THRU C10 AROMATIC HYDROCARBONS
Quantity: 2440 milligrams per kilogram
Chemical: NAPHTHALENE
Quantity: 6.71 milligrams per kilogram

Actions:
Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 1/2/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/27/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/7/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/7/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/7/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No

J STONE & SON INC (Continued) **U000227317**

Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 11/7/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/13/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/13/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/17/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/22/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 3/4/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 3/4/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 5/3/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more

J STONE & SON INC (Continued) **U000227317**

AULs that have been implemented.

Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection
Action Date:	9/28/2012
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	9/28/2012
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

UST:

Facility:

Facility ID:	5397
Owner Id:	3263
Owner:	J STONE & SON INC
Owner Address:	86 BENNETT ST
Owner City,St,Zip:	LYNN, MA 01905
Telephone:	Not reported
Description:	Manufacturing
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.45578
Longitude:	-70.96214
Contact name:	Not reported
Contact address1:	Not reported
Contact address2:	Not reported
Contact city:	Not reported
Contact state:	Not reported
Contact zip:	Not reported
Contact email:	Not reported
Update:	1996-01-31 00:00:00
Update by:	Not reported
Fac status:	CLOSED

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	04/15/1994
Date Installed:	11/01/1986
Capacity:	2000
Contents:	Diesel
Tank Usage:	Not reported
Tank Leak Detection:	Manual Tank Gauging (1,000G or more capacity tank)
Pipe Leak Detection:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Not reported
Pipe construct:	Not reported
Ptype:	Not reported

J STONE & SON INC (Continued) **U000227317**

Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

INST CONTROL:
Release Tracking Number: 3-0029746
Action Type: AUL
Action Stat: LEGNOT
Action Date: 01/02/2012
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0029746
Action Type: AUL
Action Stat: RECPT
Action Date: 12/17/2011
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0029746
Action Type: AUL
Action Stat: SNAUDI
Action Date: 03/04/2016
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release Tracking Number: 3-0029746
Action Type: AUL
Action Stat: SNAUDI
Action Date: 09/28/2012
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Release:
Release Tracking Number/Current Status: 3-0029746 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/07/2011
Category: 120 DY

J STONE & SON INC (Continued) **U000227317**

Status Date: 12/13/2011
Phase: PHASE II
Response Action Outcome: B2 - Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.
Oil / Haz Material Type: Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 1/2/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/27/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/7/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 1/7/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/7/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 11/7/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/13/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more

J STONE & SON INC (Continued) **U000227317**

AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/13/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/17/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/22/2011
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 3/4/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 3/4/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 5/3/2016
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 9/28/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/28/2012
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists, but that level is contingent upon one or more AULs that have been implemented.

J STONE & SON INC (Continued) **U000227317**

Chemicals:
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 6440 milligrams per kilogram
Chemical: LEAD
Quantity: 1200 milligrams per kilogram
Chemical: 2-METHYLNAPHTHALENE
Quantity: 28.7 milligrams per kilogram
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 2500 milligrams per kilogram
Chemical: ACENAPHTHYLENE
Quantity: 3.97 milligrams per kilogram
Chemical: C9 THRU C12 ALIPHATIC HYDROCARBONS
Quantity: 1940 milligrams per kilogram
Chemical: C9 THRU C10 AROMATIC HYDROCARBONS
Quantity: 2440 milligrams per kilogram
Chemical: NAPHTHALENE
Quantity: 6.71 milligrams per kilogram

MA Financial Assurance 2:
Facility Id: 5397
Description: Industrial
Work Phone: (617) 592-4377

AQ158 **OIL DEPOT FMR** **MA SHWS** **S101023332**
West **84 BENNETT ST** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA 01901** **MA SPILLS**
0.921 mi. **MA ENF**
4864 ft. **Site 2 of 2 in cluster AQ**

Relative: Higher
Actual: 14 ft.

SHWS:
Release Tracking Number/Current Status: 3-0002567 / PSNC
Release Town: LYNN
Notification Date: 07/17/1989
Category: NONE
Associated ID: Not reported
Current Status: **PSNC**
Status Date: 04/07/2016
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Not reported
Location Type: INDUSTRIAL

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Compliance and Enforcement Action
Action Status: CILS
Action Date: 1/8/2008
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued

OIL DEPOT FMR (Continued) **S101023332**

Action Date: 1/8/2008
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 11/17/2011
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 11/17/2011
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 11/17/2011
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 4/27/2011
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 4/7/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 4/7/2016
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 5/20/2014
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 6/30/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 6/30/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 6/30/2008
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: TCEXT
Action Date: 6/30/2014
Response Action Outcome: Not reported

OIL DEPOT FMR (Continued) **S101023332**

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 6/8/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/17/1989
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/17/1989
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/17/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 8/12/2015
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/3/2011
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/14/2011
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 9/7/2015
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0002567 / PSNC
Primary ID: Not reported
Official City: LYNN
Notification: 07/17/1989
Category: NONE
Status Date: 04/07/2016
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Compliance and Enforcement Action

OIL DEPOT FMR (Continued) **S101023332**

Action Status:	CILS
Action Date:	1/8/2008
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	1/8/2008
Response Action Outcome:	Not reported
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	11/17/2011
Response Action Outcome:	Not reported
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	11/17/2011
Response Action Outcome:	Not reported
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	11/17/2011
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	4/27/2011
Response Action Outcome:	Not reported
Action Type:	Phase 4
Action Status:	Completion Statement Received
Action Date:	4/7/2016
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	4/7/2016
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	5/20/2014
Response Action Outcome:	Not reported
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	6/30/2008
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	6/30/2008
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/30/2008

OIL DEPOT FMR (Continued) **S101023332**

Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: TCEXT
Action Date: 6/30/2014
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 6/8/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/17/1989
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/17/1989
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/17/2007
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 8/12/2015
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/3/2011
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/14/2011
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Status or Interim Report Received
Action Date: 9/7/2015
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported
Location Type: INDUSTRIAL

MA Spills:
Facility ID: 3-2567
Staff Lead: MACAFEE, K
Last Entered: 19931129
Spill ID: N89-1039
Date Entered: 19890719
First Response: 19890623

OIL DEPOT FMR (Continued) **S101023332**

Spill Date:	19890623	Spill Time:	Not reported
Report Date:	19890623	Report Time:	12:30PM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	SOIL	Other Impact:	Not reported
Material:	GASOLINE	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	UNKNOWN
Qty Reported:	----------	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	UNKNOWN
Source:	U.S.T.	Other Source:	Not reported
Incident:	LEAK	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	SA	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported
Notifier:	INSP.DURKEE FD		
Notif Tel:	Not reported		
Days/Close:	0		

ENFORCEMENT:

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0002567
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported
Date Executed:	09/14/2011
ENF #:	NON-NE-11-3A046
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3C
DEP Bureau:	BWSC
Program:	Not reported
Program Id:	3-0002567
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Not reported

OIL DEPOT FMR (Continued) **S101023332**

Date Executed:	01/08/2008
ENF #:	Not reported
Document Type:	IDL
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Not reported
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0002567
High Or Low Level Enforcement:	HLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Lynn
Date Executed:	08/12/2015
ENF #:	ACOP-NE-15-3R007
Document Type:	ACOP
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	08/12/2016
ACOP $:	$3,000.00
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	$27,000.00
Ownership:	T

Region:	NERO
DEP Region:	NERO
DEP Program:	3R
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	3-0002567
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Lynn
Date Executed:	05/20/2014

OIL DEPOT FMR (Continued) **S101023332**

ENF #:	NON-NE-13-3R051
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Individually Owned

AP159 **613-623 LYNNWAY** **MA SHWS** **S118337336**
WSW **613-623 LYNNWAY** **MA INST CONTROL** **N/A**
1/2-1 **LYNN, MA 01905** **MA RELEASE**
0.925 mi.
4883 ft. **Site 2 of 2 in cluster AP**

Relative:
Higher

Actual:
6 ft.

SHWS:

Release Tracking Number/Current Status:	3-0033121 / PSC
Release Town:	LYNN
Notification Date:	08/30/2015
Category:	120 DY
Associated ID:	Not reported
Current Status:	**PSC**
Status Date:	08/22/2016
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	UNKNOWN
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	ARSENIC
Quantity:	83 milligrams per kilogram
Chemical:	LEAD
Quantity:	2326 milligrams per kilogram

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	PSAREV
Action Date:	12/7/2016
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/30/2016
Response Action Outcome:	Not reported
Action Type:	RNFE

613-623 LYNNWAY (Continued) **S118337336**

Action Status: Revised Statement or Transmittal Received
Action Date: 4/30/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/12/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 6/8/2016
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/22/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSARCD
Action Date: 8/22/2016
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/30/2015
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/30/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/30/2015
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/4/2015
Response Action Outcome: Not reported

INST CONTROL:
Release Tracking Number: 3-0033121
Action Type: AUL
Action Stat: RECPT
Action Date: 08/22/2016
Response Action Outcome: -

Release:
Release Tracking Number/Current Status: 3-0033121 / PSC
Primary ID: Not reported
Official City: LYNN

613-623 LYNNWAY (Continued) **S118337336**

Notification: 08/30/2015
Category: 120 DY
Status Date: 08/22/2016
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Response Action Outcome - RAO
Action Status: PSAREV
Action Date: 12/7/2016
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/30/2016
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Revised Statement or Transmittal Received
Action Date: 4/30/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/12/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 6/8/2016
Response Action Outcome: Not reported

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/22/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSARCD
Action Date: 8/22/2016
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/30/2015
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/30/2015
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E

613-623 LYNNWAY (Continued) **S118337336**

Action Date: 8/30/2015
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/4/2015
Response Action Outcome: Not reported

Chemicals:
Chemical: ARSENIC
Quantity: 83 milligrams per kilogram
Chemical: LEAD
Quantity: 2326 milligrams per kilogram
Location Type: UNKNOWN
Source: UNKNOWN

---

160 NW 1/2-1 0.926 mi. 4887 ft.

LYNN APARTMENT BUILDING FIRE
438 WESTERN AVE
LYNN, MA 01902

MA SHWS S111411815
MA LAST N/A
MA RELEASE
MA ASBESTOS

Relative: Higher

Actual: 56 ft.

SHWS:
Release Tracking Number/Current Status: 3-0030374 / RAO
Release Town: LYNN
Notification Date: 10/09/2011
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 02/13/2012
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil
Location Type: PRIVPROP
Location Type: RESIDNTIAL
Source: LINE
Source: AST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 200 gallons

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/31/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 10/9/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

LYNN APARTMENT BUILDING FIRE (Continued) **S111411815**

reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/9/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/9/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/12/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/13/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LAST:
Release Tracking Number/Current Status: 3-0030374 / RAO
Source Type: AST
Release Town: LYNN
Notification Date: 10/09/2011
Category: TWO HR
Associated ID: Not reported
Status Date: 02/13/2012
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

LYNN APARTMENT BUILDING FIRE (Continued) **S111411815**

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 200 gallons
Location Type: PRIVPROP
Location Type: RESIDNTIAL
Source: LINE
Source: AST

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/31/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 10/9/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/9/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/9/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/12/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

LYNN APARTMENT BUILDING FIRE (Continued) **S111411815**

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/13/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0030374 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 10/09/2011
Category: TWO HR
Status Date: 02/13/2012
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/31/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 10/9/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/9/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/9/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/12/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

LYNN APARTMENT BUILDING FIRE (Continued) **S111411815**

reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/13/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 200 gallons
Location Type: PRIVPROP
Location Type: RESIDNTIAL
Source: LINE
Source: AST

ASBESTOS:
Notification: 100136537
DEP Region: NE
Notifiers Name: CLEAR AIR SERVICES INC
Start Date: 10/12/2011
End Date: 10/12/2011
Date Entered: 18/10/2011
Entry Date: 10/18/2011
Quantity Materical Removed SF: 200
Quantity Material Removed LF: 0
Project Description: Trns
AR Tracking ID: Not reported
Super Lic Number: Not reported
Monitor Lic Number: Not reported
Lab Lic Number: Not reported
Year: Not reported
Sticker Number: Not reported
Form Type: Not reported
Fee Status: Not reported
Facility Phone: Not reported
Sub Town: Not reported
Worksite: Not reported
Occupied: Not reported
Contractor: Not reported
Contract Type: Not reported
Hours: Not reported
Project Type: Not reported
Abatement Process: Not reported

LYNN APARTMENT BUILDING FIRE (Continued) **S111411815**

Location:	Not reported
Decon Process:	Not reported
Disposal Methods:	Not reported
Facility Usage:	Not reported
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	Not reported
Owner Name:	Not reported
Owner Address:	Not reported
Owner City:	Not reported
Owner State:	Not reported
On Site Manager Name:	Not reported
On Site Manager Phone:	Not reported
Ins Comp:	Not reported
Policy Number:	Not reported
EXP Date:	Not reported
Facility Size:	Not reported
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	Not reported
Certified Name:	Not reported
Cert Sign Date:	Not reported
Certified Company:	Not reported
Certified Phone:	Not reported
Entered_by:	Not reported

161
NW
1/2-1
0.930 mi.
4912 ft.

NO LOCATION AID **MA SHWS** **S104000575**
477 WESTERN AVE **MA RELEASE** **N/A**
LYNN, MA

Relative:
Higher

Actual:
46 ft.

SHWS:

Release Tracking Number/Current Status:	3-0018514 / RAO
Release Town:	LYNN
Notification Date:	07/07/1999
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	04/18/2001
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Hazardous Material
Source:	INSULATION

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	ASBESTOS
Quantity:	Not reported

Actions:

Action Type:	Compliance and Enforcement Action

NO LOCATION AID (Continued) **S104000575**

Action Status: Notice of Non-Compliance Issued
Action Date: 10/11/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RAO - DEP Lead
Action Status: RAO Statement Received
Action Date: 4/18/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/5/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/22/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 7/13/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 7/13/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/7/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 7/7/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/22/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release:
Release Tracking Number/Current Status: 3-0018514 / RAO
Primary ID: Not reported

NO LOCATION AID (Continued) **S104000575**

Official City: LYNN
Notification: 07/07/1999
Category: TWO HR
Status Date: 04/18/2001
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 10/11/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RAO - DEP Lead
Action Status: RAO Statement Received
Action Date: 4/18/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 4/5/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 5/22/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 7/13/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 7/13/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/7/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 7/7/1999

NO LOCATION AID (Continued) **S104000575**

Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/22/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: ASBESTOS
Quantity: Not reported
Source: INSULATION

AR162 **JOHN J NISSEN BAKING CO INC** **MA SHWS U001005213**
NE **118 BROOKLINE ST** **MA UST N/A**
1/2-1 **LYNN, MA 01902** **MA INST CONTROL**
0.941 mi. **MA RELEASE**
4968 ft. **Site 1 of 2 in cluster AR** **MA Financial Assurance**

Relative: Higher
Actual: 26 ft.

SHWS:
Release Tracking Number/Current Status: 3-0001273 / RAO
Release Town: LYNN
Notification Date: 01/15/1990
Category: NONE
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 07/23/2002
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil
Location Type: INDUSTRIAL
Location Type: COMMERCIAL

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: FUEL OIL
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1990
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 1/22/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received

JOHN J NISSEN BAKING CO INC (Continued) **U001005213**

Action Date: 1/22/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/1/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 11/19/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Not Required - Fee Refunded-FMCRA Use Only
Action Date: 11/3/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 12/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 12/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: DEPNFA
Action Date: 12/24/1988
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 2/11/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 5/8/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

JOHN J NISSEN BAKING CO INC (Continued) **U001005213**

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 6/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 7/22/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/23/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/23/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 7/29/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 7/3/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/7/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Activity and Use Limitation
Action Status: Action Status or AUL Terminated
Action Date: 9/17/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/17/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 9/17/2008

JOHN J NISSEN BAKING CO INC (Continued) **U001005213**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 9/6/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

UST:

Facility:

Facility ID:	5410
Owner Id:	3482
Owner:	JOHN J NISSEN BAKING CO INC
Owner Address:	59 WASHINGTON AVE
Owner City,St,Zip:	PORTLAND, ME 04104
Telephone:	Not reported
Description:	Manufacturing
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.47011
Longitude:	-70.93099
Contact name:	Not reported
Contact address1:	Not reported
Contact address2:	Not reported
Contact city:	Not reported
Contact state:	Not reported
Contact zip:	Not reported
Contact email:	Not reported
Update:	2013-06-06 00:00:00
Update by:	Not reported
Fac status:	CLOSED

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	01/01/1987
Date Installed:	04/21/1981
Capacity:	2000
Contents:	Gasoline
Tank Usage:	Not reported
Tank Leak Detection:	Not reported
Pipe Leak Detection:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Tank construct:	Not reported
Pipe construct:	Not reported
Ptype:	Not reported
Number of compartment:	Not reported
Pipe install date:	Not reported
Pipe leak install date:	Not reported
Submersible sump:	N
Submersible sump install date:	Not reported
Turbine sump:	N
Turbine sump sensor:	N

JOHN J NISSEN BAKING CO INC (Continued) **U001005213**

Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 2
Tank Status: Tank Removed
Status Date: 10/01/1986
Date Installed: 04/21/1966
Capacity: 4000
Contents: Diesel
Tank Usage: Not reported
Tank Leak Detection: Not reported
Pipe Leak Detection: Not reported
Latitude: Not reported
Longitude: Not reported
Tank construct: Not reported
Pipe construct: Not reported
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

INST CONTROL:
Release Tracking Number: 3-0001273
Action Type: AUL
Action Stat: LEGNOT
Action Date: 07/03/2002
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.

Release Tracking Number: 3-0001273
Action Type: AUL
Action Stat: LEGNOT
Action Date: 09/06/2008
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.

JOHN J NISSEN BAKING CO INC (Continued) **U001005213**

Release Tracking Number: 3-0001273
Action Type: AUL
Action Stat: RECPT
Action Date: 07/23/2002
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.

Release Tracking Number: 3-0001273
Action Type: AUL
Action Stat: TERMIN
Action Date: 09/17/2008
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Release Tracking Number/Current Status: 3-0001273 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1990
Category: NONE
Status Date: 07/23/2002
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1990
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 1/22/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/22/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/1/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 11/19/1997

JOHN J NISSEN BAKING CO INC (Continued) **U001005213**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Not Required - Fee Refunded-FMCRA Use Only
Action Date: 11/3/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 12/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 12/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: DEPNFA
Action Date: 12/24/1988
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 2/11/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 3/30/2009
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Transfer
Action Date: 5/8/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 6/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 7/22/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

JOHN J NISSEN BAKING CO INC (Continued) **U001005213**

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/23/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Activity and Use Limitation
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/23/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 7/29/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 7/3/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/7/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Activity and Use Limitation
Action Status: Action Status or AUL Terminated
Action Date: 9/17/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/17/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 9/17/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 9/6/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL
Quantity: Not reported

JOHN J NISSEN BAKING CO INC (Continued) **U001005213**

Location Type: INDUSTRIAL
Location Type: COMMERCIAL

MA Financial Assurance 2:
Facility Id: 5410
Description: Industrial
Work Phone: (617) 595-3600

AS163 **NO LOCATION AID** **MA SHWS S113411757**
WSW **626 LYNNWAY** **MA LUST N/A**
1/2-1 **LYNN, MA 01905** **MA RELEASE**
0.946 mi.
4996 ft. **Site 1 of 2 in cluster AS**

Relative:
Higher

Actual:
9 ft.

SHWS:
Release Tracking Number/Current Status: 3-0031401 / ADQREG
Release Town: LYNN
Notification Date: 02/26/2013
Category: TWO HR
Associated ID: Not reported
Current Status: **Adequately Regulated**
Status Date: 04/26/2013
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material
Location Type: INDUSTRIAL
Source: UNDER IN
Source: VESTIGATN

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: METHANE
Quantity: 100 %LEL

Actions:
Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/16/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLFLD
Action Date: 3/11/2013
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S113411757**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/21/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1U
Action Date: 3/6/2013
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/8/2013
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 4/26/2013
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Adequately Regulated
Action Date: 4/26/2013
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/26/2013
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/26/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/6/2013
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0031401 / ADQREG
Release Town: LYNN
Notification Date: 02/26/2013
Category: TWO HR
Associated ID: Not reported
Current Status: **Adequately Regulated**
Status Date: 04/26/2013
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material
Location Type: INDUSTRIAL
Source: UNDER IN
Source: VESTIGATN

Click here to access the MA DEP site for this facility:

NO LOCATION AID (Continued) **S113411757**

Chemicals:
Chemical: METHANE
Quantity: 100 %LEL

Actions:
Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/16/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLFLD
Action Date: 3/11/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/21/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1U
Action Date: 3/6/2013
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/8/2013
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 4/26/2013
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Adequately Regulated
Action Date: 4/26/2013
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/26/2013
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E

NO LOCATION AID (Continued) **S113411757**

Action Date:	4/26/2013
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	5/6/2013
Response Action Outcome:	Not reported
Release Tracking Number/Current Status:	3-0032594 / PSNC
Release Town:	LYNN
Notification Date:	11/04/2014
Category:	72 HR
Associated ID:	Not reported
Current Status:	**PSNC**
Status Date:	11/03/2015
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	TANKDISP
Source:	UST
Source:	TANK

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	270 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	1/2/2015
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/2/2015
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Imminent Hazard Evaluation Received
Action Date:	1/2/2015
Response Action Outcome:	Not reported
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	1/26/2015
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	1/5/2015
Response Action Outcome:	Not reported

NO LOCATION AID (Continued) **S113411757**

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/19/2014
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/2/2015
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 11/3/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/4/2014
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/4/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/12/2014
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/22/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/3/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 3/4/2015
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/14/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/5/2015
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0032594 / PSNC

NO LOCATION AID (Continued) **S113411757**

Release Town:	LYNN
Notification Date:	11/04/2014
Category:	72 HR
Associated ID:	Not reported
Current Status:	**PSNC**
Status Date:	11/03/2015
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	TANKDISP
Source:	UST
Source:	TANK

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	270 parts per million

Actions:

Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	1/2/2015
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/2/2015
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Imminent Hazard Evaluation Received
Action Date:	1/2/2015
Response Action Outcome:	Not reported
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	1/26/2015
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	1/5/2015
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	11/19/2014
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	11/2/2015
Response Action Outcome:	Not reported

NO LOCATION AID (Continued) **S113411757**

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 11/3/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/4/2014
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/4/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/12/2014
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/22/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/3/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 3/4/2015
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/14/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/5/2015
Response Action Outcome: Not reported

LUST:

Facility:
Release Tracking Number/Current Status: 3-0032594 / PSNC
Status Date: 11/03/2015
Source Type: UST
Release Town: LYNN
Notification Date: 11/04/2014
Category: 72 HR
Associated ID: Not reported
Phase: Not reported

NO LOCATION AID (Continued) **S113411757**

Response Action Outcome: -
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: TANKDISP
Source: UST
Source: TANK

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: DIESEL FUEL
Quantity: 270 parts per million

Actions:
Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 1/2/2015
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/2/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 1/2/2015
Response Action Outcome: Not reported

Action Type: BOL
Action Status: SHPFAC
Action Date: 1/26/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/5/2015
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/19/2014
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/2/2015
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 11/3/2015
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S113411757**

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/4/2014
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/4/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/12/2014
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/22/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/3/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 3/4/2015
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/14/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/5/2015
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0031401 / ADQREG
Primary ID: Not reported
Official City: LYNN
Notification: 02/26/2013
Category: TWO HR
Status Date: 04/26/2013
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action

NO LOCATION AID (Continued) **S113411757**

Action Status: Level I - Technical Screen Audit
Action Date: 1/16/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/26/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLFLD
Action Date: 3/11/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/21/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1U
Action Date: 3/6/2013
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/8/2013
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 4/26/2013
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Adequately Regulated
Action Date: 4/26/2013
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 4/26/2013
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/26/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/6/2013

NO LOCATION AID (Continued) **S113411757**

Response Action Outcome: Not reported

Chemicals:
Chemical: METHANE
Quantity: 100 %LEL
Location Type: INDUSTRIAL
Source: UNDER IN
Source: VESTIGATN

Release Tracking Number/Current Status: 3-0032594 / PSNC
Primary ID: Not reported
Official City: LYNN
Notification: 11/04/2014
Category: 72 HR
Status Date: 11/03/2015
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 1/2/2015
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/2/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 1/2/2015
Response Action Outcome: Not reported

Action Type: BOL
Action Status: SHPFAC
Action Date: 1/26/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 1/5/2015
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 11/19/2014
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/2/2015
Response Action Outcome: Not reported

NO LOCATION AID (Continued) **S113411757**

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 11/3/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/4/2014
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/4/2014
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/12/2014
Response Action Outcome: Not reported

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/22/2014
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/3/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 3/4/2015
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/14/2015
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/5/2015
Response Action Outcome: Not reported

Chemicals:
Chemical: DIESEL FUEL
Quantity: 270 parts per million
Location Type: COMMERCIAL
Source: TANKDISP
Source: UST
Source: TANK

AS164 **GARELICK FARMS** **MA SHWS** **S101030422**
WSW **626 LYNNWAY** **MA SWF/LF** **N/A**
1/2-1 **LYNN, MA 01905** **MA LUST**
0.946 mi. **MA RELEASE**
4996 ft. **Site 2 of 2 in cluster AS** **MA SPILLS**
MA ENF
Relative: **MA HW GEN**
Higher **MA TIER 2**

Actual:
9 ft.

SHWS:

Release Tracking Number/Current Status:	3-0020367 / RAO
Release Town:	LYNN
Notification Date:	02/05/2001
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	04/09/2001
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	PIPE

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	LUBE OIL
Quantity:	40 gallons

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	2/26/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/5/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	2/5/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	4/6/2001
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	4/9/2001

GARELICK FARMS (Continued) **S101030422**

Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release Tracking Number/Current Status: 3-0027819 / RAO
Release Town: LYNN
Notification Date: 07/05/2008
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 09/09/2008
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Hazardous Material
Location Type: COMMERCIAL
Location Type: PRIVPROP
Source: PUMP
Source: REFRIGRNT

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: ANHYDROUS AMMONIA
Quantity: 20 pounds
Chemical: ANHYDROUS AMMONIA
Quantity: 17.06 pounds

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 10/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/5/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 7/5/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 7/5/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 7/5/2008

GARELICK FARMS (Continued) **S101030422**

Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/29/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/9/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release Tracking Number/Current Status: 3-0027819 / RAO
Release Town: LYNN
Notification Date: 07/05/2008
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 09/09/2008
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Hazardous Material
Location Type: COMMERCIAL
Location Type: PRIVPROP
Source: PUMP
Source: REFRIGRNT

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: ANHYDROUS AMMONIA
Quantity: 20 pounds
Chemical: ANHYDROUS AMMONIA
Quantity: 17.06 pounds

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 10/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/5/2008

GARELICK FARMS (Continued) **S101030422**

Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 7/5/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 7/5/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 7/5/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/29/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/9/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release Tracking Number/Current Status: 3-0017871 / RAO
Release Town: LYNN
Notification Date: 01/15/1999
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 03/16/1999
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Hazardous Material
Location Type: INDUSTRIAL
Source: PIPE

Click here to access the MA DEP site for this facility:

GARELICK FARMS (Continued) **S101030422**

Chemicals:
Chemical: AMMONIA, ANHYDROUS
Quantity: 100 pounds

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/15/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/19/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 3/16/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release Tracking Number/Current Status: 3-0013079 / TMPS
Release Town: LYNN
Notification Date: 10/25/1995
Category: 72 HR
Associated ID: 3-0013079
Current Status: **TMPS**
Status Date: 07/19/2016
Phase: PHASE V
Response Action Outcome: -
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: UST
Source: TANKER

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #4 FUEL OIL
Quantity: Not reported

Actions:
Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 1/15/2014
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 1/15/2014
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action

GARELICK FARMS (Continued) **S101030422**

Action Status: Notice of Non-Compliance Issued
Action Date: 1/24/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/5/1996
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 1/5/1996
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 10/10/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 10/21/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Level II - Audit Inspection
Action Date: 10/21/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/25/1995
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/25/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/30/1995
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/30/1995
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 11/1/1996

GARELICK FARMS (Continued) **S101030422**

Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 11/2/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 11/23/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/23/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/24/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINI
Action Date: 11/24/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 11/24/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/24/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 11/24/2009
Response Action Outcome: Not reported

GARELICK FARMS (Continued) **S101030422**

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/27/2007
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 11/27/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/3/1995
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 11/5/2001
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/5/2010
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/18/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/18/1995
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 12/2/2005
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 12/20/2011
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 12/20/2011
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 12/3/2008
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT

GARELICK FARMS (Continued) **S101030422**

Action Date: 12/3/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/26/1996
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 2/26/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/3/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/6/2003
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 3/5/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 3/5/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 3/8/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 3/8/2013
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/9/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 5/24/2007
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/24/2007
Response Action Outcome: Not reported

GARELICK FARMS (Continued) **S101030422**

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 5/24/2007
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 5/25/2005
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 5/25/2005
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: As-Built Construction Report Received
Action Date: 5/25/2005
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/26/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 5/26/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/29/2008
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 5/29/2008
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 5/30/2001
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received

GARELICK FARMS (Continued) **S101030422**

Action Date: 5/31/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 6/20/2011
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 6/20/2011
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 6/29/2004
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 7/15/2010
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: TSNRCD
Action Date: 7/19/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RMRFIN
Action Date: 7/25/2014
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Action Status or AUL Terminated
Action Date: 7/25/2014
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 7/3/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 7/3/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Level II - Audit Inspection
Action Date: 8/10/2005
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 8/10/2005
Response Action Outcome: Not reported

GARELICK FARMS (Continued) **S101030422**

Action Type:	Compliance and Enforcement Action
Action Status:	NON-A
Action Date:	8/30/2004
Response Action Outcome:	Not reported
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	8/4/2004
Response Action Outcome:	Not reported
Action Type:	Tier Classification
Action Status:	Tier 2 Extension
Action Date:	8/4/2004
Response Action Outcome:	Not reported
Action Type:	Phase 5
Action Status:	Level II - Audit Inspection
Action Date:	9/13/2007
Response Action Outcome:	Not reported
Action Type:	An activity type that is related to an Audit
Action Status:	NAFVIO
Action Date:	9/8/2005
Response Action Outcome:	Not reported
Release Tracking Number/Current Status:	3-0033437 / PSNC
Release Town:	LYNN
Notification Date:	02/28/2016
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**PSNC**
Status Date:	04/07/2016
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Hazardous Material
Location Type:	COMMERCIAL
Location Type:	INDUSTRIAL
Source:	LINE
Source:	VALVE
Source:	SOLENOID

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	ANHYDROUS AMMONIA
Quantity:	645 pounds

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/28/2016
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FLDD1A

GARELICK FARMS (Continued) **S101030422**

Action Date: 2/28/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/28/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/10/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 4/7/2016
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0033437 / PSNC
Release Town: LYNN
Notification Date: 02/28/2016
Category: TWO HR
Associated ID: Not reported
Current Status: **PSNC**
Status Date: 04/07/2016
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material
Location Type: COMMERCIAL
Location Type: INDUSTRIAL
Source: LINE
Source: VALVE
Source: SOLENOID

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: ANHYDROUS AMMONIA
Quantity: 645 pounds

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/28/2016
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1A
Action Date: 2/28/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/28/2016
Response Action Outcome: Not reported

GARELICK FARMS (Continued) **S101030422**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/10/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 4/7/2016
Response Action Outcome: Not reported

Release Tracking Number/Current Status: 3-0033437 / PSNC
Release Town: LYNN
Notification Date: 02/28/2016
Category: TWO HR
Associated ID: Not reported
Current Status: **PSNC**
Status Date: 04/07/2016
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Hazardous Material
Location Type: COMMERCIAL
Location Type: INDUSTRIAL
Source: LINE
Source: VALVE
Source: SOLENOID

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: ANHYDROUS AMMONIA
Quantity: 645 pounds

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/28/2016
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDD1A
Action Date: 2/28/2016
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/28/2016
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/10/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD

GARELICK FARMS (Continued) **S101030422**

Action Date:	4/7/2016
Response Action Outcome:	Not reported
Release Tracking Number/Current Status:	3-0025793 / RAO
Release Town:	LYNN
Notification Date:	04/03/2006
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	06/12/2006
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Hazardous Material
Location Type:	INDUSTRIAL
Source:	WSTDIGSTR

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	METHANE
Quantity:	130 pounds
Chemical:	METHANE
Quantity:	Not reported

Actions:

Action Type:	Immediate Response Action
Action Status:	IRA Assessment Only
Action Date:	4/3/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/3/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/19/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	6/12/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Compliance and Enforcement Action
Action Status:	Interim Deadline Letter Issued
Action Date:	6/20/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

GARELICK FARMS (Continued) **S101030422**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/20/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release Tracking Number/Current Status: 3-0019279 / RAO
Release Town: LYNN
Notification Date: 02/14/2000
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 04/14/2000
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: TANKER

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: WASTE OIL
Quantity: 25 gallons
Chemical: WASTE OIL
Quantity: 40 gallons

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/14/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/14/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 3/21/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 4/14/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received

GARELICK FARMS (Continued) **S101030422**

Action Date: 4/14/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/14/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release Tracking Number/Current Status: 3-0020162 / RAO
Release Town: LYNN
Notification Date: 11/29/2000
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 01/18/2001
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Hazardous Material
Source: PUMP SEAL

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: AMMONIA
Quantity: 11.1 pounds

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/18/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/29/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/29/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/19/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

GARELICK FARMS (Continued) **S101030422**

Release Tracking Number/Current Status:	3-0017939 / RAO
Release Town:	LYNN
Notification Date:	02/03/1999
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	04/08/1999
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	PIPE
Source:	BOX TRUCK

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	30 gallons

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	2/3/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	2/3/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/3/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/2/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	4/2/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	4/8/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced

GARELICK FARMS (Continued) **S101030422**

to background or a threat of release has been eliminated.

Release Tracking Number/Current Status:	3-0017939 / RAO
Release Town:	LYNN
Notification Date:	02/03/1999
Category:	TWO HR
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	04/08/1999
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	PIPE
Source:	BOX TRUCK

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	30 gallons

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	2/3/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	2/3/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/3/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/2/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	4/2/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO

GARELICK FARMS (Continued) **S101030422**

Action Status:	RAO Statement Received
Action Date:	4/8/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

LF:

Facility Phone:	(781)599-1300
Annual Tons for 1995:	Not reported
Annual Tons for 1996:	Not reported
Annual Tons for 1997:	Not reported
Annual Tons for 1998:	Not reported
Annual Tons for 1999:	Not reported
Annual Tons for 2000:	Not reported
Annual Tons for 2001:	Not reported
Annual Tons for 2002:	Not reported
Annual Tons for 2003:	Not reported
Annual Tons for 2004:	Not reported
Annual Tons for 2005:	Not reported
Annual Tons for 2006:	Not reported
Annual Tons for 2007:	Not reported
Annual Tons for 2008:	Not reported
Annual Tons for 2009:	Not reported
Annual Tons for 2010:	Not reported
Annual Tons for 2011:	Not reported
Annual Tons for 2012:	Not reported
Annual Tons for 2013:	Not reported
Annual Tons for 2014:	Not reported
Annual Tons for 2015:	Not reported
Reg Obj Acct ID Num For Each Solid Waste Operation:	523796
Days of Operation:	Not reported
Note On The Physical Location Of The Site:	Not reported
Acres:	Not reported
Active Year:	Not reported
Classification Group:	Land Disposal
Current Or Most Recent Closed Classification:	CLFNMN
Description Of The Last Classification:	Closed Landfill with No Env Monitoring Required
Close Year:	1988
Name Of The Organization:	Not reported
Contacts Organization Type:	Not reported
Contact Persons Name And Title:	MICHAEL KENNEDY X336
Contact Phone Including Extension:	Not reported
Contact Mailing Street Address:	Not reported
Contacts Mailing City, State, Zip:	,
Inactive Year:	Not reported
Land Disposal Closure Status:	Capped
Land Disposal Only, Category Waste Disposed:	MSW
Landfills Liner:	unknown
Municipality That The Operation Is Located In:	LYNN
Alpha-Numeric Identification Code:	Not reported
Numeric-Only Portion Of The Identification Code:	Not reported
Region:	Northeast (Wilmington)
Org That Pays Any Annual Compliance Fee And/Or Permittee:	Not reported
Responsible Party Organization Type:	Not reported
Responsible Party Mailing Street Address Line 1:	Not reported
Responsible Party Mailing Street Address Line 2:	Not reported
Responsible Party Mailing City, State, Zip:	Not reported

GARELICK FARMS (Continued) **S101030422**

Responsible Party Telephone Inc Extension: Not reported
Maximum Permitted Tons Per Day: Not reported
Current Operational Status: Closed

LUST:

Facility:
Release Tracking Number/Current Status: 3-0013079 / TMPS
Status Date: 07/19/2016
Source Type: UST
Release Town: LYNN
Notification Date: 10/25/1995
Category: 72 HR
Associated ID: 3-0013079
Phase: PHASE V
Response Action Outcome: -
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST
Source: TANKER

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #4 FUEL OIL
Quantity: Not reported

Actions:
Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 1/15/2014
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 1/15/2014
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 1/24/2013
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 1/5/1996
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Approval of Plan
Action Date: 1/5/1996
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit

GARELICK FARMS (Continued) **S101030422**

Action Status: NAFNVD
Action Date: 10/10/2007
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 10/21/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Level II - Audit Inspection
Action Date: 10/21/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/25/1995
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/25/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/30/1995
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/30/1995
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 11/1/1996

GARELICK FARMS (Continued) **S101030422**

Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 11/2/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 11/23/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/23/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/24/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINI
Action Date: 11/24/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 11/24/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/24/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 11/24/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/27/2007
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 11/27/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/3/1995
Response Action Outcome: Not reported

GARELICK FARMS (Continued) **S101030422**

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 11/5/2001
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/5/2010
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/18/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/18/1995
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 12/2/2005
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 12/20/2011
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 12/20/2011
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 12/3/2008
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 12/3/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/26/1996
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 2/26/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received

GARELICK FARMS (Continued) **S101030422**

Action Date: 2/3/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/6/2003
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 3/5/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 3/5/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 3/8/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 3/8/2013
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/9/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 5/24/2007
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/24/2007
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 5/24/2007
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 5/25/2005
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 5/25/2005
Response Action Outcome: Not reported

GARELICK FARMS (Continued) **S101030422**

Action Type: Phase 4
Action Status: As-Built Construction Report Received
Action Date: 5/25/2005
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/26/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 5/26/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/29/2008
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 5/29/2008
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 5/30/2001
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 5/31/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 6/20/2011
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 6/20/2011
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued

GARELICK FARMS (Continued) **S101030422**

Action Date: 6/29/2004
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 7/15/2010
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: TSNRCD
Action Date: 7/19/2016
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RMRFIN
Action Date: 7/25/2014
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Action Status or AUL Terminated
Action Date: 7/25/2014
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 7/3/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 7/3/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Level II - Audit Inspection
Action Date: 8/10/2005
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 8/10/2005
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: NON-A
Action Date: 8/30/2004
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 8/4/2004
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 8/4/2004
Response Action Outcome: Not reported

GARELICK FARMS (Continued) **S101030422**

Action Type: Phase 5
Action Status: Level II - Audit Inspection
Action Date: 9/13/2007
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 9/8/2005
Response Action Outcome: Not reported

Facility:
Release Tracking Number/Current Status: 3-0002977 / RAONR
Status Date: 11/01/1996
Source Type: UST
Release Town: LYNN
Notification Date: 01/15/1990
Category: NONE
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: WASTE OIL
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1990
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 10/21/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site

GARELICK FARMS (Continued) **S101030422**

Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 11/5/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/6/2003
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/21/1991
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 8/4/2004
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 9/13/2007
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0002977 / RAONR
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1990
Category: NONE
Status Date: 11/01/1996
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 1/15/1990

GARELICK FARMS (Continued) **S101030422**

Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 10/21/2009
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: RAO Not Required
Action Status: Linked to a Tier Classified Site
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 11/5/2001
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/6/2003
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/21/1991
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 8/4/2004
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 9/13/2007
Response Action Outcome: Not reported

GARELICK FARMS (Continued) **S101030422**

Chemicals:

Chemical:	WASTE OIL
Quantity:	Not reported
Location Type:	COMMERCIAL
Source:	UST
Release Tracking Number/Current Status:	3-0013079 / TMPS
Primary ID:	3-0013079
Official City:	LYNN
Notification:	10/25/1995
Category:	72 HR
Status Date:	07/19/2016
Phase:	PHASE V
Response Action Outcome:	-
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Phase 5
Action Status:	Remedy Operation Status Report Received
Action Date:	1/15/2014
Response Action Outcome:	Not reported
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	1/15/2014
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	Notice of Non-Compliance Issued
Action Date:	1/24/2013
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/5/1996
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Approval of Plan
Action Date:	1/5/1996
Response Action Outcome:	Not reported
Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	10/10/2007
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	10/21/2009
Response Action Outcome:	Not reported
Action Type:	Phase 5
Action Status:	Level II - Audit Inspection

GARELICK FARMS (Continued) **S101030422**

Action Date: 10/21/2009
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/25/1995
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/25/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/30/1995
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 10/30/1995
Response Action Outcome: Not reported

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: RTN Linked to TCLASS Via Tier Classification Submittal
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 11/1/1996
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 11/2/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 11/23/2010
Response Action Outcome: Not reported

GARELICK FARMS (Continued) **S101030422**

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/23/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/24/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINI
Action Date: 11/24/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 11/24/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/24/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 11/24/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 11/27/2007
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 11/27/2007
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/3/1995
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 11/5/2001
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 11/5/2010
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E

GARELICK FARMS (Continued) **S101030422**

Action Date: 12/18/1995
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/18/1995
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 12/2/2005
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 12/20/2011
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 12/20/2011
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 12/3/2008
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 12/3/2008
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 2/26/1996
Response Action Outcome: Not reported

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 2/26/1999
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/3/1996
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 2/6/2003
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 3/5/2013
Response Action Outcome: Not reported

GARELICK FARMS (Continued) **S101030422**

Action Type: Phase 5
Action Status: RMRINT
Action Date: 3/5/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 3/8/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 3/8/2013
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 3/9/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 5/24/2007
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/24/2007
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Status or Interim Report Received
Action Date: 5/24/2007
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Completion Statement Received
Action Date: 5/25/2005
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 5/25/2005
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: As-Built Construction Report Received
Action Date: 5/25/2005
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT

GARELICK FARMS (Continued) **S101030422**

Action Date: 5/26/2009
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/26/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 5/26/2010
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 5/29/2008
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 5/29/2008
Response Action Outcome: Not reported

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 5/30/2001
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 5/31/2006
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 6/20/2011
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 6/20/2011
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 6/29/2004
Response Action Outcome: Not reported

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 7/15/2010
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: TSNRCD
Action Date: 7/19/2016
Response Action Outcome: Not reported

GARELICK FARMS (Continued) **S101030422**

Action Type: Response Action Outcome - RAO
Action Status: RMRFIN
Action Date: 7/25/2014
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Action Status or AUL Terminated
Action Date: 7/25/2014
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: RMRINT
Action Date: 7/3/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Remedy Operation Status Report Received
Action Date: 7/3/2013
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Level II - Audit Inspection
Action Date: 8/10/2005
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FLDRAN
Action Date: 8/10/2005
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: NON-A
Action Date: 8/30/2004
Response Action Outcome: Not reported

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 8/4/2004
Response Action Outcome: Not reported

Action Type: Tier Classification
Action Status: Tier 2 Extension
Action Date: 8/4/2004
Response Action Outcome: Not reported

Action Type: Phase 5
Action Status: Level II - Audit Inspection
Action Date: 9/13/2007
Response Action Outcome: Not reported

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 9/8/2005
Response Action Outcome: Not reported

Chemicals:
Chemical: #4 FUEL OIL

GARELICK FARMS (Continued) **S101030422**

Quantity: Not reported
Location Type: COMMERCIAL
Source: UST
Source: TANKER

Release Tracking Number/Current Status: 3-0017871 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 01/15/1999
Category: TWO HR
Status Date: 03/16/1999
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 1/15/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/19/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 3/16/1999
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: AMMONIA, ANHYDROUS
Quantity: 100 pounds
Location Type: INDUSTRIAL
Source: PIPE

Release Tracking Number/Current Status: 3-0017939 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 02/03/1999
Category: TWO HR
Status Date: 04/08/1999
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

GARELICK FARMS (Continued) **S101030422**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	2/3/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	2/3/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/3/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/2/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	4/2/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	4/8/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical:	DIESEL FUEL
Quantity:	30 gallons
Location Type:	COMMERCIAL
Source:	PIPE
Source:	BOX TRUCK
Release Tracking Number/Current Status:	3-0019279 / RAO
Primary ID:	Not reported
Official City:	LYNN
Notification:	02/14/2000
Category:	TWO HR
Status Date:	04/14/2000
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type:	Oil

GARELICK FARMS (Continued) **S101030422**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/14/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	2/14/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/21/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	4/14/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	4/14/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	4/14/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical:	WASTE OIL
Quantity:	25 gallons
Chemical:	WASTE OIL
Quantity:	40 gallons
Location Type:	COMMERCIAL
Source:	TANKER
Release Tracking Number/Current Status:	3-0020162 / RAO
Primary ID:	Not reported
Official City:	LYNN
Notification:	11/29/2000
Category:	TWO HR
Status Date:	01/18/2001
Phase:	Not reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.

GARELICK FARMS (Continued) **S101030422**

Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/18/2001
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/29/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/29/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/19/2000
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:

Chemical: AMMONIA
Quantity: 11.1 pounds
Source: PUMP SEAL

Release Tracking Number/Current Status: 3-0020367 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 02/05/2001
Category: TWO HR
Status Date: 04/09/2001
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 2/26/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E

GARELICK FARMS (Continued) **S101030422**

Action Date: 2/5/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 2/5/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 4/6/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 4/9/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: LUBE OIL
Quantity: 40 gallons
Location Type: COMMERCIAL
Source: PIPE

Release Tracking Number/Current Status: 3-0025793 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 04/03/2006
Category: TWO HR
Status Date: 06/12/2006
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: IRA Assessment Only
Action Date: 4/3/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/3/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E

GARELICK FARMS (Continued) **S101030422**

Action Date: 5/19/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/12/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 6/20/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/20/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: METHANE
Quantity: 130 pounds
Chemical: METHANE
Quantity: Not reported
Location Type: INDUSTRIAL
Source: WSTDIGSTR

Release Tracking Number/Current Status: 3-0027819 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 07/05/2008
Category: TWO HR
Status Date: 09/09/2008
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 10/16/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/5/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

GARELICK FARMS (Continued) **S101030422**

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: FLDISS
Action Date: 7/5/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 7/5/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 7/5/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/20/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 8/29/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/9/2008
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: ANHYDROUS AMMONIA
Quantity: 20 pounds
Chemical: ANHYDROUS AMMONIA
Quantity: 17.06 pounds
Location Type: COMMERCIAL
Location Type: PRIVPROP
Source: PUMP
Source: REFRIGRNT

Release Tracking Number/Current Status: 3-0033437 / PSNC
Primary ID: Not reported
Official City: LYNN
Notification: 02/28/2016
Category: TWO HR
Status Date: 04/07/2016
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

GARELICK FARMS (Continued) **S101030422**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/28/2016
Response Action Outcome:	Not reported
Action Type:	RLFA
Action Status:	FLDD1A
Action Date:	2/28/2016
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	2/28/2016
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/10/2016
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	4/7/2016
Response Action Outcome:	Not reported

Chemicals:

Chemical:	ANHYDROUS AMMONIA
Quantity:	645 pounds
Location Type:	COMMERCIAL
Location Type:	INDUSTRIAL
Source:	LINE
Source:	VALVE
Source:	SOLENOID

MA Spills:

Facility ID:	0000	Spill ID:	N86-0760
Staff Lead:	NDI, K	Date Entered:	Not reported
Last Entered:	Not reported	First Response:	Not reported
Spill Date:	19860817	Spill Time:	Not reported
Report Date:	Not reported	Report Time:	Not reported
Case Closed:	YES	Mat Type:	Not reported
Virgin Waste:	Not reported	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	AMMONIA FUMES	Other Material:	Not reported
Qty Reported:	FUMES	Qty Actual:	Not reported
Qty Reported:	Not reported	Qty Actual:	Not reported
CAS No:	Not reported	PCB Lev (ppm):	Not reported
Source:	Not reported	Other Source:	Not reported
Incident:	Not reported	Other Incdnt:	Not reported
Cleanup Type:	Not reported	Contractor:	Not reported
Referral:	Not reported	LUST Elig:	Not reported
Report Prep:	Not reported	Category:	Not reported
Notifier:	Not reported		

GARELICK FARMS (Continued) **S101030422**

Notif Tel: Not reported
Days/Close: 1

Facility ID:	0000	Spill ID:	N91-0971
Staff Lead:	CASEY, M	Date Entered:	19911031
Last Entered:	19940203	First Response:	19910716
Spill Date:	19910716	Spill Time:	05:30PM
Report Date:	19910716	Report Time:	06:50PM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	DIESEL FUEL	Other Material:	Not reported
Qty Reported:	11-50	Qty Actual:	----------
Qty Reported:	GALLONS	Qty Actual:	----------
CAS No:	Not reported	PCB Lev (ppm):	----------
Source:	PIPE/HOSE/LINE	Other Source:	Not reported
Incident:	SPILL	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	NO	LUST Elig:	NO
Report Prep:	Not reported	Category:	1
Notifier:	D COWIE/ENPRO SERV		
Notif Tel:	Not reported		
Days/Close:	0		

Facility ID:	0000	Spill ID:	N91-1026
Staff Lead:	ARMSTRONG, V	Date Entered:	19911101
Last Entered:	19920409	First Response:	19910726
Spill Date:	19910726	Spill Time:	11:45AM
Report Date:	19910726	Report Time:	12:40PM
Case Closed:	YES	Mat Type:	HAZARDOUS
Virgin Waste:	------	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	AMMONIA	Other Material:	Not reported
Qty Reported:	11-50	Qty Actual:	----------
Qty Reported:	POUNDS	Qty Actual:	----------
CAS No:	07644-41-7	PCB Lev (ppm):	NONE
Source:	OTHER SOURCE >	Other Source:	RELEASE VALVE
Incident:	LEAK	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	AQC	LUST Elig:	NO
Report Prep:	Not reported	Category:	30
Notifier:	FD		
Notif Tel:	Not reported		
Days/Close:	1		

Facility ID:	0000	Spill ID:	N91-0919
Staff Lead:	MACAFEE, K	Date Entered:	19911023
Last Entered:	19920403	First Response:	19910708
Spill Date:	19910708	Spill Time:	11:05PM
Report Date:	19910708	Report Time:	12:05PM
Case Closed:	YES	Mat Type:	HAZARDOUS
Virgin Waste:	WASTE	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	AMMONIA	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	----------
Qty Reported:	----------	Qty Actual:	----------
CAS No:	07644-41-7	PCB Lev (ppm):	----------

GARELICK FARMS (Continued) **S101030422**

Source:	PIPE/HOSE/LINE	Other Source:	Not reported
Incident:	OTHER RELEASE >	Other Incdnt:	VENTING
Cleanup Type:	---	Contractor:	NOT USED
Referral:	AQC	LUST Elig:	NO
Report Prep:	Not reported	Category:	17
Notifier:	B GRAY/WEST LYNN CREAMERY		
Notif Tel:	Not reported		
Days/Close:	1		

Facility ID:	0000	Spill ID:	N93-0211
Staff Lead:	BOYLE, T	Date Entered:	Not reported
Last Entered:	19930330	First Response:	19930224
Spill Date:	19930224	Spill Time:	Not reported
Report Date:	19930224	Report Time:	Not reported
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	#2 FUEL OIL	Other Material:	Not reported
Qty Reported:	11-50	Qty Actual:	----------
Qty Reported:	GALLONS	Qty Actual:	GALLONS
CAS No:	Not reported	PCB Lev (ppm):	----------
Source:	PIPE/HOSE/LINE	Other Source:	Not reported
Incident:	OVERFILL	Other Incdnt:	Not reported
Cleanup Type:	Not reported	Contractor:	NOT USED
Referral:	NO	LUST Elig:	---
Report Prep:	Not reported	Category:	Not reported
Notifier:	PAUL O'KEEFE/GLENMOR		
Notif Tel:	Not reported		
Days/Close:	0		

Facility ID:	0000	Spill ID:	N93-0298
Staff Lead:	GORRASI, M	Date Entered:	Not reported
Last Entered:	19930406	First Response:	19930319
Spill Date:	19930319	Spill Time:	11:00AM
Report Date:	19930319	Report Time:	01:20PM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	Not reported	Other Impact:	Not reported
Material:	DIESEL FUEL	Other Material:	Not reported
Qty Reported:	11-50	Qty Actual:	----------
Qty Reported:	GALLONS	Qty Actual:	GALLONS
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	PIPE/HOSE/LINE	Other Source:	Not reported
Incident:	SPILL	Other Incdnt:	Not reported
Cleanup Type:	Not reported	Contractor:	NOT USED
Referral:	NO	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported
Notifier:	DAVE COWIE/ENPRO		
Notif Tel:	Not reported		
Days/Close:	0		

ENFORCEMENT:

Region:	NERO
DEP Region:	NERO
DEP Program:	3A
DEP Bureau:	BWSC
Program:	BWSC

GARELICK FARMS (Continued) **S101030422**

Program Id:	3-0013079
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	Lynn
Date Executed:	01/24/2013
ENF #:	NON-NE-13-3A005
Document Type:	NON
AG Ref (Y/N):	Not reported
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	Y
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

HW GEN:

EPA Id:	MAD001017110
RCRA Generator Status:	SQG
State Generator Status:	LQG-MA

TIER 2:

Report Year:	2017
Facility Id:	FATR2017000000035865
Facility Dept:	Not reported
Latitude:	42.52869
Longitude:	-70.96100
Mailing Address:	626 Lynnway
Mailing City/State/Zip:	01905
Mailing Country:	Not reported
Notes:	Not reported
All Chemicals Same As Last Yr:	Not reported
Date Signed:	2/28/2018
Dike Or Other Safeguard:	Not reported
Failed Validation:	Not reported
Date Modified:	06/28/2018
Fees Total:	Not reported
Num Of Employees:	265
Site Coord Abbreviated?:	Not reported
Site Map:	Not reported
State Label Code:	MA2017
Submitted By:	Martin Chapman, Sr. EHS Manager
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
Record Key:	FDTR2017000000032516
Id:	Not reported

GARELICK FARMS (Continued) **S101030422**

Type: EIN
Description: EIN
Last Modified: Not reported

Record Key: FDTR2017000000032517
Id: Not reported
Type: State ID
Description: State ID
Last Modified: Not reported

Record Key: FDTR2017000000032518
Id: 001017110
Type: DUN & BradStreet
Description: DUN & BradStreet
Last Modified: Not reported

Record Key: FDTR2017000000032519
Id: 01905WSTLY626LY
Type: TRI
Description: TRI
Last Modified: Not reported

Record Key: FDTR2017000000032520
Id: 100000127221
Type: RMP
Description: RMP
Last Modified: Not reported

Record Key: FDTR2017000000032521
Id: 2026
Type: SIC
Description: SIC
Last Modified: Not reported

Record Key: FDTR2017000000032522
Id: 311511
Type: NAICS
Description: Fluid Milk Manufacturing
Last Modified: Not reported

Record Key: FDTR2017000000032523
Id: 7963
Type: T2M Facility ID
Description: T2M Facility ID
Last Modified: Not reported

Contact:
Report Year: 2017
Contact Record Id: CTTR2017136094P35865
Title: Not reported
Contact Name: Not reported
Contact Email: Not reported
Contact Mail Address: 175 Terminal Road
Contact Mail City: Providence
Contact Mail State: RI
Contact Mail Zip: 02906-906-
Contact Mail Country: Not reported

GARELICK FARMS (Continued) **S101030422**

Contact1 Type:	Carrier Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Report Year:	2017
Contact Record Id:	CTTR2017331373P35865
Title:	Not reported
Contact Name:	Not reported
Contact Email:	Not reported
Contact Mail Address:	Not reported
Contact Mail City:	Not reported
Contact Mail State:	Not reported
Contact Mail Zip:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Billing
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Report Year:	2017
Contact Record Id:	CTTR2017136043P35865
Title:	Not reported
Contact Name:	Industries
Contact Email:	Not reported
Contact Mail Address:	55 Drexler Road
Contact Mail City:	East Province
Contact Mail State:	RI
Contact Mail Zip:	02914-914-
Contact Mail Country:	Not reported
Contact1 Type:	Carrier Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Report Year:	2017
Contact Record Id:	CTTR2017331379P35865
Title:	Plant Manager
Contact Name:	Leake
Contact Email:	aubrey_leake@deanfoods.com
Contact Mail Address:	Not reported
Contact Mail City:	Not reported
Contact Mail State:	Not reported
Contact Mail Zip:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Emergency Contact
Contact2 Type:	Not reported

GARELICK FARMS (Continued) **S101030422**

Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:
Report Year: 2017
Contact Record Id: CTTR2017331378P35865
Title: Sr. EHS Manager
Contact Name: Chapman
Contact Email: dean_chapman@deanfoods.com
Contact Mail Address: Not reported
Contact Mail City: Not reported
Contact Mail State: Not reported
Contact Mail Zip: Not reported
Contact Mail Country: Not reported
Contact1 Type: Fac. Emergency Coordinator
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:
Report Year: 2017
Contact Record Id: CTTR2017331371P35865
Title: Not reported
Contact Name: Foods Company
Contact Email: Not reported
Contact Mail Address: 2711 North Haskall Avenue, Suite 3400
Contact Mail City: Dallas
Contact Mail State: TX
Contact Mail Zip: 75204
Contact Mail Country: US
Contact1 Type: Parent Company
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:
Report Year: 2017
Contact Record Id: CTTR2017136044P35865
Title: Not reported
Contact Name: Shop of New England
Contact Email: Not reported
Contact Mail Address: 40 Silva Lane
Contact Mail City: Dracut
Contact Mail State: MA
Contact Mail Zip: 01826-826-
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported

GARELICK FARMS (Continued) **S101030422**

Modification Date: 1/1/1900

Contact:
Report Year: 2017
Contact Record Id: CTTR2017331376P35865
Title: Sr.EHS Manager
Contact Name: Chapman
Contact Email: dean_chapman@deanfoods.com
Contact Mail Address: Not reported
Contact Mail City: Not reported
Contact Mail State: Not reported
Contact Mail Zip: Not reported
Contact Mail Country: Not reported
Contact1 Type: Emergency Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:
Report Year: 2017
Contact Record Id: CTTR2017331375P35865
Title: Not reported
Contact Name: Not reported
Contact Email: Not reported
Contact Mail Address: 626 Lynnway
Contact Mail City: Lynn
Contact Mail State: MA
Contact Mail Zip: 01905
Contact Mail Country: US
Contact1 Type: Other
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

Contact:
Report Year: 2017
Contact Record Id: CTTR2017136046P35865
Title: Not reported
Contact Name: Not reported
Contact Email: Not reported
Contact Mail Address: 1 Colonial Road
Contact Mail City: Salem
Contact Mail State: MA
Contact Mail Zip: 01970-970-
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: 1/1/1900

GARELICK FARMS (Continued) **S101030422**

Contact:

Report Year:	2017
Contact Record Id:	CTTR2017331372P35865
Title:	Not reported
Contact Name:	Garelick Farm, LLC,
Contact Email:	Aubrey_Leake@deanfoods.com
Contact Mail Address:	1199 Central St.
Contact Mail City:	Franklin
Contact Mail State:	MA
Contact Mail Zip:	02038
Contact Mail Country:	US
Contact1 Type:	Owner / Operator
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Contact:

Report Year:	2017
Contact Record Id:	CTTR2017331377P35865
Title:	Sr. EHS Manager
Contact Name:	Chapman
Contact Email:	dean_chapman@deanfoods.com
Contact Mail Address:	Not reported
Contact Mail City:	Not reported
Contact Mail State:	Not reported
Contact Mail Zip:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Tier II Information Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	1/1/1900

Chemicals:

Acute:	T
Ave Amount:	28500.00
Ave Amount Code:	7
Chem Inv Record Id:	CVTR2017000000136043
Chem Same As Last Yr:	Not reported
Chronic:	Not reported
CICAS:	7664417
CI EHS Chemical:	Yes
CI Last Modified:	6/28/2018
Days On Site:	365
Entered Chemical Name:	AMMONIA
Fire:	Not reported
Gas:	T
Liquid:	T
Max Amount:	28500.00
Max Amount Code:	7
Max Amt Container:	2.850000000000000e+004
Mixture:	Not reported
Pressure:	Not reported

GARELICK FARMS (Continued) **S101030422**

Pure:	T
Reactive:	Not reported
Solid:	Not reported
State01 Checkbox:	Not reported
State01 Number:	10000
State01 Text:	N/A
State02 Checkbox:	T
State02 Number:	0
State02 Text:	Year
State03 Checkbox:	Not reported
State03 Number:	10000
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	4000
State04 Text:	Gas
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported
State07 Checkbox:	Not reported
State07 Text:	Interste 95 Homeland security regulations prohibits further information
State1 Contact Field:	Tanner Industries
State Label Code:	MA2017
Trade Secret:	Not reported

Location:

Record Key:	CLTR201700000S366160
Chem Inv Record Id:	CVTR2017000000136043
Type Code:	Tank inside building
Pressure Code:	Greater than ambient pressure
Temperature Code:	Greater than ambient temperature
Location:	High pressure Reciever inside compressor room #2
Amount:	7563
Amount Unit:	lbs
Last Modified:	6/28/2018

Record Key:	CLTR201700000S366161
Chem Inv Record Id:	CVTR2017000000136043
Type Code:	Tank inside building
Pressure Code:	Greater than ambient pressure
Temperature Code:	Greater than ambient temperature
Location:	suction cap above milk cooler truck dock
Amount:	3982
Amount Unit:	lbs
Last Modified:	6/28/2018

Record Key:	CLTR201700000S366162
Chem Inv Record Id:	CVTR2017000000136043
Type Code:	Tank inside building
Pressure Code:	Greater than ambient pressure
Temperature Code:	Greater than ambient temperature
Location:	Intercooler #1 located inside compressor room #2
Amount:	6796
Amount Unit:	lbs
Last Modified:	6/28/2018

GARELICK FARMS (Continued) **S101030422**

Acute:	T
Ave Amount:	32280.00
Ave Amount Code:	7
Chem Inv Record Id:	CVTR2017000000136044
Chem Same As Last Yr:	Not reported
Chronic:	Not reported
CICAS:	7664939
CI EHS Chemical:	Yes
CI Last Modified:	6/28/2018
Days On Site:	365
Entered Chemical Name:	Sulfuric acid
Fire:	Not reported
Gas:	Not reported
Liquid:	T
Max Amount:	32280.00
Max Amount Code:	7
Max Amt Container:	3.228000000000000e+004
Mixture:	Not reported
Pressure:	Not reported
Pure:	T
Reactive:	Not reported
Solid:	Not reported
State01 Checkbox:	T
State01 Number:	1170
State01 Text:	N/A
State02 Checkbox:	Not reported
State02 Number:	1
State02 Text:	Year
State03 Checkbox:	Not reported
State03 Number:	3510
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	3510
State04 Text:	Liquid
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported
State07 Checkbox:	Not reported
State07 Text:	On Average three batteries are delivered and swapped out(no change in inventory) Route: I-495 to Rt. 114E to Rt. 1A S
State1 Contact Field:	Battery Shop of New England
State Label Code:	MA2017
Trade Secret:	Not reported

Location:

Record Key:	CLTR201700000S366164
Chem Inv Record Id:	CVTR2017000000136044
Type Code:	Battery
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Battery Charging Area SW corner of freezer
Amount:	32280
Amount Unit:	lbs
Last Modified:	6/28/2018

Record Key:	CLTR201700000S366210
Chem Inv Record Id:	CVTR2017000000136044

GARELICK FARMS (Continued) **S101030422**

Type Code:	Batteries
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Battery charging area in SW corner of freezer
Amount:	0
Amount Unit:	lbs
Last Modified:	6/28/2018

Acute:	Not reported
Ave Amount:	64560.00
Ave Amount Code:	8
Chem Inv Record Id:	CVTR2017000000136045
Chem Same As Last Yr:	Not reported
Chronic:	Not reported
CICAS:	7439921
CI EHS Chemical:	No
CI Last Modified:	6/28/2018
Days On Site:	365
Entered Chemical Name:	LEAD
Fire:	Not reported
Gas:	Not reported
Liquid:	Not reported
Max Amount:	64560.00
Max Amount Code:	8
Max Amt Container:	6.456000000000000e+004
Mixture:	T
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	T
State01 Checkbox:	Not reported
State01 Number:	0
State01 Text:	N/A
State02 Checkbox:	Not reported
State02 Number:	0
State02 Text:	N/A
State03 Checkbox:	Not reported
State03 Number:	0
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	0
State04 Text:	N/A
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported
State07 Checkbox:	T
State07 Text:	N/A
State1 Contact Field:	N/A
State Label Code:	MA2017
Trade Secret:	Not reported

Location:

Record Key:	CLTR201700000S366166
Chem Inv Record Id:	CVTR2017000000136045
Type Code:	Battery
Pressure Code:	Ambient pressure

GARELICK FARMS (Continued) **S101030422**

Temperature Code:	Ambient temperature
Location:	Battery Charging Area SW corner of freezer
Amount:	64560
Amount Unit:	lbs
Last Modified:	6/28/2018

Acute:	T
Ave Amount:	3474.00
Ave Amount Code:	4
Chem Inv Record Id:	CVTR2017000000136046
Chem Same As Last Yr:	Not reported
Chronic:	Not reported
CICAS:	7697372
CI EHS Chemical:	Yes
CI Last Modified:	6/28/2018
Days On Site:	365
Entered Chemical Name:	NITRIC ACID
Fire:	Not reported
Gas:	Not reported
Liquid:	T
Max Amount:	5980.00
Max Amount Code:	5
Max Amt Container:	5.980000000000000e+003
Mixture:	T
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	Not reported
State01 Checkbox:	T
State01 Number:	29412
State01 Text:	N/A
State02 Checkbox:	T
State02 Number:	2
State02 Text:	Month
State03 Checkbox:	Not reported
State03 Number:	2157
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	2157
State04 Text:	Liquid
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported
State07 Checkbox:	Not reported
State07 Text:	Route 1A
State1 Contact Field:	Univar
State Label Code:	MA2017
Trade Secret:	Not reported

Location:

Record Key:	CLTR201700000S366168
Chem Inv Record Id:	CVTR2017000000136046
Type Code:	Tank inside building
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	AC-55-5 Red tank second floor, raw materials storage area

GARELICK FARMS (Continued) **S101030422**

Amount:	2965
Amount Unit:	lbs
Last Modified:	6/28/2018
Record Key:	CLTR201700000S366169
Chem Inv Record Id:	CVTR2017000000136046
Type Code:	Tank inside building
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Mandate plus tank Second Floor Raw materials Storage Area
Amount:	3440
Amount Unit:	lbs
Last Modified:	6/28/2018
Acute:	T
Ave Amount:	10030.00
Ave Amount Code:	6
Chem Inv Record Id:	CVTR2017000000136047
Chem Same As Last Yr:	Not reported
Chronic:	Not reported
CICAS:	1310732
CI EHS Chemical:	No
CI Last Modified:	6/28/2018
Days On Site:	365
Entered Chemical Name:	SODIUM HYDROXIDE
Fire:	Not reported
Gas:	Not reported
Liquid:	T
Max Amount:	27032.00
Max Amount Code:	7
Max Amt Container:	2.703200000000000e+004
Mixture:	T
Pressure:	Not reported
Pure:	Not reported
Reactive:	Not reported
Solid:	Not reported
State01 Checkbox:	Not reported
State01 Number:	0
State01 Text:	N/A
State02 Checkbox:	Not reported
State02 Number:	0
State02 Text:	N/A
State03 Checkbox:	Not reported
State03 Number:	0
State03 Text:	Not reported
State04 Checkbox:	Not reported
State04 Number:	0
State04 Text:	N/A
State05 Checkbox:	Not reported
State05 Text:	Not reported
State06 Checkbox:	Not reported
State06 Text:	Not reported
State07 Checkbox:	T
State07 Text:	N/A
State1 Contact Field:	N/A
State Label Code:	MA2017

GARELICK FARMS (Continued) **S101030422**

Trade Secret: Not reported

Location:
Record Key: CLTR201700000S366171
Chem Inv Record Id: CVTR2017000000136047
Type Code: Tank inside building
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: Second Floor case room
Amount: 18537
Amount Unit: lbs
Last Modified: 6/28/2018

Record Key: CLTR201700000S366172
Chem Inv Record Id: CVTR2017000000136047
Type Code: Tank inside building
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: storage tank second floor case room
Amount: 2703
Amount Unit: lbs
Last Modified: 6/28/2018

Record Key: CLTR201700000S366173
Chem Inv Record Id: CVTR2017000000136047
Type Code: Tank inside building
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: storage tank second floor case room
Amount: 681
Amount Unit: lbs
Last Modified: 6/28/2018

Acute: Not reported
Ave Amount: 7808.00
Ave Amount Code: 5
Chem Inv Record Id: CVTR2017000000136048
Chem Same As Last Yr: Not reported
Chronic: Not reported
CICAS: 1309428
CI EHS Chemical: No
CI Last Modified: 6/28/2018
Days On Site: 365
Entered Chemical Name: MAGNESIUM HYDROXIDE
Fire: Not reported
Gas: Not reported
Liquid: T
Max Amount: 11712.00
Max Amount Code: 6
Max Amt Container: 1.171200000000000e+004
Mixture: T
Pressure: Not reported
Pure: Not reported
Reactive: Not reported
Solid: Not reported
State01 Checkbox: Not reported
State01 Number: 0

GARELICK FARMS (Continued) **S101030422**

State01 Text: N/A
State02 Checkbox: Not reported
State02 Number: 0
State02 Text: N/A
State03 Checkbox: Not reported
State03 Number: 0
State03 Text: Not reported
State04 Checkbox: Not reported
State04 Number: 0
State04 Text: N/A
State05 Checkbox: Not reported
State05 Text: Not reported
State06 Checkbox: Not reported
State06 Text: Not reported
State07 Checkbox: T
State07 Text: N/A
State1 Contact Field: N/A
State Label Code: MA2017
Trade Secret: Not reported

Location:
Record Key: CLTR201700000S366175
Chem Inv Record Id: CVTR2017000000136048
Type Code: Tote bin
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: Wastewater Treatment Plant
Amount: 1952
Amount Unit: lbs
Last Modified: 6/28/2018

Acute: Not reported
Ave Amount: 3500.00
Ave Amount Code: 4
Chem Inv Record Id: CVTR2017000000136049
Chem Same As Last Yr: Not reported
Chronic: Not reported
CICAS: 68476302
CI EHS Chemical: No
CI Last Modified: 6/28/2018
Days On Site: 365
Entered Chemical Name: DIESEL FUEL
Fire: Not reported
Gas: Not reported
Liquid: T
Max Amount: 3500.00
Max Amount Code: 4
Max Amt Container: 3.500000000000000e+003
Mixture: T
Pressure: Not reported
Pure: Not reported
Reactive: Not reported
Solid: Not reported
State01 Checkbox: Not reported
State01 Number: 0
State01 Text: N/A
State02 Checkbox: Not reported

GARELICK FARMS (Continued) **S101030422**

State02 Number: 0
State02 Text: N/A
State03 Checkbox: Not reported
State03 Number: 0
State03 Text: Not reported
State04 Checkbox: Not reported
State04 Number: 0
State04 Text: N/A
State05 Checkbox: Not reported
State05 Text: Not reported
State06 Checkbox: Not reported
State06 Text: Not reported
State07 Checkbox: T
State07 Text: N/A
State1 Contact Field: N/A
State Label Code: MA2017
Trade Secret: Not reported

Location:
Record Key: CLTR201700000S366177
Chem Inv Record Id: CVTR2017000000136049
Type Code: Above ground tank
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: 500 gallon above ground tank
Amount: 3500
Amount Unit: lbs
Last Modified: 6/28/2018

Acute: T
Ave Amount: 298.00
Ave Amount Code: 2
Chem Inv Record Id: CVTR2017000000136094
Chem Same As Last Yr: Not reported
Chronic: Not reported
CICAS: 7632000
CI EHS Chemical: No
CI Last Modified: 6/28/2018
Days On Site: 365
Entered Chemical Name: Sodium Nitrite
Fire: Not reported
Gas: Not reported
Liquid: T
Max Amount: 470.00
Max Amount Code: 2
Max Amt Container: 4.700000000000000e+002
Mixture: T
Pressure: Not reported
Pure: Not reported
Reactive: Not reported
Solid: Not reported
State01 Checkbox: Not reported
State01 Number: 3000
State01 Text: N/A
State02 Checkbox: T
State02 Number: 1
State02 Text: Month

GARELICK FARMS (Continued) **S101030422**

State03 Checkbox: Not reported
State03 Number: 2000
State03 Text: Not reported
State04 Checkbox: Not reported
State04 Number: 2000
State04 Text: Liquid
State05 Checkbox: Not reported
State05 Text: Not reported
State06 Checkbox: Not reported
State06 Text: Not reported
State07 Checkbox: T
State07 Text: Route 1A North or South to Garelick Lynn
State1 Contact Field: Univar
State Label Code: MA2017
Trade Secret: Not reported

Location:
Record Key: CLTR201700000S366314
Chem Inv Record Id: CVTR2017000000136094
Type Code: Above ground tank
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: Case room
Amount: 0
Amount Unit: lbs
Last Modified: 6/28/2018

---

165 **CHATHAM ST** **MA SHWS** **S105124933**
NNE **196 ESSEX ST** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA 01902**
0.952 mi.
5025 ft.

Relative:
Higher

Actual:
42 ft.

SHWS:
Release Tracking Number/Current Status: 3-0020607 / RAO
Release Town: LYNN
Notification Date: 04/19/2001
Category: TWO HR
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 06/13/2001
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: VEHICLE

Click here to access the MA DEP site for this facility:

CHATHAM ST (Continued) **S105124933**

Chemicals:
Chemical: DIESEL FUEL
Quantity: 25 gallons
Chemical: DIESEL FUEL
Quantity: 50 gallons

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/19/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/19/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/9/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Release:
Release Tracking Number/Current Status: 3-0020607 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 04/19/2001
Category: TWO HR
Status Date: 06/13/2001
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 4/19/2001

CHATHAM ST (Continued) **S105124933**

Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 4/19/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/9/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 6/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/13/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:
Chemical: DIESEL FUEL
Quantity: 25 gallons
Chemical: DIESEL FUEL
Quantity: 50 gallons
Location Type: COMMERCIAL
Source: VEHICLE

---

166 **LYNN COMMON** **MA SHWS S105735935**
WNW **189-195 NORTH COMMON ST** **MA RELEASE N/A**
1/2-1 **LYNN, MA 01902**
0.955 mi.
5041 ft.

Relative: **Higher**
Actual: **29 ft.**

SHWS:
Release Tracking Number/Current Status: 3-0022299 / RAO
Release Town: LYNN
Notification Date: 11/12/2002
Category: 120 DY
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 11/12/2002
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material: Oil

Click here to access the MA DEP site for this facility:

LYNN COMMON (Continued) **S105735935**

Chemicals:
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 1060 parts per million
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 430 parts per million

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/12/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/12/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/12/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:
Release Tracking Number/Current Status: 3-0022299 / RAO
Primary ID: Not reported
Official City: LYNN
Notification: 11/12/2002
Category: 120 DY
Status Date: 11/12/2002
Phase: Not reported
Response Action Outcome: B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/12/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/12/2002
Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 11/12/2002

LYNN COMMON (Continued) **S105735935**

Response Action Outcome: Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:
Chemical: C9 THRU C18 ALIPHATIC HYDROCARBONS
Quantity: 1060 parts per million
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 430 parts per million

AT167 **QUICKMART CITGO** **MA SHWS** **U003654515**
WNW **625 WESTERN AVE** **MA LUST** **N/A**
1/2-1 **LYNN, MA 01905** **MA UST**
0.972 mi. **MA RELEASE**
5132 ft. **Site 1 of 2 in cluster AT** **MA Financial Assurance**

Relative: Higher
Actual: 29 ft.

SHWS:
Release Tracking Number/Current Status: 3-0034088 / PSNC
Release Town: LYNN
Notification Date: 03/06/2017
Category: 72 HR
Associated ID: Not reported
Current Status: **PSNC**
Status Date: 03/01/2018
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil
Location Type: COMMERCIAL
Source: TANK
Source: UST
Source: TANKDISP
Source: USTOTHER

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: PETROLEUM
Quantity: 199 parts per million

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 1/10/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 10/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit

QUICKMART CITGO (Continued) **U003654515**

Action Date: 10/11/2017
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 3/1/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 3/1/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRFIN
Action Date: 3/1/2018
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/6/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 3/6/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/7/2017
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/12/2017
Response Action Outcome: Not reported

QUICKMART CITGO (Continued) **U003654515**

Release Tracking Number/Current Status:	3-0034088 / PSNC
Release Town:	LYNN
Notification Date:	03/06/2017
Category:	72 HR
Associated ID:	Not reported
Current Status:	**PSNC**
Status Date:	03/01/2018
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	TANK
Source:	UST
Source:	TANKDISP
Source:	USTOTHER

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	PETROLEUM
Quantity:	199 parts per million

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	1/10/2018
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	10/11/2017
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	RMRINI
Action Date:	10/11/2017
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	10/11/2017
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	3/1/2018
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	3/1/2018
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	RMRFIN
Action Date:	3/1/2018

QUICKMART CITGO (Continued) **U003654515**

Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/6/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 3/6/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/7/2017
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/12/2017
Response Action Outcome: Not reported

LUST:

Facility:
Release Tracking Number/Current Status: 3-0034088 / PSNC
Status Date: 03/01/2018
Source Type: UST
Release Town: LYNN
Notification Date: 03/06/2017
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil

QUICKMART CITGO (Continued) **U003654515**

Location Type:	COMMERCIAL
Source:	TANK
Source:	UST
Source:	TANKDISP
Source:	USTOTHER

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	PETROLEUM
Quantity:	199 parts per million

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	1/10/2018
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Status or Interim Report Received
Action Date:	10/11/2017
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	RMRINI
Action Date:	10/11/2017
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	10/11/2017
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	3/1/2018
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	3/1/2018
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	RMRFIN
Action Date:	3/1/2018
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/6/2017
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action

QUICKMART CITGO (Continued) **U003654515**

Action Date: 3/6/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/7/2017
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/12/2017
Response Action Outcome: Not reported

Facility:
Release Tracking Number/Current Status: 3-0034088 / PSNC
Status Date: 03/01/2018
Source Type: USTOTHER
Release Town: LYNN
Notification Date: 03/06/2017
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: TANK
Source: UST
Source: TANKDISP
Source: USTOTHER

Click here to access the MA DEP site for this facility:

QUICKMART CITGO (Continued) **U003654515**

Chemicals:
Chemical: PETROLEUM
Quantity: 199 parts per million

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 1/10/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 10/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 10/11/2017
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 3/1/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 3/1/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRFIN
Action Date: 3/1/2018
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/6/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 3/6/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/7/2017
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E

QUICKMART CITGO (Continued) **U003654515**

Action Date:	5/11/2017
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	5/11/2017
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Imminent Hazard Evaluation Received
Action Date:	5/11/2017
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/11/2017
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	5/12/2017
Response Action Outcome:	Not reported

UST:

Facility:

Facility ID:	5409
Owner Id:	9039
Owner:	EVIE INC
Owner Address:	23 THOMAS RD
Owner City,St,Zip:	LYNNFIELD, MA 01940
Telephone:	7813342905
Description:	Retail Motor Vehicle Fuel
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.46586
Longitude:	-70.96209
Contact name:	Not reported
Contact address1:	Not reported
Contact address2:	Not reported
Contact city:	Not reported
Contact state:	Not reported
Contact zip:	Not reported
Contact email:	Not reported
Update:	2018-03-26 00:00:00
Update by:	Haralampos Sidiropoulos
Fac status:	OPEN

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	03/03/2017
Date Installed:	03/01/1988
Capacity:	8000
Contents:	Gasoline
Tank Usage:	Motor Vehi

QUICKMART CITGO (Continued) **U003654515**

Tank Leak Detection: In-Tank Monitoring System
Pipe Leak Detection: Annual Automatic Line Leak Detection Test
Latitude: 42.46589
Longitude: -70.96191
Tank construct: Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Single-walled non-corrodible material (No corrosion protection required)
Ptype: Pressurized piping system with mechanical automatic line leak detection
Number of compartment: Not reported
Pipe install date: 03/01/1988
Pipe leak install date: Not reported
Submersible sump: Y
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Ball Float
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 2
Tank Status: Tank Removed
Status Date: 03/03/2017
Date Installed: 03/01/1988
Capacity: 8000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: In-Tank Monitoring System
Pipe Leak Detection: Annual Automatic Line Leak Detection Test
Latitude: 42.4659
Longitude: -70.96195
Tank construct: Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Single-walled non-corrodible material (No corrosion protection required)
Ptype: Pressurized piping system with mechanical automatic line leak detection
Number of compartment: Not reported
Pipe install date: 03/01/1988
Pipe leak install date: Not reported
Submersible sump: Y
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Ball Float
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

QUICKMART CITGO (Continued) **U003654515**

Tank ID: 3
Tank Status: Tank Removed
Status Date: 03/03/2017
Date Installed: 03/01/1988
Capacity: 8000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: In-Tank Monitoring System
Pipe Leak Detection: Annual Automatic Line Leak Detection Test
Latitude: 42.46592
Longitude: -70.96198
Tank construct: Single-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Single-walled non-corrodible material (No corrosion protection required)
Ptype: Pressurized piping system with mechanical automatic line leak detection
Number of compartment: Not reported
Pipe install date: 03/01/1988
Pipe leak install date: Not reported
Submersible sump: Y
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Ball Float
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 4
Tank Status: In Use
Status Date: 03/26/2018
Date Installed: 03/27/2017
Capacity: 20000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: Not reported
Longitude: Not reported
Tank construct: Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: Pressurized piping system with mechanical automatic line leak detection
Number of compartment: Not reported
Pipe install date: 03/27/2017
Pipe leak install date: Not reported
Submersible sump: Y
Submersible sump install date: Not reported
Turbine sump: Y
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: Y

QUICKMART CITGO (Continued) **U003654515**

Overfill protect install: Not reported
Overfill protect type: Ball Float
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 5
Tank Status: In Use
Status Date: 03/26/2018
Date Installed: 03/27/2017
Capacity: 4000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: Not reported
Longitude: Not reported
Tank construct: Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: Pressurized piping system with mechanical automatic line leak detection
Number of compartment: Not reported
Pipe install date: 03/27/2017
Pipe leak install date: Not reported
Submersible sump: Y
Submersible sump install date: Not reported
Turbine sump: Y
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: Y
Overfill protect install: Not reported
Overfill protect type: Ball Float
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 5
Tank Status: In Use
Status Date: 03/26/2018
Date Installed: 03/27/2017
Capacity: 6000
Contents: Diesel
Tank Usage: Motor Vehi
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: Not reported
Longitude: Not reported
Tank construct: Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: Pressurized piping system with mechanical automatic line leak detection
Number of compartment: Not reported
Pipe install date: 03/27/2017
Pipe leak install date: Not reported
Submersible sump: Y

QUICKMART CITGO (Continued) **U003654515**

Submersible sump install date: Not reported
Turbine sump: Y
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: Y
Overfill protect install: Not reported
Overfill protect type: Ball Float
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Release:
Release Tracking Number/Current Status: 3-0034088 / PSNC
Primary ID: Not reported
Official City: LYNN
Notification: 03/06/2017
Category: 72 HR
Status Date: 03/01/2018
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 1/10/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 10/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: RMRINI
Action Date: 10/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 10/11/2017
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 3/1/2018
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 3/1/2018
Response Action Outcome: Not reported

QUICKMART CITGO (Continued) **U003654515**

Action Type: Immediate Response Action
Action Status: RMRFIN
Action Date: 3/1/2018
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/6/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 3/6/2017
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 4/7/2017
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Imminent Hazard Evaluation Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/11/2017
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/12/2017
Response Action Outcome: Not reported

Chemicals:
Chemical: PETROLEUM
Quantity: 199 parts per million
Location Type: COMMERCIAL
Source: TANK
Source: UST
Source: TANKDISP
Source: USTOTHER

MA Financial Assurance 2:
Facility Id: 5409

QUICKMART CITGO (Continued) **U003654515**

Description: Gas Station
Work Phone: (781) 937-5533

AT168 **CUMBERLAND FARMS** **MA SHWS** **S101696334**
WNW **625-631 WESTERN AVE** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA 01901**
0.972 mi.
5132 ft. **Site 2 of 2 in cluster AT**

Relative:
Higher

Actual:
29 ft.

SHWS:
Release Tracking Number/Current Status: 3-0002388 / RAO
Release Town: LYNN
Notification Date: 06/14/1988
Category: NONE
Associated ID: Not reported
Current Status: **Response Action Outcome**
Status Date: 08/09/1996
Phase: Not reported
Response Action Outcome: -
Oil Or Haz Material: Not reported

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: TREGS
Action Status: DEPNDS
Action Date: 4/10/1996
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 6/14/1988
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: RFI
Action Date: 6/14/1988
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/14/1988
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: RAOEQ
Action Date: 8/9/1996
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0002388 / RAO

CUMBERLAND FARMS (Continued) **S101696334**

Primary ID: Not reported
Official City: LYNN
Notification: 06/14/1988
Category: NONE
Status Date: 08/09/1996
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type: TREGS
Action Status: DEPNDS
Action Date: 4/10/1996
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 6/14/1988
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: RFI
Action Date: 6/14/1988
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/14/1988
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: RAOEQ
Action Date: 8/9/1996
Response Action Outcome: Not reported

Chemicals:

Chemical: UNKNOWN
Quantity: Not reported

---

169 NW 1/2-1 0.974 mi. 5142 ft. **DRY CLEANERS FMR** **MA SHWS S100830537**
167-169 FRANKLIN ST **MA RELEASE N/A**
LYNN, MA 01901

Relative: Higher
Actual: 39 ft.

SHWS:

Release Tracking Number/Current Status: 3-0001498 / LSPNFA
Release Town: LYNN
Notification Date: 10/15/1988
Category: NONE
Associated ID: Not reported
Current Status: **LSP No Further Action**
Status Date: 03/13/1997
Phase: Not reported
Response Action Outcome: -

DRY CLEANERS FMR (Continued) **S100830537**

Oil Or Haz Material: Not reported

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 10/15/1988
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: LSPNFA
Action Date: 3/13/1997
Response Action Outcome: Not reported

Release:
Release Tracking Number/Current Status: 3-0001498 / LSPNFA
Primary ID: Not reported
Official City: LYNN
Notification: 10/15/1988
Category: NONE
Status Date: 03/13/1997
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 10/15/1988
Response Action Outcome: Not reported

Action Type: TREGS
Action Status: LSPNFA
Action Date: 3/13/1997
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported

AR170 **FORMER NISSEN BAKERY MAINTENANCE GARAGE** **MA SHWS** **S116687221**
NE **104 BROOKLINE ST** **MA RELEASE** **N/A**
1/2-1 **LYNN, MA**
0.977 mi.
5156 ft. **Site 2 of 2 in cluster AR**

Relative: Higher

Actual: 25 ft.

SHWS:

Release Tracking Number/Current Status:	3-0032201 / PSNC
Release Town:	LYNN
Notification Date:	05/23/2014
Category:	120 DY
Associated ID:	Not reported
Current Status:	**PSNC**
Status Date:	09/22/2014
Phase:	Not reported
Response Action Outcome:	-
Oil Or Haz Material:	Not reported
Location Type:	SCHOOL
Source:	UNKNOWN

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	HYDRAULIC OIL
Quantity:	0.12 inches

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/23/2014
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/23/2014
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/23/2014
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	6/18/2014
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	6/18/2014
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/19/2014
Response Action Outcome:	Not reported
Action Type:	BOL

FORMER NISSEN BAKERY MAINTENANCE GARAGE (Continued) **S116687221**

Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/30/2014
Response Action Outcome:	Not reported
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	9/11/2014
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	9/22/2014
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	9/22/2014
Response Action Outcome:	Not reported

Release:

Release Tracking Number/Current Status:	3-0032201 / PSNC
Primary ID:	Not reported
Official City:	LYNN
Notification:	05/23/2014
Category:	120 DY
Status Date:	09/22/2014
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/23/2014
Response Action Outcome:	Not reported
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/23/2014
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/23/2014
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	6/18/2014
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received

FORMER NISSEN BAKERY MAINTENANCE GARAGE (Continued) **S116687221**

Action Date:	6/18/2014
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	6/19/2014
Response Action Outcome:	Not reported
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	6/30/2014
Response Action Outcome:	Not reported
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	9/11/2014
Response Action Outcome:	Not reported
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	9/22/2014
Response Action Outcome:	Not reported
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	9/22/2014
Response Action Outcome:	Not reported

Chemicals:

Chemical:	HYDRAULIC OIL
Quantity:	0.12 inches
Location Type:	SCHOOL
Source:	UNKNOWN

171
WSW
1/2-1
0.988 mi.
5214 ft.

LOT 28 & 75 OF BLOCK 752
HARDING ST LC 7
LYNN, MA 01902

MA SHWS **S103811596**
MA RELEASE **N/A**

Relative:
Higher

Actual:
17 ft.

SHWS:

Release Tracking Number/Current Status:	3-0012511 / RAO
Release Town:	LYNN
Notification Date:	05/25/1995
Category:	120 DY
Associated ID:	Not reported
Current Status:	**Response Action Outcome**
Status Date:	08/07/1997
Phase:	Not reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil Or Haz Material:	Hazardous Material

Click here to access the MA DEP site for this facility:

LOT 28 & 75 OF BLOCK 752 (Continued) **S103811596**

Chemicals:

Chemical:	1,2-BENZENEDICARBOXYLIC ACID,DIETHYL ESTER
Quantity:	0.32 micrograms per gallon
Chemical:	AROCLOR 1242
Quantity:	130 micrograms per liter
Chemical:	AROCLOR 1242
Quantity:	0.13 micrograms per gallon
Chemical:	1,2-BENZENEDICARBOXYLIC ACID,DIETHYL ESTER
Quantity:	320 micrograms per liter

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/25/1995
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/25/1995
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	7/12/1995
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	8/11/1997
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	8/7/1997
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

Release:

Release Tracking Number/Current Status:	3-0012511 / RAO
Primary ID:	Not reported
Official City:	LYNN
Notification:	05/25/1995
Category:	120 DY
Status Date:	08/07/1997
Phase:	Not reported
Response Action Outcome:	B1 - Remedial actions have not been conducted because a level of No Significant Risk exists.
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

LOT 28 & 75 OF BLOCK 752 (Continued) **S103811596**

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	5/25/1995
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	5/25/1995
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	7/12/1995
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	8/11/1997
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	8/7/1997
Response Action Outcome:	Remedial actions have not been conducted because a level of No Significant Risk exists.

Chemicals:

Chemical:	1,2-BENZENEDICARBOXYLIC ACID,DIETHYL ESTER
Quantity:	0.32 micrograms per gallon
Chemical:	AROCLOR 1242
Quantity:	130 micrograms per liter
Chemical:	AROCLOR 1242
Quantity:	0.13 micrograms per gallon
Chemical:	1,2-BENZENEDICARBOXYLIC ACID,DIETHYL ESTER
Quantity:	320 micrograms per liter

Count: 18 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
LYNN	S117964742	NO LOCATION AID	26, 40, AND 50 SPENCER STREET	01905	MA SHWS, MA RELEASE, MA ENF
LYNN	S116358006	NO LOCATION AID	BLOSSOM STREET EXTENSION		MA SHWS, MA RELEASE
LYNN	S112288415	PAD-MOUNTED TRANSFMR - 15 CLONAKIL	BLOSSOM ST - MARIAN GARDENS AP	01902	MA SHWS, MA RELEASE
LYNN	S109146517	PARCEL #5	BLOSSOM ST	01901	MA SHWS, MA RELEASE
LYNN	S109489618	NO LOCATION AID	BLOSSOM ST	01901	MA SHWS, MA RELEASE
LYNN	S107678001	BLOSSOM STREET LOT	BLOSSOM ST	01901	MA SHWS, MA RELEASE
LYNN	S120630346	NO LOCATION AID	BOSTON STREET	01905	MA SHWS, MA RELEASE
LYNN	S102618413	NO LOCATION AID	CEDAR BROOK RD	01901	MA SHWS, MA RELEASE
LYNN	S105200067	ADAMS ST TO SAINT MARYS	CHESTNUT ST	01901	MA SHWS, MA RELEASE
LYNN	S107678054	ELLIS STREET PARKING LOT	ELLIS ST	01901	MA SHWS, MA RELEASE
LYNN	S110360996	MARKET STREET @ BROAD STREET	MARKET ST	01901	MA LUST, MA RELEASE
LYNN	S116687191	NO LOCATION AID	WEST NEPTUNE ST AT ORCHARD ST	01905	MA SHWS, MA RELEASE
LYNN	S117277512	RILEY WAY EXTENSION/	RILEY WAY EXTENSION	01902	MA SHWS, MA RELEASE
LYNN	S116687257	INTERSECTION OF WASHINGTON & SAGAM	SAGAMORE STREET	01902	MA SHWS, MA RELEASE
LYNN	1003862455	LANDMARK DEVELOPMENT	WASHINGTON AT BROAD STREETS	01905	SEMS-ARCHIVE
LYNN	S106617510	RUSSOS TRANSMISSION	1069A WESTERN AVE	01905	MA SHWS, MA RELEASE, MA ENF, M HW GEN
NAHANT	S106030112	2 MILES OFF SHORE NEAR NAHANT	OFF NAHANT	01908	MA SHWS, MA RELEASE
NAHANT	S109613082	WARD ROAD PUMP STATION	WARD RD		MA SHWS, MA LAST, MA RELEASE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: N/A
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 07/06/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 05/18/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 05/18/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 23

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/14/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 07/16/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 02/13/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 05/29/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 03/19/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 06/27/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

SHWS: Site Transition List

Contains information on releases of oil and hazardous materials that have been reported to DEP.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 08/14/2018
Number of Days to Update: 34

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

LF PROFILES: Landfill Profiles Listing

This spreadsheet describes landfills that have actively accepted waste or have closed under MassDEP Solid Waste Regulations first adopted in 1971 (310 CMR 16.00 and 310 CMR 19.00). The list does not include landfills that closed before 1971 (and which never had a MassDEP permit or approval), or for which agency data is incomplete.

Date of Government Version: 07/01/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 12/14/2015
Number of Days to Update: 48

Source: Department of Environmental Protection
Telephone: 617-292-5868
Last EDR Contact: 07/06/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Varies

SWF/LF: Solid Waste Facility Database/Transfer Stations

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/01/2018
Date Data Arrived at EDR: 07/05/2018
Date Made Active in Reports: 08/14/2018
Number of Days to Update: 40

Source: Department of Environmental Protection
Telephone: 617-292-5989
Last EDR Contact: 07/05/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Listing

Sites within the Leaking Underground Storage Tank Listing that have a UST listed as its source.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 08/14/2018
Number of Days to Update: 34

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Quarterly

LAST: Leaking Aboveground Storage Tank Sites
Sites within the Releases Database that have a AST listed as its source.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 08/14/2018
Number of Days to Update: 34
Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/25/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Varies

UST: Summary Listing of all the Tanks Registered in the State of Massachusetts
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 05/02/2018
Date Made Active in Reports: 05/23/2018
Number of Days to Update: 21
Source: Department of Fire Services, Office of the Public Safety
Telephone: 617-556-1035
Last EDR Contact: 07/12/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Quarterly

AST: Aboveground Storage Tank Database
Registered Aboveground Storage Tanks.

Date of Government Version: 10/22/2009
Date Data Arrived at EDR: 10/28/2009
Date Made Active in Reports: 11/06/2009
Number of Days to Update: 9
Source: Department of Public Safety
Telephone: 617-556-1035
Last EDR Contact: 07/12/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Quarterly

AST 2: Aboveground Storage Tanks
Aboveground storage tanks

Date of Government Version: 07/18/2018
Date Data Arrived at EDR: 07/24/2018
Date Made Active in Reports: 08/14/2018
Number of Days to Update: 21
Source: Department of Fire Services
Telephone: 978-567-3181
Last EDR Contact: 07/12/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/25/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/10/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/24/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/01/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/08/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/12/2018
Date Data Arrived at EDR: 05/18/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 63

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: Sites With Activity and Use Limitation

Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 08/14/2018
Number of Days to Update: 34

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 06/22/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS 2: Potential Brownfields Listing

A listing of potential brownfields site locations in the state.

Date of Government Version: 05/22/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 09/22/2017
Number of Days to Update: 50

Source: Department of Environmental Protection
Telephone: 617-556-1007
Last EDR Contact: 05/04/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Varies

BROWNFIELDS: Completed Brownfields Covenants Listing

Under Massachusetts law, M.G.L. c. 21E is the statute that governs the cleanup of releases of oil and/or hazardous material to the environment. The Brownfields Act of 1998 amended M.G.L. c. 21E by establishing significant liability relief and financial incentives to spur the redevelopment of brownfields, while ensuring that the Commonwealth's environmental standards are met. Most brownfields are redeveloped with the benefit of liability protections that operate automatically under M.G.L. c. 21E.

Date of Government Version: 04/05/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/10/2017
Number of Days to Update: 68

Source: Office of the Attorney General
Telephone: 617-963-2423
Last EDR Contact: 05/04/2018
Next Scheduled EDR Contact: 08/13/2018
Data Release Frequency: Annually

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 03/19/2018
Date Data Arrived at EDR: 03/21/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 06/20/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/30/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/17/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176
Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 08/03/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 05/11/2018
Number of Days to Update: 71
Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Quarterly

Local Land Records

LIENS: Liens Information Listing
A listing of environmental liens.

Date of Government Version: 03/07/2018
Date Data Arrived at EDR: 03/09/2018
Date Made Active in Reports: 06/21/2018
Number of Days to Update: 104
Source: Department of Environmental Protection
Telephone: 617-292-5628
Last EDR Contact: 05/17/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 30
Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 03/26/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 73

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RELEASE: Reportable Releases

Contains information on all releases of oil and hazardous materials that have been reported to DEP

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 07/11/2018
Date Made Active in Reports: 08/14/2018
Number of Days to Update: 34

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Quarterly

MA SPILLS: Historical Spill List

The Spills Database was the release notification tracking system for spills that occurred prior to October 1, 1993. This information should be considered to be primarily of historical interest since all of the listed spills have either been cleaned up or assigned new tracking numbers and moved to the Reportable Releases or Sites Transition List databases.

Date of Government Version: 09/30/1993
Date Data Arrived at EDR: 12/03/2003
Date Made Active in Reports: 12/31/2003
Number of Days to Update: 28

Source: Department of Environmental Protection
Telephone: 617-292-5720
Last EDR Contact: 12/03/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/11/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/08/2013
Number of Days to Update: 36

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 03/10/1998
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/05/2013
Number of Days to Update: 61

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/28/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 86

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 05/25/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/13/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/15/2018
Next Scheduled EDR Contact: 08/27/2018
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/27/2018
Date Made Active in Reports: 06/22/2018
Number of Days to Update: 87

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 06/27/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 08/03/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/10/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 06/22/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 05/25/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 30

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/20/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/13/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 07/09/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Quarterly

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: Quarterly

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/23/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data

A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76

Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 06/07/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List

A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 06/04/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 07/27/2018
Next Scheduled EDR Contact: 11/05/2018
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/03/2018
Date Data Arrived at EDR: 04/05/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 85
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 07/05/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data
Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42
Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees
Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 03/31/2018
Date Data Arrived at EDR: 04/16/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 74

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/09/2018
Next Scheduled EDR Contact: 10/01/2018
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 06/28/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/11/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/19/2018
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 05/18/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 05/13/2018
Date Data Arrived at EDR: 05/30/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 30

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 10/15/2018
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/03/2018
Date Data Arrived at EDR: 05/31/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 29

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 05/31/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Semi-Annually

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 05/30/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 87

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 06/20/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 02/21/2018
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 28

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 10/31/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 73

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/13/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 02/25/2018
Date Data Arrived at EDR: 03/17/2018
Date Made Active in Reports: 06/08/2018
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 06/06/2018
Next Scheduled EDR Contact: 09/17/2018
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 04/13/2018
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 06/01/2018
Next Scheduled EDR Contact: 09/10/2018
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 30

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 05/23/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Quarterly

AIRS: Permitted Facilities Listing
A listing of Air Quality permit applications.

Date of Government Version: 04/13/2018
Date Data Arrived at EDR: 04/17/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 59

Source: Department of Environmental Protection
Telephone: 617-292-5789
Last EDR Contact: 07/12/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Varies

ASBESTOS: Asbestos Notification Listing
Asbestos sites

Date of Government Version: 06/11/2018
Date Data Arrived at EDR: 06/15/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 14

Source: Department of Environmental Protection
Telephone: 617-292-5982
Last EDR Contact: 05/17/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

DRYCLEANERS: Regulated Drycleaning Facilities
A listing of Department of Environmental Protection regulated drycleaning facilities that use perchloroethylene under the Environmental Results Program.

Date of Government Version: 04/18/2018
Date Data Arrived at EDR: 05/04/2018
Date Made Active in Reports: 05/23/2018
Number of Days to Update: 19

Source: Department of Environmental Protection
Telephone: 617-292-5633
Last EDR Contact: 07/25/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Varies

ENFORCEMENT: Enforcement Action Cases
A listing of enforcement action cases tracked by Department of Environmental Protection programs, including Solid Waste and Hazardous Waste.

Date of Government Version: 07/25/2018
Date Data Arrived at EDR: 07/27/2018
Date Made Active in Reports: 08/14/2018
Number of Days to Update: 18

Source: Department of Environmental Quality
Telephone: 617-292-5979
Last EDR Contact: 07/25/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
Information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/01/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 02/03/2011
Number of Days to Update: 42

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 06/07/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Varies

Financial Assurance 2: Financial Assurance Information Listing
A listing of financial assurance information for underground storage tanks. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 10/21/2011
Date Data Arrived at EDR: 10/25/2011
Date Made Active in Reports: 11/18/2011
Number of Days to Update: 24

Source: Office of State Fire Marshal
Telephone: 978-567-3100
Last EDR Contact: 07/12/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Quarterly

Financial Assurance 3: Financial Assurance Information listing

Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 04/17/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 59

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 07/05/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Varies

GWDP: Ground Water Discharge Permits

The Ground Water Discharge Permits datalayer (formerly known as Groundwater Discharge Points) is a statewide point dataset containing approximate locations of permitted discharges to groundwater.

Date of Government Version: 01/18/2018
Date Data Arrived at EDR: 05/04/2018
Date Made Active in Reports: 05/23/2018
Number of Days to Update: 19

Source: MassGIS
Telephone: 617-556-1150
Last EDR Contact: 08/03/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Varies

HW GEN: List of Massachusetts Hazardous Waste Generators

Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

Date of Government Version: 06/04/2018
Date Data Arrived at EDR: 06/27/2018
Date Made Active in Reports: 08/14/2018
Number of Days to Update: 48

Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 06/27/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Semi-Annually

MERCURY: Mercury Product Recyling Drop-Off Locations Listing

A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through skin absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize.

Date of Government Version: 05/07/2018
Date Data Arrived at EDR: 05/25/2018
Date Made Active in Reports: 06/25/2018
Number of Days to Update: 31

Source: Department of Environmental Protection
Telephone: 617-292-5632
Last EDR Contact: 05/17/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Varies

NPDES: NPDES Permit Listing

Listing of treatment plants in Massachusetts that hold permits to discharge to groundwater.

Date of Government Version: 02/12/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 54

Source: Department of Environmental Protection
Telephone: 508-767-2781
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: Varies

TIER 2: Tier 2 Information Listing

A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 05/17/2018
Date Made Active in Reports: 06/29/2018
Number of Days to Update: 43

Source: Massachusetts Emergency Management Agency
Telephone: 508-820-2019
Last EDR Contact: 07/12/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Annually

TSD: TSD Facility
List of Licensed Hazardous Waste Treatment, Storage Disposal Facilities (TSDFs) in Massachusetts.

Date of Government Version: 06/04/2018
Date Data Arrived at EDR: 06/29/2018
Date Made Active in Reports: 08/14/2018
Number of Days to Update: 46

Source: Department of Environmental Protection
Telephone: 617-292-5580
Last EDR Contact: 06/25/2018
Next Scheduled EDR Contact: 10/08/2018
Data Release Frequency: Varies

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants
The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations
EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners
EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 01/03/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/22/2018
Number of Days to Update: 36

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/09/2018
Next Scheduled EDR Contact: 11/26/2018
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 07/13/2018
Date Made Active in Reports: 08/01/2018
Number of Days to Update: 19

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/13/2018
Next Scheduled EDR Contact: 10/22/2018
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 04/30/2018
Date Data Arrived at EDR: 05/03/2018
Date Made Active in Reports: 06/07/2018
Number of Days to Update: 35

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/01/2018
Next Scheduled EDR Contact: 11/12/2018
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/12/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 05/21/2018
Next Scheduled EDR Contact: 09/03/2018
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 05/16/2018
Date Data Arrived at EDR: 05/23/2018
Date Made Active in Reports: 07/03/2018
Number of Days to Update: 41

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 07/16/2018
Next Scheduled EDR Contact: 10/29/2018
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/15/2018
Date Made Active in Reports: 07/09/2018
Number of Days to Update: 24

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 06/11/2018
Next Scheduled EDR Contact: 09/24/2018
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

LYNN HERITAGE STATE PARK
154 LYNNWAY
LYNN, MA 01902

TARGET PROPERTY COORDINATES

Latitude (North):	42.458733 - 42° 27' 31.44''
Longitude (West):	70.94365 - 70° 56' 37.14''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	340185.6
UTM Y (Meters):	4702327.0
Elevation:	2 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5642638 LYNN, MA
Version Date:	2012

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

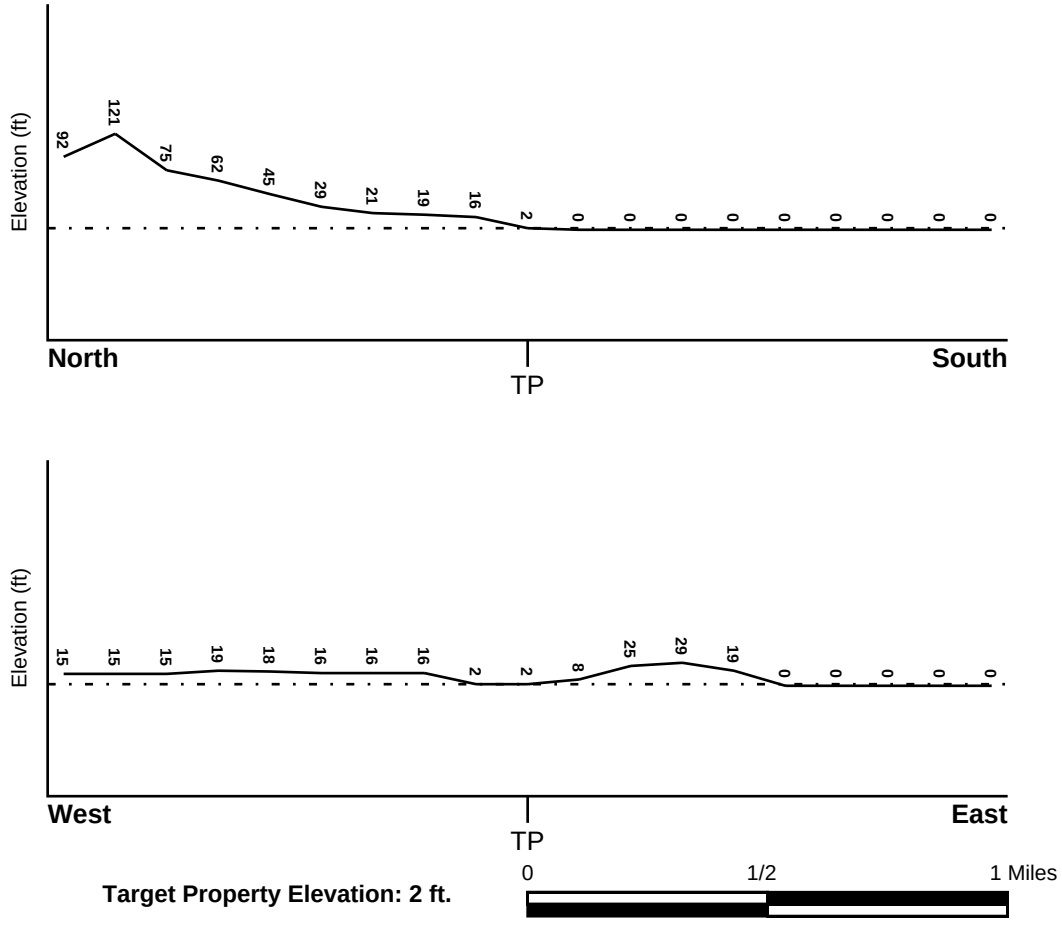
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Target Property Elevation: 2 ft.

Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
25009C0529G	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
25009C0527F	FEMA FIRM Flood data
25009C0531G	FEMA FIRM Flood data
25009C0533G	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
WEST HALF OF LYNN	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
2	1/4 - 1/2 Mile West	VARIES
1G	1/4 - 1/2 Mile West	VARIES

For additional site information, refer to Physical Setting Source Map Findings.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

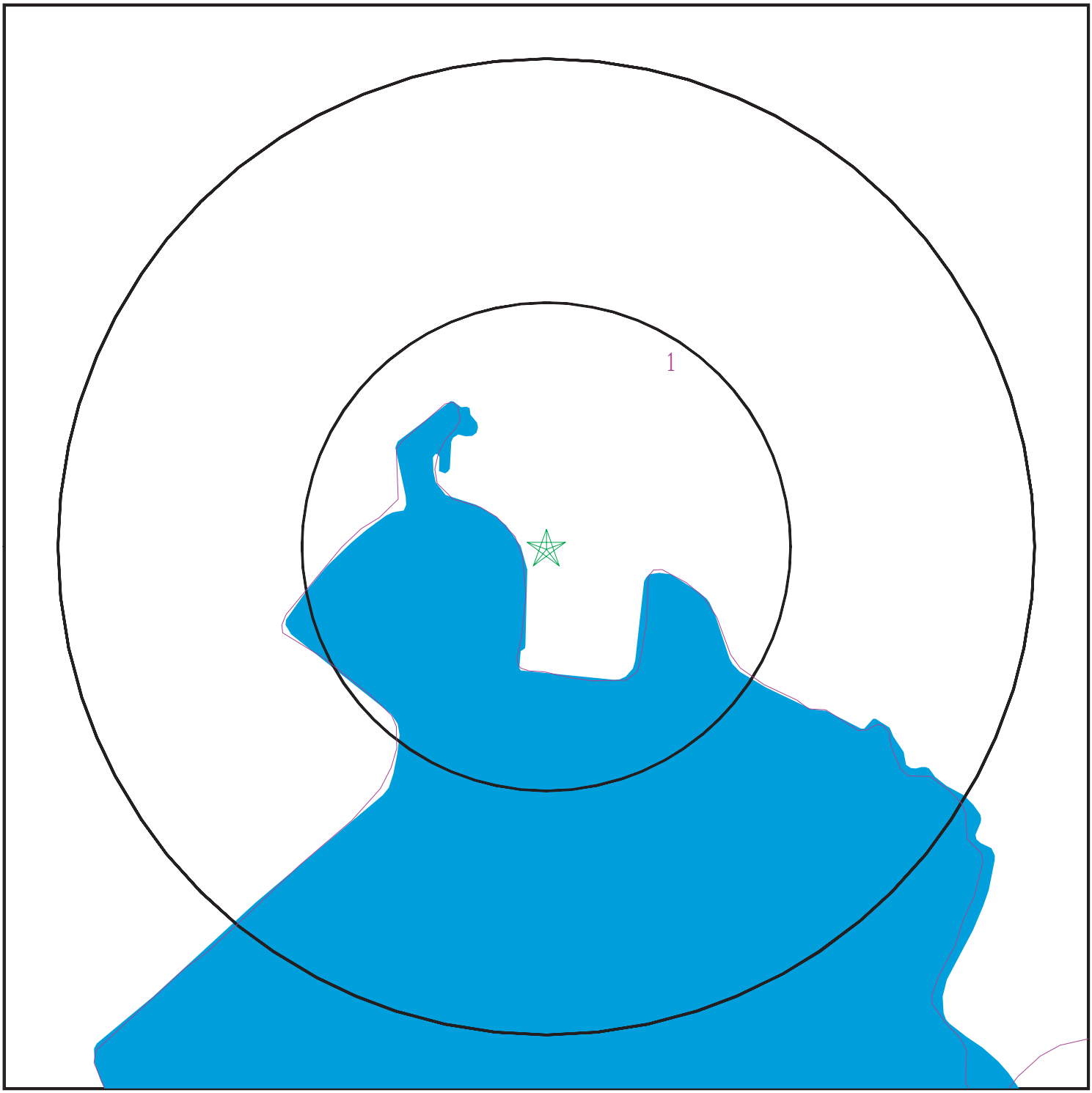
Era:	Paleozoic
System:	Silurian
Series:	Silurian
Code:	Se *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposit

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 5393000.2s



SITE NAME:	Lynn Heritage State Park	CLIENT:	Stantec
ADDRESS:	154 Lynnway Lynn MA 01902	CONTACT:	Andrew Martzolf
LAT/LONG:	42.458733 / 70.94365	INQUIRY #:	5393000.2s
		DATE:	August 15, 2018 1:25 pm

Copyright © 2018 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Urban land

Soil Surface Texture:
Hydrologic Group: Not reported

Soil Drainage Class:
Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000474917	1/8 - 1/4 Mile NW
3	USGS40000474931	1/4 - 1/2 Mile NW
4	USGS40000474891	1/4 - 1/2 Mile WNW
5	USGS40000475013	1/4 - 1/2 Mile North

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
8	USGS40000474817	1/2 - 1 Mile West
10	USGS40000474951	1/2 - 1 Mile ENE
12	USGS40000475173	1/2 - 1 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
7	MA3163001	1/2 - 1 Mile NNW

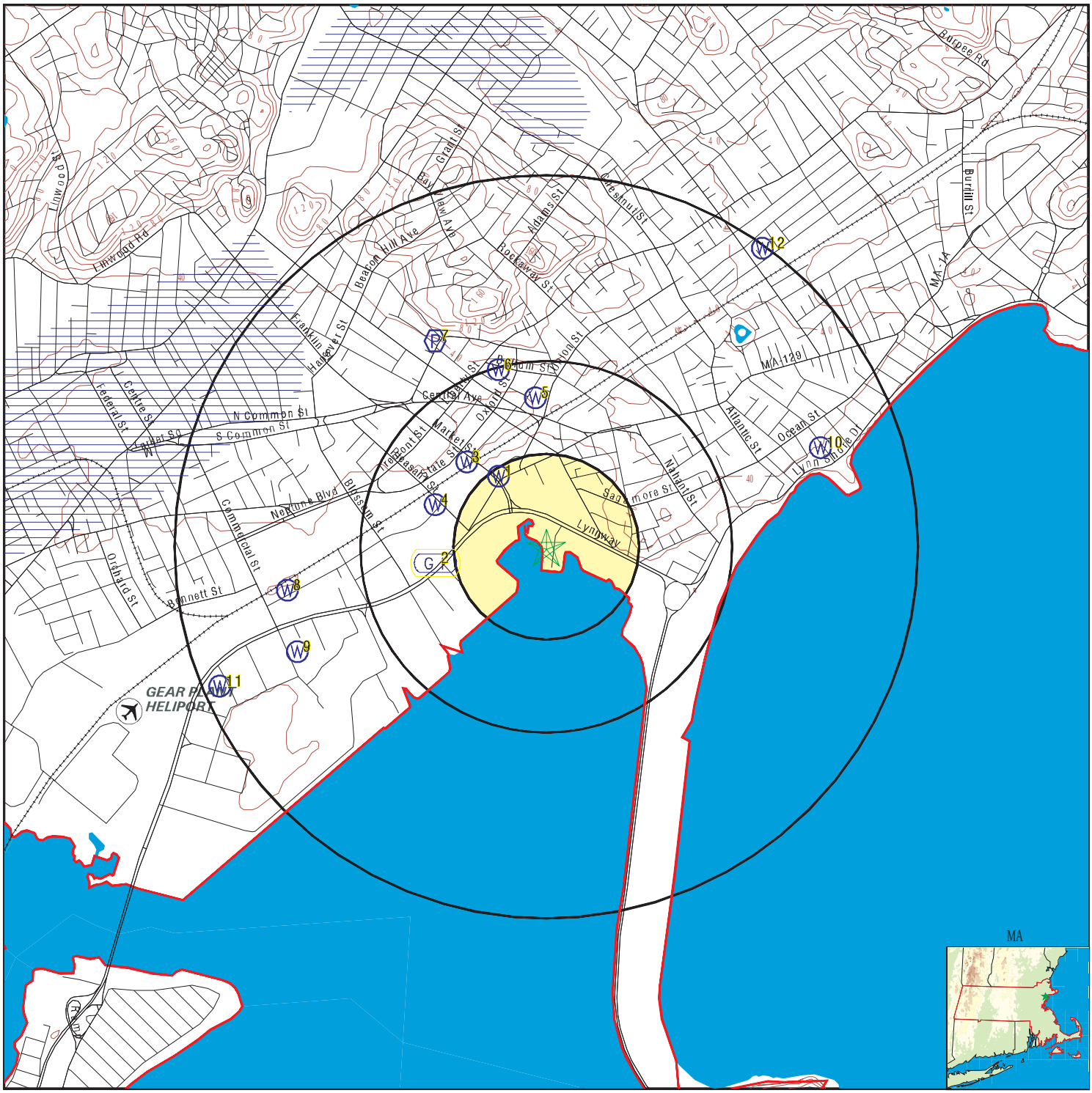
Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
6	MA8000000001212	1/4 - 1/2 Mile NNW
9	MA8000000001652	1/2 - 1 Mile WSW
11	MA8000000000770	1/2 - 1 Mile WSW

OTHER STATE DATABASE INFORMATION

PHYSICAL SETTING SOURCE MAP - 5393000.2s



- County Boundary
- Major Roads
- Contour Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location

- Potentially Productive Aquifers
- Not Potentially Productive Aquifers
- DEP Approved Zone IIs
- EPA Designated Sole Src. Aq.

SITE NAME:	Lynn Heritage State Park	CLIENT:	Stantec
ADDRESS:	154 Lynnway Lynn MA 01902	CONTACT:	Andrew Martzolf
LAT/LONG:	42.458733 / 70.94365	INQUIRY #:	5393000.2s
		DATE:	August 15, 2018 1:24 pm

Copyright © 2018 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
NW
1/8 - 1/4 Mile
Higher

FED USGS **USGS40000474917**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-L5W 15	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1907
Well Depth:	32	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

2
West
1/4 - 1/2 Mile
Higher

Site ID:	3-0001680
Groundwater Flow:	VARIES
Water Table Depth:	Shallowest: 4.74 ft. Deepest: 6.46 ft.
Date:	02/1993

AQUIFLOW **2573**

3
NW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000474931**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-L5W 10	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	Not Reported
Well Depth:	30	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

4
WNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000474891**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-L5W 3	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1906
Well Depth:	31	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

5
North **FED USGS** **USGS40000475013**
1/4 - 1/2 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-L5W 16	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1947
Well Depth:	550	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

6
NNW **MA WELLS** **MA8000000001212**
1/4 - 1/2 Mile
Higher

Fid:	1211	Fac name:	US POSTAL SERVICE- LYNN VMF
Address:	100 BUFFUM ST	Town:	LYNN
Region:	3	Rtn:	Not Reported
Hw id:	Not Reported	Sw id:	Not Reported
Sseis id:	0	Npdes id:	Not Reported
Air:	Not Reported	Gwd:	Not Reported
Hwr:	Not Reported	Lqg ma:	Y
Lqg rcra:	Not Reported	Lqtu:	Not Reported
Tsdf:	Not Reported	Swd:	Not Reported
Fac id:	330808	Source id:	Not Reported
Site name:	Not Reported	Latitude:	0
Longitude:	0	Type:	Not Reported
Zii num:	0	Pws id:	Not Reported
Site id:	MA8000000001212		

Objectid:	1578	L base:	DOQ
L acc est:	100	L type:	CF
L meth:	PHO	L src 1:	AP_PN
L src 2:	Not Reported	L src 3:	Not Reported
Point x:	245548.03295798	Point y:	912937.65248403
Ustid:	15717.	L date:	09-FEB-07
L src 1 da:	Not Reported	L src 2 da:	Not Reported
L src 3 da:	Not Reported	Fac id:	330808.

7
NNW **FRDS PWS** **MA3163001**
1/2 - 1 Mile
Higher

Epa region:	01	State:	MA
Pwsid:	MA3163001	Pwsname:	STAR MARKET (LYNN) VEND.
Cityserved:	Not Reported	Stateserved:	MA
Zipserved:	Not Reported	Fipscounty:	25009
Status:	Closed	Retpopsrvd:	25
Pwssvcconn:	1	Psource longname:	Purch_surface_water
Pwstype:	TNCWS	Owner:	Private

Contact:	STAR MARKET (LYNN) VEND.	Contactorgname:	Not Reported
Contactphone:	Not Reported	Contactaddress1:	MARKET ST-MARKET PLZ
Contactaddress2:	Not Reported	Contactcity:	LYNN
Contactstate:	MA	Contactzip:	019010000
Pwsactivitycode:	I		
PWS ID:	MA3163001	PWS type:	Mailing
PWS name:	WATER VEND	PWS address:	12 PLYMOUTH ST
PWS city:	CHICOPEE	PWS state:	MA
PWS zip:	01020	PWS ID:	MA3163001
Activity status:	Active	Date system activated:	9003
Date system deactivated:	Not Reported	Retail population:	00000025
System name:	STAR MARKET LYNN MARKET PLAZA		
System address:	MARKET ST	System city:	LYNN
System state:	MA	System zip:	Not Reported
Population served:	Under 101 Persons	Treatment:	Treated
Latitude:	422800	Longitude:	0705700

8
West **FED USGS** **USGS40000474817**
1/2 - 1 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-L5W 8	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1916
Well Depth:	165	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

9
WSW **MA WELLS** **MA8000000001652**
1/2 - 1 Mile
Higher

Fid:	1651	Fac name:	LYNN DPW
Address:	250 COMMERCIAL ST	Town:	LYNN
Region:	3	Rtn:	Not Reported
Hw id:	MAR000503763	Sw id:	Not Reported
Sseis id:	0	Npdes id:	Not Reported
Air:	Not Reported	Gwd:	Not Reported
Hwr:	Not Reported	Lqg ma:	Y
Lqg rcra:	Not Reported	Lqtu:	Not Reported
Tsdf:	Not Reported	Swd:	Not Reported
Fac id:	1000	Source id:	Not Reported
Site name:	Not Reported	Latitude:	0
Longitude:	0	Type:	Not Reported
Zii num:	0	Pws id:	Not Reported
Site id:	MA8000000001652		
Objectid:	16	L base:	DOQ
L acc est:	16	L type:	CB
L meth:	OTH	L src 1:	SV

L src 2:	AP_DOQ	L src 3:	Not Reported
Point x:	244685.65600896	Point y:	911710.43761455
Ustid:	5434.	L date:	04-MAR-04
L src 1 da:	04-MAR-04	L src 2 da:	Not Reported
L src 3 da:	Not Reported	Fac id:	1000.

10
ENE **FED USGS** **USGS40000474951**
1/2 - 1 Mile
Higher

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-L5X 1	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1962
Well Depth:	30	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

---

11
WSW **MA WELLS** **MA8000000000770**
1/2 - 1 Mile
Higher

Fid:	769	Fac name:	GARELICK FARMS LLC
Address:	626 LYNNWAY	Town:	LYNN
Region:	3	Rtn:	3-0013079
Hw id:	Not Reported	Sw id:	Not Reported
Sseis id:	0	Npdes id:	Not Reported
Air:	Not Reported	Gwd:	Not Reported
Hwr:	Not Reported	Lqg ma:	Y
Lqg rcra:	Not Reported	Lqtu:	Y
Tsdf:	Not Reported	Swd:	Not Reported
Fac id:	371182	Source id:	Not Reported
Site name:	Not Reported	Latitude:	0
Longitude:	0	Type:	Not Reported
Zii num:	0	Pws id:	Not Reported
Site id:	MA8000000000770		

Objectid:	950	L base:	DOQ
L acc est:	100	L type:	CF
L meth:	DD_1	L src 1:	DD_FAC
L src 2:	DD_21E	L src 3:	Not Reported
Point x:	244350.43733615	Point y:	911559.12525247
Ustid:	5437.	L date:	05-JAN-07
L src 1 da:	Not Reported	L src 2 da:	Not Reported
L src 3 da:	Not Reported	Fac id:	371182.

12
NE **FED USGS** **USGS40000475173**
1/2 - 1 Mile
Higher

Organization ID:	USGS-MA
Organization Name:	USGS Massachusetts Water Science Center

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Monitor Location:	MA-L5W 1	Type:	Well
Description:	Not Reported	HUC:	01090001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1906
Well Depth:	82	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

Ground water levels,Number of Measurements:	1	Level reading date:	1906-06-01
Feet below surface:	11.00	Feet to sea level:	Not Reported
Note:	Not Reported		

1G
West
1/4 - 1/2 Mile
Lower

Site ID:	3-0001680
Groundwater Flow:	VARIES
Water Table Depth:	Shallowest: 4.74 ft. Deepest: 6.46 ft.
Date:	02/1993

AQUIFLOW **2573**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

MA_ACECS_ID 13

MA_ACECS_ID 13

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: MA Radon

Radon Test Results

County	% of sites>4 pCi/L	Median
ESSEX	36	2.8

Federal EPA Radon Zone for ESSEX County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 01902

Number of sites tested: 5

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	Not Reported	Not Reported	Not Reported	Not Reported
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	3.140 pCi/L	60%	40%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Massachusetts Geographic Information System (MassGIS) Datalayers
Source: Executive Office of Environmental Affairs

Public Water Supply Database: The Public Water Supply datalayer contains the locations of public community surface and groundwater supply sources and public non-community supply sources as defined in 310 CMR 22.00.

OTHER STATE DATABASE INFORMATION

Areas of Critical Environmental Concern Datalayer: The Areas of Critical Environmental Concern (ACEC) datalayer shows the location of areas that have been designated ACECs by the Secretary of Environmental Affairs. ACEC designation requires greater environmental review of certain kinds of proposed development under state jurisdiction within the ACEC boundaries. The ACEC Program is administered by the Department of Environmental Management (DEM) on behalf of the Secretary of Environmental Affairs. The Massachusetts Coastal Zone Management (MCZM) Office managed the original Coastal ACEC Program from 1978 to 1993, and continues to play a key role in monitoring coastal ACECs. Procedures for ACEC designation and the general policies governing the effects of designation are contained in the ACEC regulations (301 CMR 12.00). The ACEC datalayer has been compiled by MCZM and DEM and includes both coastal and inland areas.

EPA Designated Sole Source Aquifers Datalayer: The Sole Source Aquifer datalayer was compiled by the Department of Environmental Protection (DEP) Division of Water Supply (DWS). Seven Sole Source Aquifers have been designated by the US Environmental Protection Agency (EPA) for Massachusetts. A Sole Source Aquifer (SSA) is an aquifer designated by US EPA as the sole or principal source of drinking water for a given aquifer service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should that aquifer become contaminated. The aquifers were defined by a EPA hydrogeologist.

Aquifers Datalayer: MassGIS produced an aquifer datalayer composed of 20 individual panels, generally based on the boundaries of the major drainage basins. Areas of high and medium yield were mapped. This datalayer includes polygon attribute coding to help in the identification of areas in which cleanup of hazardous waste sites must meet drinking water standards, as defined in the Massachusetts Contingency Plan (MCP) (310 CMR 40.00000).

Non-Potential Drinking Water Source Areas: Non-Potential Drinking Water Source Areas (NPDWSA) are regulatory in nature, representing one of many considerations used in determining the standards to which ground water must be cleaned in the event of a release of oil or hazardous material. NPDWSAs are not based on existing water quality and do not indicate poor ambient conditions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

DEP Approved Zone IIs Datalayer: The Department of Environmental Protection (DEP) approved Zone IIs datalayer was compiled by the DEP Division of Water Supply (DWS). The database contains 281 approved Zone IIs statewide. As stated in 310 CMR 22.02, a Zone II is "that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation.) It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone IIs shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary)." These data are used in association with the Public Water Supplies datalayer. The following describes certain unique features of this association.

- Any proposed new well which will pump at least 100,000 gallons per day must have a Zone II delineation completed and approved by DEP prior to the well coming on line.
- Additionally, a new source may not be on-line yet, but other, older wells may fall within its Zone II boundary.
- Further, existing wells must have a Zone II delineated as a condition of receiving a water withdrawal permit under the Water Management Act.

RADON

State Database: MA Radon
Source: Department of Health
Telephone: 413-586-7525
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

ATTACHMENT 4

Soil Boring Logs

Stantec BOREHOLE LOG HP-5A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-5A**

EXPLORATION DATE **9/19/2018 to 9/19/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	10.0						in.			
0	9.7	4" Boardwalk								
	7.5									
		Very loose, brown SILT, some medium to fine SAND, trace Brick, trace Gravel. Black ash in tip.			SS	1	12	3 1 2 3	3	
5	5.0	Casing bouncing through wood.								
	1.0	Loose, brown SILT, some medium to fine SAND, trace Brick. Wood in tip.			SS	2	8	3 2 3 10	5	
10	-1.0									
	-5.0	Wood, trace brown Silt.			SS	3	10	18 100/4"	R	
15	-7.0									
	-9.0									
	-9.3	Medium dense, gray medium to fine SAND, little Silt, trace Wood.			SS	4	6	5 9 5 9	14	
20	-11.0	Stiff, gray SILTY CLAY.								

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-5A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-5A**

EXPLORATION DATE **9/19/2018 to 9/19/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
25	-14.0	Stiff, olive gray SILTY CLAY.			SS	5	24	4 8 7 13	15	
	-16.0									
	-19.0	Medium stiff, olive gray SILTY CLAY.			SS	6	24	2 3 3 4	6	
30	-21.0									
	-24.0	Medium stiff, olive gray SILTY CLAY.			SS	7	24	WOH 2 3 5	5	
35	-26.0									
	-29.0	Medium stiff, olive gray SILTY CLAY.			SS	8	24	WOH 2 3 4	5	
40	-31.0									
	-34.0	Medium stiff, olive gray SILTY CLAY, trace Gravel.			SS	9	24	1 2 4 3	6	
45	-36.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

BOREHOLE LOG

HP-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/19/2018 to 9/19/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-39.0	Medium stiff, olive gray SILTY CLAY, trace Gravel.			SS	10	24	WOH 3 4 5	7	
50	-41.0	Stiff, olive gray SILTY CLAY, trace Gravel.			SS	11	24	5 7 8 9	15	
	-43.0	Boring terminated at 53 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-8A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-8A**

EXPLORATION DATE **9/20/2018 to 9/20/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.9						in.			
0	11.6	4" Boardwalk								
	9.4	Very loose, brown medium to fine SAND and SILT, trace Brick, trace Wood. Brick in tip.			SS	1	3	1 2 1 100/3"	3	
	7.4	Roller bit through brick and concrete from 4.5 feet to 6 feet.								
5	2.9	Dense, brown medium to fine SAND, some Silt, some Gravel, trace Brick.			SS	2	7	20 22 15 30	37	
10	0.9									
	-2.1	Dense, brown medium to fine SAND and SILT, little Gravel, little coarse Sand.			SS	3	8	23 25 21 24	46	
15	-4.1									
	-7.1	Dense, brown medium to fine SAND and SILT, little Gravel, little coarse Sand.			SS	4	8	10 8 7 12	15	
20	-9.1	Very stiff, gray SILTY CLAY.								
	-11.1									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-8A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-8A**

EXPLORATION DATE **9/20/2018 to 9/20/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
		Layer change at 23 feet.								
	-12.1									
25		Very stiff, gray SILTY CLAY, trace fine Sand varves. PP= 1.75tsf			SS	5	12	6 6 7 13	13	
	-14.1									
	-17.1									
30		Very stiff, olive gray SILTY CLAY. PP= 0.75tsf			SS	6	24	3 4 5 7	9	
	-19.1									
	-22.1									
35		Very stiff, olive gray SILTY CLAY.			SS	7	5	3 7 8 9	15	
	-24.1									
	-27.1									
40		Very stiff, olive gray SILTY CLAY, trace Gravel PP= 0.0 tsf			SS	8	8	4 4 6 7	10	
	-29.1									
	-32.1									
45		Stiff, olive gray SILTY CLAY. PP=0 tsf			SS	9	24	WOH 2 3 5	5	
	-34.1									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-8A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-8A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
50	-37.1	Medium stiff, olive gray SILTY CLAY. PP=0.0 tsf			SS	10	24	WOH/12" 6 7	6	
	-39.1	Stiff, olive gray SILTY CLAY. PP=0.25 tsf			SS	11	24	6 6 6 6	12	
	-41.1	Boring terminated at 53 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-9A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-9A**

EXPLORATION DATE **9/18/2018 to 9/18/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.9						in.			
0	11.6	4" Boardwalk								
	8.9									
		Very loose, brown SILT and medium to fine SAND, trace Brick, trace Wood, trace Ash.			SS	1	6	1 1 1 2	2	
5	6.9									
	2.9									
		Medium dense, brown medium to fine SAND, some Silt, some coarse to fine Gravel.			SS	2	9	8 10 12 6	22	
10	0.9									
	-2.1									
		Loose, brown medium to fine SAND and SILT, trace Gravel, trace burnt Wood, little Ash.			SS	3	3	4 2 3 4	5	
15	-4.1									
	-7.1									
		Medium dense, brown medium to fine SAND, some Silt, little Gravel. Sample from tip.			SS	4	0	15 8 5 9	13	
20	-9.1									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-9A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-9A**

EXPLORATION DATE **9/18/2018 to 9/18/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-12.1	Medium dense, brown medium to fine SAND and SILT, trace fine Gravel.			SS	5	8	8 9 12 9	21	
25	-14.1	Fine gravel in wash.								
	-17.1	Medium dense, black SILT, little fine Sand. No odor.			SS	6	2	2 11 3 11	14	
30	-19.1									
	-22.1	Stiff, olive gray SILTY CLAY, some Gravel at tip. Recovery with 3-inch sampler.			SS	7	4	3 4 5 5	9	
35	-24.1									
	-27.1	No recovery. Olive gray silty clay on spoon.			SS	8	0	2 3 3 5	6	
40	-29.1									
	-32.1	Medium stiff, olive gray SILTY CLAY. PP= 0.25 tsf			SS	9	24	WOH 2 2 3	4	
45	-34.1									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-10A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-10A**

EXPLORATION DATE **9/18/2018 to 9/18/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.8						in.			
0	11.5	4" Boardwalk								
	8.8	Loose, dark brown medium to fine SAND and SILT, trace Gravel.			SS	1	2	1 1 5 3	6	
5	6.8									
	2.8	Medium dense, brown coarse to fine SAND and GRAVEL. Gray Silt in tip.			SS	2	6	18 11 5 2	16	
10	0.8									
	-2.2	Soft, gray CLAY and SILT. trace fine Gravel. PP= 0.0tsf			SS	3	16	3 2 1 2	3	
15	-4.2									
	-7.2	Medium stiff, gray/black SILTY CLAY, little Wood, trace Ash.			SS	4	4	4 4 2 2	6	
20	-9.2									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-10A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/18/2018 to 9/18/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-10A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-12.2									
25		Medium dense, grayish brown medium to fine SAND, some Silt.			SS	5	4	4 8 5 4	13	
	-14.2									
	-16.2									
	-17.2	Layer change at 28 feet.								
30		Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	6	13	3 4 4 5	8	
	-19.2									
	-22.2									
35		Medium stiff, olive gray SILTY CLAY. PP= 0.5tsf			SS	7	24	1 2 4 6	6	
	-24.2									
	-27.2									
40		Medium stiff, olive gray SILTY CLAY. PP= 0.25tsf			SS	8	24	3 4 3 4	7	
	-29.2									
	-32.2									
45		Medium stiff, olive gray SILTY CLAY. PP= 0.25tsf			SS	9	24	1 3 5 6	8	
	-34.2									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-10A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-10A**

EXPLORATION DATE **9/18/2018 to 9/18/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-37.2	Stiff, olive gray SILTY CLAY. PP= 0.25tsf			SS	10	24	1 4 5 7	9	
50	-38.5	Stiff, olive gray SILTY CLAY. PP= 1.0tsf								
	-39.2	Hard, olive gray SILTY CLAY. PP= 0.75tsf			SS	11	24	7 9 26 100/4"	35	
	-40.9									
	-41.2	Dense, brown SANDY GRAVEL, little Silt. Roll through gravel to 55 feet.								
55	-43.2	Boring terminated at 55 feet. No refusal.								
60										
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-11A

CLIENT **Brown, Richardson, and Rowe**
LOCATION **Heritage State Park, Lynn, MA**
EXPLORATION DATE **9/21/2018 to 9/21/2018** WATER LEVEL **Tidal**

PROJECT No. **179410750**
EXPLORATION No. **HP-11A**
DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.9						in.			
0	11.6	4" Boardwalk								
	9.4	Soft, black/brown CLAYEY SILT, little medium to fine Sand, trace Ash. Trace brick in tip.			SS	1	1	5 3 2 3	5	
	7.4	Black wood and ash in wash from 6 to 7 feet. Casing or roller bit refusal on rock at 8 feet at 3 locations. Possible sea wall. Resume location 4 at 9 feet.								
5	2.9	Loose, brown coarse to medium SAND, trace Silt, trace Brick. Wood in tip.			SS	2	7	3 3 4 6	7	
10	0.9									
	-2.1	No recovery. Gravel stuck in tip.			SS	3	0	15 15 11 11	26	
15	-4.1									
	-7.1	Dense, gray medium to fine SAND, some Silt.			SS	4	9	14 14 17 22	31	
20	-9.1									

Undrained Shear Strength - tsf
1 2 3 4
Water Content & Atterberg Limits W_P W W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley
Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-11A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-11A**

EXPLORATION DATE **9/21/2018 to 9/21/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-12.1									
25		Very stiff, olive gray CLAYEY SILT. Sand seam at bottom of sample.			SS	5	19	9 13 12 16	25	
	-14.1									
	-17.1	Very stiff, olive gray SILTY CLAY. PP=1.5tsf								
30					SS	6	24	4 10 11 13	21	
	-19.1									
	-22.1	Stiff, olive gray SILTY CLAY. PP=0.75tsf								
35					SS	7	22	5 7 9 12	16	
	-24.1									
	-27.1	Stiff, olive gray SILTY CLAY. One medium sand seam. PP=0.75tsf								
40					SS	8	24	3 4 5 7	9	
	-29.1	Water coming up in pipe from possible swelling clays.								
	-32.1	Stiff, olive gray SILTY CLAY, trace fine Gravel. PP=0.5tsf								
45					SS	9	24	5 6 7 7	13	
	-34.1									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-11A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/21/2018 to 9/21/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-11A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-37.1									
50		Medium stiff, olive gray SILTY CLAY, trace fine Gravel. PP=0.25tsf - 0.5tsf			SS	10	24	2 3 4 6	7	
	-39.1									
	-42.1									
55		Medium stiff, olive gray SILTY CLAY, trace fine Gravel. PP=1.25tsf			SS	11	XX	XX	XX	
	-44.1									
		Boring terminated at 56 feet. No refusal.								
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-12A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/22/2018 to 9/22/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-12A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.8						in.			
0	11.5	4" Boardwalk								
	9.3	Loose, brown medium to fine SAND and SILT, trace Gravel, trace Brick, trace Ash.			SS	1	2	1 2 2 3	4	
5	7.3									
	2.8	Medium dense, brown/orange/gray medium to fine SAND and SILT, trace Gravel, trace Brick, trace Ash.			SS	2	14	3 4 6 12	10	
10	0.8									
	-2.2	Medium dense, orangish brown coarse to medium SAND, trace Silt. Gravel stuck in tip.			SS	3	5	6 7 7 7	14	
15	-4.2									
	-7.2	Medium stiff, gray SILTY CLAY, trace fine Gravel, trace medium Sand. PP= 0.1tsf			SS	4	7	5 3 4 2	7	
20	-9.2									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-12A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-12A**

EXPLORATION DATE **9/22/2018 to 9/22/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-12.2	Stiff, olive gray SILTY CLAY, trace organics. Few sand seams. PP= 2.0tsf			SS	5	12	3 4 6 12	10	
25	-14.2									
	-17.2	Stiff, olive gray SILTY CLAY. PP= 0.25tsf			SS	6	20	5 6 7 5	13	
30	-19.2									
	-22.2	Stiff, olive gray SILTY CLAY. PP= 0.0tsf			SS	7	10	5 4 4 6	8	
35	-24.2									
	-27.2	Stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	8	24	4 4 5 7	9	
40	-29.2									
	-32.2	Stiff, olive gray SILTY CLAY. PP= 0.25 - 0.5tsf			SS	9	24	1 8 6 4	14	
45	-34.2									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-12A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/22/2018 to 9/22/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-12A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-37.2	Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	10	24	WOR 3 4 4	7	
50	-39.2	Stiff, olive gray SILTY CLAY. PP= 0.5tsf			SS	11	24	5 7 7 8	14	
	-41.2	Boring terminated at 53 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-13A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-13A**

EXPLORATION DATE **10/8/2018 to 10/9/2018** WATER LEVEL **9.5** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	10.0						in.			
0		Loose, dark brown medium to fine SAND and SILT, trace Organics.			SS	1	3	1 3 6 6	9	0.0
	8.0	Very dense, borwn medium to fine SAND, some Silt, little Gravel, trace Glass.			SS	2	2	13 50/1"	R	NR
	6.0	Medium dense, tan/gray/black medium to fine SAND, some Wood, little Silt, trace Gravel, trace Ash.			SS	3	7	6 5 5 2	10	16.3
5	4.0	Stiff, gray SILTY CLAY.			SS	4	8	3 4 5 2	9	1.8
	2.0	Loose, WOOD, some gray Silt.		▽	SS	5	1	3 2 4 3	6	5.5
10	0.0	No recovery.			SS	6	0	3 1 2 1	3	NR
	-2.0	No recovery. Wood trace brick in tip.			SS	7	0	1 2 3 1	5	NR
	-4.0	Very loose, blackish brown SILT, little medium to fine Sand, little Gravel, trace Wood, trace Ash. Wood in tip.			SS	8	8	WOR /16" 1 5	1	0.0
15	-6.0	Casing driven through large piece of wood at 18.5 feet.								
	-9.0	Very stiff, gray SILT, some fine Sand, trace Clay. Organic odor.			SS	9	17	10 10 12 11	22	0.4
20	-11.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-13A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-13A**

EXPLORATION DATE **10/8/2018 to 10/9/2018** WATER LEVEL **9.5** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-14.0									
25		Stiff, brownish gray SILTY CLAY. PP= 2.75tsf			SS	10	16	3 6 7 8	13	0.0
	-16.0									
	-19.0									
30		Soft, olive gray SILTY CLAY. PP= 0.0tsf			SS	11	24	WOH/12" 2 2	2	0.0
	-21.0									
	-24.0									
35		Very soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	12	24	WOH/18" 1	0	0.0
	-26.0									
	-29.0									
40		Very soft, olive gray SILTY CLAY. PP= 0.1-0.5tsf			SS	13	24	WOH/12" 2 2	2	0.0
	-31.0									
	-34.0									
45		Very soft, olive gray SILTY CLAY. PP= 0.1-0.5tsf			SS	14	24	WOH/18" 3	0	0.0
	-36.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-13A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-13A**

EXPLORATION DATE **10/8/2018 to 10/9/2018** WATER LEVEL **9.5** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
50	-39.0	Very soft, olive gray SILTY CLAY. PP= 0.0-0.1tsf			SS	15	18	WOH/12" 2 3	2	0.0
	-41.0									
	-44.0	Very soft, olive gray SILTY CLAY. One fine sand lense. PP= 0.1tsf			SS	16	24	WOH/18" 1	0	0.0
55	-46.0									
	-49.0	Very soft, olive gray SILTY CLAY. PP= 0.0-0.1tsf			SS	17	24	WOH/18" 4	0	0.0
60	-51.0	Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-14A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-14A**

EXPLORATION DATE **10/9/2018 to 10/10/2018** WATER LEVEL **9.1** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.0						in.			
0	10.4	Loose, brown medium to fine SAND, some Silt, trace Organics.			SS	1	15	1 2 4 3	6	0.0
	9.0	Medium dense, tan medium to fine SAND, little Silt, trace Gravel.			SS	2	13	3 3 6 8	9	0.4
	7.0	Loose, tan medium to fine SAND, little Silt, trace Organics, trace Brick. Brick in tip.			SS	3	8	4 6 2 6	8	44
5	5.0	Loose, brown/tan medium to fine SAND, some Silt. Wood in tip.			SS	4	10	5 7 3 4	10	1.1
	3.0	Medium dense, brown SANDY SILT, trace Wood, trace Brick.		▽	SS	5	4	31 3 14 2	17	NR
	1.0	Medium dense, WOOD, trace Gravel.			SS	6	5	2 3 3 3	6	18.4
10	-1.0	Loose, black SANDY SILT, some Wood, trace Gravel, little Ash.			SS	7	9	2 2 3 2	5	1.338
	-3.0	Loose, brown/black SILTY SAND, trace Wood, trace Brick, little Ash.			SS	8	5	7 4 2 2	6	71
15	-5.0	Loose, tan/black WOOD, trace Glass, trace Ash.								
	-8.0	Medium dense, black/tan WOOD, little Ash.			SS	9	18	12 16 12 23	28	50
20	-9.0	Medium dense, black SANDY SILT, trace Glass. trace ash.								
	-10.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-14A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-14A**

EXPLORATION DATE **10/9/2018 to 10/10/2018** WATER LEVEL **9.1** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-13.0									
25		Very stiff, brownish gray SILTY CLAY, trace coarse Sand. PP= 3.25tsf			SS	10	19	4 7 9 11	16	0.0
	-15.0									
	-18.0									
30		Medium stiff, olive gray, SILTY CLAY. Couple fine sand lenses. PP= 0.1-0.25tsf			SS	11	24	1 1 2 3	3	0.0
	-20.0									
	-23.0									
35		Very soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	12	24	WOH/18" 2	0	0.0
	-25.0									
	-28.0									
40		Very soft, olive gray SILTY CLAY. PP= 0.0-0.25tsf			SS	13	24	WOH/18" 1	0	0.0
	-30.0									
	-33.0									
45		Soft, olive gray SILTY CLAY, trace fine Gravel. PP= 0.25tsf			SS	14	24	WOH/12" 3 2	3	0.0
	-35.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-14A

CLIENT **Brown, Richardson, and Rowe**
LOCATION **Heritage State Park, Lynn, MA**
EXPLORATION DATE **10/9/2018 to 10/10/2018** WATER LEVEL **9.1**

PROJECT No. **179410750**
EXPLORATION No. **HP-14A**
DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-38.0	Very soft, olive gray SILTY CLAY. One sand lense. PP= 0.0tsf			SS	15	24	WOH/18" 3	0	0.0
50	-40.0									
	-43.0	Very soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	16	24	WOH/18" 3	0	0.0
55	-45.0									
	-48.0	Very soft, olive gray SILTY CLAY. One sand lense. PP= 0.1tsf			SS	17	24	WOH/18" 1	0	0.0
60	-50.0									
		Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf
1 2 3 4
Water Content & Atterberg Limits W_P W W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley
Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-15A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-15A**

EXPLORATION DATE **10/8/2018 to 10/8/2018** WATER LEVEL **9.5** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	0.0						in.			
0		Medium dense, brown meidum to fine SAND, some Silt, trace Gravel, trace Organics.			SS	1	7	1 4 6 7	10	0.0
	-2.0									
	-2.5	Medium dense, tan fine SAND and SILT.								
		Medium dense, brown medium to fine SAND, little Gravel, trace Wood. Brick in tip.			SS	2	13	9 5 6 10	11	0.0
	-4.0									
	-4.6	Very dense, brown/black SILT, little medium to fine Sand, trace Gravel, some Wood, trace Plastic, trace Ash.			SS	3	13	5 15 75 19	90	20.5
5	-6.0	Very dense, WOOD, trace Ash.								
		Dense, brown SILTY WOOD, trace Ash.			SS	4	1	13 13 17 16	30	NR
	-8.0									
		No recovery. Wood stuck in tip.			SS	5	0	4 3 5 3	8	NR
	-10.0									
10		Loose, reddish brown WOOD, some Silt, little Sand, trace Gravel.			SS	6	4	3 2 1 2	3	7.0
	-12.0									
		Loose, orangish brown/black coarse GRAVEL, some Wood, trace Sand, trace Silt, trace Ash.			SS	7	13	1 2 5 12	7	2.4
	-14.0									
		No recovery. Wood and gray silt in wash.			SS	8	0	6 2 1 4	3	NR
15	-16.0									
	-19.0									
	-20.0	Loose, gray coarse to fine SAND, trace Silt.			SS	9	18	2 4 4 5	8	0.0
20	-21.0	Stiff, gray SILTY CLAY, trace fine Sand.								

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-15A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-15A**

EXPLORATION DATE **10/8/2018 to 10/8/2018** WATER LEVEL **9.5** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-24.0	Stiff, gray SILTY CLAY. One sand lense. PP= 2.25tsf			SS	10	22	2 4 5 7	9	0.0
25	-26.0									
	-29.0	Soft, olive gray SILTY CLAY. PP= 0.25-0.5tsf			SS	11	24	WOH 1 1 2	2	0.0
30	-31.0									
	-34.0	Soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	12	24	WOH/18" 1	0	0.0
35	-36.0									
	-39.0	Soft, olive gray SILTY CLAY. PP= 0.0tsf			SS	13	24	WOH/24"	0	0.0
40	-41.0									
	-44.0	Soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	14	24	WOH/12" 2 2	2	0.0
45	-46.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-15A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/8/2018 to 10/8/2018**

WATER LEVEL **9.5**

PROJECT No. **179410750**

EXPLORATION No. **HP-15A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-49.0									
50		Medium stiff, olive gray SILTY CLAY, trace fine Gravel. PP= 0.25tsf			SS	15	24	WOH 12" 5 3	5	0.0
	-51.0	Roller bit through gravel layer at 51 feet.								
	-54.0									
55		Soft, olive gray SILTY CLAY, trace fine Gravel. PP= 0.25tsf			SS	16	24	1 1 2 2	3	0.0
	-56.0									
	-59.0									
60		Soft, olive gray SILTY CLAY. PP= 0.1-0.25tsf.			SS	17	24	1 1 1 2	2	0.0
	-61.0	Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-16A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-16A**

EXPLORATION DATE **10/10/2018 to 10/10/2018** WATER LEVEL **11.5** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	0.0						in.			
0	-0.3	Medium dense, dark brown medium to fine SAND, some Silt, trace Organics.			SS	1	18	1 2 8 8	10	0.4
	-2.0	Medium dense, brown medium to fine SAND, some Silt, little fine Gravel, trace Organics.								
		Dense, tan fine SAND and SILT, trace Gravel.			SS	2	6	7 15 33 36	48	0.0
	-4.0									
	-4.5	Loose, tan fine SAND and SILT, trace Gravel.								
5		Loose, black WOOD, trace Brick, little Ash. Wood in tip.			SS	3	10	5 4 5 4	9	0.1
	-6.0									
		Loose, grayish brown SANDY SILT, some Wood, trace Brick.			SS	4	7	4 3 5 3	8	0.0
	-8.0									
		No recovery. Wood stuck in tip.			SS	5	0	1 2 2 8	4	NR
10	-10.0									
		Loose, brown SILTY SAND, little Brick, little Wood, little Gravel.		▽	SS	6	3	4 4 5 5	9	0.1
	-12.0									
		Loose, brown SANDY SILT, trace Brick, trace Wood. Wood stuck in tip.			SS	7	5	4 4 3 4	7	0.0
	-14.0									
		Dense, black/brown WOOD, trace Sand, trace Silt, trace Ash. Wood in tip.			SS	8	5	8 25 11 4	36	0.0
15	-16.0									
	-19.0									
		Very stiff, brownish gray SILTY CLAY, trace Gravel. PP= 3.5tsf			SS	9	24	4 7 10 13	17	NR
20	-21.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-16A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-16A**

EXPLORATION DATE **10/10/2018 to 10/10/2018** WATER LEVEL **11.5** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-24.0	Stiff, olive gray SILTY CLAY. Few sand lenses. PP= 2.25tsf			SS	10	24	2 4 5 7	9	0.0
25	-26.0									
	-29.0	Medium stiff, brownish gray SILTY CLAY. PP= 0.5tsf			SS	11	12	2 2 3 3	5	0.0
30	-31.0									
	-34.0	Very soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	12	24	WOH/18" 3	0	0.0
35	-36.0									
	-39.0	Soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	13	24	WOH 1 2 3	3	0.0
40	-41.0									
	-44.0	Very soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	14	24	WOH/12" 2 3	2	0.0
45	-46.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-16A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/10/2018 to 10/10/2018**

WATER LEVEL **11.5**

PROJECT No. **179410750**

EXPLORATION No. **HP-16A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-49.0	Very soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	15	24	WOH 16" 1 3	1	0.0
50	-51.0									
	-54.0	Very soft, olive gray SILTY CLAY. PP= 0.0tsf			SS	16	24	WOH/16" 1 2	1	0.0
55	-56.0									
	-59.0	Very soft, olive gray SILTY CLAY, trace fine Gravel. PP= 0.75tsf			SS	17	24	WOH/12" 2 5	2	0.0
60	-61.0									
		Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-17A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-17A**

EXPLORATION DATE **10/5/2018 to 10/5/2018** WATER LEVEL **12.6** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	11.0						in.			
0		Very dense, dark brown medium to fine SAND and SILT, trace Organics, trace Gravel.			SS	1	8	2 4 50/1"	R	0.6
	9.0									
		Very dense, dark brown medium to fine SAND, some Silt, trave Wood, trace Gravel.			SS	2	7	5 4 3 2	7	0.6
	7.0									
		Loose, tan fine SAND, little Silt.			SS	3	9	4 3 4 4	7	0.9
5	5.0									
	4.7	Red Brick.								
		Medium dense, dark gray SILT, little Clay.			SS	4	11	5 7 4 3	11	0.0
	3.0									
		Loose, WOOD and BRICK, trace Ash. Wood stuck in tip.			SS	5	1	3 4 4 6	8	NR
10	1.0									
		Loose, brown medium to fine SAND and SILT, some Brick, trace Wood, trace Gravel, trace Glass.			SS	6	6	2 4 4 5	8	0.0
	-1.0									
		Loose, WOOD and BRICK, trace brown Silt, trace Glass, trace Ash.		▽	SS	7	4	7 4 4 25	8	1.0
	-3.0									
		Medium dense, WOOD and BRICK, trace Ash. Wood stuck in tip.			SS	8	1	6 3 7 4	10	5.0
15	-5.0									
		Wood in wash. Creosote odor.								
	-8.0									
	-8.4	Red brick.								
		Medium stiff, dark gray SILTY CLAY, little medium Sand.			SS	9	12	9 4 2 3	6	0.8
20	-10.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-17A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-17A**

EXPLORATION DATE **10/5/2018 to 10/5/2018** WATER LEVEL **12.6** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-13.0									
25		Hard, gray medium to fine SAND and SILT. Organic odor.			SS	10	16	19 16 16 10	32	10.5
	-15.0									
	-18.0									
		Stiff, olive gray SILTY CLAY. PP= 1.5tsf			SS	11	24	4 4 5 4	9	0.0
30	-20.0									
	-23.0									
		Very soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	12	24	WOH/18" 1	0	0.0
35	-25.0									
	-28.0									
		Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	13	12	WOH 3 3 4	6	0.0
40	-30.0									
	-33.0									
		Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	14	24	1 2 2 3	4	0.0
45	-35.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-17A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-17A**

EXPLORATION DATE **10/5/2018 to 10/5/2018** WATER LEVEL **12.6** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-38.0									
50		Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	15	8	3 1 3 3	4	0.0
	-40.0									
	-43.0									
55		Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	16	13	1 2 2 3	4	0.0
	-45.0									
	-48.0									
60		Very soft, olive gray SILTY CLAY. PP= 0.0-0.25tsf			SS	17	24	WOH/18" 4	0	0.0
	-50.0									
		Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-18A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-18A**

EXPLORATION DATE **10/12/2018 to 10/12/2018** WATER LEVEL **Not observed** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	10.8						in.			
0	10.1	Medium dense, brown medium to fine SAND, sone Silt, trace fine Gravel.			SS	1	13	1 3 2 12	5	0.2
	8.8	Medium dense, tan fine SAND, some Silt.								
	8.6	Stiff, gray/black SILT, trace Brick, trace Shells, trace Ash.			SS	2	18	8 6 9 12	15	5.0
	6.8	Medium dense, black medium to fine SAND, some Silt, little Ash, trace Wood, trace Brick.			SS	3	15	12 12 12 6	24	7.5
5	4.8	Loose, brown medium to fine SAND and SILT, trace Wood, trace Brick, trace fine Gravel, trace Ash.			SS	4	8	3 2 6 3	8	64.0
	2.8	Loose, brown medium to fine SAND and SILT, trace Wood, trace Brick, trace fine Gravel, trace Ash.			SS	5	6	3 3 2 1	5	73.0
	0.8	Loose, brown medium to fine SAND, little Silt, trace Brick, trace Wood. Black ash at bottom of sample. Spoon bouncing on wood.			SS	6	12	4 1 3 100/5"	4	37.0
10	-1.2	Loose, brown coarse to fine SAND, little Silt, little Wood, trace scrap Metal, trace Brick, trace Ash.			SS	7	12	6 3 3 11	6	2.2
	-3.2	Medium dense, brown coarse to fine SAND, little Silt, little Wood, trace Glass, trace Brick, trace Ash.			SS	8	8	20 7 6 15	13	17.2
15	-5.2									
	-8.2	Medium dense, gray medium to fine SAND, little to some Silt.			SS	9	18	8 12 11 11	23	0.2
20	-10.2									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-18A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/12/2018 to 10/12/2018**

WATER LEVEL **Not observed**

PROJECT No. **179410750**

EXPLORATION No. **HP-18A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-13.2									
	-13.5	Medium dense, gray medium to fine SAND, little to some Silt.			SS	10	24	2 5 5 6	10	0.0
25	-15.2	Stiff, gray SILTY CLAY. PP= 1.5tsf								
	-18.2	Stiff, olive gray SILTY CLAY. PP= 1.0tsf			SS	11	24	1 4 4 5	8	0.0
30	-20.2									
	-23.2	Medium stiff, olive gray SILTY CLAY. PP= 0.5tsf			SS	12	24	WOH 2 3 4	5	0.0
35	-25.2									
	-28.2	Very soft, olive gray SILTY CLAY. PP= 0.5tsf			SS	13	24	WOH/16" 1 3	1	0.0
40	-30.2									
	-33.2	Very soft, olive gray SILTY CLAY. PP= 0.5tsf			SS	14	24	WOH/12" 3 4	3	0.0
45	-35.2									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-18A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/12/2018 to 10/12/2018**

WATER LEVEL **Not observed**

PROJECT No. **179410750**

EXPLORATION No. **HP-18A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
							in.			
		Boring terminated at 46 feet. No refusal.								

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-19A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-19A**

EXPLORATION DATE **10/4/2018 to 10/4/2018** WATER LEVEL **11** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	13.0						in.			
0	12.3	Medium dense, dark brown medium to fine SAND, some Silt, trace Organics.			SS	1	12	2 5 7 18	12	0.0
	11.0	Medium dense, tan fine SAND, little Silt.								
		Dense, tan fine SAND, little Silt, trace fine Gravel.			SS	2	14	24 18 15 18	35	0.0
	9.0									
5	8.8	Medium dense, brown medium to fine SAND, little Silt, little fine Gravel.			SS	3	12	12 15 11 6	26	0.3
	7.0									
	6.6	Medium dense, tan medium to fine SAND, trace Silt. Burnt wood and ash in tip.			SS	4	12	9 9 10 7	19	0.9
	5.0	Medium dense, black SILT, some Wood, trace Brick, trace medium Sand, little Ash.			SS	5	9	3 1 10 9	11	33.5
10	3.0	Medium dense, black SILT, some Wood, trace Brick, little Ash, trace medium Sand.		▽	SS	6	10	7 6 6 7	12	7.5
	1.0	No recovery. Black wood and ash in tip.			SS	7	0	6 5 3 2	8	NR
	-1.0	WOOD. Wood stuck in tip.			SS	8	1	9 3 5 4	8	NR
15	-3.0	Wood in wash.								
	-6.0	WOOD. Brick stuck in tip.			SS	9	2	12 10 5 5	15	2.0
20	-8.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-19A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/4/2018 to 10/4/2018**

WATER LEVEL **11**

PROJECT No. **179410750**

EXPLORATION No. **HP-19A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-11.0	No recovery. Wood in tip.			SS	10	0	10 9 4 6	13	1.7
25	-13.0									
	-16.0	No recovery.			SS	11	0	1 3 3 3	6	NR
30	-18.0									
	-21.0	Medium stiff, olive gray SILTY CLAY, trace Wood. PP= 0.1tsf			SS	12	8	2 3 3 4	6	0.0
35	-23.0									
	-26.0	Very soft, olive gray SILTY CLAY. PP= 0.5tsf			SS	13	24	WOH/12" 1 3	1	0.0
40	-28.0									
	-31.0	Very soft, olive gray SILTY CLAY. PP= 0.25tsf			SS	14	24	WOH/18" 3	0	0.0
45	-33.0									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-19A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/4/2018 to 10/4/2018**

WATER LEVEL **11**

PROJECT No. **179410750**

EXPLORATION No. **HP-19A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-36.0	Very soft, olive gray SILTY CLAY. PP= 0.5tsf			SS	15	24	WOH/18" 1	0	0.0
50	-38.0									
	-41.0	Very soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	16	24	WOH/24"	0	0.0
55	-43.0	Layer change at 59 feet.								
	-46.0	Medium dense, coarse to fine GRAVEL, little coarse to fine Sand, trace Silt, trace Clay.			SS	17	5	20 8 7 6	15	0.0
60	-48.0	Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-20A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-20A**

EXPLORATION DATE **10/4/2018 to 10/4/2018** WATER LEVEL **Not observed** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	14.0						in.			
0	13.7	Medium dense, dark brown medium to fine SAND and SILT, trace Oranics.			SS	1	9	1 4 6 10	10	0.4
	12.0	Medium dense, brown coarse to fine SAND, little Silt, trace fine Gravel.			SS	2	14	11 7 9 9	16	0.9
	10.0	Medium dense, grayish brown SILT, some fine Sand, trace Organics.			SS	3	17	4 5 3 5	8	7.3
5	9.5	Loose, brown coarse to fine SAND, some Silt, trace fine Gravel.			SS	4	15	8 55 10/2"	R	6.7
	9.0	Stiff, black CLAY and SILT, trace Shells. Organic odor.			SS	5	0	4 3 6 3	9	NR
	8.0	Loose, gray medium to fine SAND, some Silt.			SS	6	0	2 3 3 4	6	NR
	7.3	Brown medium to fine SAND, some Silt.			SS	7	2	1 4 6 5	10	NR
	6.0	Gray fine SAND, some Silt, some burnt Wood, , little Ash, trace Brick.			SS	8	8	8 4 7 6	11	1.1
10	4.0	No recovery. Wood and brick in wash above sample.								
	2.0	No recovery. Brick stuck in tip.								
	0.0	Red brick.								
15	-2.0	Medium dense, brown coarse to fine SAND, some Gravel, little Silt.								
	-5.0									
	-5.3	Stiff, black/gray CLAYEY SILT, trace Brick, trace Shells.			SS	9	18	1 3 6 6	9	0.0
20	-7.0	Stiff, brownish gray SILTY CLAY. PP= 3-3.5tsf								

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-20A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-20A**

EXPLORATION DATE **10/4/2018 to 10/4/2018** WATER LEVEL **Not observed** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
25	-10.0	Very Stiff, brownish gray SILTY CLAY, trace fine Gravel.			SS	10	17	7 9 8 10	17	0.0
	-12.0									
	-15.0	Stiff, olive gray SILTY CLAY/ PP= 0.5tsf			SS	11	24	4 3 5 5	8	0.0
30	-17.0									
	-20.0									
	-20.5	Very stiff, olive gray SILTY CLAY. PP= 0.25- 1.0tsf								
35	-22.0	Medium dense, olive gray coarse to fine GRAVEL, little coarse to fine Sand, trace Silt, trace Clay.			SS	12	20	1 3 14 37	17	0.0
	-25.0									
40	-27.0	Very dense, olive gray coarse to fine GRAVEL, little coarse to fine Sand, trace Silt, trace Clay.			SS	13	24	94 55 37 37	92	0.0
		Boring terminated at 41 feet. No refusal.								
45										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-21A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-21A**

EXPLORATION DATE **10/1/2018 to 10/2/2018** WATER LEVEL **8** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	11.8				in.			
0	11.4	Loose, dark brown fine SAND, some Silt, trace Organics.	SS	1	12	1 4 4 6	8	4.2
	9.8	Loose, tan medium to fine SAND, little Silt.						
	9.1	Medium dense, tan/brown fine SAND and SILT. Brick in tip.	SS	2	16	5 4 6 8	10	1.2
	7.8	Medium dense, brown medium to fine SAND, some SILT, trace Brick.						
5	7.1	Very stiff, olive gray SILTY CLAY.	SS	3	16	2 7 6 7	13	1.5
	5.8	Stiff, gray/black SILTY CLAY, little Wood, trace Ash, trace Brick.						
	5.4	No recovery. Sample from tip. Gravel and brick.	SS	4	10	9 11 12 13	23	3.1
	3.8	Medium dense, black coarse to fine SAND, little to some Gravel, little Wood, little Ash.	SS	5	0	7 12 14 16	26	NR
10	1.8	Loose, black coarse to fine SAND and SILT, little Wood, little Ash, trace Brick.	SS	6	11	14 10 24 14	34	225.0
	-0.2	Rolling through boulder from 12.5 to 14 feet.	SS	7	6	100/6"	R	200.0
	-0.7	Loose, dark gray SILT, trace Brick in tip.						
15	-3.2	Rolled through boulders from 17 to 22 feet. Possible burried seawall.	SS	8	5	30 18 4 7	22	49.0
	-5.2							
20								

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-21A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/1/2018 to 10/2/2018**

WATER LEVEL **8**

PROJECT No. **179410750**

EXPLORATION No. **HP-21A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-12.2									
25	-13.5	Very stiff, dark gray SILT, little Clay, trace Organics.			SS	9	20	3 2 3 4	5	3.3
	-14.2	Very stiff, black SILT and CLAY. Organic odor.								
	-17.2									
30		Stiff, olive gray SILTY CLAY. PP= 0.75tsf			SS	10	24	4 4 5 6	9	0.0
	-19.2									
		Boring terminated at 31 feet. No refusal.								
35										
40										
45										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-22A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-22A**

EXPLORATION DATE **10/2/2018 to 10/3/2018** WATER LEVEL **11** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	12.5				in.			
0	11.9	Medium dense, dark brown medium to fine SAND, some Silt, trace Oranics (topsoil).	SS	1	16	1 8 10 14	18	5.5
	10.5	Medium dense, brown/tan medium to fine SAND, some Silt, trace coarse Sand, trace Clay.	SS	2	11	11 22 16 16	28	10.8
	8.5	Dense, brown/black medium to fine SAND, some Silt, some fine Sand, trace Wood, trace Brick, trace Ash. Brick in tip.	SS	3	15	3 4 4 16	8	1000
5	6.5	Loose, black/brown medium to fine SAND, some Silt, some fine Sand, trace Wood, trace Brick, trace Ash.	SS	4	20	15 23 14 10	37	29.1
	6.1	Dense, brown medium to fine SAND and SILT, trace Brick.	SS	5	12	4 6 13 8	19	5.5
	4.5	Dense, black/gray medium to fine SAND and SILT, trace Brick, trace Gravel, trace Ash.	SS	6	1	7 10 9 7	19	NR
	2.5	Medium dense, dark gray SILT, some fine Sand, little Clay, trace Brick, trace Wood, trace Glass, trace Ash.	SS	7	10	14 13 11 10	24	25.1
10	0.5	Very stiff, gray CLAYEY SILT, trace Wood, trace Brick.	SS	8	0	2 2 3 4	5	0.0
	-1.5	Medium dense, gray coarse to fine SAND and SILT, trace Clay, trace Brick, trace Wood, trace Ash.						
	-3.5	No recovery. Wood stuck in tip.						
15	-6.5	Wood in wash.	SS	9	1	8 2 6 6	8	0.0
	-8.5	Brown WOOD, trace Ash.						
20								

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-22A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-22A**

EXPLORATION DATE **10/2/2018 to 10/3/2018** WATER LEVEL **11** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
25	-11.5	No recovery.			SS	10	0	7 3 2 2	5	7.0
	-13.5	Black wash.								
	-16.5									
30		Medium stiff, olive gray SILTY CLAY, trace shells. PP= 0.8tsf			SS	11	22	2 3 4 4	7	0.2
	-18.5									
	-21.5	Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	12	24	WOH 3 3 4	6	0.0
35	-23.5									
	-26.5	Medium stiff, olive gray SILTY CLAY. PP= 0.75tsf			SS	13	24	1 3 4 4	7	0.0
40	-28.5									
	-31.5	Stiff, olive gray SILTY CLAY. PP= 0.0tsf			SS	14	9	3 4 4 4	8	0.0
45	-33.5									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

BOREHOLE LOG

HP-22A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/2/2018 to 10/3/2018**

WATER LEVEL **11**

PROJECT No. **179410750**

EXPLORATION No. **HP-22A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
							in.			
	-35.5	Roller but on gravel at 48 feet.								
	-36.5	Very stiff, olive gray SILTY CLAY and GRAVEL.								
50					SS	15	3	6 5 15 21	20	0.0
	-38.5	Boring terminated at 51 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-23A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-23A**

EXPLORATION DATE **10/3/2018 to 10/3/2018** WATER LEVEL **12.1** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	12.2				in.			
0		Loose, brown medium to fine SAND, some Silt, trace Organics.	SS	1	9	WOH 3 5 4	8	13.1
	10.2							
		Medium dense, grayish brown/black medium to fine SAND, some Silt, little Brick, little Wood, trace Ash.	SS	2	13	5 10 10 8	20	5.3
	8.2							
	7.6	Very dense, brown/gray SILTY medium to fine SAND.	SS	3	12	25 14 85 28	99	10.5
5		Very dense, coarse to fine GRAVEL, little Brick, little Silt, little Sand.						
	6.2							
		Medium dense, gray/black medium to fine SAND and SILT, little Wood, little Brick, little Ash.	SS	4	15	10 11 13 11	24	7.4
	4.2							
		No recovery. Wood stuck in tip.	SS	5	0	6 6 5 4	11	NR
10	2.2							
		Medium dense, black WOOD and GRAVEL, some Silt, little Ash. Sample from tip.	SS	6	0	3 5 6 6	11	NR
	0.2							
		Medium dense, black WOOD and GRAVEL, some Silt, little Ash. Sample from tip.	SS	7	0	4 4 5 3	9	NR
	-1.8							
		Medium dense, black WOOD, little Brick, little Gravel, little Ash, trace Silt. Gravel in tip.	SS	8	5	6 9 13 13	22	20.0
15	-3.8							
	-6.8							
		No recovery.	SS	9	0	6 4 6 3	10	NR
20	-8.8							
		Boulder from 20 to 24 feet.						

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-23A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-23A**

EXPLORATION DATE **10/3/2018 to 10/3/2018** WATER LEVEL **12.1** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-11.8	Gray/tan GRAVELY SAND.								
25					SS	10	8	36 9 100/5"	R	10.8
	-13.8									
	-16.8	Stiff, olive gray SILTY CLAY. PP= 0.1tsf								
30					SS	11	15	4 5 6 10	11	17.6
	-18.8									
	-21.8	Medium stiff, olive gray SILTY CLAY. PP= 0.25tsf								
35					SS	12	24	2 3 3 4	6	9.4
	-23.8									
	-26.8	Soft, olive gray SILTY CLAY. PP= 0.0tsf								
40					SS	13	24	WOH/12" 2 2	2	8.3
	-28.8									
	-31.8	Soft, olive gray SILTY CLAY. PP= 0.1tsf								
45					SS	14	24	WOH 2 3 4	5	13.7
	-33.8									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-23A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/3/2018 to 10/3/2018**

WATER LEVEL **12.1**

PROJECT No. **179410750**

EXPLORATION No. **HP-23A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-36.8									
50		Soft, olive gray SILTY CLAY, trace fine Gravel. PP= 0.1tsf			SS	15	24	WOH/12" 3 4	3	0.0
	-38.8									
	-41.8									
55		Soft, olive gray SILTY CLAY, trace fine Gravel. Couple sand varves. PP= 0.25tsf			SS	16	24	WOH/12" 3 3	3	0.0
	-43.8									
	-46.8									
	-47.3	Stiff, olive gray SILTY CLAY.								
60		Medium dense, SILT and medium to fine SAND, some Clay, little fine Gravel.			SS	17	17	7 4 6 8	10	0.0
	-48.8									
		Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-24A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-24A**

EXPLORATION DATE **9/27/2018 to 9/27/2018** WATER LEVEL **6** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	TYPE	NUMBER	RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	12.2				in.			
0	11.8	Medium dense, brown ORGANIC SILT and SAND.						
		Medium dense, brown fine to medium SAND.	SS	1	8	4 5 6 6	11	
	10.2							
		Medium dense, brown SILTY fine to medium SAND, little Concrete, little Wood.	SS	2	9	9 10 11 8	21	
	8.2							
5		Medium dense, dark brown SILTY fine SAND, little Wood, little Clay, little Silt.	SS	3	11	4 9 7 7	16	
	6.2							
		Medium dense, dark brown SILTY fine SAND, little Gravel, little Wood.	SS	4	5	6 6 5 3	11	
	4.2							
		Loose, dark brown SILTY fine SAND, and Wood.	SS	5	3	2 2 2 3	4	
10	2.2							
		Loose, dark brown SILTY fine SAND, and Wood.	SS	6	6	4 3 4 19	7	
	0.2							
		Loose, WOOD, some Silt, some fine Sand, little Gravel.	SS	7	2	3 3 3 3	6	
	-1.8							
15		Loose, WOOD, some Silt, some fine Sand.	SS	8	5	6 3 4 2	7	
	-3.8							
	-6.8							
	-7.0	No recovery. Gravel in tip.						
20			SS	9	0	100/2"	R	

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-24A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-24A**

EXPLORATION DATE **9/27/2018 to 9/27/2018** WATER LEVEL **6** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-11.8									
25		Very stiff, gray SILTY CLAY, some fine Gravel.			SS	10	6	4 8 10 15	18	
	-13.8									
	-16.8	Stiff, gray SILTY CLAY.			SS	11	24	4 5 5 7	10	
30	-18.8									
	-21.8	Medium stiff, gray SILTY CLAY.			SS	12	20	2 2 3 3	5	
35	-23.8									
	-26.8	Medium stiff, gray SILTY CLAY.			SS	13	24	WOH 2 3 4	5	
40	-28.8									
	-31.8	Medium stiff, gray SILTY CLAY. Few fine sand seams.			SS	14	24	2 3 2 4	5	
45	-33.8									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-24A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/27/2018 to 9/27/2018**

WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-24A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-36.8	Medium stiff, gray SILTY CLAY.			SS	15	24	1 3 3 5	6	
50	-38.8									
	-40.8	Roller bit bouncing on gravel at 53 feet.								
	-41.8	Medium dense, SILTY fine SAND, and Gravel, trace Silt, trace Silt.			SS	16	7	5 6 10 12	16	
55	-43.8									
	-46.8	Dense, SILTY fine SAND, and Gravel, trace Silt, trace Silt.			SS	17	5	26 31 15 14	46	
60	-48.8	Boring terminated at 61 feet. No refusal.								
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-25A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-25A**

EXPLORATION DATE **9/27/2018 to 9/27/2018** WATER LEVEL **6** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	13.0				in.			
0		Loose, dark brown SILTY fine SAND. Wood in tip.	SS	1	7	1 4 4 10	8	
	11.0							
		No recovery. Wood in tip.	SS	2	0	5 9 17 13	26	
	9.0							
	8.5	Loose, light brown medium to fine SAND, trace Silt.						
5		Loose, dark brown SILTY fine SAND, some Silt, some Clay.	SS	3	12	5 3 3 2	6	
	7.0							
		Medium stiff, dark black, fine SANDY SILT, some Clay, little Ash.	SS	4	11	4 4 3 2	7	
	5.0							
		Loose, dark black fine SANDY SILT, some Brick, some Wood, little Ash.	SS	5	10	1 2 5 4	7	
10	3.0							
		Medium dense, dark brown fine SANDY SILT, some Wood, trace Ash. Creosote odor.	SS	6	7	8 9 15 19	24	
	1.0							
		Dense, dark brown fine SANDY SILT, some Wood. Creosote odor, trace Ash.	SS	7	10	16 10 35 10	45	
	-1.0							
15		Dense, dark brown fine SANDY SILT, some Wood, some Brick, trace Ash.	SS	8	6	42 27 6 6	33	
	-3.0							
	-6.0							
		Medium dense, dark brown fine SANDY SILT, some Wood, some Brick, trace Ash.	SS	9	4	5 5 5 7	10	
20	-8.0							

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG HP-25A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-25A**

EXPLORATION DATE **9/27/2018 to 9/27/2018** WATER LEVEL **6** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-11.0									
25		Medium stiff, dark gray/black CLAYEY SILT.			SS	10	12	3 2 2 3	4	
	-13.0									
	-16.0	Medium stiff, tan/gray SILTY CLAY.			SS	11	7	3 3 4 5	7	
30	-18.0									
	-21.0	Medium stiff, tan/gray SILTY CLAY.			SS	12	7	1 2 2 3	4	
35	-23.0									
	-26.0	Medium stiff, gray SILTY CLAY.			SS	13	15	WOH 3 3 3	6	
40	-28.0									
	-31.0	Medium stiff, gray SILTY CLAY.			SS	14	13	WOH 3 3 4	6	
45	-33.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-25A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-25A**

EXPLORATION DATE **9/27/2018 to 9/27/2018** WATER LEVEL **6** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
50	-36.0	Medium stiff, gray SILTY CLAY.			SS	15	24	WOH/12" 4 4	4	
	-38.0									
	-41.0	Medium stiff, tan/gray SILTY CLAY.			SS	16	24	WOH 3 4 8	7	
55	-43.0	Roller bit chattering at 56 feet.								
	-46.0	Dense, gray SILTY fine SAND, and Gravel.			SS	17	5	13 16 25 15	41	
60	-48.0									
65										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-26A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-26A**

EXPLORATION DATE **10/11/2018 to 10/12/2018** WATER LEVEL **6** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	13.0						in.			
0	12.4	Medium dense, brown fine SAND, some Silt, trace Organics.			SS	1	14	2 5 7 6	12	0.0
	11.0	Medium dense, light brown fine SAND, some Silt, some Gravel. Medium dense, tan fine SAND, little Silt.			SS	2	16	10 13 10 9	23	0.0
	9.0	Medium dense, black SILT, little Ash, trace Clay, trace Coal Ash crystals, trace Shells, trace Brick.			SS	3	18	7 9 7 6	16	1.0
5	7.0			▽						
	6.7	Stiff, greenish gray SILTY CLAY, little medium Sand in bottom inch of sample.			SS	4	15	5 5 4 4	9	44.4
	5.0	Stiff, gray SILT, some Clay, trace Brick.			SS	5	9	2 2 6 9	8	1.1
10	3.0	Medium stiff, gray SILT, some Clay. Some fine gravel in bottom 3 inches.			SS	6	12	4 3 4 10	7	1.2
	1.0									
	0.4	Medium dense, dark brown/black SILTY coarse to fine SAND, little Gravel, trace Ash.			SS	7	13	15 12 8 16	20	0.3
	-1.0	Medium dense, black GRAVEL, little Silt, little Sand.								
15	-1.8	Medium dense, gray coarse to fine SAND, some fine Gravel, little Silt.			SS	8	15	5 12 15 12	27	NR
	-3.0									
	-6.0	No recovery. No clay on rods or spoon.			SS	9	0	3 1 2 2	3	NR
20	-8.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-26A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-26A**

EXPLORATION DATE **10/11/2018 to 10/12/2018** WATER LEVEL **6** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-11.0									
25		Medium stiff, black CLAYEY SILT, trace Shells.			SS	10	10	1 2 2 3	4	0.0
	-13.0									
	-16.0									
30		Medium stiff, brownish gray SILTY CLAY. PP= 0.5tsf			SS	11	24	1 2 4 4	6	0.0
	-18.0									
	-21.0									
35		Medium stiff, olive gray SILTY CLAY. PP= 0.75tsf			SS	12	24	1 3 4 4	7	0.0
	-23.0									
	-26.0									
40		Medium stiff, olive gray SILTY CLAY. PP= 0.75tsf			SS	13	24	1 2 2 4	4	0.0
	-28.0									
	-31.0									
45		Soft, olive gray SILTY CLAY. PP= 0.1tsf			SS	14	24	WOH/12" 2	0	0.0
	-33.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-26A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/11/2018 to 10/12/2018**

WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-26A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
50	-36.0	Hard, olive gray SILTY CLAY.			SS	15	24	2 8 22 18	30	0.0
	-37.5									
	-38.0	Dense, olive gray SILTY GRAVEL.								
		Boring terminated at 51 feet. No refusal.								
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG HP-27A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **HP-27A**

EXPLORATION DATE **10/11/2018 to 10/12/2018** WATER LEVEL **6** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	11.0						in.			
0	10.4	Loose, brown fine SAND and SILT, trace Organics.								
		Loose, dark gray SILTY SAND, trace Shells, trace Wood, trace Ash.			SS	1	17	1 1 4 6	5	0.3
	9.0	Medium dense, grayish brown SILTY SAND, little Wood, trace Brick, trace Plastic, trace Ash.			SS	2	18	5 7 6 8	13	2.5
	7.0									
	6.6	Medium dense, gray/black SILT, some Wood, trace Plastic, trace Ash.			SS	3	13	6 7 10 6	17	0.9
5	5.0	Medium dense, grayish brown SILT, little medium to fine Sand, trace Wood, trace Organics, trace Ash.		▽						
		Medium stiff, blackish gray CLAYEY SILT, trace Ash. Gravel and brick in tip.			SS	4	12	4 3 4 10	7	3.9
	3.0									
	2.0									
		Medium stiff, black medium to fine SAND and SILT, little Ash. Wood in tip.			SS	5	6	1 2 3 1	5	1.6
10	0.0									
		Loose, blackish brown SILT and medium to fine SAND, little Wood, little Gravel, trace Brick, trace Ash.			SS	6	5	2 2 2 1	4	0.7
	-2.0									
		Stiff, dark gray CLAYEY SILT.			SS	7	8	3 5 3 1	8	0.3
15	-4.0									
		No recovery with 2-inch split spoon. Sample collected with 3-inch split spoon. Soft, grayish brown CLAYEY SILT, trace Shells. Organic odor.			SS	8	0	3 1 1 1	2	NR
	-6.0									
	-8.0									
		Loose, gray medium to fine SAND, little Silt, little Clay.			SS	9	20	WOH 2 5 4	7	NR
20	-9.7									
	-10.0	Medium stiff, grayish brown CLAYEY SILT, trace Shells. Organic odor.								

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-27A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/11/2018 to 10/12/2018** WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-27A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-13.0									
25		Stiff, grayish brown SILTY CLAY. PP= 2.0tsf			SS	10	20	4 6 7 8	13	0.0
	-15.0									
	-18.0									
30		Medium stiff, olive gray SILTY CLAY. PP= 0.5tsf			SS	11	24	1 3 2 3	5	0.0
	-20.0									
	-23.0									
35		Soft, olive gray SILTY CLAY. PP= 0.5tsf			SS	12	24	WOH/12" 2 3	2	0.0
	-25.0									
	-28.0									
40		Medium stiff, olive gray SILTY CLAY. PP= 0.1tsf			SS	13	24	WOH 2 2 3	4	0.0
	-30.0									
	-33.0									
45		Medium stiff, olive gray SILTY CLAY. PP= 0.5tsf			SS	14	24	WOH 2 2 2	4	0.0
	-35.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

HP-27A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **10/11/2018 to 10/12/2018** WATER LEVEL **6**

PROJECT No. **179410750**

EXPLORATION No. **HP-27A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-38.0									
50		Medium stiff, olive gray SILTY CLAY. Couple sand lenses. PP= 0.1tsf			SS	15	24	WOH 2 2 3	4	0.0
	-40.0									
	-43.0									
	-43.3	Hard, olive gray SILTY CLAY.								
55		Dense, SILTY CLAY, some Gravel.			SS	16	12	5 25 22 50	47	0.0
	-45.0									
		Boring terminated at 56 feet. No refusal.								
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker B-53 ATV Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

HP-9A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/18/2018 to 9/18/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **HP-9A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
							in.			
		Medium stiff, olive gray SILTY CLAY, trace fine Gravel. PP= 0.25 tsf								
	-37.1									
50		Stiff, olive gray SILTY CLAY. PP= 0.25 tsf			SS	10	24	WOH/12" 4 5	4	
	-39.1									
		Boring terminated at 51 feet. No refusal.			SS	11	24	3 4 5 7	9	
55										
60										
65										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Brian Foley

Rig Type: Acker Soil Scout Rig; Hammer: Safety Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

W-3A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/19/2018 to 9/19/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-3A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	2.0						in.			
0		20 feet of water.								
5										
10										
15										
20	-18.0	Dense, black SILTY SAND, trace Gravel, trace Wood.			SS	1	20	40 22 11 4	33	
	-20.0	Very loose, black SILT and fine SAND, trace coarse Sand. Gray Silt and clay in shoe.						WOR WOH		

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

W-3A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/19/2018 to 9/19/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-3A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-22.0				SS	2	17	2 3	2	
	-23.0									
25		Meidum stiff, gray SILTY CLAY.			SS	3	17	WOH 3 4 4	7	
	-25.0	Meidum stiff, gray SILTY CLAY.			SS	4	20	1 3 3 4	6	
	-27.0									
	-28.0	Very soft, gray SILTY CLAY.			SS	5	20	WOR/12" 1 2	1	
30	-30.0	Meidum stiff, gray SILTY CLAY.			SS	6	24	2 3 3 3	6	
	-32.0									
	-33.0	Very soft, gray SILTY CLAY.			SS	7	24	WOH/12" 1 2	1	
35	-35.0	Meidum stiff, gray SILTY CLAY.			SS	8	24	2 2 2 2	4	
	-37.0									
	-38.0	Very soft, gray SILTY CLAY.			SS	9	24	WOH/12" 1 3	1	
40	-40.0	Meidum stiff, gray SILTY CLAY.			SS	10	24	WOH 2 2 2	4	
	-42.0									
	-43.0	Very soft, gray SILTY CLAY.						WOR		
45										

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG W-3A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **W-3A**

EXPLORATION DATE **9/19/2018 to 9/19/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	NUMBER	RECOVERY in.	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	-45.0	Meidum stiff, gray SILTY CLAY.			SS	11	24	WOH/12" 1	0	
					SS	12	24	WOH 2 2 3	4	
	-47.0									
50	-48.0	Very soft, gray SILTY CLAY.			SS	13	24	WOH/18" 1	0	
	-50.0	Meidum stiff, gray SILTY CLAY.			SS	14	24	WOH 3 3 3	6	
	-52.0									
55	-53.0	Very soft, gray SILTY CLAY.			SS	15	24	WOH/18" 1	0	
	-55.0	Meidum stiff, gray SILTY CLAY.			SS	16	24	WOH 2 2 3	4	
	-57.0									
60	-58.0	Very soft, gray SILTY CLAY.			SS	17	24	WOH/24"	0	
	-60.0	Meidum stiff, gray SILTY CLAY.			SS	18	24	3 3 3 3	6	
	-62.0									
65	-63.0	Very soft, gray SILTY CLAY.			SS	19	24	WOH/24"	0	
	-65.0	Very soft, gray SILTY CLAY.			SS	20	24	WOH/24"	0	
	-67.0									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG W-3A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **W-3A**

EXPLORATION DATE **9/19/2018 to 9/19/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
70	-68.0	Soft, gray SILTY CLAY.			SS	21	24	WOH/12" 3 3	3	
	-70.0	Soft, gray SILTY CLAY.			SS	22	24	1 1 2 3	3	
	-72.0									
75	-73.0	Very soft, gray SILTY CLAY.			SS	23	12	WOH/24"	0	
	-75.0									
80	-78.0	Meidum stiff, gray SILTY CLAY.			SS	24	24	WOH/12" 7 27	7	
	-79.7									
	-80.0	Meidum stiff, gray SILTY CLAY, some Sand, some Gravel.								
		Boring terminated at 82 feet bleow water surface. No refusal.								
85										
90										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG W-4A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **W-4A**

EXPLORATION DATE **9/17/2018 to 9/17/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	4.2						in.			
0		19 feet of water.								
	-14.8									
20		Very loose, black SILTY fine SAND.			SS	1	15	WR WR WR WR	0	
	-16.8									
		Very soft, black/gray SILT and CLAY.			SS	2	17	WR WR WR WR	0	
	-18.8									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

W-4A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/17/2018 to 9/17/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-4A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-19.8									
25		Medium stiff, gray CLAY and SILT.			SS	3	24	WH 3 2 5	5	
	-21.8									
	-24.8									
30		Soft, gray CLAY and SILT.			SS	4	24	WH 1 2 3	3	
	-26.8									
	-29.8									
35		Medium stiff, gray CLAY and SILT.			SS	5	6	2 3 3 4	6	
	-31.8									
	-34.8									
40		Soft, gray CLAY and SILT.			SS	6	24	WH 1 2 3	3	
	-36.8									
	-39.8									
45		Soft, gray CLAY and SILT.			SS	7	24	WH 1 2 3	3	
	-41.8									

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

W-4A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/17/2018 to 9/17/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-4A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
	-44.8	Medium stiff, gray CLAY and SILT.			SS	8	20	2 2 2 3	4	
50	-46.8									
	-49.8	Medium stiff, gray CLAY and SILT, trace fine Gravel.			SS	9	24	WH 2 2 3	4	
55	-51.8									
	-54.8	Soft, gray CLAY ande SILT, trace fine Gravel.			SS	10	24	WH WH 2 3	2	
60	-56.8									
	-59.8	Medium stiff, gray CLAY ande SILT, trace fine Gravel.			SS	11	24	WH WH 4 14	4	
65	-61.3									
	-61.8	Medium stiff. gray/brown CLAY and SILT, trace Gravel.								
	-64.8									

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec BOREHOLE LOG W-4A

CLIENT **Brown, Richardson, and Rowe**
LOCATION **Heritage State Park, Lynn, MA**
EXPLORATION DATE **9/17/2018 to 9/17/2018** WATER LEVEL **Tidal**

PROJECT No. **179410750**
EXPLORATION No. **W-4A**
DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY in.	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
70	-66.8	Very dense, brown fine to coarse SAND and GRAVEL, trace Silt.			SS	12	14	17 27 24 23	51	
		Boring terminated at 71 feet below water surface.. No refusal.								
75										
80										
85										
90										

Undrained Shear Strength - tsf
1 2 3 4
Water Content & Atterberg Limits W_P W W_L
Dynamic Penetration Test, blows/foot ★
Standard Penetration Test, blows/foot ●
10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward
Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test
□ Field Vane Test ■ Remolded
✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec BOREHOLE LOG W-5A

CLIENT **Brown, Richardson, and Rowe** PROJECT No. **179410750**

LOCATION **Heritage State Park, Lynn, MA** EXPLORATION No. **W-5A**

EXPLORATION DATE **9/20/2018 to 9/20/2018** WATER LEVEL **Tidal** DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
	3.8						in.			
0		20 feet of water								
5										
10										
15										
20	-16.2	Very soft, black SILTY SAND, trace Clay.			SS	1	12	WOR/24"	0	
	-18.2	Very soft, black SILTY SAND, trace Clay.								

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

Stantec

BOREHOLE LOG

W-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
					SS	2	7	WOR/24"	0	
	-20.2									
	-21.2									
25		Very soft, black SILTY SAND, trace Clay.			SS	3	9	WOR/24"	0	
	-23.2									
		Very soft, black SILTY SAND, trace Clay.			SS	4	5	WOR/24"	0	
	-25.2									
	-26.2									
30		Very soft, gray/black SANDY SILT, trace Clay.			SS	5	7	WOR/24"	0	
	-28.2									
		Very soft, gray/black SANDY SILT, trace Clay.			SS	6	5	WOR/24"	0	
	-30.2									
	-31.2									
35		Very soft, gray/black SANDY SILT, trace Clay.			SS	7	10	WOR/24"	0	
	-33.2									
		Very soft, gray/black SANDY SILT, trace Clay.			SS	8	14	WOR/24"	0	
	-35.2									
	-36.2									
40		Medium dense, coarse SAND and GRAVEL.			SS	9	3	5 5 5 6	10	
	-38.2									
		Medium dense, coarse SAND and GRAVEL.			SS	10	7	7 9 8 7	17	
	-40.2									
	-41.2									
45		Medium dense, coarse SAND and GRAVEL.						23 11		

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

W-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SPT blows / 6"	SPT N-Value	PID Reading (PPM)
					SS	11	6	10 8	21	
	-43.2	Dense, coarse SAND and GRAVEL.			SS	12	11	17 21 20 29	41	
	-45.2									
50	-46.2	Loose, SAND and GRAVEL.			SS	13	9	9 4 5 5	9	
	-48.2									
	-51.2									
55		Medium dense, SAND and GRAVEL.			SS	14	7	17 9 7 7	16	
	-53.2									
	-56.2									
60		Medium dense, SAND and GRAVEL.			SS	15	10	11 9 7 9	16	
	-58.2									
	-61.2									
65		Dense, tan fine SAND, trace Silt.			SS	16	11	39 23 17 13	40	
	-62.0									
	-63.2									
		Dense, SAND and GRAVEL.								

Undrained Shear Strength - tsf

1 2 3 4

Water Content & Atterberg Limits W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

Continued Next Page

Stantec

BOREHOLE LOG

W-5A

CLIENT **Brown, Richardson, and Rowe**

LOCATION **Heritage State Park, Lynn, MA**

EXPLORATION DATE **9/20/2018 to 9/20/2018**

WATER LEVEL **Tidal**

PROJECT No. **179410750**

EXPLORATION No. **W-5A**

DATUM **NAVD 88**

DEPTH (ft)	ELEVATION (ft)	MATERIAL DESCRIPTION	STRATA PLOT	WATER LEVEL	SAMPLES TYPE	SAMPLES NUMBER	SAMPLES RECOVERY (in.)	SAMPLES SPT blows / 6"	SAMPLES SPT N-Value	PID Reading (PPM)
70	-66.2	Medium dense, coarse SAND and GRAVEL.			SS	17	11	16 9 10 12	19	
	-68.2									
75	-71.2	Very dense, coarse SAND and GRAVEL, trace Silt, trace fine Sand.			SS	18	8	21 24 31 38	55	
	-73.2	Boring terminated at 77 feet below the water. No refusal.								
80										
85										
90										

Undrained Shear Strength - tsf: 1 2 3 4

Water Content & Atterberg Limits: W_P W W_L

Dynamic Penetration Test, blows/foot ★

Standard Penetration Test, blows/foot ●

10 20 30 40 50 60 70 80 90

Driller: New England Boring- Derry, NH; Supervisor: Jason Ward

Rig Type: CME-45 Barge Mounted Rig; Hammer: Auto Hammer; 4" diam. Drive and Wash, 2" Split Spoon Sampler

△ Unconfined Compression Test

□ Field Vane Test ■ Remolded

✖ Pocket Penetrometer / Torvane

STN13-GEO-I-VOC LYNN HERITAGE PARK BORINGS- PHASE 2.GPJ JW NHP.GDT 11/2/18

ATTACHMENT 5
Soil Laboratory Results

PHOENIX
Environmental Laboratories, Inc.

Monday, October 22, 2018

Attn: Mr Joseph Salvetti
Stantec
400 Crown Colony Drive
Suite 200
Quincy MA 02169

Project ID: HERITAGE PARK
Sample ID#s: CB71362 - CB71369

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext. 200.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 22, 2018

FOR: Attn: Mr Joseph Salvetti
Stantec
400 Crown Colony Drive
Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/12/18	12:00
Location Code:	STANTECMA	Received by:	CP	10/12/18	18:22
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCB71362
Phoenix ID: CB71362

Project ID: HERITAGE PARK
Client ID: HP-18A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 1.3	1.3	mg/Kg	1	10/13/18	CPP	SW6010C	
Arsenic	9.26	0.91	mg/Kg	1	10/13/18	CPP	SW6010C	
Barium	218	0.46	mg/Kg	1	10/13/18	CPP	SW6010C	
Beryllium	0.60	0.37	mg/Kg	1	10/13/18	CPP	SW6010C	
Cadmium	1.07	0.46	mg/Kg	1	10/13/18	CPP	SW6010C	
Chromium	214	4.6	mg/Kg	10	10/16/18	CPP	SW6010C	
Mercury	0.54	0.03	mg/Kg	1	10/16/18	RS	SW7471B	
Nickel	26.5	0.46	mg/Kg	1	10/13/18	CPP	SW6010C	
Lead	613	4.6	mg/Kg	10	10/16/18	CPP	SW6010C	
Antimony	< 4.6	4.6	mg/Kg	1	10/13/18	CPP	SW6010C	
Selenium	< 1.8	1.8	mg/Kg	1	10/13/18	CPP	SW6010C	
Thallium	< 4.1	4.1	mg/Kg	1	10/13/18	CPP	SW6010C	
Vanadium	46.6	0.46	mg/Kg	1	10/13/18	CPP	SW6010C	
Zinc	344	9.1	mg/Kg	10	10/16/18	CPP	SW6010C	
Percent Solid	75		%		10/12/18	DA	SW846-%Solid	
Conductivity - Soil Matrix	2970	500	umhos/cm	1	10/16/18	AP	SM2510B-11	
Corrosivity	Negative		Pos/Neg	1	10/12/18	O	SW846-Corr	
Flash Point	>200	200	Degree F	1	10/17/18	Y	SW1010A	
Ignitability	Passed	140	degree F	1	10/17/18	Y	SW846-Ignit	
pH at 25C - Soil	6.97	1.00	pH Units	1	10/12/18 19:53	O	SW9045	
Reactivity Cyanide	< 6	6	mg/Kg	1	10/17/18	JO/GD	SW846-ReactCyn	7
Reactivity Sulfide	< 20	20	mg/Kg	1	10/17/18	JO/GD	SW-7.3	7
Reactivity	Negative		Pos/Neg	1	10/17/18	JO/GD	SW846-React	7
Soil Extraction for PCB	Completed				10/15/18	AA/V	SW3545A	
Soil Extraction for Pesticides	Completed				10/15/18	AA/V	SW3545A	
Soil Extraction for SVOA	Completed				10/15/18	SJ/CKV	SW3545A	
Mercury Digestion	Completed				10/16/18	Q/Q	SW7471B	
EPH Extraction	Completed				10/16/18	MJ/DW	SW3545A	

Ver 1

Project ID: HERITAGE PARK
Client ID: HP-18A

Phoenix I.D.: CB71362

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Ext. Petroleum Hydrocarbons	Completed				10/12/18		MADEP EPH-04
Soil Extraction for Herbicide	Completed				10/14/18	C/R	SW8151A
Total Metals Digest	Completed				10/12/18	B/AG/BF	SW3050B
Extraction of TPH SM	Completed				10/15/18	JJ/VCK	SW3545A
MA Petroleum Hydrocarbon (VPH)	Completed				10/18/18	ARC	MADEP VPH04
EPH Diesel PAH Target Analytes							
2-Methylnaphthalene	0.47	0.3	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Acenaphthene	1.7	0.3	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Naphthalene	0.7	0.3	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Phenanthrene	32	1.5	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	64		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	67		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	67		%	1	10/16/18	WB	30 - 130 %
Chlorinated Herbicides							
2,4,5-T	ND	0.11	mg/Kg	10	10/16/18	CW	SW8151A
2,4,5-TP (Silvex)	ND	0.11	mg/Kg	10	10/16/18	CW	SW8151A
2,4-D	ND	0.22	mg/Kg	10	10/16/18	CW	SW8151A
2,4-DB	ND	1.1	mg/Kg	10	10/16/18	CW	SW8151A
Dalapon	ND	0.11	mg/Kg	10	10/16/18	CW	SW8151A
Dicamba	ND	0.11	mg/Kg	10	10/16/18	CW	SW8151A
Dichloroprop	ND	0.17	mg/Kg	10	10/16/18	CW	SW8151A
Dinoseb	ND	0.11	mg/Kg	10	10/16/18	CW	SW8151A
MCPA	ND	33	mg/Kg	10	10/16/18	CW	SW8151A
MCPP	ND	33	mg/Kg	10	10/16/18	CW	SW8151A
QA/QC Surrogates							
% DCAA	44		%	10	10/16/18	CW	30 - 150 %
Polychlorinated Biphenyls							
PCB-1016	ND	0.088	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1221	ND	0.088	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1232	ND	0.088	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1242	ND	0.088	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1248	ND	0.088	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1254	0.17	0.088	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1260	ND	0.088	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1262	ND	0.088	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1268	ND	0.088	mg/Kg	2	10/17/18	AW	SW8082A
QA/QC Surrogates							
% DCBP	102		%	2	10/17/18	AW	30 - 150 %
% TCMX	88		%	2	10/17/18	AW	30 - 150 %
Pesticides							
4,4' -DDD	0.036	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
4,4' -DDE	0.012	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
4,4' -DDT	0.0091	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
a-BHC	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
Alachlor	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B

Project ID: HERITAGE PARK
Client ID: HP-18A

Phoenix I.D.: CB71362

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Aldrin	ND	0.0044	mg/Kg	2	10/19/18	CW	SW8081B
b-BHC	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
Chlordane	ND	0.044	mg/Kg	2	10/19/18	CW	SW8081B
d-BHC	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
Dieldrin	ND	0.0044	mg/Kg	2	10/19/18	CW	SW8081B
Endosulfan I	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
Endosulfan II	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
Endosulfan sulfate	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
Endrin	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
Endrin aldehyde	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
Endrin ketone	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
g-BHC	ND	0.0018	mg/Kg	2	10/19/18	CW	SW8081B
Heptachlor	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
Heptachlor epoxide	ND	0.0088	mg/Kg	2	10/19/18	CW	SW8081B
Hexachlorobenzene	ND	0.0044	mg/Kg	2	10/19/18	CW	SW8081B
Methoxychlor	ND	0.044	mg/Kg	2	10/19/18	CW	SW8081B
Toxaphene	ND	0.18	mg/Kg	2	10/19/18	CW	SW8081B
QA/QC Surrogates							
% DCBP	87		%	2	10/19/18	CW	30 - 150 %
% TCMX	73		%	2	10/19/18	CW	30 - 150 %

TPH by GC (Extractable Products)

Fuel Oil #2 / Diesel Fuel	ND	330	mg/kg	5	10/16/18	JRB	SW8015D DRO
Fuel Oil #4	ND	330	mg/kg	5	10/16/18	JRB	SW8015D DRO
Fuel Oil #6	ND	330	mg/kg	5	10/16/18	JRB	SW8015D DRO
Kerosene	ND	330	mg/kg	5	10/16/18	JRB	SW8015D DRO
Motor Oil	ND	330	mg/kg	5	10/16/18	JRB	SW8015D DRO
Other Oil	ND	330	mg/kg	5	10/16/18	JRB	SW8015D DRO
Unidentified	ND	330	mg/kg	5	10/16/18	JRB	SW8015D DRO
QA/QC Surrogates							
% n-Pentacosane	140		%	5	10/16/18	JRB	50 - 150 %

Volatiles

1,1,1,2-Tetrachloroethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.004	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloroethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloroethene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloropropene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dibromoethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichloroethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichloropropane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C

Project ID: HERITAGE PARK
Client ID: HP-18A

Phoenix I.D.: CB71362

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
1,3-Dichlorobenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,3-Dichloropropane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
2,2-Dichloropropane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
2-Chlorotoluene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
2-Hexanone	ND	0.034	mg/Kg	1	10/14/18	JLI	SW8260C
2-Isopropyltoluene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
4-Chlorotoluene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
4-Methyl-2-pentanone	ND	0.034	mg/Kg	1	10/14/18	JLI	SW8260C
Acetone	ND	0.34	mg/Kg	1	10/14/18	JLI	SW8260C
Acrylonitrile	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Benzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Bromobenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Bromochloromethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Bromodichloromethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Bromoform	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Bromomethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Carbon Disulfide	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Carbon tetrachloride	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Chlorobenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Chloroethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Chloroform	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Chloromethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Dibromochloromethane	ND	0.004	mg/Kg	1	10/14/18	JLI	SW8260C
Dibromomethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Dichlorodifluoromethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Ethylbenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Hexachlorobutadiene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Isopropylbenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
m&p-Xylene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	0.04	mg/Kg	1	10/14/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	0.013	mg/Kg	1	10/14/18	JLI	SW8260C
Methylene chloride	ND	0.013	mg/Kg	1	10/14/18	JLI	SW8260C
Naphthalene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
n-Butylbenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
n-Propylbenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
o-Xylene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
p-Isopropyltoluene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
sec-Butylbenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Styrene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
tert-Butylbenzene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Tetrachloroethene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	0.013	mg/Kg	1	10/14/18	JLI	SW8260C
Toluene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Total Xylenes	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
trans-1,4-dichloro-2-butene	ND	0.013	mg/Kg	1	10/14/18	JLI	SW8260C
Trichloroethene	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Trichlorofluoromethane	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	0.013	mg/Kg	1	10/14/18	JLI	SW8260C
Vinyl chloride	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	99		%	1	10/14/18	JLI	70 - 130 %
% Bromofluorobenzene	83		%	1	10/14/18	JLI	70 - 130 %
% Dibromofluoromethane	102		%	1	10/14/18	JLI	70 - 130 %
% Toluene-d8	96		%	1	10/14/18	JLI	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	0.13	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Diethyl ether	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	0.0067	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
1,2-Dichlorobenzene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
1,3-Dichlorobenzene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
1,4-Dichlorobenzene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dichlorophenol	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dimethylphenol	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dinitrophenol	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dinitrotoluene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
2,6-Dinitrotoluene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
2-Chloronaphthalene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
2-Chlorophenol	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
2-Methylnaphthalene	0.47	0.3	mg/Kg	1	10/16/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
2-Nitroaniline	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
2-Nitrophenol	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
3-Nitroaniline	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
4-Chloroaniline	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
4-Nitroaniline	ND	0.7	mg/Kg	1	10/16/18	WB	SW8270D
4-Nitrophenol	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Acenaphthene	1.7	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Acenaphthylene	0.86	0.3	mg/Kg	1	10/16/18	WB	SW8270D

Project ID: HERITAGE PARK
Client ID: HP-18A

Phoenix I.D.: CB71362

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Acetophenone	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Aniline	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
Anthracene	6	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Benz(a)anthracene	17	1.5	mg/Kg	5	10/16/18	WB	SW8270D
Benzidine	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(a)pyrene	13	1.5	mg/Kg	5	10/16/18	WB	SW8270D
Benzo(b)fluoranthene	12	1.5	mg/Kg	5	10/16/18	WB	SW8270D
Benzo(ghi)perylene	5.8	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(k)fluoranthene	12	1.5	mg/Kg	5	10/16/18	WB	SW8270D
Benzoic acid	ND	0.87	mg/Kg	1	10/16/18	WB	SW8270D
Benzyl butyl phthalate	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Carbazole	1.6	0.44	mg/Kg	1	10/16/18	WB	SW8270D
Chrysene	18	1.5	mg/Kg	5	10/16/18	WB	SW8270D
Dibenz(a,h)anthracene	1.6	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Dibenzofuran	1.4	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Diethyl phthalate	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Dimethylphthalate	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Di-n-butylphthalate	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
Di-n-octylphthalate	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Fluoranthene	43	1.5	mg/Kg	5	10/16/18	WB	SW8270D
Fluorene	2.5	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorobenzene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorobutadiene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Hexachloroethane	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	7	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Isophorone	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Naphthalene	0.7	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Nitrobenzene	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodimethylamine	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
Pentachloronitrobenzene	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
Pentachlorophenol	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
Phenanthrene	32	1.5	mg/Kg	5	10/16/18	WB	SW8270D
Phenol	ND	0.3	mg/Kg	1	10/16/18	WB	SW8270D
Pyrene	38	1.5	mg/Kg	5	10/16/18	WB	SW8270D
Pyridine	ND	0.44	mg/Kg	1	10/16/18	WB	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	87		%	1	10/16/18	WB	30 - 130 %
% 2-Fluorobiphenyl	64		%	1	10/16/18	WB	30 - 130 %
% 2-Fluorophenol	56		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	67		%	1	10/16/18	WB	30 - 130 %
% Phenol-d5	61		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	67		%	1	10/16/18	WB	30 - 130 %

Project ID: HERITAGE PARK
Client ID: HP-18A

Phoenix I.D.: CB71362

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Other PAH Target Analytes							
Acenaphthylene	0.86	0.3	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Anthracene	6	0.3	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benz(a)anthracene	17	1.5	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
Benzo(a)pyrene	13	1.5	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
Benzo(b)fluoranthene	12	1.5	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
Benzo(ghi)perylene	5.8	0.3	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benzo(k)fluoranthene	12	1.5	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
Chrysene	18	1.5	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
Dibenz(a,h)anthracene	1.6	0.3	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Fluoranthene	43	1.5	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
Fluorene	2.5	0.3	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Indeno(1,2,3-cd)pyrene	7	0.3	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Pyrene	38	1.5	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	64		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	67		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	67		%	1	10/16/18	WB	30 - 130 %
Field Extraction	Completed				10/12/18		SW5035A
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	70	4.4	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	4.4	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	4.4	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
Total TPH 1,2*	70	4.4	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	43		%	1	10/20/18	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	97		%	1	10/20/18	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	101		%	1	10/20/18	AW	40 - 140 %
% o-terphenyl (aromatic)	45		%	1	10/20/18	AW	40 - 140 %
MA Volatile Petroleum Hydrocarbons (VPH)							
Benzene	ND	0.043	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	8.5	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	8.5	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	8.5	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Ethyl Benzene	ND	0.085	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
m,p-Xylenes	ND	0.085	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
MTBE	ND	0.085	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Naphthalene	ND	0.43	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
o-Xylene	ND	0.085	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Toluene	ND	0.085	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Unadjusted C5-C8 Aliphatics (*1)	ND	8.5	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	8.5	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	89		%	50	10/18/18	ARC	70 - 130 %
% 2,5-Dibromotoluene (PID)	85		%	50	10/18/18	ARC	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

7 = This parameter is not certified by MA for this matrix.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

VPH:
*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 22, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 22, 2018

FOR: Attn: Mr Joseph Salvetti
Stantec
400 Crown Colony Drive
Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/12/18	11:00
Location Code:	STANTECMA	Received by:	CP	10/12/18	18:22
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCB71362
Phoenix ID: CB71363

Project ID: HERITAGE PARK
Client ID: HP-14A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				10/18/18	ARC	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.0041	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloroethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloroethene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloropropene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dibromoethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichloroethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichloropropane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,3-Dichloropropane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
2,2-Dichloropropane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
2-Chlorotoluene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
2-Hexanone	ND	0.034	mg/Kg	1	10/14/18	JLI	SW8260C
2-Isopropyltoluene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
4-Chlorotoluene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C

Project ID: HERITAGE PARK
Client ID: HP-14A

Phoenix I.D.: CB71363

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	0.034	mg/Kg	1	10/14/18	JLI	SW8260C
Acetone	0.51	S 0.48	mg/Kg	50	10/13/18	JLI	SW8260C
Acrylonitrile	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Benzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Bromobenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Bromochloromethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Bromodichloromethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Bromoform	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Bromomethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Carbon Disulfide	0.011	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Carbon tetrachloride	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Chlorobenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Chloroethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Chloroform	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Chloromethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Dibromochloromethane	ND	0.0041	mg/Kg	1	10/14/18	JLI	SW8260C
Dibromomethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Dichlorodifluoromethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Ethylbenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Hexachlorobutadiene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Isopropylbenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
m&p-Xylene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	0.041	mg/Kg	1	10/14/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	0.014	mg/Kg	1	10/14/18	JLI	SW8260C
Methylene chloride	ND	0.014	mg/Kg	1	10/14/18	JLI	SW8260C
Naphthalene	0.14	0.12	mg/Kg	50	10/13/18	JLI	SW8260C
n-Butylbenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
n-Propylbenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
o-Xylene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
p-Isopropyltoluene	0.13	0.12	mg/Kg	50	10/13/18	JLI	SW8260C
sec-Butylbenzene	0.044	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Styrene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
tert-Butylbenzene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Tetrachloroethene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	0.014	mg/Kg	1	10/14/18	JLI	SW8260C
Toluene	0.0089	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Total Xylenes	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	0.014	mg/Kg	1	10/14/18	JLI	SW8260C
Trichloroethene	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Trichlorofluoromethane	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	0.014	mg/Kg	1	10/14/18	JLI	SW8260C
Vinyl chloride	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	94		%	1	10/14/18	JLI	70 - 130 %
% Bromofluorobenzene	90		%	1	10/14/18	JLI	70 - 130 %

Ver 1

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	99		%	1	10/14/18	JLI	70 - 130 %
% Toluene-d8	96		%	1	10/14/18	JLI	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	0.14	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Diethyl ether	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	0.0068	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Field Extraction	Completed				10/12/18		SW5035A
MA Volatile Petroleum Hydrocarbons (VPH)							
Benzene	ND	0.037	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	7.5	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	7.5	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	7.5	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Ethyl Benzene	ND	0.075	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
m,p-Xylenes	ND	0.075	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
MTBE	ND	0.075	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Naphthalene	0.41	0.37	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
o-Xylene	ND	0.075	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Toluene	ND	0.075	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Unadjusted C5-C8 Aliphatics (*1)	ND	7.5	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	7.5	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	99		%	50	10/18/18	ARC	70 - 130 %
% 2,5-Dibromotoluene (PID)	89		%	50	10/18/18	ARC	70 - 130 %

Project ID: HERITAGE PARK
Client ID: HP-14A

Phoenix I.D.: CB71363

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

VPH:
*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

S - Laboratory solvent, contamination is possible.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 22, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 22, 2018

FOR: Attn: Mr Joseph Salvetti
Stantec
400 Crown Colony Drive
Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/12/18	11:00
Location Code:	STANTECMA	Received by:	CP	10/12/18	18:22
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCB71362
Phoenix ID: CB71364

Project ID: HERITAGE PARK
Client ID: HP-14A/13A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 1.3	1.3	mg/Kg	1	10/13/18	CPP	SW6010C	
Arsenic	18.3	1.1	mg/Kg	1	10/13/18	CPP	SW6010C	
Barium	63.8	0.56	mg/Kg	1	10/13/18	CPP	SW6010C	
Beryllium	0.62	0.45	mg/Kg	1	10/13/18	CPP	SW6010C	
Cadmium	< 0.56	0.56	mg/Kg	1	10/13/18	CPP	SW6010C	
Chromium	42.0	0.56	mg/Kg	1	10/13/18	CPP	SW6010C	
Mercury	0.27	0.04	mg/Kg	1	10/16/18	RS	SW7471B	
Nickel	25.1	0.56	mg/Kg	1	10/13/18	CPP	SW6010C	
Lead	141	0.56	mg/Kg	1	10/13/18	CPP	SW6010C	
Antimony	< 5.6	5.6	mg/Kg	1	10/13/18	CPP	SW6010C	
Selenium	< 2.2	2.2	mg/Kg	1	10/13/18	CPP	SW6010C	
Thallium	< 5.0	5.0	mg/Kg	1	10/13/18	CPP	SW6010C	
Vanadium	28.4	0.56	mg/Kg	1	10/13/18	CPP	SW6010C	
Zinc	113	1.1	mg/Kg	1	10/13/18	CPP	SW6010C	
Percent Solid	59		%		10/12/18	DA	SW846-%Solid	
Conductivity - Soil Matrix	7190	500	umhos/cm	1	10/16/18	AP	SM2510B-11	
Corrosivity	Negative		Pos/Neg	1	10/12/18	O	SW846-Corr	
Flash Point	>200	200	Degree F	1	10/17/18	Y	SW1010A	
Ignitability	Passed	140	degree F	1	10/17/18	Y	SW846-Ignit	
pH at 25C - Soil	6.85	1.00	pH Units	1	10/12/18 19:53	O	SW9045	
Reactivity Cyanide	< 8	8	mg/Kg	1	10/17/18	JO/GD	SW846-ReactCyn	7
Reactivity Sulfide	< 20	20	mg/Kg	1	10/17/18	JO/GD	SW-7.3	7
Reactivity	Negative		Pos/Neg	1	10/17/18	JO/GD	SW846-React	7
Soil Extraction for PCB	Completed				10/17/18	BB	SW3545A	
Soil Extraction for Pesticide	Completed				10/17/18	BB/V	SW3545A	
Soil Extraction for Pesticides	Completed				10/17/18	BB/V	SW3545A	
Soil Extraction for SVOA	Completed				10/15/18	SJ/CKV	SW3545A	
Mercury Digestion	Completed				10/16/18	Q/Q	SW7471B	

Ver 1

Project ID: HERITAGE PARK
Client ID: HP-14A/13A

Phoenix I.D.: CB71364

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
EPH Extraction	Completed				10/16/18	MJ/DW	SW3545A
Ext. Petroleum Hydrocarbons	Completed				10/12/18		MADEP EPH-04
Soil Extraction for Herbicide	Completed				10/14/18	C/R	SW8151A
Total Metals Digest	Completed				10/12/18	B/AG/BF	SW3050B
Extraction of TPH SM	Completed				10/15/18	JJ/VCK	SW3545A
EPH Diesel PAH Target Analytes							
2-Methylnaphthalene	0.48	0.38	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Acenaphthene	1.6	0.38	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Naphthalene	0.75	0.38	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Phenanthrene	19	1.9	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	60		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	64		%	1	10/16/18	WB	30 - 130 %
Chlorinated Herbicides							
2,4,5-T	ND	0.14	mg/Kg	10	10/16/18	CW	SW8151A
2,4,5-TP (Silvex)	ND	0.14	mg/Kg	10	10/16/18	CW	SW8151A
2,4-D	ND	0.28	mg/Kg	10	10/16/18	CW	SW8151A
2,4-DB	ND	1.4	mg/Kg	10	10/16/18	CW	SW8151A
Dalapon	ND	0.14	mg/Kg	10	10/16/18	CW	SW8151A
Dicamba	ND	0.14	mg/Kg	10	10/16/18	CW	SW8151A
Dichloroprop	ND	0.21	mg/Kg	10	10/16/18	CW	SW8151A
Dinoseb	ND	0.14	mg/Kg	10	10/16/18	CW	SW8151A
MCPA	ND	42	mg/Kg	10	10/16/18	CW	SW8151A
MCPP	ND	42	mg/Kg	10	10/16/18	CW	SW8151A
QA/QC Surrogates							
% DCAA	42		%	10	10/16/18	CW	30 - 150 %
Polychlorinated Biphenyls							
PCB-1016	ND	0.11	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1221	ND	0.11	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1232	ND	0.11	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1242	ND	0.11	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1248	ND	0.11	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1254	ND	0.11	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1260	ND	0.11	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1262	ND	0.11	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1268	ND	0.11	mg/Kg	2	10/17/18	AW	SW8082A
QA/QC Surrogates							
% DCBP	76		%	2	10/17/18	AW	30 - 150 %
% TCMX	82		%	2	10/17/18	AW	30 - 150 %
Pesticides							
4,4' -DDD	0.014	0.011	mg/Kg	2	10/18/18	CW	SW8081B
4,4' -DDE	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
4,4' -DDT	0.014	0.011	mg/Kg	2	10/18/18	CW	SW8081B
a-BHC	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
Alachlor	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B

Project ID: HERITAGE PARK
Client ID: HP-14A/13A

Phoenix I.D.: CB71364

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Aldrin	ND	0.0056	mg/Kg	2	10/18/18	CW	SW8081B
b-BHC	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
Chlordane	ND	0.056	mg/Kg	2	10/18/18	CW	SW8081B
d-BHC	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
Dieldrin	0.02	0.0056	mg/Kg	2	10/18/18	CW	SW8081B
Endosulfan I	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
Endosulfan II	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
Endosulfan sulfate	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
Endrin	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
Endrin aldehyde	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
Endrin ketone	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
g-BHC	ND	0.0022	mg/Kg	2	10/18/18	CW	SW8081B
Heptachlor	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
Heptachlor epoxide	ND	0.011	mg/Kg	2	10/18/18	CW	SW8081B
Hexachlorobenzene	ND	0.0056	mg/Kg	2	10/18/18	CW	SW8081B
Methoxychlor	ND	0.056	mg/Kg	2	10/18/18	CW	SW8081B
Toxaphene	ND	0.22	mg/Kg	2	10/18/18	CW	SW8081B
QA/QC Surrogates							
% DCBP	92		%	2	10/18/18	CW	30 - 150 %
% TCMX	79		%	2	10/18/18	CW	30 - 150 %
TPH by GC (Extractable Products)							
Fuel Oil #2 / Diesel Fuel	ND	82	mg/kg	1	10/16/18	JRB	SW8015D DRO
Fuel Oil #4	ND	82	mg/kg	1	10/16/18	JRB	SW8015D DRO
Fuel Oil #6	ND	82	mg/kg	1	10/16/18	JRB	SW8015D DRO
Kerosene	ND	82	mg/kg	1	10/16/18	JRB	SW8015D DRO
Motor Oil	ND	82	mg/kg	1	10/16/18	JRB	SW8015D DRO
Other Oil	ND	82	mg/kg	1	10/16/18	JRB	SW8015D DRO
Unidentified	ND	82	mg/kg	1	10/16/18	JRB	SW8015D DRO
QA/QC Surrogates							
% n-Pentacosane	71		%	1	10/16/18	JRB	50 - 150 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
1,2-Dichlorobenzene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
1,3-Dichlorobenzene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
1,4-Dichlorobenzene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dichlorophenol	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dimethylphenol	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dinitrophenol	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dinitrotoluene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
2,6-Dinitrotoluene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
2-Chloronaphthalene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
2-Chlorophenol	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
2-Methylnaphthalene	0.48	0.38	mg/Kg	1	10/16/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D

Project ID: HERITAGE PARK
Client ID: HP-14A/13A

Phoenix I.D.: CB71364

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitroaniline	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
2-Nitrophenol	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
3-Nitroaniline	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
4-Chloroaniline	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
4-Nitroaniline	ND	0.88	mg/Kg	1	10/16/18	WB	SW8270D
4-Nitrophenol	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Acenaphthene	1.6	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Acenaphthylene	0.6	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Acetophenone	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Aniline	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
Anthracene	5	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Benz(a)anthracene	16	1.9	mg/Kg	5	10/16/18	WB	SW8270D
Benzidine	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(a)pyrene	12	1.9	mg/Kg	5	10/16/18	WB	SW8270D
Benzo(b)fluoranthene	11	1.9	mg/Kg	5	10/16/18	WB	SW8270D
Benzo(ghi)perylene	5.7	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(k)fluoranthene	9.1	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Benzoic acid	ND	1.1	mg/Kg	1	10/16/18	WB	SW8270D
Benzyl butyl phthalate	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	3.1	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Carbazole	2	0.55	mg/Kg	1	10/16/18	WB	SW8270D
Chrysene	15	1.9	mg/Kg	5	10/16/18	WB	SW8270D
Dibenz(a,h)anthracene	1.8	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Dibenzofuran	1.2	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Diethyl phthalate	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Dimethylphthalate	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Di-n-butylphthalate	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
Di-n-octylphthalate	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Fluoranthene	34	1.9	mg/Kg	5	10/16/18	WB	SW8270D
Fluorene	2.1	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorobenzene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorobutadiene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Hexachloroethane	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	6.6	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Isophorone	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Naphthalene	0.75	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Nitrobenzene	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodimethylamine	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
N-Nitrosodiphenylamine	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
Pentachloronitrobenzene	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
Pentachlorophenol	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
Phenanthrene	19	1.9	mg/Kg	5	10/16/18	WB	SW8270D
Phenol	ND	0.38	mg/Kg	1	10/16/18	WB	SW8270D
Pyrene	31	1.9	mg/Kg	5	10/16/18	WB	SW8270D
Pyridine	ND	0.55	mg/Kg	1	10/16/18	WB	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	81		%	1	10/16/18	WB	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	10/16/18	WB	30 - 130 %
% 2-Fluorophenol	50		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	60		%	1	10/16/18	WB	30 - 130 %
% Phenol-d5	55		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	64		%	1	10/16/18	WB	30 - 130 %
EPH Other PAH Target Analytes							
Acenaphthylene	0.6	0.38	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Anthracene	5	0.38	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benz(a)anthracene	16	1.9	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
Benzo(a)pyrene	12	1.9	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
Benzo(b)fluoranthene	11	1.9	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
Benzo(ghi)perylene	5.7	0.38	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benzo(k)fluoranthene	9.1	0.38	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Chrysene	15	1.9	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
Dibenz(a,h)anthracene	1.8	0.38	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Fluoranthene	34	1.9	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
Fluorene	2.1	0.38	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Indeno(1,2,3-cd)pyrene	6.6	0.38	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Pyrene	31	1.9	mg/Kg	5	10/16/18	WB	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	60		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	64		%	1	10/16/18	WB	30 - 130 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	210	5.5	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	5.5	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	5.5	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
Total TPH 1,2*	210	5.5	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	40		%	1	10/20/18	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	97		%	1	10/20/18	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	104		%	1	10/20/18	AW	40 - 140 %
% o-terphenyl (aromatic)	97		%	1	10/20/18	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

7 = This parameter is not certified by MA for this matrix.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 22, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 22, 2018

FOR: Attn: Mr Joseph Salvetti
Stantec
400 Crown Colony Drive
Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/12/18	11:00
Location Code:	STANTECMA	Received by:	CP	10/12/18	18:22
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCB71362
Phoenix ID: CB71365

Project ID: HERITAGE PARK
Client ID: HP-26A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				10/18/18	ARC	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.0037	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloroethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloroethene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloropropene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,4-Trimethylbenzene	0.2	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dibromoethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichloroethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichloropropane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,3,5-Trimethylbenzene	0.06	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,3-Dichloropropane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
2,2-Dichloropropane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
2-Chlorotoluene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
2-Hexanone	ND	0.031	mg/Kg	1	10/14/18	JLI	SW8260C
2-Isopropyltoluene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
4-Chlorotoluene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C

Project ID: HERITAGE PARK
Client ID: HP-26A

Phoenix I.D.: CB71365

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	0.031	mg/Kg	1	10/14/18	JLI	SW8260C
Acetone	ND	0.31	mg/Kg	1	10/14/18	JLI	SW8260C
Acrylonitrile	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Benzene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Bromobenzene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Bromochloromethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Bromodichloromethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Bromoform	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Bromomethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Carbon Disulfide	0.016	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Carbon tetrachloride	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Chlorobenzene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Chloroethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Chloroform	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Chloromethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Dibromochloromethane	ND	0.0037	mg/Kg	1	10/14/18	JLI	SW8260C
Dibromomethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Dichlorodifluoromethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Ethylbenzene	0.0067	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Hexachlorobutadiene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Isopropylbenzene	0.0082	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
m&p-Xylene	0.023	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	0.037	mg/Kg	1	10/14/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	0.012	mg/Kg	1	10/14/18	JLI	SW8260C
Methylene chloride	ND	0.012	mg/Kg	1	10/14/18	JLI	SW8260C
Naphthalene	0.054	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
n-Butylbenzene	0.017	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
n-Propylbenzene	0.019	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
o-Xylene	0.026	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
p-Isopropyltoluene	0.053	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
sec-Butylbenzene	0.05	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Styrene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
tert-Butylbenzene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Tetrachloroethene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	0.012	mg/Kg	1	10/14/18	JLI	SW8260C
Toluene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Total Xylenes	0.049	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	0.012	mg/Kg	1	10/14/18	JLI	SW8260C
Trichloroethene	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Trichlorofluoromethane	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	0.012	mg/Kg	1	10/14/18	JLI	SW8260C
Vinyl chloride	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	96		%	1	10/14/18	JLI	70 - 130 %
% Bromofluorobenzene	94		%	1	10/14/18	JLI	70 - 130 %

Project ID: HERITAGE PARK
Client ID: HP-26A

Phoenix I.D.: CB71365

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	98		%	1	10/14/18	JLI	70 - 130 %
% Toluene-d8	98		%	1	10/14/18	JLI	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	0.12	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Diethyl ether	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	0.0062	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Field Extraction	Completed				10/12/18		SW5035A
MA Volatile Petroleum Hydrocarbons (VPH)							
Benzene	ND	0.032	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	6.4	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	6.4	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	7.2	6.4	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Ethyl Benzene	ND	0.064	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
m,p-Xylenes	ND	0.064	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
MTBE	ND	0.064	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Naphthalene	0.44	0.32	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
o-Xylene	ND	0.064	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Toluene	ND	0.064	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Unadjusted C5-C8 Aliphatics (*1)	ND	6.4	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	9.6	6.4	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	83		%	50	10/18/18	ARC	70 - 130 %
% 2,5-Dibromotoluene (PID)	78		%	50	10/18/18	ARC	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

VPH:
*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 22, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 22, 2018

FOR: Attn: Mr Joseph Salvetti
Stantec
400 Crown Colony Drive
Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/12/18	11:00
Location Code:	STANTECMA	Received by:	CP	10/12/18	18:22
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCB71362
Phoenix ID: CB71366

Project ID: HERITAGE PARK
Client ID: HP-26A/27A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 1.3	1.3	mg/Kg	1	10/13/18	CPP	SW6010C	
Arsenic	11.5	0.82	mg/Kg	1	10/13/18	CPP	SW6010C	
Barium	65.3	0.41	mg/Kg	1	10/13/18	CPP	SW6010C	
Beryllium	0.60	0.33	mg/Kg	1	10/13/18	CPP	SW6010C	
Cadmium	0.72	0.41	mg/Kg	1	10/13/18	CPP	SW6010C	
Chromium	30.8	0.41	mg/Kg	1	10/13/18	CPP	SW6010C	
Mercury	0.12	0.03	mg/Kg	1	10/16/18	RS	SW7471B	
Nickel	24.2	0.41	mg/Kg	1	10/13/18	CPP	SW6010C	
Lead	209	4.1	mg/Kg	10	10/16/18	CPP	SW6010C	
Antimony	< 4.1	4.1	mg/Kg	1	10/13/18	CPP	SW6010C	
Selenium	< 1.6	1.6	mg/Kg	1	10/13/18	CPP	SW6010C	
Thallium	< 3.7	3.7	mg/Kg	1	10/13/18	CPP	SW6010C	
Vanadium	36.2	0.41	mg/Kg	1	10/13/18	CPP	SW6010C	
Zinc	151	0.8	mg/Kg	1	10/13/18	CPP	SW6010C	
Percent Solid	80		%		10/12/18	DA	SW846-%Solid	
Conductivity - Soil Matrix	1350	5	umhos/cm	1	10/16/18	AP	SM2510B-11	
Corrosivity	Negative		Pos/Neg	1	10/12/18	O	SW846-Corr	
Flash Point	>200	200	Degree F	1	10/17/18	Y	SW1010A	
Ignitability	Passed	140	degree F	1	10/17/18	Y	SW846-Ignit	
pH at 25C - Soil	7.75	1.00	pH Units	1	10/12/18 19:53	O	SW9045	
Reactivity Cyanide	< 6	6	mg/Kg	1	10/17/18	JO/GD	SW846-ReactCyn	7
Reactivity Sulfide	< 20	20	mg/Kg	1	10/17/18	JO/GD	SW-7.3	7
Reactivity	Negative		Pos/Neg	1	10/17/18	JO/GD	SW846-React	7
Soil Extraction for PCB	Completed				10/15/18	AA/V	SW3545A	
Soil Extraction for Pesticides	Completed				10/15/18	AA/V	SW3545A	
Soil Extraction for SVOA	Completed				10/15/18	SJ/CKV	SW3545A	
Mercury Digestion	Completed				10/16/18	Q/Q	SW7471B	
EPH Extraction	Completed				10/16/18	MJ/DW	SW3545A	

Ver 1

Project ID: HERITAGE PARK
Client ID: HP-26A/27A

Phoenix I.D.: CB71366

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Ext. Petroleum Hydrocarbons	Completed				10/12/18		MADEP EPH-04
Soil Extraction for Herbicide	Completed				10/14/18	C/R	SW8151A
Total Metals Digest	Completed				10/12/18	B/AG/BF	SW3050B
Extraction of TPH SM	Completed				10/15/18	JJ/VCK	SW3545A
EPH Diesel PAH Target Analytes							
2-Methylnaphthalene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Acenaphthene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Naphthalene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Phenanthrene	0.36	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	71		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	59		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	71		%	1	10/16/18	WB	30 - 130 %
Chlorinated Herbicides							
2,4,5-T	ND	0.1	mg/Kg	10	10/16/18	CW	SW8151A
2,4,5-TP (Silvex)	ND	0.1	mg/Kg	10	10/16/18	CW	SW8151A
2,4-D	ND	0.21	mg/Kg	10	10/16/18	CW	SW8151A
2,4-DB	ND	1	mg/Kg	10	10/16/18	CW	SW8151A
Dalapon	ND	0.1	mg/Kg	10	10/16/18	CW	SW8151A
Dicamba	ND	0.1	mg/Kg	10	10/16/18	CW	SW8151A
Dichloroprop	ND	0.15	mg/Kg	10	10/16/18	CW	SW8151A
Dinoseb	ND	0.1	mg/Kg	10	10/16/18	CW	SW8151A
MCPA	ND	31	mg/Kg	10	10/16/18	CW	SW8151A
MCPP	ND	31	mg/Kg	10	10/16/18	CW	SW8151A
QA/QC Surrogates							
% DCAA	44		%	10	10/16/18	CW	30 - 150 %
Polychlorinated Biphenyls							
PCB-1016	ND	0.081	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1221	ND	0.081	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1232	ND	0.081	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1242	ND	0.081	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1248	ND	0.081	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1254	0.13	0.081	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1260	ND	0.081	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1262	ND	0.081	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1268	ND	0.081	mg/Kg	2	10/17/18	AW	SW8082A
QA/QC Surrogates							
% DCBP	111		%	2	10/17/18	AW	30 - 150 %
% TCMX	102		%	2	10/17/18	AW	30 - 150 %
Pesticides							
4,4' -DDD	0.036	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
4,4' -DDE	0.012	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
4,4' -DDT	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
a-BHC	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
Alachlor	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
Aldrin	ND	0.0041	mg/Kg	2	10/19/18	CW	SW8081B

Project ID: HERITAGE PARK
Client ID: HP-26A/27A

Phoenix I.D.: CB71366

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
b-BHC	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
Chlordane	ND	0.041	mg/Kg	2	10/19/18	CW	SW8081B
d-BHC	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
Dieldrin	0.0057	0.0041	mg/Kg	2	10/19/18	CW	SW8081B
Endosulfan I	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
Endosulfan II	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
Endosulfan sulfate	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
Endrin	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
Endrin aldehyde	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
Endrin ketone	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
g-BHC	ND	0.0016	mg/Kg	2	10/19/18	CW	SW8081B
Heptachlor	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
Heptachlor epoxide	ND	0.0081	mg/Kg	2	10/19/18	CW	SW8081B
Hexachlorobenzene	ND	0.0041	mg/Kg	2	10/19/18	CW	SW8081B
Methoxychlor	ND	0.041	mg/Kg	2	10/19/18	CW	SW8081B
Toxaphene	ND	0.16	mg/Kg	2	10/19/18	CW	SW8081B
QA/QC Surrogates							
% DCBP	101		%	2	10/19/18	CW	30 - 150 %
% TCMX	82		%	2	10/19/18	CW	30 - 150 %
TPH by GC (Extractable Products)							
Fuel Oil #2 / Diesel Fuel	ND	62	mg/kg	1	10/16/18	JRB	SW8015D DRO
Fuel Oil #4	ND	62	mg/kg	1	10/16/18	JRB	SW8015D DRO
Fuel Oil #6	ND	62	mg/kg	1	10/16/18	JRB	SW8015D DRO
Kerosene	ND	62	mg/kg	1	10/16/18	JRB	SW8015D DRO
Motor Oil	ND	62	mg/kg	1	10/16/18	JRB	SW8015D DRO
Other Oil	**	62	mg/kg	1	10/16/18	JRB	SW8015D DRO
Unidentified	140	62	mg/kg	1	10/16/18	JRB	SW8015D DRO
QA/QC Surrogates							
% n-Pentacosane	70		%	1	10/16/18	JRB	50 - 150 %
Semivolatiles							
1,2,4,5-Tetrachlorobenzene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
1,2-Dichlorobenzene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
1,3-Dichlorobenzene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
1,4-Dichlorobenzene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dichlorophenol	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dimethylphenol	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dinitrophenol	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dinitrotoluene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
2,6-Dinitrotoluene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
2-Chloronaphthalene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
2-Chlorophenol	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
2-Methylnaphthalene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
2-Nitroaniline	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D

Project ID: HERITAGE PARK
Client ID: HP-26A/27A

Phoenix I.D.: CB71366

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
3-Nitroaniline	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
4-Chloroaniline	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
4-Nitroaniline	ND	0.66	mg/Kg	1	10/16/18	WB	SW8270D
4-Nitrophenol	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Acenaphthene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Acenaphthylene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Acetophenone	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Aniline	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
Anthracene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Benz(a)anthracene	0.3	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Benzidine	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(a)pyrene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(b)fluoranthene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(ghi)perylene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(k)fluoranthene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Benzoic acid	ND	0.83	mg/Kg	1	10/16/18	WB	SW8270D
Benzyl butyl phthalate	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Carbazole	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
Chrysene	0.3	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Dibenzofuran	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Diethyl phthalate	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Dimethylphthalate	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Di-n-butylphthalate	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
Di-n-octylphthalate	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Fluoranthene	0.63	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Fluorene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorobenzene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorobutadiene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Hexachloroethane	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Isophorone	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Naphthalene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Nitrobenzene	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodimethylamine	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
Pentachlorophenol	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
Phenanthrene	0.36	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Phenol	ND	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Pyrene	0.61	0.29	mg/Kg	1	10/16/18	WB	SW8270D
Pyridine	ND	0.42	mg/Kg	1	10/16/18	WB	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	86		%	1	10/16/18	WB	30 - 130 %
% 2-Fluorobiphenyl	71		%	1	10/16/18	WB	30 - 130 %
% 2-Fluorophenol	59		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	59		%	1	10/16/18	WB	30 - 130 %
% Phenol-d5	66		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	71		%	1	10/16/18	WB	30 - 130 %
EPH Other PAH Target Analytes							
Acenaphthylene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Anthracene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benz(a)anthracene	0.3	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benzo(a)pyrene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benzo(b)fluoranthene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benzo(ghi)perylene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benzo(k)fluoranthene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Chrysene	0.3	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Dibenz(a,h)anthracene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Fluoranthene	0.63	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Fluorene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Indeno(1,2,3-cd)pyrene	ND	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Pyrene	0.61	0.29	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	71		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	59		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	71		%	1	10/16/18	WB	30 - 130 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	19	4.1	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	4.1	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	4.1	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
Total TPH 1,2*	19	4.1	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	46		%	1	10/20/18	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	99		%	1	10/20/18	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	100		%	1	10/20/18	AW	40 - 140 %
% o-terphenyl (aromatic)	58		%	1	10/20/18	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

7 = This parameter is not certified by MA for this matrix.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C16 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 22, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 22, 2018

FOR: Attn: Mr Joseph Salvetti
Stantec
400 Crown Colony Drive
Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/12/18	11:00
Location Code:	STANTECMA	Received by:	CP	10/12/18	18:22
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCB71362
Phoenix ID: CB71367

Project ID: HERITAGE PARK
Client ID: HP-16A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
MA Petroleum Hydrocarbon (VPH)	Completed				10/18/18	ARC	MADEP VPH04
Volatiles							
1,1,1,2-Tetrachloroethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,1-Trichloroethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,2,2-Tetrachloroethane	ND	0.0031	mg/Kg	1	10/14/18	JLI	SW8260C
1,1,2-Trichloroethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloroethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloroethene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,1-Dichloropropene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,3-Trichlorobenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,3-Trichloropropane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,4-Trichlorobenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,2,4-Trimethylbenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dibromo-3-chloropropane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dibromoethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichlorobenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichloroethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,2-Dichloropropane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,3,5-Trimethylbenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,3-Dichlorobenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,3-Dichloropropane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
1,4-Dichlorobenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
2,2-Dichloropropane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
2-Chlorotoluene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
2-Hexanone	ND	0.026	mg/Kg	1	10/14/18	JLI	SW8260C
2-Isopropyltoluene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
4-Chlorotoluene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C

Project ID: HERITAGE PARK
Client ID: HP-16A

Phoenix I.D.: CB71367

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
4-Methyl-2-pentanone	ND	0.026	mg/Kg	1	10/14/18	JLI	SW8260C
Acetone	ND	0.26	mg/Kg	1	10/14/18	JLI	SW8260C
Acrylonitrile	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Benzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Bromobenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Bromochloromethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Bromodichloromethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Bromoform	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Bromomethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Carbon Disulfide	0.0058	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Carbon tetrachloride	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Chlorobenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Chloroethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Chloroform	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Chloromethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
cis-1,2-Dichloroethene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
cis-1,3-Dichloropropene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Dibromochloromethane	ND	0.0031	mg/Kg	1	10/14/18	JLI	SW8260C
Dibromomethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Dichlorodifluoromethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Ethylbenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Hexachlorobutadiene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Isopropylbenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
m&p-Xylene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Methyl Ethyl Ketone	ND	0.031	mg/Kg	1	10/14/18	JLI	SW8260C
Methyl t-butyl ether (MTBE)	ND	0.01	mg/Kg	1	10/14/18	JLI	SW8260C
Methylene chloride	ND	0.01	mg/Kg	1	10/14/18	JLI	SW8260C
Naphthalene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
n-Butylbenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
n-Propylbenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
o-Xylene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
p-Isopropyltoluene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
sec-Butylbenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Styrene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
tert-Butylbenzene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Tetrachloroethene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Tetrahydrofuran (THF)	ND	0.01	mg/Kg	1	10/14/18	JLI	SW8260C
Toluene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Total Xylenes	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
trans-1,2-Dichloroethene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
trans-1,3-Dichloropropene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
trans-1,4-dichloro-2-butene	ND	0.01	mg/Kg	1	10/14/18	JLI	SW8260C
Trichloroethene	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Trichlorofluoromethane	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
Trichlorotrifluoroethane	ND	0.01	mg/Kg	1	10/14/18	JLI	SW8260C
Vinyl chloride	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C
QA/QC Surrogates							
% 1,2-dichlorobenzene-d4	97		%	1	10/14/18	JLI	70 - 130 %
% Bromofluorobenzene	98		%	1	10/14/18	JLI	70 - 130 %

Ver 1

Project ID: HERITAGE PARK
Client ID: HP-16A

Phoenix I.D.: CB71367

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% Dibromofluoromethane	99		%	1	10/14/18	JLI	70 - 130 %
% Toluene-d8	99		%	1	10/14/18	JLI	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	0.1	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Diethyl ether	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Di-isopropyl ether	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Ethyl tert-butyl ether	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
tert-amyl methyl ether	ND	0.0051	mg/Kg	1	10/14/18	JLI	SW8260C (OXY)
Field Extraction	Completed				10/12/18		SW5035A
MA Volatile Petroleum Hydrocarbons (VPH)							
Benzene	ND	0.037	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C5-C8 Aliphatic Hydrocarbons *1,2	ND	7.4	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C9-C10 Aromatic Hydrocarbons *1	ND	7.4	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
C9-C12 Aliphatic Hydrocarbons *1,3	ND	7.4	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Ethyl Benzene	ND	0.074	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
m,p-Xylenes	ND	0.074	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
MTBE	ND	0.074	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Naphthalene	ND	0.37	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
o-Xylene	ND	0.074	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Toluene	ND	0.074	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Unadjusted C5-C8 Aliphatics (*1)	ND	7.4	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
Unadjusted C9-C12 Aliphatics (*1)	ND	7.4	mg/Kg	50	10/18/18	ARC	MA VPH 5/2004
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	84		%	50	10/18/18	ARC	70 - 130 %
% 2,5-Dibromotoluene (PID)	78		%	50	10/18/18	ARC	70 - 130 %

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

VPH:
*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 22, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 22, 2018

FOR: Attn: Mr Joseph Salvetti
Stantec
400 Crown Colony Drive
Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/12/18	11:00
Location Code:	STANTECMA	Received by:	CP	10/12/18	18:22
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCB71362
Phoenix ID: CB71368

Project ID: HERITAGE PARK
Client ID: HP-15A/16A/17A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 1.3	1.3	mg/Kg	1	10/13/18	CPP	SW6010C	
Arsenic	51.9	1.3	mg/Kg	1	10/13/18	CPP	SW6010C	
Barium	320	0.65	mg/Kg	1	10/13/18	CPP	SW6010C	
Beryllium	< 0.52	0.52	mg/Kg	1	10/13/18	CPP	SW6010C	
Cadmium	2.18	0.65	mg/Kg	1	10/13/18	CPP	SW6010C	
Chromium	51.8	0.65	mg/Kg	1	10/13/18	CPP	SW6010C	
Mercury	0.48	0.05	mg/Kg	1	10/16/18	RS	SW7471B	
Nickel	24.7	0.65	mg/Kg	1	10/13/18	CPP	SW6010C	
Lead	5150	65	mg/Kg	100	10/16/18	CPP	SW6010C	
Antimony	34.6	6.5	mg/Kg	1	10/16/18	CPP	SW6010C	
Selenium	< 2.6	2.6	mg/Kg	1	10/13/18	CPP	SW6010C	
Thallium	< 5.8	5.8	mg/Kg	1	10/13/18	CPP	SW6010C	
Vanadium	43.4	0.65	mg/Kg	1	10/13/18	CPP	SW6010C	
Zinc	832	13	mg/Kg	10	10/16/18	CPP	SW6010C	
Percent Solid	50		%		10/12/18	DA	SW846-%Solid	
Conductivity - Soil Matrix	2830	500	umhos/cm	1	10/16/18	AP	SM2510B-11	
Corrosivity	Negative		Pos/Neg	1	10/12/18	O	SW846-Corr	
Flash Point	>200	200	Degree F	1	10/17/18	Y	SW1010A	
Ignitability	Passed	140	degree F	1	10/17/18	Y	SW846-Ignit	
pH at 25C - Soil	7.08	1.00	pH Units	1	10/12/18 19:53	O	SW9045	
Reactivity Cyanide	< 9	9	mg/Kg	1	10/17/18	JO/GD	SW846-ReactCyn	7
Reactivity Sulfide	< 20	20	mg/Kg	1	10/17/18	JO/GD	SW-7.3	7
Reactivity	Negative		Pos/Neg	1	10/17/18	JO/GD	SW846-React	7
Soil Extraction for PCB	Completed				10/15/18	AA/V	SW3545A	
Soil Extraction for Pesticides	Completed				10/15/18	AA/V	SW3545A	
Soil Extraction for SVOA	Completed				10/15/18	SJ/CKV	SW3545A	
Mercury Digestion	Completed				10/16/18	Q/Q	SW7471B	
EPH Extraction	Completed				10/16/18	MJ/DW	SW3545A	

Ver 1

Project ID: HERITAGE PARK
Client ID: HP-15A/16A/17A

Phoenix I.D.: CB71368

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Ext. Petroleum Hydrocarbons	Completed				10/12/18		MADEP EPH-04
Soil Extraction for Herbicide	Completed				10/15/18	C/R/D	SW8151A
Total Metals Digest	Completed				10/12/18	B/AG/BF	SW3050B
Extraction of TPH SM	Completed				10/15/18	JJ/VCK	SW3545A
EPH Diesel PAH Target Analytes							
2-Methylnaphthalene	4.5	0.46	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Acenaphthene	9.1	0.46	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Naphthalene	6.5	0.46	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Phenanthrene	95	4.6	mg/Kg	10	10/16/18	WB	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	55		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	65		%	1	10/16/18	WB	30 - 130 %
Chlorinated Herbicides							
2,4,5-T	ND	0.16	mg/Kg	10	10/16/18	CW	SW8151A
2,4,5-TP (Silvex)	ND	0.16	mg/Kg	10	10/16/18	CW	SW8151A
2,4-D	ND	0.33	mg/Kg	10	10/16/18	CW	SW8151A
2,4-DB	ND	1.6	mg/Kg	10	10/16/18	CW	SW8151A
Dalapon	ND	0.16	mg/Kg	10	10/16/18	CW	SW8151A
Dicamba	ND	0.16	mg/Kg	10	10/16/18	CW	SW8151A
Dichloroprop	ND	0.25	mg/Kg	10	10/16/18	CW	SW8151A
Dinoseb	ND	0.16	mg/Kg	10	10/16/18	CW	SW8151A
MCPA	ND	49	mg/Kg	10	10/16/18	CW	SW8151A
MCPP	ND	49	mg/Kg	10	10/16/18	CW	SW8151A
QA/QC Surrogates							
% DCAA	52		%	10	10/16/18	CW	30 - 150 %
Polychlorinated Biphenyls							
PCB-1016	ND	0.13	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1221	ND	0.13	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1232	ND	0.13	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1242	ND	0.13	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1248	ND	0.13	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1254	0.46	0.13	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1260	ND	0.13	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1262	ND	0.13	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1268	ND	0.13	mg/Kg	2	10/17/18	AW	SW8082A
QA/QC Surrogates							
% DCBP	112		%	2	10/17/18	AW	30 - 150 %
% TCMX	87		%	2	10/17/18	AW	30 - 150 %
Pesticides							
4,4' -DDD	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
4,4' -DDE	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
4,4' -DDT	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
a-BHC	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
Alachlor	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
Aldrin	ND	0.066	mg/Kg	20	10/16/18	CW	SW8081B

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
b-BHC	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
Chlordane	ND	0.66	mg/Kg	20	10/16/18	CW	SW8081B
d-BHC	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
Dieldrin	ND	0.066	mg/Kg	20	10/16/18	CW	SW8081B
Endosulfan I	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
Endosulfan II	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
Endosulfan sulfate	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
Endrin	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
Endrin aldehyde	0.81	0.13	mg/Kg	20	10/16/18	CW	SW8081B
Endrin ketone	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
g-BHC	ND	0.026	mg/Kg	20	10/16/18	CW	SW8081B
Heptachlor	ND	0.13	mg/Kg	20	10/16/18	CW	SW8081B
Heptachlor epoxide	ND	0.066	mg/Kg	20	10/16/18	CW	SW8081B
Hexachlorobenzene	ND	0.066	mg/Kg	20	10/16/18	CW	SW8081B
Methoxychlor	ND	0.66	mg/Kg	20	10/16/18	CW	SW8081B
Toxaphene	ND	2.6	mg/Kg	20	10/16/18	CW	SW8081B
QA/QC Surrogates							
% DCBP	Diluted Out		%	20	10/16/18	CW	30 - 150 %
% TCMX	Diluted Out		%	20	10/16/18	CW	30 - 150 %

TPH by GC (Extractable Products)

Fuel Oil #2 / Diesel Fuel	ND	490	mg/kg	5	10/16/18	JRB	SW8015D DRO
Fuel Oil #4	ND	490	mg/kg	5	10/16/18	JRB	SW8015D DRO
Fuel Oil #6	ND	490	mg/kg	5	10/16/18	JRB	SW8015D DRO
Kerosene	ND	490	mg/kg	5	10/16/18	JRB	SW8015D DRO
Motor Oil	ND	490	mg/kg	5	10/16/18	JRB	SW8015D DRO
Other Oil	**	490	mg/kg	5	10/16/18	JRB	SW8015D DRO
Unidentified	6300	490	mg/kg	5	10/16/18	JRB	SW8015D DRO
QA/QC Surrogates							
% n-Pentacosane	Interference		%	5	10/16/18	JRB	50 - 150 %

Semivolatiles

1,2,4,5-Tetrachlorobenzene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
1,2-Dichlorobenzene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
1,3-Dichlorobenzene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
1,4-Dichlorobenzene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dichlorophenol	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dimethylphenol	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dinitrophenol	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dinitrotoluene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
2,6-Dinitrotoluene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
2-Chloronaphthalene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
2-Chlorophenol	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
2-Methylnaphthalene	4.5	0.46	mg/Kg	1	10/16/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
2-Nitroaniline	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D

Project ID: HERITAGE PARK
Client ID: HP-15A/16A/17A

Phoenix I.D.: CB71368

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
3-Nitroaniline	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
4-Chloroaniline	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
4-Nitroaniline	ND	1	mg/Kg	1	10/16/18	WB	SW8270D
4-Nitrophenol	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Acenaphthene	9.1	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Acenaphthylene	2.7	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Acetophenone	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Aniline	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
Anthracene	22	4.6	mg/Kg	10	10/16/18	WB	SW8270D
Benz(a)anthracene	41	4.6	mg/Kg	10	10/16/18	WB	SW8270D
Benzidine	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(a)pyrene	32	4.6	mg/Kg	10	10/16/18	WB	SW8270D
Benzo(b)fluoranthene	27	4.6	mg/Kg	10	10/16/18	WB	SW8270D
Benzo(ghi)perylene	13	4.6	mg/Kg	10	10/16/18	WB	SW8270D
Benzo(k)fluoranthene	25	4.6	mg/Kg	10	10/16/18	WB	SW8270D
Benzoic acid	ND	1.3	mg/Kg	1	10/16/18	WB	SW8270D
Benzyl butyl phthalate	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Carbazole	8.9	0.65	mg/Kg	1	10/16/18	WB	SW8270D
Chrysene	41	4.6	mg/Kg	10	10/16/18	WB	SW8270D
Dibenz(a,h)anthracene	4.1	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Dibenzofuran	7.6	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Diethyl phthalate	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Dimethylphthalate	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Di-n-butylphthalate	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
Di-n-octylphthalate	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Fluoranthene	97	4.6	mg/Kg	10	10/16/18	WB	SW8270D
Fluorene	12	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorobenzene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorobutadiene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Hexachloroethane	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	15	4.6	mg/Kg	10	10/16/18	WB	SW8270D
Isophorone	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Naphthalene	6.5	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Nitrobenzene	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodimethylamine	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
Pentachlorophenol	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
Phenanthrene	95	4.6	mg/Kg	10	10/16/18	WB	SW8270D
Phenol	ND	0.46	mg/Kg	1	10/16/18	WB	SW8270D
Pyrene	89	4.6	mg/Kg	10	10/16/18	WB	SW8270D
Pyridine	ND	0.65	mg/Kg	1	10/16/18	WB	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	74		%	1	10/16/18	WB	30 - 130 %
% 2-Fluorobiphenyl	58		%	1	10/16/18	WB	30 - 130 %
% 2-Fluorophenol	44		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	55		%	1	10/16/18	WB	30 - 130 %
% Phenol-d5	52		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	65		%	1	10/16/18	WB	30 - 130 %
EPH Other PAH Target Analytes							
Acenaphthylene	2.7	0.46	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Anthracene	22	4.6	mg/Kg	10	10/16/18	WB	MA EPH 5/2004
Benz(a)anthracene	41	4.6	mg/Kg	10	10/16/18	WB	MA EPH 5/2004
Benzo(a)pyrene	32	4.6	mg/Kg	10	10/16/18	WB	MA EPH 5/2004
Benzo(b)fluoranthene	27	4.6	mg/Kg	10	10/16/18	WB	MA EPH 5/2004
Benzo(ghi)perylene	13	4.6	mg/Kg	10	10/16/18	WB	MA EPH 5/2004
Benzo(k)fluoranthene	25	4.6	mg/Kg	10	10/16/18	WB	MA EPH 5/2004
Chrysene	41	4.6	mg/Kg	10	10/16/18	WB	MA EPH 5/2004
Dibenz(a,h)anthracene	4.1	0.46	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Fluoranthene	97	4.6	mg/Kg	10	10/16/18	WB	MA EPH 5/2004
Fluorene	12	0.46	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Indeno(1,2,3-cd)pyrene	15	4.6	mg/Kg	10	10/16/18	WB	MA EPH 5/2004
Pyrene	89	4.6	mg/Kg	10	10/16/18	WB	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	58		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	55		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	65		%	1	10/16/18	WB	30 - 130 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	570	6.6	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	8.8	6.6	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	6.6	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
Total TPH 1,2*	580	6.6	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	45		%	1	10/20/18	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	95		%	1	10/20/18	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	102		%	1	10/20/18	AW	40 - 140 %
% o-terphenyl (aromatic)	58		%	1	10/20/18	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

7 = This parameter is not certified by MA for this matrix.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C10 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 22, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

October 22, 2018

FOR: Attn: Mr Joseph Salvetti
Stantec
400 Crown Colony Drive
Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/12/18	10:30
Location Code:	STANTECMA	Received by:	CP	10/12/18	18:22
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCB71362
Phoenix ID: CB71369

Project ID: HERITAGE PARK
Client ID: HP-21A

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference	
Silver	< 1.3	1.3	mg/Kg	1	10/13/18	CPP	SW6010C	
Arsenic	15.0	0.86	mg/Kg	1	10/13/18	CPP	SW6010C	
Barium	54.8	0.43	mg/Kg	1	10/13/18	CPP	SW6010C	
Beryllium	0.49	0.34	mg/Kg	1	10/13/18	CPP	SW6010C	
Cadmium	0.92	0.43	mg/Kg	1	10/13/18	CPP	SW6010C	
Chromium	87.3	0.43	mg/Kg	1	10/13/18	CPP	SW6010C	
Mercury	0.13	0.03	mg/Kg	1	10/16/18	RS	SW7471B	
Nickel	21.3	0.43	mg/Kg	1	10/13/18	CPP	SW6010C	
Lead	122	0.43	mg/Kg	1	10/13/18	CPP	SW6010C	
Antimony	< 4.3	4.3	mg/Kg	1	10/13/18	CPP	SW6010C	
Selenium	< 1.7	1.7	mg/Kg	1	10/13/18	CPP	SW6010C	
Thallium	< 3.9	3.9	mg/Kg	1	10/13/18	CPP	SW6010C	
Vanadium	29.8	0.43	mg/Kg	1	10/13/18	CPP	SW6010C	
Zinc	100	0.9	mg/Kg	1	10/13/18	CPP	SW6010C	
Percent Solid	82		%		10/12/18	DA	SW846-%Solid	
Conductivity - Soil Matrix	1620	5	umhos/cm	1	10/16/18	AP	SM2510B-11	
Corrosivity	Negative		Pos/Neg	1	10/12/18	O	SW846-Corr	
Flash Point	>200	200	Degree F	1	10/17/18	Y	SW1010A	
Ignitability	Passed	140	degree F	1	10/17/18	Y	SW846-Ignit	
pH at 25C - Soil	7.16	1.00	pH Units	1	10/12/18 19:53	O	SW9045	
Reactivity Cyanide	< 6	6	mg/Kg	1	10/17/18	JO/GD	SW846-ReactCyn	7
Reactivity Sulfide	66	20	mg/Kg	1	10/17/18	JO/GD	SW-7.3	7
Reactivity	Negative		Pos/Neg	1	10/17/18	JO/GD	SW846-React	7
Soil Extraction for PCB	Completed				10/15/18	AA/V	SW3545A	
Soil Extraction for Pesticides	Completed				10/15/18	AA/V	SW3545A	
Soil Extraction for SVOA	Completed				10/15/18	SJ/CKV	SW3545A	
Mercury Digestion	Completed				10/16/18	Q/Q	SW7471B	
EPH Extraction	Completed				10/16/18	MJ/DW	SW3545A	

Ver 1

Project ID: HERITAGE PARK
Client ID: HP-21A

Phoenix I.D.: CB71369

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Ext. Petroleum Hydrocarbons	Completed				10/12/18		MADEP EPH-04
Soil Extraction for Herbicide	Completed				10/15/18	C/R/D	SW8151A
Total Metals Digest	Completed				10/12/18	B/AG/BF	SW3050B
Extraction of TPH SM	Completed				10/15/18	JJ/VCK	SW3545A
EPH Diesel PAH Target Analytes							
2-Methylnaphthalene	ND	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Acenaphthene	ND	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Naphthalene	ND	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Phenanthrene	0.75	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	71		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	63		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	69		%	1	10/16/18	WB	30 - 130 %
Chlorinated Herbicides							
2,4,5-T	ND	0.1	mg/Kg	10	10/16/18	CW	SW8151A
2,4,5-TP (Silvex)	ND	0.1	mg/Kg	10	10/16/18	CW	SW8151A
2,4-D	ND	0.2	mg/Kg	10	10/16/18	CW	SW8151A
2,4-DB	ND	1	mg/Kg	10	10/16/18	CW	SW8151A
Dalapon	ND	0.1	mg/Kg	10	10/16/18	CW	SW8151A
Dicamba	ND	0.1	mg/Kg	10	10/16/18	CW	SW8151A
Dichloroprop	ND	0.15	mg/Kg	10	10/16/18	CW	SW8151A
Dinoseb	ND	0.1	mg/Kg	10	10/16/18	CW	SW8151A
MCPA	ND	30	mg/Kg	10	10/16/18	CW	SW8151A
MCPP	ND	30	mg/Kg	10	10/16/18	CW	SW8151A
QA/QC Surrogates							
% DCAA	59		%	10	10/16/18	CW	30 - 150 %
Polychlorinated Biphenyls							
PCB-1016	ND	0.08	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1221	ND	0.08	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1232	ND	0.08	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1242	ND	0.08	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1248	ND	0.08	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1254	ND	0.08	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1260	ND	0.08	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1262	ND	0.08	mg/Kg	2	10/17/18	AW	SW8082A
PCB-1268	ND	0.08	mg/Kg	2	10/17/18	AW	SW8082A
QA/QC Surrogates							
% DCBP	72		%	2	10/17/18	AW	30 - 150 %
% TCMX	71		%	2	10/17/18	AW	30 - 150 %
Pesticides							
4,4' -DDD	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
4,4' -DDE	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
4,4' -DDT	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
a-BHC	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
Alachlor	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
Aldrin	ND	0.004	mg/Kg	2	10/17/18	CW	SW8081B

Project ID: HERITAGE PARK
Client ID: HP-21A

Phoenix I.D.: CB71369

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
b-BHC	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
Chlordane	ND	0.04	mg/Kg	2	10/17/18	CW	SW8081B
d-BHC	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
Dieldrin	ND	0.004	mg/Kg	2	10/17/18	CW	SW8081B
Endosulfan I	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
Endosulfan II	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
Endosulfan sulfate	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
Endrin	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
Endrin aldehyde	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
Endrin ketone	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
g-BHC	ND	0.0016	mg/Kg	2	10/17/18	CW	SW8081B
Heptachlor	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
Heptachlor epoxide	ND	0.008	mg/Kg	2	10/17/18	CW	SW8081B
Hexachlorobenzene	ND	0.004	mg/Kg	2	10/17/18	CW	SW8081B
Methoxychlor	ND	0.04	mg/Kg	2	10/17/18	CW	SW8081B
Toxaphene	ND	0.16	mg/Kg	2	10/17/18	CW	SW8081B
QA/QC Surrogates							
% DCBP	69		%	2	10/17/18	CW	30 - 150 %
% TCMX	60		%	2	10/17/18	CW	30 - 150 %

TPH by GC (Extractable Products)

Fuel Oil #2 / Diesel Fuel	ND	61	mg/kg	1	10/16/18	JRB	SW8015D DRO
Fuel Oil #4	ND	61	mg/kg	1	10/16/18	JRB	SW8015D DRO
Fuel Oil #6	ND	61	mg/kg	1	10/16/18	JRB	SW8015D DRO
Kerosene	ND	61	mg/kg	1	10/16/18	JRB	SW8015D DRO
Motor Oil	ND	61	mg/kg	1	10/16/18	JRB	SW8015D DRO
Other Oil	ND	61	mg/kg	1	10/16/18	JRB	SW8015D DRO
Unidentified	ND	61	mg/kg	1	10/16/18	JRB	SW8015D DRO
QA/QC Surrogates							
% n-Pentacosane	75		%	1	10/16/18	JRB	50 - 150 %

Semivolatiles

1,2,4,5-Tetrachlorobenzene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
1,2,4-Trichlorobenzene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
1,2-Dichlorobenzene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
1,2-Diphenylhydrazine	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
1,3-Dichlorobenzene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
1,4-Dichlorobenzene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
2,4,5-Trichlorophenol	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
2,4,6-Trichlorophenol	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dichlorophenol	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dimethylphenol	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dinitrophenol	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
2,4-Dinitrotoluene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
2,6-Dinitrotoluene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
2-Chloronaphthalene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
2-Chlorophenol	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
2-Methylnaphthalene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
2-Methylphenol (o-cresol)	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
2-Nitroaniline	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D

Project ID: HERITAGE PARK
Client ID: HP-21A

Phoenix I.D.: CB71369

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
3&4-Methylphenol (m&p-cresol)	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
3,3'-Dichlorobenzidine	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
3-Nitroaniline	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
4,6-Dinitro-2-methylphenol	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
4-Bromophenyl phenyl ether	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
4-Chloro-3-methylphenol	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
4-Chloroaniline	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
4-Chlorophenyl phenyl ether	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
4-Nitroaniline	ND	0.64	mg/Kg	1	10/16/18	WB	SW8270D
4-Nitrophenol	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Acenaphthene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Acenaphthylene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Acetophenone	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Aniline	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
Anthracene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Benz(a)anthracene	0.45	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Benzidine	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(a)pyrene	0.41	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(b)fluoranthene	0.4	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(ghi)perylene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Benzo(k)fluoranthene	0.35	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Benzoic acid	ND	0.8	mg/Kg	1	10/16/18	WB	SW8270D
Benzyl butyl phthalate	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroethoxy)methane	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroethyl)ether	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-chloroisopropyl)ether	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Bis(2-ethylhexyl)phthalate	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Carbazole	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
Chrysene	0.49	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Dibenz(a,h)anthracene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Dibenzofuran	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Diethyl phthalate	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Dimethylphthalate	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Di-n-butylphthalate	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
Di-n-octylphthalate	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Fluoranthene	0.97	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Fluorene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorobenzene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorobutadiene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Hexachlorocyclopentadiene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Hexachloroethane	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Indeno(1,2,3-cd)pyrene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Isophorone	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Naphthalene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Nitrobenzene	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodimethylamine	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodi-n-propylamine	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
N-Nitrosodiphenylamine	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachloronitrobenzene	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
Pentachlorophenol	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
Phenanthrene	0.75	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Phenol	ND	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Pyrene	0.95	0.28	mg/Kg	1	10/16/18	WB	SW8270D
Pyridine	ND	0.4	mg/Kg	1	10/16/18	WB	SW8270D
QA/QC Surrogates							
% 2,4,6-Tribromophenol	85		%	1	10/16/18	WB	30 - 130 %
% 2-Fluorobiphenyl	71		%	1	10/16/18	WB	30 - 130 %
% 2-Fluorophenol	55		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	63		%	1	10/16/18	WB	30 - 130 %
% Phenol-d5	61		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	69		%	1	10/16/18	WB	30 - 130 %
EPH Other PAH Target Analytes							
Acenaphthylene	ND	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Anthracene	ND	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benz(a)anthracene	0.45	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benzo(a)pyrene	0.41	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benzo(b)fluoranthene	0.4	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benzo(ghi)perylene	ND	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Benzo(k)fluoranthene	0.35	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Chrysene	0.49	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Dibenz(a,h)anthracene	ND	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Fluoranthene	0.97	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Fluorene	ND	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Indeno(1,2,3-cd)pyrene	ND	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
Pyrene	0.95	0.28	mg/Kg	1	10/16/18	WB	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	71		%	1	10/16/18	WB	30 - 130 %
% Nitrobenzene-d5	63		%	1	10/16/18	WB	30 - 130 %
% Terphenyl-d14	69		%	1	10/16/18	WB	30 - 130 %
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2*	8.7	4.0	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
C19-C36 Aliphatic Hydrocarbons 1*	ND	4.0	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
C9-C18 Aliphatic Hydrocarbons 1*	ND	4.0	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
Total TPH 1,2*	8.7	4.0	mg/Kg	1	10/20/18	AW	MA EPH 5/2004
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	40		%	1	10/20/18	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	104		%	1	10/20/18	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	103		%	1	10/20/18	AW	40 - 140 %
% o-terphenyl (aromatic)	50		%	1	10/20/18	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

7 = This parameter is not certified by MA for this matrix.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

Corrosivity is based solely on the pH analysis performed above.

Ignitability is based solely on the results of the closed cup flashpoint analysis performed above. Passed is >140 degree F.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Cyanide. This method is no longer listed in the current version of SW-846.

The reactivity, reported above, is based only on the EPA Interim Guidance for Reactive Sulfide. This method is no longer listed in the current version of SW-846.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If there are any questions regarding this data, please call Phoenix Client Services.
This report must not be reproduced except in full as defined by the attached chain of custody.

Phyllis Shiller, Laboratory Director
October 22, 2018
Reviewed and Released by: Phyllis Shiller, Laboratory Director

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 22, 2018

QA/QC Data

SDG I.D.: GCB71362

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 451812 (mg/kg), QC Sample No: CB70129 (CB71368, CB71369)														
Mercury - Soil	BRL	0.03	<0.03	<0.03	NC	89.5	85.6	4.5	79.7			75 - 125	20	
Comment:														
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%														
QA/QC Batch 451813 (mg/kg), QC Sample No: CB70476 (CB71364, CB71366)														
Mercury - Soil	BRL	0.03	<0.03	<0.03	NC	79.5	76.7	3.6	85.7			75 - 125	20	
Comment:														
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%														
QA/QC Batch 451814 (mg/kg), QC Sample No: CB71002 (CB71362)														
Mercury - Soil	BRL	0.02	0.13	0.11	NC	83.9	79.2	5.8	73.2			75 - 125	20	m
Comment:														
Additional Mercury criteria: LCS acceptance range for waters is 80-120% and for soils is 75-125%														
QA/QC Batch 451663 (mg/kg), QC Sample No: CB71347 (CB71362, CB71364, CB71366, CB71368, CB71369)														
ICP Metals - Soil														
Antimony	BRL	3.5	<5.6	<5.7	NC	119			100			75 - 125	30	
Arsenic	BRL	0.70	21.3	21.5	0.90	105			102			75 - 125	30	
Barium	BRL	0.35	49.7	51.1	2.80	102			108			75 - 125	30	
Beryllium	BRL	0.28	0.66	0.73	NC	102			103			75 - 125	30	
Cadmium	BRL	0.35	<0.56	<0.57	NC	104			104			75 - 125	30	
Chromium	BRL	0.35	20.7	18.0	14.0	110			104			75 - 125	30	
Lead	BRL	0.35	53.1	54.2	2.10	106			105			75 - 125	30	
Nickel	BRL	0.35	17.8	14.7	19.1	104			103			75 - 125	30	
Selenium	BRL	1.4	<2.3	<2.3	NC	94.5			94.3			75 - 125	30	
Silver	BRL	0.35	<0.56	<0.57	NC	102			102			75 - 125	30	
Thallium	BRL	3.2	<5.1	<5.1	NC	104			103			75 - 125	30	
Vanadium	BRL	0.35	18.7	19.2	2.60	111			103			75 - 125	30	
Zinc	BRL	0.70	85.1	90.1	5.70	104			101			75 - 125	30	

m = This parameter is outside laboratory MS/MSD specified recovery limits.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 22, 2018

QA/QC Data

SDG I.D.: GCB71362

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 452106 (umhos/cm), QC Sample No: CB70541 (CB71362, CB71364, CB71366, CB71368, CB71369)													
Conductivity - Soil Matrix	BRL	5	475	472	0.60	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 452163 (Degree F), QC Sample No: CB71147 (CB71362, CB71364, CB71366, CB71368, CB71369)													
Flash Point			>200	>200	NC	100						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 451679 (PH), QC Sample No: CB71362 (CB71362, CB71364, CB71366, CB71368, CB71369)													
pH at 25C - Soil			6.97	6.99	0.30	99.9						85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 451992 (mg/Kg), QC Sample No: CB71368 4.72X (CB71362, CB71364, CB71366, CB71368, CB71369)													
Reactivity Cyanide	BRL	0.05	<9	<9.2	NC	99.4						80 - 120	20
Comment:													
Additional soil criteria LCS acceptance range is 80-120% MS acceptance range 75-125%.													

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

October 22, 2018

QA/QC Data

SDG I.D.: GCB71362

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 451772 (mg/Kg), QC Sample No: CB68329 10X (CB71362, CB71364, CB71366)										
Chlorinated Herbicides - Soil										
2,4,5-T	ND	0.083	54	53	1.9	51			40 - 140	30
2,4,5-TP (Silvex)	ND	0.083	61	60	1.7	52			40 - 140	30
2,4-D	ND	0.17	49	48	2.1	46			40 - 140	30
2,4-DB	ND	1.7	67	65	3.0	58			40 - 140	30
Dalapon	ND	0.083	42	40	4.9	46			40 - 140	30
Dicamba	ND	0.083	63	61	3.2	49			40 - 140	30
Dichloroprop	ND	0.17	69	67	2.9	60			40 - 140	30
Dinoseb	ND	0.17	60	59	1.7	74			10 - 110	20
MCPA	ND	25	50	49	2.0	48			40 - 140	30
MCPP	ND	25	121	116	4.2	86			40 - 140	30
% DCAA (Surrogate Rec)	51	%	49	46	6.3	43			30 - 150	30

Comment:

The QC for this batch consists of a Blank, LCS, LCSD, and MS.

MCP 8151 additional criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%.

QA/QC Batch 451807 (mg/Kg), QC Sample No: CB70751 (CB71363 (50X))										
Volatiles - Soil										
Acetone	ND	0.01	83	74	11.5	85	83	2.4	40 - 160	30
Naphthalene	ND	0.005	104	102	1.9	102	105	2.9	70 - 130	30
p-Isopropyltoluene	ND	0.001	105	101	3.9	105	107	1.9	70 - 130	30
QA/QC Batch 451808 (mg/Kg), QC Sample No: CB71061 (CB71362, CB71363, CB71365, CB71367)										
Volatiles - Soil										
1,1,1,2-Tetrachloroethane	ND	0.005	109	104	4.7	105	106	0.9	70 - 130	30
1,1,1-Trichloroethane	ND	0.005	110	102	7.5	107	105	1.9	70 - 130	30
1,1,2,2-Tetrachloroethane	ND	0.003	106	99	6.8	105	105	0.0	70 - 130	30
1,1,2-Trichloroethane	ND	0.005	104	98	5.9	101	100	1.0	70 - 130	30
1,1-Dichloroethane	ND	0.005	104	98	5.9	103	102	1.0	70 - 130	30
1,1-Dichloroethene	ND	0.005	109	101	7.6	108	105	2.8	70 - 130	30
1,1-Dichloropropene	ND	0.005	105	99	5.9	108	106	1.9	70 - 130	30
1,2,3-Trichlorobenzene	ND	0.005	100	97	3.0	99	100	1.0	70 - 130	30
1,2,3-Trichloropropane	ND	0.005	102	96	6.1	99	99	0.0	70 - 130	30
1,2,4-Trichlorobenzene	ND	0.005	99	95	4.1	101	101	0.0	70 - 130	30
1,2,4-Trimethylbenzene	ND	0.001	98	94	4.2	101	102	1.0	70 - 130	30
1,2-Dibromo-3-chloropropane	ND	0.005	114	109	4.5	104	105	1.0	70 - 130	30
1,2-Dibromoethane	ND	0.005	104	98	5.9	101	102	1.0	70 - 130	30
1,2-Dichlorobenzene	ND	0.005	98	95	3.1	101	102	1.0	70 - 130	30
1,2-Dichloroethane	ND	0.005	105	99	5.9	103	103	0.0	70 - 130	30
1,2-Dichloropropane	ND	0.005	103	98	5.0	103	103	0.0	70 - 130	30
1,3,5-Trimethylbenzene	ND	0.001	100	95	5.1	102	102	0.0	70 - 130	30
1,3-Dichlorobenzene	ND	0.005	98	93	5.2	102	101	1.0	70 - 130	30

QA/QC Data

SDG I.D.: GCB71362

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
1,3-Dichloropropane	ND	0.005	102	97	5.0	101	103	2.0	70 - 130	30
1,4-Dichlorobenzene	ND	0.005	96	91	5.3	100	101	1.0	70 - 130	30
1,4-dioxane	ND	0.1	97	101	4.0	102	104	1.9	40 - 160	30
2,2-Dichloropropane	ND	0.005	113	105	7.3	101	102	1.0	70 - 130	30
2-Chlorotoluene	ND	0.005	101	95	6.1	102	103	1.0	70 - 130	30
2-Hexanone	ND	0.025	95	87	8.8	88	87	1.1	40 - 160	30
2-Isopropyltoluene	ND	0.005	105	99	5.9	107	107	0.0	70 - 130	30
4-Chlorotoluene	ND	0.005	97	93	4.2	99	101	2.0	70 - 130	30
4-Methyl-2-pentanone	ND	0.025	102	94	8.2	94	93	1.1	40 - 160	30
Acetone	ND	0.01	87	79	9.6	77	76	1.3	40 - 160	30
Acrylonitrile	ND	0.005	107	98	8.8	99	100	1.0	70 - 130	30
Benzene	ND	0.001	101	96	5.1	104	102	1.9	70 - 130	30
Bromobenzene	ND	0.005	101	97	4.0	101	104	2.9	70 - 130	30
Bromochloromethane	ND	0.005	107	103	3.8	107	106	0.9	70 - 130	30
Bromodichloromethane	ND	0.005	110	105	4.7	104	105	1.0	70 - 130	30
Bromoform	ND	0.005	117	112	4.4	102	104	1.9	70 - 130	30
Bromomethane	ND	0.005	104	95	9.0	95	95	0.0	40 - 160	30
Carbon Disulfide	ND	0.005	111	102	8.5	102	101	1.0	70 - 130	30
Carbon tetrachloride	ND	0.005	112	104	7.4	100	101	1.0	70 - 130	30
Chlorobenzene	ND	0.005	99	96	3.1	102	103	1.0	70 - 130	30
Chloroethane	ND	0.005	111	101	9.4	102	102	0.0	70 - 130	30
Chloroform	ND	0.005	106	99	6.8	104	103	1.0	70 - 130	30
Chloromethane	ND	0.005	86	80	7.2	84	81	3.6	40 - 160	30
cis-1,2-Dichloroethene	ND	0.005	106	99	6.8	105	103	1.9	70 - 130	30
cis-1,3-Dichloropropene	ND	0.005	109	104	4.7	101	102	1.0	70 - 130	30
Dibromochloromethane	ND	0.003	119	114	4.3	109	110	0.9	70 - 130	30
Dibromomethane	ND	0.005	105	100	4.9	100	102	2.0	70 - 130	30
Dichlorodifluoromethane	ND	0.005	91	84	8.0	95	94	1.1	40 - 160	30
Diethyl ether	ND	0.005	105	96	9.0	76	79	3.9	70 - 130	30
Di-isopropyl ether	ND	0.005	97	91	6.4	99	99	0.0	70 - 130	30
Ethyl tert-butyl ether	ND	0.005	99	92	7.3	97	98	1.0	70 - 130	30
Ethylbenzene	ND	0.001	100	95	5.1	104	104	0.0	70 - 130	30
Hexachlorobutadiene	ND	0.005	106	101	4.8	106	105	0.9	70 - 130	30
Isopropylbenzene	ND	0.001	101	96	5.1	103	103	0.0	70 - 130	30
m&p-Xylene	ND	0.002	100	95	5.1	104	104	0.0	70 - 130	30
Methyl ethyl ketone	ND	0.005	96	85	12.2	84	84	0.0	40 - 160	30
Methyl t-butyl ether (MTBE)	ND	0.001	115	108	6.3	109	110	0.9	70 - 130	30
Methylene chloride	ND	0.005	97	90	7.5	95	94	1.1	70 - 130	30
Naphthalene	ND	0.005	106	102	3.8	101	104	2.9	70 - 130	30
n-Butylbenzene	ND	0.001	101	96	5.1	105	104	1.0	70 - 130	30
n-Propylbenzene	ND	0.001	99	95	4.1	102	103	1.0	70 - 130	30
o-Xylene	ND	0.002	104	100	3.9	108	108	0.0	70 - 130	30
p-Isopropyltoluene	ND	0.001	101	97	4.0	105	105	0.0	70 - 130	30
sec-Butylbenzene	ND	0.001	105	99	5.9	107	107	0.0	70 - 130	30
Styrene	ND	0.005	102	98	4.0	106	106	0.0	70 - 130	30
tert-amyl methyl ether	ND	0.005	107	103	3.8	107	109	1.9	70 - 130	30
tert-Butylbenzene	ND	0.001	101	97	4.0	103	103	0.0	70 - 130	30
Tetrachloroethene	ND	0.005	103	98	5.0	108	107	0.9	70 - 130	30
Tetrahydrofuran (THF)	ND	0.005	106	97	8.9	97	97	0.0	70 - 130	30
Toluene	ND	0.001	101	96	5.1	104	102	1.9	70 - 130	30
trans-1,2-Dichloroethene	ND	0.005	110	101	8.5	107	105	1.9	70 - 130	30
trans-1,3-Dichloropropene	ND	0.005	107	102	4.8	96	97	1.0	70 - 130	30
trans-1,4-dichloro-2-butene	ND	0.005	119	112	6.1	97	98	1.0	70 - 130	30

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Trichloroethene	ND	0.005	105	100	4.9	105	105	0.0	70 - 130	30	
Trichlorofluoromethane	ND	0.005	101	93	8.2	92	93	1.1	70 - 130	30	
Trichlorotrifluoroethane	ND	0.005	109	99	9.6	107	107	0.0	70 - 130	30	
Vinyl chloride	ND	0.005	100	92	8.3	90	89	1.1	70 - 130	30	
% 1,2-dichlorobenzene-d4	100	%	100	101	1.0	100	100	0.0	70 - 130	30	
% Bromofluorobenzene	97	%	99	100	1.0	99	101	2.0	70 - 130	30	
% Dibromofluoromethane	103	%	106	102	3.8	99	99	0.0	70 - 130	30	
% Toluene-d8	99	%	99	100	1.0	100	99	1.0	70 - 130	30	

Comment:

Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

QA/QC Batch 452027 (mg/kg), QC Sample No: CB71362 (CB71362, CB71364, CB71366, CB71368, CB71369)

Extractable Petroleum Hydrocarbons - Soil

C11-C22 Aromatic Hydrocarbons 1	ND	3.3	56	50	11.3				40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	3.3	55	57	3.6				40 - 140	25	
C9-C18 Aliphatic Hydrocarbons 1*	ND	3.3	43	33	26.3				40 - 140	25	l,r
Total TPH 1,2*	ND	3.3	53	48	9.9				40 - 140	25	
% 1-chlorooctadecane (aliphatic)	68	%	59	59	0.0				40 - 140	25	
% 2-Bromonaphthalene (Fractionati	77	%	84	74	12.7				40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	86	%	92	92	0.0				40 - 140	25	
% 2-Methylnaphthalene BT			0	0	NC				0 - 5		
% Naphthalene BT			0	0	NC				0 - 5		
% o-terphenyl (aromatic)	66	%	56	55	1.8				40 - 140	25	

Comment:

Due to sample matrix, MS/MSD could not be reported.

Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%

QA/QC Batch 452555 (mg/Kg), QC Sample No: CB71362 (CB71362 (50X) , CB71363 (50X) , CB71365 (50X) , CB71367 (50X))

Volatile Petroleum Hydrocarbons - Soil

Benzene	ND	0.25	98	99	1.0				70 - 130	30	
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.0	106	107	0.9				70 - 130	30	
C9-C10 Aromatic Hydrocarbons *1	ND	1.7	108	106	1.9				70 - 130	30	
C9-C12 Aliphatic Hydrocarbons *1,	ND	5.0	99	99	0.0				70 - 130	30	
Ethyl Benzene	ND	0.25	97	97	0.0				70 - 130	30	
m,p-Xylenes	ND	0.25	98	98	0.0				70 - 130	30	
MTBE	ND	0.050	96	95	1.0				70 - 130	30	
Naphthalene	ND	0.25	103	102	1.0				70 - 130	30	
o-Xylene	ND	0.25	99	99	0.0				70 - 130	30	
Toluene	ND	0.25	99	99	0.0				70 - 130	30	
Unadjusted C5-C8 Aliphatics (*1)	ND	5.0	106	107	0.9				70 - 130	30	
Unadjusted C9-C12 Aliphatics (*1)	ND	5.0	99	99	0.0				70 - 130	30	
% 2,5-Dibromotoluene (FID)	94	%	93	92	1.1				70 - 130	30	
% 2,5-Dibromotoluene (PID)	90	%	90	89	1.1				70 - 130	30	

Comment:

This batch consists of a Blank, LCS and LCSD.

QA/QC Batch 451848 (mg/Kg), QC Sample No: CB71364 2X (CB71362, CB71364, CB71366, CB71368, CB71369)

Pesticides - Soil

4,4' -DDD	ND	0.0017	77	85	9.9	51	88	53.2	40 - 140	30	r
4,4' -DDE	ND	0.0017	72	78	8.0	55	89	47.2	40 - 140	30	r
4,4' -DDT	ND	0.0017	81	91	11.6	59	100	51.6	40 - 140	30	r
a-BHC	ND	0.001	75	75	0.0	55	84	41.7	40 - 140	30	r
Alachlor	ND	0.0033	NA	NA	NC	NA	NA	NC	40 - 140	30	

QA/QC Data

SDG I.D.: GCB71362

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Aldrin	ND	0.001	77	72	6.7	56	125	76.2	40 - 140	30	r
b-BHC	ND	0.001	83	91	9.2	71	132	60.1	40 - 140	30	r
Chlordane	ND	0.033	70	78	10.8	65	92	34.4	40 - 140	30	r
d-BHC	ND	0.0033	82	82	0.0	66	132	66.7	40 - 140	30	r
Dieldrin	ND	0.001	78	86	9.8	43	80	60.2	40 - 140	30	r
Endosulfan I	ND	0.0033	77	84	8.7	71	105	38.6	40 - 140	30	r
Endosulfan II	ND	0.0033	86	92	6.7	76	113	39.2	40 - 140	30	r
Endosulfan sulfate	ND	0.0033	92	97	5.3	76	119	44.1	40 - 140	30	r
Endrin	ND	0.0033	77	87	12.2	70	106	40.9	40 - 140	30	r
Endrin aldehyde	ND	0.0033	79	91	14.1	72	109	40.9	40 - 140	30	r
Endrin ketone	ND	0.0033	85	92	7.9	70	103	38.2	40 - 140	30	r
g-BHC	ND	0.001	69	77	11.0	61	96	44.6	40 - 140	30	r
Heptachlor	ND	0.0033	71	77	8.1	80	65	20.7	40 - 140	30	
Heptachlor epoxide	ND	0.0033	75	84	11.3	68	103	40.9	40 - 140	30	r
Hexachlorobenzene	ND	0.0033	71	85	17.9	90	81	10.5	40 - 140	30	
Methoxychlor	ND	0.0033	87	94	7.7	68	110	47.2	40 - 140	30	r
Toxaphene	ND	0.13	NA	NA	NC	NA	NA	NC	40 - 140	30	
% DCBP	79	%	83	90	8.1	83	126	41.1	30 - 150	30	r
% TCMX	75	%	73	77	5.3	70	108	42.7	30 - 150	30	r

QA/QC Batch 451846 (mg/Kg), QC Sample No: CB71364 2X (CB71362, CB71364, CB71366, CB71368, CB71369)

Polychlorinated Biphenyls - Soil

PCB-1016	ND	0.033	96	97	1.0	102			40 - 140	30	
PCB-1221	ND	0.033							40 - 140	30	
PCB-1232	ND	0.033							40 - 140	30	
PCB-1242	ND	0.033							40 - 140	30	
PCB-1248	ND	0.033							40 - 140	30	
PCB-1254	ND	0.033							40 - 140	30	
PCB-1260	ND	0.033	94	96	2.1	85			40 - 140	30	
PCB-1262	ND	0.033							40 - 140	30	
PCB-1268	ND	0.033							40 - 140	30	
% DCBP (Surrogate Rec)	97	%	123	124	0.8	106			30 - 150	30	
% TCMX (Surrogate Rec)	82	%	103	105	1.9	93			30 - 150	30	

Comment:

Spike in MS, MSD reported as MS

QA/QC Batch 451850 (mg/Kg), QC Sample No: CB71521 (CB71362, CB71364, CB71366, CB71368, CB71369)

TPH by GC (Extractable Products) - Soil

Ext. Petroleum H.C. (C9-C36)	ND	50	71	61	15.2	72	73	1.4	50 - 150	30	
% n-Pentacosane	75	%	69	61	12.3	71	80	11.9	50 - 150	30	

Comment:

The ETPH/DRO LCS has been normalized based on the alkane calibration.

QA/QC Batch 451856 (mg/Kg), QC Sample No: CB72005 10X (CB71368, CB71369)

Chlorinated Herbicides - Soil

2,4,5-T	ND	0.083	71	61	15.2	66	68	3.0	40 - 140	30	
2,4,5-TP (Silvex)	ND	0.083	76	68	11.1	65	66	1.5	40 - 140	30	
2,4-D	ND	0.17	79	71	10.7	59	61	3.3	40 - 140	30	
2,4-DB	ND	1.7	66	58	12.9	70	73	4.2	40 - 140	30	
Dalapon	ND	0.083	46	39	16.5	43	49	13.0	40 - 140	30	l
Dicamba	ND	0.083	88	77	13.3	79	83	4.9	40 - 140	30	
Dichloroprop	ND	0.17	97	87	10.9	78	80	2.5	40 - 140	30	
Dinoseb	ND	0.17	74	63	16.1	68	71	4.3	10 - 110	20	
MCPA	ND	25	81	71	13.2	67	65	3.0	40 - 140	30	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
MCPP	ND	25	92	78	16.5	91	98	7.4	40 - 140	30	
% DCAA (Surrogate Rec)	42	%	53	50	5.8	51	51	0.0	30 - 150	30	

Comment:

MCP 8151 additional criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%.

QA/QC Batch 451845 (mg/Kg), QC Sample No: CB72006 (CB71362, CB71364, CB71366, CB71368, CB71369)

Semivolatiles - Soil

1,2,4,5-Tetrachlorobenzene	ND	0.23	62	68	9.2	54	51	5.7	30 - 130	30	
1,2,4-Trichlorobenzene	ND	0.23	65	68	4.5	58	53	9.0	30 - 130	30	
1,2-Dichlorobenzene	ND	0.18	52	57	9.2	52	46	12.2	30 - 130	30	
1,2-Diphenylhydrazine	ND	0.23	77	81	5.1	68	58	15.9	30 - 130	30	
1,3-Dichlorobenzene	ND	0.23	54	56	3.6	50	47	6.2	30 - 130	30	
1,4-Dichlorobenzene	ND	0.23	54	59	8.8	51	48	6.1	30 - 130	30	
2,4,5-Trichlorophenol	ND	0.23	71	76	6.8	61	55	10.3	30 - 130	30	
2,4,6-Trichlorophenol	ND	0.13	68	72	5.7	61	53	14.0	30 - 130	30	
2,4-Dichlorophenol	ND	0.13	66	68	3.0	59	51	14.5	30 - 130	30	
2,4-Dimethylphenol	ND	0.23	72	80	10.5	69	59	15.6	30 - 130	30	
2,4-Dinitrophenol	ND	0.23	15	<10	NC	62	46	29.6	30 - 130	30	l
2,4-Dinitrotoluene	ND	0.13	73	77	5.3	68	57	17.6	30 - 130	30	
2,6-Dinitrotoluene	ND	0.13	75	76	1.3	63	53	17.2	30 - 130	30	
2-Chloronaphthalene	ND	0.23	68	70	2.9	60	52	14.3	30 - 130	30	
2-Chlorophenol	ND	0.23	52	63	19.1	54	46	16.0	30 - 130	30	
2-Methylnaphthalene	ND	0.23	60	64	6.5	56	50	11.3	30 - 130	30	
2-Methylphenol (o-cresol)	ND	0.23	55	62	12.0	60	51	16.2	30 - 130	30	
2-Nitroaniline	ND	0.33	99	104	4.9	73	68	7.1	30 - 130	30	
2-Nitrophenol	ND	0.23	73	78	6.6	69	62	10.7	30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	0.23	57	68	17.6	59	53	10.7	30 - 130	30	
3,3'-Dichlorobenzidine	ND	0.13	69	72	4.3	62	57	8.4	30 - 130	30	
3-Nitroaniline	ND	0.33	71	79	10.7	57	55	3.6	30 - 130	30	
4,6-Dinitro-2-methylphenol	ND	0.23	36	19	61.8	70	50	33.3	30 - 130	30	l,r
4-Bromophenyl phenyl ether	ND	0.23	71	72	1.4	61	54	12.2	30 - 130	30	
4-Chloro-3-methylphenol	ND	0.23	73	82	11.6	66	57	14.6	30 - 130	30	
4-Chloroaniline	ND	0.23	73	78	6.6	60	50	18.2	30 - 130	30	
4-Chlorophenyl phenyl ether	ND	0.23	70	75	6.9	61	52	15.9	30 - 130	30	
4-Nitroaniline	ND	0.23	73	76	4.0	65	51	24.1	30 - 130	30	
4-Nitrophenol	ND	0.23	78	81	3.8	67	55	19.7	30 - 130	30	
Acenaphthene	ND	0.23	69	72	4.3	62	60	3.3	30 - 130	30	
Acenaphthylene	ND	0.13	62	65	4.7	53	52	1.9	30 - 130	30	
Acetophenone	ND	0.23	55	62	12.0	56	49	13.3	30 - 130	30	
Aniline	ND	0.33	49	56	13.3	48	44	8.7	30 - 130	30	
Anthracene	ND	0.23	69	74	7.0	60	67	11.0	30 - 130	30	
Benz(a)anthracene	ND	0.23	68	73	7.1	60	94	44.2	30 - 130	30	r
Benzidine	ND	0.33	43	39	9.8	15	12	22.2	30 - 130	30	m
Benzo(a)pyrene	ND	0.13	68	73	7.1	57	87	41.7	30 - 130	30	r
Benzo(b)fluoranthene	ND	0.16	72	76	5.4	63	87	32.0	30 - 130	30	r
Benzo(ghi)perylene	ND	0.23	67	69	2.9	49	64	26.5	30 - 130	30	
Benzo(k)fluoranthene	ND	0.23	73	79	7.9	57	83	37.1	30 - 130	30	r
Benzoic Acid	ND	0.33	<10	<10	NC	52	32	47.6	30 - 130	30	l,r
Benzyl butyl phthalate	ND	0.23	77	82	6.3	62	55	12.0	30 - 130	30	
Bis(2-chloroethoxy)methane	ND	0.23	65	66	1.5	56	51	9.3	30 - 130	30	
Bis(2-chloroethyl)ether	ND	0.13	47	52	10.1	47	44	6.6	30 - 130	30	
Bis(2-chloroisopropyl)ether	ND	0.23	41	47	13.6	41	39	5.0	30 - 130	30	
Bis(2-ethylhexyl)phthalate	ND	0.23	77	81	5.1	64	57	11.6	30 - 130	30	

QA/QC Data

SDG I.D.: GCB71362

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Carbazole	ND	0.23	68	72	5.7	58	52	10.9	30 - 130	30	
Chrysene	ND	0.23	70	77	9.5	62	93	40.0	30 - 130	30	r
Dibenz(a,h)anthracene	ND	0.13	73	76	4.0	60	58	3.4	30 - 130	30	
Dibenzofuran	ND	0.23	66	70	5.9	57	54	5.4	30 - 130	30	
Diethyl phthalate	ND	0.23	77	81	5.1	63	55	13.6	30 - 130	30	
Dimethylphthalate	ND	0.23	74	79	6.5	62	53	15.7	30 - 130	30	
Di-n-butylphthalate	ND	0.67	76	80	5.1	63	54	15.4	30 - 130	30	
Di-n-octylphthalate	ND	0.23	78	83	6.2	67	60	11.0	30 - 130	30	
Fluoranthene	ND	0.23	68	74	8.5	66	140	71.8	30 - 130	30	m,r
Fluorene	ND	0.23	70	73	4.2	62	60	3.3	30 - 130	30	
Hexachlorobenzene	ND	0.13	95	101	6.1	84	72	15.4	30 - 130	30	
Hexachlorobutadiene	ND	0.23	68	72	5.7	59	57	3.4	30 - 130	30	
Hexachlorocyclopentadiene	ND	0.23	54	61	12.2	21	12	54.5	30 - 130	30	m,r
Hexachloroethane	ND	0.13	58	62	6.7	50	49	2.0	30 - 130	30	
Indeno(1,2,3-cd)pyrene	ND	0.23	69	73	5.6	53	70	27.6	30 - 130	30	
Isophorone	ND	0.13	59	63	6.6	53	47	12.0	30 - 130	30	
Naphthalene	ND	0.23	59	63	6.6	57	52	9.2	30 - 130	30	
Nitrobenzene	ND	0.13	59	67	12.7	60	55	8.7	30 - 130	30	
N-Nitrosodimethylamine	ND	0.23	52	54	3.8	51	43	17.0	30 - 130	30	
N-Nitrosodi-n-propylamine	ND	0.13	59	67	12.7	58	51	12.8	30 - 130	30	
N-Nitrosodiphenylamine	ND	0.13	68	70	2.9	56	51	9.3	30 - 130	30	
Pentachloronitrobenzene	ND	0.23	81	80	1.2	67	55	19.7	30 - 130	30	
Pentachlorophenol	ND	0.23	63	55	13.6	68	57	17.6	30 - 130	30	
Phenanthrene	ND	0.13	68	70	2.9	65	106	48.0	30 - 130	30	r
Phenol	ND	0.23	59	69	15.6	59	51	14.5	30 - 130	30	
Pyrene	ND	0.23	70	75	6.9	63	127	67.4	30 - 130	30	r
Pyridine	ND	0.23	39	39	0.0	37	33	11.4	30 - 130	30	
% 2,4,6-Tribromophenol	72	%	81	84	3.6	69	58	17.3	30 - 130	30	
% 2-Fluorobiphenyl	66	%	63	65	3.1	56	49	13.3	30 - 130	30	
% 2-Fluorophenol	58	%	50	57	13.1	53	45	16.3	30 - 130	30	
% Nitrobenzene-d5	66	%	53	63	17.2	57	51	11.1	30 - 130	30	
% Phenol-d5	60	%	51	60	16.2	54	45	18.2	30 - 130	30	
% Terphenyl-d14	65	%	60	63	4.9	51	43	17.0	30 - 130	30	

Comment:

Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
October 22, 2018

Monday, October 22, 2018

Criteria: MA: S1G2, S1G3, S2G2, S2G3, S3G2, S3G3

State: MA

Sample Criteria Exceedances Report

GCB71362 - STANTECMA

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CB71362	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	13000	1500	2000	2000	ug/Kg
CB71362	$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	12000	1500	7000	7000	ug/Kg
CB71362	$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	1600	300	700	700	ug/Kg
CB71362	$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	17000	1500	7000	7000	ug/Kg
CB71362	$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	17000	1500	7000	7000	ug/Kg
CB71362	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	13000	1500	2000	2000	ug/Kg
CB71362	$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	12000	1500	7000	7000	ug/Kg
CB71362	$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	1600	300	700	700	ug/Kg
CB71362	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	13000	1500	7000	7000	ug/Kg
CB71362	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	13000	1500	7000	7000	ug/Kg
CB71362	$EPH_TARGET	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	12000	1500	7000	7000	ug/Kg
CB71362	$EPH_TARGET	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	1600	300	700	700	ug/Kg
CB71362	$EPH_TARGET	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	17000	1500	7000	7000	ug/Kg
CB71362	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	13000	1500	2000	2000	ug/Kg
CB71362	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	13000	1500	2000	2000	ug/Kg
CB71362	$EPH_TARGET	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	17000	1500	7000	7000	ug/Kg
CB71362	$EPH_TARGET	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	12000	1500	7000	7000	ug/Kg
CB71362	$EPH_TARGET	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	1600	300	700	700	ug/Kg
CB71362	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	13000	1500	7000	7000	ug/Kg
CB71362	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	13000	1500	7000	7000	ug/Kg
CB71362	CR-SM	Chromium	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	214	4.6	100	100	mg/Kg
CB71362	CR-SM	Chromium	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	214	4.6	100	100	mg/Kg
CB71362	CR-SM	Chromium	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	214	4.6	200	200	mg/Kg
CB71362	CR-SM	Chromium	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	214	4.6	200	200	mg/Kg
CB71362	CR-SM	Chromium	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-2	214	4.6	200	200	mg/Kg
CB71362	CR-SM	Chromium	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-3	214	4.6	200	200	mg/Kg
CB71362	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	613	4.6	200	200	mg/Kg
CB71362	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	613	4.6	200	200	mg/Kg
CB71362	PB-SM	Lead	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	613	4.6	300	300	mg/Kg
CB71362	PB-SM	Lead	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	613	4.6	300	300	mg/Kg
CB71362	PB-SM	Lead	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-2	613	4.6	600	600	mg/Kg
CB71362	PB-SM	Lead	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-3	613	4.6	600	600	mg/Kg
CB71364	$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	11000	1900	7000	7000	ug/Kg
CB71364	$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	1800	380	700	700	ug/Kg
CB71364	$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	16000	1900	7000	7000	ug/Kg
CB71364	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	12000	1900	2000	2000	ug/Kg
CB71364	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	12000	1900	2000	2000	ug/Kg
CB71364	$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	11000	1900	7000	7000	ug/Kg
CB71364	$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	1800	380	700	700	ug/Kg
CB71364	$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	16000	1900	7000	7000	ug/Kg
CB71364	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	12000	1900	7000	7000	ug/Kg

Monday, October 22, 2018

Criteria: MA: S1G2, S1G3, S2G2, S2G3, S3G2, S3G3

State: MA

Sample Criteria Exceedances Report

GCB71362 - STANTECMA

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CB71364	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	12000	1900	7000	7000	ug/Kg
CB71364	$EPH_TARGET	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	16000	1900	7000	7000	ug/Kg
CB71364	$EPH_TARGET	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	1800	380	700	700	ug/Kg
CB71364	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	12000	1900	2000	2000	ug/Kg
CB71364	$EPH_TARGET	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	11000	1900	7000	7000	ug/Kg
CB71364	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	12000	1900	2000	2000	ug/Kg
CB71364	$EPH_TARGET	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	11000	1900	7000	7000	ug/Kg
CB71364	$EPH_TARGET	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	16000	1900	7000	7000	ug/Kg
CB71364	$EPH_TARGET	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	1800	380	700	700	ug/Kg
CB71364	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	12000	1900	7000	7000	ug/Kg
CB71364	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	12000	1900	7000	7000	ug/Kg
CB71366	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	209	4.1	200	200	mg/Kg
CB71366	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	209	4.1	200	200	mg/Kg
CB71368	$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	41000	4600	7000	7000	ug/Kg
CB71368	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	32000	4600	2000	2000	ug/Kg
CB71368	$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	27000	4600	7000	7000	ug/Kg
CB71368	$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	4100	460	700	700	ug/Kg
CB71368	$8270-SMR	Indeno(1,2,3-cd)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	15000	4600	7000	7000	ug/Kg
CB71368	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	32000	4600	2000	2000	ug/Kg
CB71368	$8270-SMR	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	41000	4600	7000	7000	ug/Kg
CB71368	$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	4100	460	700	700	ug/Kg
CB71368	$8270-SMR	Indeno(1,2,3-cd)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	15000	4600	7000	7000	ug/Kg
CB71368	$8270-SMR	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	27000	4600	7000	7000	ug/Kg
CB71368	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	32000	4600	7000	7000	ug/Kg
CB71368	$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	4100	460	4000	4000	ug/Kg
CB71368	$8270-SMR	Benz(a)anthracene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	41000	4600	40000	40000	ug/Kg
CB71368	$8270-SMR	Dibenz(a,h)anthracene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	4100	460	4000	4000	ug/Kg
CB71368	$8270-SMR	Benz(a)anthracene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	41000	4600	40000	40000	ug/Kg
CB71368	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	32000	4600	7000	7000	ug/Kg
CB71368	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-2	32000	4600	30000	30000	ug/Kg
CB71368	$8270-SMR	Benzo(a)pyrene	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-3	32000	4600	30000	30000	ug/Kg
CB71368	$EPH_TARGET	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	4100	460	700	700	ug/Kg
CB71368	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	32000	4600	2000	2000	ug/Kg
CB71368	$EPH_TARGET	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	27000	4600	7000	7000	ug/Kg
CB71368	$EPH_TARGET	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	41000	4600	7000	7000	ug/Kg
CB71368	$EPH_TARGET	Indeno(1,2,3-cd)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	15000	4600	7000	7000	ug/Kg
CB71368	$EPH_TARGET	Dibenz(a,h)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	4100	460	700	700	ug/Kg
CB71368	$EPH_TARGET	Benzo(b)fluoranthene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	27000	4600	7000	7000	ug/Kg
CB71368	$EPH_TARGET	Indeno(1,2,3-cd)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	15000	4600	7000	7000	ug/Kg
CB71368	$EPH_TARGET	Benz(a)anthracene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	41000	4600	7000	7000	ug/Kg

Monday, October 22, 2018

Criteria: MA: S1G2, S1G3, S2G2, S2G3, S3G2, S3G3

State: MA

Sample Criteria Exceedances Report

GCB71362 - STANTECMA

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units
CB71368	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	32000	4600	2000	2000	ug/Kg
CB71368	$EPH_TARGET	Benz(a)anthracene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	41000	4600	40000	40000	ug/Kg
CB71368	$EPH_TARGET	Dibenz(a,h)anthracene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	4100	460	4000	4000	ug/Kg
CB71368	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	32000	4600	7000	7000	ug/Kg
CB71368	$EPH_TARGET	Benz(a)anthracene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	41000	4600	40000	40000	ug/Kg
CB71368	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	32000	4600	7000	7000	ug/Kg
CB71368	$EPH_TARGET	Dibenz(a,h)anthracene	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	4100	460	4000	4000	ug/Kg
CB71368	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-2	32000	4600	30000	30000	ug/Kg
CB71368	$EPH_TARGET	Benzo(a)pyrene	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-3	32000	4600	30000	30000	ug/Kg
CB71368	$TPH_SMR	Unidentified	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	6300	490	1000	1000	mg/kg
CB71368	$TPH_SMR	Unidentified	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	6300	490	1000	1000	mg/kg
CB71368	$TPH_SMR	Unidentified	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	6300	490	3000	3000	mg/kg
CB71368	$TPH_SMR	Unidentified	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	6300	490	3000	3000	mg/kg
CB71368	$TPH_SMR	Unidentified	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-2	6300	490	5000	5000	mg/kg
CB71368	$TPH_SMR	Unidentified	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-3	6300	490	5000	5000	mg/kg
CB71368	AS-SM	Arsenic	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	51.9	1.3	20	20	mg/Kg
CB71368	AS-SM	Arsenic	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	51.9	1.3	20	20	mg/Kg
CB71368	AS-SM	Arsenic	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	51.9	1.3	20	20	mg/Kg
CB71368	AS-SM	Arsenic	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	51.9	1.3	20	20	mg/Kg
CB71368	AS-SM	Arsenic	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-2	51.9	1.3	50	50	mg/Kg
CB71368	AS-SM	Arsenic	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-3	51.9	1.3	50	50	mg/Kg
CB71368	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	5150	65	200	200	mg/Kg
CB71368	PB-SM	Lead	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	5150	65	200	200	mg/Kg
CB71368	PB-SM	Lead	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	5150	65	300	300	mg/Kg
CB71368	PB-SM	Lead	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	5150	65	300	300	mg/Kg
CB71368	PB-SM	Lead	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-2	5150	65	600	600	mg/Kg
CB71368	PB-SM	Lead	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-3	5150	65	600	600	mg/Kg
CB71368	SB-SM	Antimony	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-2	34.6	6.5	20	20	mg/Kg
CB71368	SB-SM	Antimony	MA / SOIL S-1 STANDARDS / S-1 Soil & GW-3	34.6	6.5	20	20	mg/Kg
CB71368	SB-SM	Antimony	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-2	34.6	6.5	30	30	mg/Kg
CB71368	SB-SM	Antimony	MA / SOIL S-2 STANDARDS / S-2 Soil & GW-3	34.6	6.5	30	30	mg/Kg
CB71368	SB-SM	Antimony	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-2	34.6	6.5	30	30	mg/Kg
CB71368	SB-SM	Antimony	MA / SOIL S-3 STANDARDS / S-3 Soil & GW-3	34.6	6.5	30	30	mg/Kg

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

October 22, 2018 SDG I.D.: GCB71362

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report:

SVOA Narration

CHEM07 10/15/18-1: CB71362, CB71364, CB71366, CB71368, CB71369

The following Initial Calibration compounds did not meet RSD% criteria: 2,4-Dinitrophenol 28% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.
The following Initial Calibration compounds did not meet recommended response factors: 2-Nitrophenol 0.095 (0.1), Hexachlorobenzene 0.067 (0.1)
The following Initial Calibration compounds did not meet minimum response factors: None.

The following Continuing Calibration compounds did not meet % deviation criteria: Hexachlorobenzene 37%H (30%)
The following Continuing Calibration compounds did not meet Maximum % deviation criteria: None.
The following Continuing Calibration compounds did not meet recommended response factors: Hexachlorobenzene 0.092 (0.1)
The following Continuing Calibration compounds did not meet minimum response factors: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

VOA Narration

CHEM26 10/14/18-2: CB71362, CB71363, CB71365, CB71367

The following Initial Calibration compounds did not meet RSD% criteria: trans-1,4-dichloro-2-butene 21% (20%)
The following Initial Calibration compounds did not meet maximum RSD% criteria: None.

Up to eight compounds can be outside of ICAL %RSD criteria and up to sixteen compounds can be outside of CCAL %Dev criteria if less than 40%.

EPH Fractionation Standard

Monday, October 22, 2018

SDG I.D.: GCB71362

Effective Date(s): 10/20/17 - 10/20/18 **Analyst:** aw

AS #	TV	20ml	22ml	25ml	30ml	% Rec1	% Rec2	% Rec3	% Rec4	Rec Limits
2-Methylnapthalene bt	0	0.00	0.00	0.00	0.00					
Napthalene bt	0	0.00	0.00	0.00	0.00					
C9 - Nonane	40	25.00	24.00	25.00	24.00	62.5	60.0	62.5	60.0	
C-10 Decane	40	30.00	28.00	29.00	28.00	75.0	70.0	72.5	70.0	
1,2,3-Trimethylbenzene	40	31.00	32.00	32.00	30.00	77.5	80.0	80.0	75.0	
Napthalene	40	32.00	33.00	34.00	32.00	80.0	82.5	85.0	80.0	
2-Methylnaphthalene	40	33.00	34.00	36.00	33.00	82.5	85.0	90.0	82.5	
C12 - Dodecane	40	32.00	31.00	32.00	30.00	80.0	77.5	80.0	75.0	
Acenaphthalene	40	33.00	34.00	35.00	32.00	82.5	85.0	87.5	80.0	
Acenaphthene	40	33.00	34.00	35.00	33.00	82.5	85.0	87.5	82.5	
C14 - Tetradecane	40	34.00	33.00	34.00	32.00	85.0	82.5	85.0	80.0	
Fluorene	40	34.00	35.00	37.00	34.00	85.0	87.5	92.5	85.0	
C16 - Hexadecane	40	34.00	34.00	35.00	36.00	85.0	85.0	87.5	90.0	
Anthracene	40	36.00	38.00	39.00	37.00	90.0	95.0	97.5	92.5	
Phenanthrene	40	35.00	36.00	38.00	35.00	87.5	90.0	95.0	87.5	
C18 - Octadecane	40	35.00	34.00	36.00	35.00	87.5	85.0	90.0	87.5	
Fluoranthene	40	34.00	35.00	37.00	35.00	85.0	87.5	92.5	87.5	
Pyrene	40	34.00	35.00	37.00	35.00	85.0	87.5	92.5	87.5	
C20 - Eicosane	40	35.00	35.00	36.00	24.00	87.5	87.5	90.0	60.0	
C21 - Heneicosane	40	33.00	33.00	34.00	33.00	82.5	82.5	85.0	82.5	
C22 - Docosane	40	35.00	35.00	36.00	35.00	87.5	87.5	90.0	87.5	
Benzo(a)anthracene	40	36.00	34.00	36.00	35.00	90.0	85.0	90.0	87.5	
Chyrsene	40	32.00	35.00	37.00	32.00	80.0	87.5	92.5	80.0	
C24 - Tetracosane	40	36.00	36.00	37.00	36.00	90.0	90.0	92.5	90.0	
Benzo(b/k)fluoranthene (c	80	67.00	71.00	74.00	96.00	83.8	88.8	92.5	120.0	
Benzo(a)pyrene	40	33.00	34.00	36.00	33.00	82.5	85.0	90.0	82.5	
C26 - Hexacosane	40	35.00	35.00	35.00	34.00	87.5	87.5	87.5	85.0	
C28 - Octacosane	40	35.00	34.00	35.00	34.00	87.5	85.0	87.5	85.0	
Indeno/Dibenz(copk)	80	68.00	70.00	74.00	69.00	85.0	87.5	92.5	86.3	
Benzo(ghi)perylene	40	34.00	35.00	37.00	34.00	85.0	87.5	92.5	85.0	
C30 - Tricotane	40	35.00	34.00	35.00	34.00	87.5	85.0	87.5	85.0	
C32 - Dotriacontance	40	34.00	34.00	35.00	33.00	85.0	85.0	87.5	82.5	

EPH Fractionation Standard

SDG I.D.: GCB71362

Effective Date(s): 10/20/17 - 10/20/18 **Analyst:** aw

AS #	TV	20ml	22ml	25ml	30ml	% Rec1	% Rec2	% Rec3	% Rec4	Rec Limits
C34 - Tetratriacontane	40	34.00	33.00	34.00	33.00	85.0	82.5	85.0	82.5	
C36 - Hexatriacontane	40	33.00	32.00	34.00	32.00	82.5	80.0	85.0	80.0	
C38 - Octatriacontane	40	32.00	31.00	32.00	31.00	80.0	77.5	80.0	77.5	
C40 - Tetracontane	40	32.00	32.00	33.00	32.00	80.0	80.0	82.5	80.0	

Notes: EPH Frac Check Solution EPH05O-solvent transfer into hex, frac 1ml. Dilute 5x to run tv=40 fid3 10/20/17 Lot:111216-1063516

Cooler: Yes [✓] No [ ]
Coolant: IPK [✓] ICE [ ] No [ ]

PHOENIX
Environmental Laboratories, Inc.

CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: info@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-8726

Temp 3 °C Pg of

Data Delivery/Contact Options:
[ ] Fax:
[ ] Phone:
[✓] Email: Joseph.Salvetti@stantec.com

Customer: Stantec
Address: 400 Crown Colony Dr
Quincy, MA

Project: Heritage Park
Report to: Joseph Salvetti
Invoice to: Joseph Salvetti
Joseph.Salvetti@stantec.com

Project P.O:

This section MUST be completed with Bottle Quantities.

Client Sample - Information - Identification

Sampler's Signature: Bri Date: 10/12/18

Matrix Code:
DW=Drinking Water **GW**=Ground Water **SW**=Surface Water **WW**=Waste Water
RW=Raw Water **SE**=Sediment **SL**=Sludge **S**=Soil **SD**=Solid **W**=Wipe **OIL**=Oil
B=Bulk **L**=Liquid

Analysis Request

PHOENIX USE ONLY SAMPLE #	Customer Sample Identification	Sample Matrix	Date Sampled	Time Sampled	Low level VOC	High level VOC	Naphthalene	EPH	VPH	5VOC, PCB, Pest, Herb, MCP, Methyl Naph	TPH + Alt. Reactivity, Cond.	GL Amber 8 oz. w/H3PO4	Soil VOA Vials (3) methanol (2) H2O	GL Soil container (4) oz	GL Soil container (8) oz	40 ml VOA Vial [ ] As is [ ] HCl	GL Amber 1000ml [ ] As is [ ] H2SO4	PL As is [ ] 250ml [ ] 500ml [ ] 1000ml	PL H2SO4 [ ] 250ml [ ] 500ml	PL HNO3 250ml	PL NaOH 250ml	Bacteria Bottle w/thio	Bacteria Bottle as is
71362	HP-18a	S	10/12/18	12:00	✓	✓	✓	✓	✓	✓	✓	~~5~~		1	2								
71363	HP-14a	S	10/9/18	11:00	✓	✓			✓			~~5~~											
71364	HP-14a/13a	S	10/9/18	11:00			✓	✓		✓	✓			1	2								
71365	HP-26a	S	10/11/18	11:00	✓	✓			✓			~~5~~											
71366	HP-26a/27a	S	10/11/18	11:00			✓	✓		✓	✓			1	2								
71367	HP-16a	S	10/10/18	11:00	✓	✓			✓			~~5~~											
71368	HP-15a/16a/17a	S	10/10/18	11:00			✓	✓		✓	✓			1	2								
71369	HP-21a	S	10/11/18	10:30			✓	✓		✓	✓			1	2								

Relinquished by:	Accepted by:	Date:	Time:
Brian Foley		10-12-18	14:45
		10/12/18	18:22

Comments, Special Requirements or Regulations:

Turnaround:
[ ] 1 Day*
[ ] 2 Days*
[ ] 3 Days*
[ ] Standard
[ ] Other
* SURCHARGE APPLIES

RI
[ ] Direct Exposure (Residential)
[ ] GW
[ ] Other

CT
[ ] RCP Cert
[ ] GW Protection
[ ] SW Protection
[ ] GA Mobility
[ ] GB Mobility
[ ] Residential DEC
[ ] I/C DEC
[ ] Other

MA
[ ] MCP Certification
[ ] GW-1
[ ] GW-2
[ ] GW-3
[ ] S-1
[ ] S-2
[ ] S-3
[ ] MWRA eSMART
[ ] Other

State where samples were collected: _____

Data Format
[ ] Excel
[ ] PDF
[ ] GIS/Key
[ ] EQuIS
[ ] Other

Data Package
[ ] Tier II Checklist
[ ] Full Data Package*
[ ] Phoenix Std Report
[ ] Other

* SURCHARGE APPLIES

ATTACHMENT 6
Historical City Directory

Lynn Heritage State Park
154 Lynnway
Lynn, MA 01902

Inquiry Number: 5393000.5
August 20, 2018

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OR DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction orforecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2017 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc. or its affiliates is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

EDR is licensed to reproduce certain City Directory works by the copyright holders of those works. The purchaser of this EDR City Directory Report may include it in report(s) delivered to a customer. Reproduction of City Directories without permission of the publisher or licensed vendor may be a violation of copyright.

Data by
infoUSA®
Copyright©2008
All Rights Reserved

RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2014	☑	☐	EDR Digital Archive
2010	☑	☐	EDR Digital Archive
2005	☑	☐	EDR Digital Archive
2000	☑	☐	EDR Digital Archive
1995	☑	☐	EDR Digital Archive
1992	☑	☐	EDR Digital Archive
1989	☑	☐	Polk's City Directory
1984	☑	☐	Polk's City Directory
1979	☑	☐	Polk's City Directory
1974	☑	☐	Polk's City Directory
1969	☑	☐	Polk's City Directory
1966	☑	☐	Polk's City Directory
1962	☑	☐	Polk's City Directory
1957	☑	☐	Polk's City Directory
1953	☑	☐	Polk's City Directory
1948	☑	☐	Polk's City Directory
1943	☑	☐	Polk's City Directory
1939	☑	☐	Polk's City Directory

EXECUTIVE SUMMARY

Year	***Target Street***	***Cross Street***	***Source***

FINDINGS

TARGET PROPERTY STREET

154 Lynnway
Lynn, MA 01902

Year	*CD Image*	*Source*
LYNNWAY		
2014	pg A2	EDR Digital Archive
2010	pg A6	EDR Digital Archive
2005	pg A10	EDR Digital Archive
2000	pg A14	EDR Digital Archive
1995	pg A18	EDR Digital Archive
1992	pg A22	EDR Digital Archive
1989	pg A23	Polk's City Directory
1984	pg A24	Polk's City Directory
1979	pg A25	Polk's City Directory
1974	pg A26	Polk's City Directory
1969	pg A27	Polk's City Directory
1966	pg A28	Polk's City Directory
1962	pg A29	Polk's City Directory
1962	pg A30	Polk's City Directory
1957	pg A31	Polk's City Directory
1957	pg A32	Polk's City Directory
1957	pg A33	Polk's City Directory
LYNNWAY (FKA BROAD AND WASHINGTON		
1953	pg A34	Polk's City Directory
1953	pg A35	Polk's City Directory
1953	pg A36	Polk's City Directory
1953	pg A37	Polk's City Directory
1948	pg A38	Polk's City Directory
1948	pg A39	Polk's City Directory
1948	pg A40	Polk's City Directory
1943	pg A41	Polk's City Directory
1943	pg A42	Polk's City Directory
1943	pg A43	Polk's City Directory

FINDINGS

Year	*CD Image*	*Source*
1943	pg A44	Polk's City Directory
1943	pg A45	Polk's City Directory
1939	pg A46	Polk's City Directory
1939	pg A47	Polk's City Directory
1939	pg A48	Polk's City Directory

LYNNWAY ST

1995	pg A19	EDR Digital Archive

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 2014

89	CHARLES, JUNIOR
91	GARDNER, JOHN R
	GLASS, ANDREA
	VARGAS, MARIA
93	GONZALEZ, MIGUEL
	HERMOSILLA, MAURICIO
	LEPPEK, JASON A
	ROSARIO, MARCOS
95	FRANCIS, CARYL A
	GRIFFIN, MICHAEL
	SEASIDE FLORIST INC
	SMITH, TAMMY
98	LYNNWAY ENTERPRISES INC
	WHALE INC
101	BROWN, RICHARD
	MARTIN, DANNY J
	MOOERS, JOHN
	RAYVII, RAVEN
107	SILVA, ANTHONY J
150	ALLEN REALTY
	ANGIULO, BARBARA
	BABIN, ELIZABETH M
	BALLETTO, STEVEN E
	BETTER RUTH
	BETTER, RUTH
	BROPHY, MARY E
	BROWN, SUSAN J
	CARON, PETER R
	CHERMESINO, DAVID J
	CITRO, GUY A
	COHEN, BARRY D
	DROUSHIOTIS, CHRIS A
	DYER, BARBARA A
	FREEMAN, MATTHEW E
	GASBARRO, JAMES A
	GASS, DAVID A
	GAUDET, PAUL C
	GIBB, IRINA
	GOLDEN, MARSHA
	GOMEZ, SAUL
	HARRISON, MARCIA T
	HUSTON, DONALD L
	JACOBS, DEAN
	KOZLOVSKY, ALEXANDER L
	LAIDLEY, STEVEN J
	MAHAR, KEVIN D
	MANCINI, RAFFAELE
	MARLEY, JAMES A
	MODERN DAY CO INC
	MONKSTERS INC

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 2014 (Cont'd)

150	MOROVITZ, LESTER R
	MOZZETTA, ALBERT J
	NATHAN, PAUL H
	OHARE, KAREN E
	PAVLIS, MARIA
	PURPLE, ROSS A
	REHAL, RICHARD J
	REVELOTIS, ESTELLE
	ROULUSONIS, ROBERT R
	RYCKMAN, WILLIAM E
	SCALZI, MARIO
	SHINSKAYA, VALENTINA G
	SMITH, CHRISTINE M
	SPEARE, SERRINA
	SPINELLI, CAROL A
	TALLENT, DEBRA E
	TANZER, MICHAEL S
	VALENTINA SHINSKAYA
	WOODROME, ROSE L
	WOODS, SAMUEL J
	YALOFF, DOLPH
152	ADCCO INCORPORATED
	ATLANTIC COAST OPHTHAMOLOGY
	ATTORNEY RANDI J POTASH
	BEST PETROLEUM
	BEST PETROLEUM INC
	BHSI LLC
	BIG BLUE REALTY LLC
	CONFLUENCE HOLDINGS CORP
	CONTROL QUEST INC
	DUT WESTWARD PHARMACEUTIC
	FRANZESE & FRANZESE PC ATTY
	GALLERY MELISSA DMD
	H O ZIMMAN INC
	HARTLEY JOHN M
	KAUFMAN LAUREN D
	KEHOE & PLAYTER
	KEHOE AND TRADER
	KERRINS MICHAEL LAW OFFICE
	LAURIOR & ASSOCIATES
	LAW OFFICE OSHEA HARTLEY LYNN
	LYNN CONDO PROPERTIES LLC
	MOODY MARY
	OSHEA WILLIAM
	PARKER CO
	PENNY PLATE INC
	PORT OF SEA INC
	QUINN OF LYNN INSURANCE CORP
	SAFE HARBOR RETIREMENT PLG
	SAVASTA WEILER CO

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 2014 (Cont'd)

152	SEAPORT DENTAL
	SOBELMAN RUSSELL
	TALIS WILLIAM G
	VOLK KITTREDGE & CO
	WAYNE JUDITH A
154	ATTORNEY CARL D GOODMAN
	BACHELLAR, THERESA
	BESPALKO LILIA
	BESPALKO, VLADIMIR
	BRADLEY, VICTOR R
	BRUCKNER, WILLIAM
	CARLINO, MARY L
	CASTELLANOS, EDWARD K
	CENTRAL PHARMACY BOSTON INC
	CENTURY PHARMACY INC
	CERRONE, ROBYN E
	CHASSEN, STUART
	CHEUNG, VINCENT W
	CIAMPA, MIKE D
	COGAN, KENNETH A
	COLLINS, DUANE S
	COMMUNICATION CTR FORTUNE INC
	CRESS, DONALD J
	DEFAZIO, JOHN J
	DELUCA, JOEL A
	DOCKSIDE LLC
	DOCKSIDE REALTY LLC
	EASTERN INDEX INC
	FAIA, WILLIAM M
	FERRARO, PAUL A
	FIELDS JOSEPH P
	FITZGERALD, DARLENE
	FLAHERTY, BERNARDO
	FLETCHER, JOHN F
	FOSTER, MAUREEN A
	FREEMAN, BERTRAM H
	FREYTIS, GREGORY D
	FUCILLO, LAURIE N
	GERSHMAN, MICHAEL B
	GILROY, MAUREEN C
	GUREVICH, NATALIYA J
	GURRY, ROBERT V
	HALKO, JUDITH M
	KENNEDY, EDWARD T
	KIRBY, DAVID A
	KRIKORIAN, SHEILA A
	MCCAFFERTY, MARY S
	MELANSON, NJ J
	MONDELLO, GUIDO
	MONTGOMERY, PAUL A

LYNNWAY 2014 (Cont'd)

154	MORROW, DAVID
	MOTRONI, PAUL W
	MUSINSKY, AMY B
	NANCY B NORMAN ESQUIRE INC
	NOLLET, JEFFREY D
	OCONNELL, DANIEL F
	PROVO, STEVEN J
	ROCHE, LINDA A
	RODRIGUE, LOUIS J
	RUSSO, MICHAEL A
	SEAPORT LANDING MARINA
	SEVINOR, RALPH W
	SMALLIS, JAMES M
	SVENSON, ALLISON
	SZCZAWINSKI, WILLIAM A
	TERECHIN, SEMEN
	VALUZHENICH, NATALYA V
	VARM, RT
	VOLKOV, ARKADIY
157	RODRIGUE, CAROL
207	BANGS, JACQUELYN
220	ROBBINS, LINDA
276	R & B IMPORTS LTD
282	U-HAUL CO OF MASSACHUSETTS
295	LYNNWAY AUTO SALES INC
300	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 2010

91	ALLEYNE, TREZON
	GLASS, MICHAEL A
	VARGAS, MARIA
93	ALAVAREZ, YAZNA
	ALMEIDA, NATASHA
95	BREGOLI, JESSICA
	SEASIDE FLORIST INC
	SMITH, TAMMY
98	LYNNWAY ENTERPRISES INC
100	DOWNING, CECIL I
101	BROWN, RICHARD
	ESTRADA, ELIZABETH
	MARTIN, JAMES H
	SANTIAGO, ADA
107	SILVA, ANTHONY J
150	22 CENTRAL LLC
	ALLEN REALTY
	ANGIULO, BARBARA
	ARTS AND ETC
	AYLWARD, WILLIAM F
	BABIN, ELIZABETH M
	BETTER, RUTH
	BOCHICCHIO, DANIEL J
	BROPHY, MARYELIZABETH
	BROWN, SUSAN J
	CAMILLE, CARDARE B
	CARON, PETER R
	CHERMESINO, DAVID J
	COHEN, BARRY D
	DAVOLIO, LEONARD W
	DROUSHIOTIS, CHRIS A
	FERULLO, WILLIAM R
	FINNIGAN, WILLIAM F
	GASS, DAVID A
	GAUDET, PAUL C
	GIANNIS LIMITED PARTNERSHIP
	GOLDEN, MARSHA A
	HARRISON, MARCIA T
	HIGHLANDS COALITION INC
	HUSTON, DONALD L
	JACOBS, DEAN F
	LERNER, BORIS S
	LYNN INVESTING IN NEIGHBORHOOD
	MAHER, ROBERT D
	MAHONEY, KATE
	MANCINI, RALPH C
	MARLEY, JAMES A
	MASCIALE, ROSLYN
	MCNEIL, JEANNE M
	MODERN DAY CO INC

LYNNWAY 2010 (Cont'd)

150 MONKSTERS INC
MOORE, ELAINE M
MUNIZ, WESLEINE
NATHAN, PAUL H
PAVLIS, MARIA
PRESSMAN, FLORENCE
PRIME, ROBERT E
RAPPA, KATHLEEN
REHAL, RICHARD J
ROULUSONIS, ROBERT R
RYCKMAN, WILLIAM E
SCENNA, RUDOLPH
SHINSKAYA, VALENTINA G
SPEARE, SERRINA
TALLENT, DEBRA E
TANZER, HARRIET A
WOODROME, ROSE L
WOODS, SAMUEL J
YALOFF, BEVERLY M

152 ADCCO INCORPORATED
ATLANTIC COAST OPHTHAMOLOGY
BEST PETROLEUM INC
BHSI LLC
BIG BLUE REALTY LLC
CAMERAS 2 CASH
CONTROL QUEST INC
FRANZESE & FRANZESE PC ATTY
GALLERY MELISSA DMD
GROWTH MKTG STRATEGIES LLC
H O ZIMMAN INC
HARTLEY JOHN M
KAUFMAN LAUREN D
KEHOE & PLAYTER
KEHOE AND TRADER
KITTREDGE & ASSOCIATES
LAW OFFICE OSHEA HARTLEY LYNN
LYNN CONDO PROPERTIES LLC
LYNNWAY MS LLC
MC GLOIN & GUSTAFSON
MOODY MARY
MOUNT VERNON CONDO LLC
OSHEA WILLIAM
PARKER CO
PORT OF SEA INC
PROUT FINANCIAL SERVICES
QUINN OF LYNN INSURANCE CORP
RONAN EDWARD S
SAFE HARBOR RETIREMENT PLG
SAVASTA WEILER CO
SEAPORT DENTAL

LYNNWAY 2010 (Cont'd)

152	SHUTZER LAURIOR & STEWART
	SOBELMAN RUSSELL
	TALIS WILLIAM G
	VOLK KITTREDGE & CO
	WAYNE JUDITH A
154	BESPALKO LILIA
	BESPALKO, PAVEL Y
	BRADLEY, VICTOR R
	BURKE, HENRY
	CASTELLANOS, EDWARD
	CENTRAL PHARMACY BOSTON INC
	CERRONE, ROBYN E
	CHASSEN, STUART
	CHEUNG, VINCENT W
	CIAMPA, MIKE
	COGAN, KENNETH A
	COLLINS, DUANE S
	CRESS, DONALD J
	DAVIS, BRENDA L
	DEFAZIO, BOBBY
	DELUCA, JOEL A
	DIGIULIO, PAT
	DOCKSIDE REALTY LLC
	FOSTER, MAUREEN A
	FREEDMAN, BRIAN L
	FREEMAN, BERTRAM H
	FREYTIS, GREGORY D
	FUCILLO, LORRAINE N
	GERSHMAN, MICHAEL B
	GILROY, MAUREEN C
	GOULD, CHARLENE
	GUREVICH, NATALIYA J
	HORRIGAN MARK S
	HORRIGAN, MARK
	JAMALI, MAJID A
	KANE, THERESA J
	KELLY, J M
	KENNEDY, EDWARD T
	KRIKORIAN, ARAKEL
	MACDONALD, TRACY M
	MELANSON, JOSEPH P
	MILLER, MARILYN J
	MONDELLO, GUIDO
	MONTGOMERY, PAUL A
	MOTRONI, PAUL W
	MRABAT, HICHAM
	MURPHY, KAREN A
	MUSINSKY, AMY B
	NESTOR, HUGH F
	NOLLET, JEFFREY D

LYNNWAY 2010 (Cont'd)

154	NORMAN NANCY B ATTY
	NORMAN NANCY B ESQUIRE
	NORMAN, NANCY
	PALLESCHI, ELLEN M
	PANGRATIS, K
	PAPPAS, THOMAS
	PERLINO, ENRICO R
	PROVO, STEVEN J
	RANTA, JACQUELINE F
	RIVERA, VALENTIN
	ROCHE, LINDA A
	RODRIGUE, LOUIS J
	ROWE, HARVEY F
	RUSSO, DONNA J
	SEAPORT LANDING MARINA
	SMALLIS, JAMES M
	SPARTOS, ANTHONY G
	SPORTS TOURS INC
	SVENSON, PATRICIA L
	SZCZAWINSKI, MARGARET L
	TERECHIN, SEMEN
	VALIDATIONWORLD
	VOLKOV, ARKADIY
	WINSPERE, DALE L
	YELLOWROSE MUSIC WORLDWIDE
260	METAL FASCINATIONS
276	P V C FENCE SYSTEMS N Y & N E
	P V C FENCE SYSTEMS NENG
	R & B IMPORTS LTD
	VINYL CONCEPTS
282	U-HAUL CO OF MASSACHUSETTS
295	LYNNWAY AUTO SALES INC

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 2005

91	GLASS, HAROLD C
93	BOCCHETTI, JAMES J
	MARTINEZ, VIRGINIA
	RANDAZZO, BETTY
	WONGUS, MELISSA A
95	NOONAN, MATTHEW
	PASSARIELLO, ROBIN
98	24 HOUR LOCKSMITH
	LYNNWAY ENTERPRISES INC
100	DOWNING, CECIL I
101	CALABRESE, JOHN R
	CALVANI, BARRY
	CORBETT, DAVID
	HARTREY, MELANIE J
	STUMPF, KATHLEEN G
107	SILVA, ANTHONY J
150	ANGIULO, BARBARA
	AYLWARD, WILLIAM F
	BABIN, ELIZABETH M
	BELLEVILLE, SUSAN A
	BOCOCK, JUDITH A
	BROPHY, MARYELIZABET
	CAMMARATA, KAREN
	CENTRAL ROAST BEEF & GRILL
	CHAMNESS, WILLIAM J
	CHERMESINO, DAVID J
	COHEN, BARRY D
	DAVOLIO, LEONARD M
	DESMOND, ROBERT J
	DROUSHIOTIS, CHRIS A
	FINNIGAN, WILLIAM F
	GAUDET, PAUL C
	GOLDEN, MARSHA A
	GRINLEY, THOMAS J
	HARRISON, MARCIA T
	HARTZFELD, JANICE B
	HUSTON, DONALD L
	JEWISH FUNERAL DIRECTORS AMER
	JOSEPH, STEPHANE
	KOZLOVSKY, ALEXANDER L
	LAIDLEY, STEVEN J
	LAUBNER, KARL L
	LERNER, ALEXANDER
	LYSENKO, OLGA
	MAHONEY, JUSTIN V
	MARLEY, JAMES A
	MASCIALE, ROSLYN
	MATARESE, JOSEPH H
	MCNEIL, DEBORAH A
	MEYER, CARLA J

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 2005 (Cont'd)

150	MODERN DAY CO INC
	MOORE, ELAINE M
	MOSCARITOLO, MICHAEL A
	NATHAN, PAUL H
	PAVLIS, MARIA
	PRESSMAN, FLORENCE
	PRIME, ROBERT E
	PURPLE, ROSS A
	REHAL, RICHARD J
	RYCKMAN, WILLIAM E
	SCENNA, RUDOLPH
	SHINSKAYA, VALENTINA G
	SILCK, DEBRA E
	WHYTE, DARYL L
	WOODROME, MARGARETTE
	WOODS, SAMUEL J
	YALOFF, BEVERLY M
152	ADCCO INCORPORATED
	AMERICAN LIABILITY & RECOVERTY
	ATLANTIC COAST OPHTHAMOLOGY
	BEST PETROLEUM INC
	BHSI LLC
	BOLDEN BRYAN
	CAMERAS 2 CASH
	CONTROL QUEST INC
	GALLERY MELISSA DMD
	H O ZIMMAN INC
	HARTLEY JOHN M
	KEHOE & PLAYTER
	KEHOE AND TRADER
	KITTREDGE & ASSOCIATES
	L 3 REALTY INC
	MANCUSO LEONARD N
	MC GLOIN & GUSTAFSON
	OSHEA WILLIAM
	PARKER CO
	PITTS & PITTS LAW OFFICES
	PIXELGLOW STUDIOS
	PROUT FINANCIAL SERVICES
	QUINN OF LYNN INSURANCE CORP
	RIGHT TURN VALLE
	RONAN EDWARD S
	SAFE HARBOR RETIREMENT PLG
	SAVASTA WEILER CO
	SEAPORT CHIROPRACTIC
	SHUTZER LAURIOR & STEWART
	SOBELMAN RUSSELL
	TALIS WILLIAM G
	VALLE ASSOC
	VOLK KITTREDGE & CO

LYNNWAY 2005 (Cont'd)

152	WAYNE JUDITH A
	WEILER MERRY C
154	BARRY, MICHAEL J
	BARTON, BERTHA J
	BESPALKO, LILIA
	BORGATTI, ALFRED L
	BOTOLINO, G
	BRADLEY, VICTOR R
	BURKE, THOMAS H
	BURT, ROBERT J
	CERRONE, ROBYN E
	CERVO, MAPLE A
	CHASSEN, SHELDON
	CHEUNG, VINCENT W
	CHUVAIVE, ALEXANDER
	CLEVENGER, THOMAS L
	COGAN, KENNETH A
	COLLINS, DUANE S
	COMMUNICATION CENTER FORTUNE
	COOGAN, TONYA E
	CORRAO, FRANCESCA A
	CRESS, DONALD J
	DAVIS, BRENDA L
	DEFAZIO, BOBBY
	DELUCA, JOEL A
	DIGIULIO, PAT
	DOWNING, CECIL I
	DUBOIS, MICHAEL A
	FLAHERTY, WALTER J
	FLYNN, TR
	FOSTER, MAUREEN A
	FREEDMAN, BRIAN L
	FREEMAN, BERTRAM H
	FREYTIS, GREGORY D
	GALATSKAYA, IRINA
	GERSHMAN, MICHAEL B
	GERSTENHABER, RONALD A
	GILROY, MAUREEN C
	GOLDFARB, ALEX
	GUREVICH, NATALIE
	HERDEGEN, STEPHEN M
	JACOBS, DEAN F
	JAMALI, MAJID A
	KANE, THERESA J
	KENNEDY, EDWARD T
	KENNEDY, MICHAEL R
	KIRBY OF LYNN
	KUKOLJ, DUSKO
	LESTER, MICHAEL R
	MACDONALD, TRACY M

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 2005 (Cont'd)

154	MCCAFFERTY, FOSTER
	MELANSON, JOSEPH P
	MILLER, MARILYN J
	MINICHELLO, ANTHONY J
	MONDELLO, GUIDO
	MORAN & SWEENEY
	MOTRONI, PAUL W
	MURPHY, KAREN A
	MUSE, MICHAEL J
	MUSINSKY, AMY B
	NOLLET, JEFFREY D
	ONORATO, ANTHONY P
	PALLESCHI, E
	PANAKIO-ROWE, LISA J
	PAPPAS, SERRINA
	PERLINO, ENRICO R
	POTH, GREGORY J
	PROVO, STEVEN J
	RANTA, JACQUELINE
	ROCHE, LINDA A
	RODRIGUE, LOUIS J
	ROWE, HARVEY F
	RUSSO, DONNA J
	SCALI, PAUL B
	SEAPORT LANDING MARINA
	SEVINOR, RALPH W
	SHERRY, JOHN I
	SMALLIS, JAMES M
	WILLIAMS, SHEILA M
	YELLOWROSE MUSIC WORLDWIDE
260	METAL FASCINATIONS
270	MILES, MICHAEL T
276	MURRAYS AUTO & TOWING
	R & B IMPORTS LTD
282	ATTWILL FURNITURE CO
	U-HAUL CO OF MASSACHUSETTS
295	LYNNWAY AUTO SALES INC

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 2000

91	GLASS, MICHAEL
93	BOCCHETTI, JAMES J
	DAMARYS, E
95	JENKINS, BRENDA
	RED & WHITE FASHIONS
98	LYNNWAY ENTERPRISES INC
100	DOWNING, CECIL I
101	BENOIT, NANCY
	CASTRO, MANUEL
	CORBETT, D
107	SILVA, ANTHONY J
150	AGNEW, CAWLEY
	APOTHEKER, HARVEY
	ARSENAULT, GEORGE
	AYLWARD, WILLIAM F
	BALLETTO, CAMILLE
	BOCOCK, JUDITH A
	BROPHY, CAROLE
	CARROLL, EDWARD J
	CHAMNESS, WILLIAM J
	CICCONE, JOHN
	COHEN, BARRY D
	DANIELS, MEL P
	DEMPSEY, L
	DESMOND, ROBERT J
	DROUSHIOTIS, CHRIS
	FANTI, LINA
	FINNIGAN, WILLIAM F
	GAUDET, B
	GAUDET, C M
	GINSBERG, B
	GLOSBAND, ARLINE
	GOLDEN, MARSHA
	GRINLEY, THOMAS J
	GROGAN, J R
	HAZEL, WILLIAM I
	HICKMAN, JOHN
	HICKMAN, S
	HOWELL, DAVID C
	JACOBS, DEAN F
	JAWORSKI, G A
	JEWISH FUNERAL DIRECTORS AMER
	LAIDLEY, STEVEN J
	LEPKE, P A
	LYNCH, KEVIN
	MAHONEY, JUSTIN V
	MEYER, C J
	MOROVITZ, DAVID
	MOSCARITOLO, MICHAEL
	MURPHY, DAVID

LYNNWAY 2000 (Cont'd)

150 NEWCOMB, W
PASSELL, JASON A
PAVLIS, MARIA
PERKINS, C A
PERRY, SUSAN L
PIERCE, JOHN E
PRESSMAN, F
REARDON, PAUL T
RILEY, JAMES H
RILEY, M L
RITCHIE, NANCY A
ROBERTO, DANTE C
RYCKMAN, WILLIAM E
SANTORA, JUDITH
SARRO, P
SCENNA, SHIRLEY A
STEVENS, ANTHONY R
SURETTE, GILBERT E
VISRAM, SALINA
WEISENFELD, SUSAN
WOODS, SAMUEL
YALOFF, BEVERLY
ZACCARIA, KAREN

152 ADCCO INCORPORATED
BEST PETROLEUM INC
BOLDEN BRYAN C ATTORNEY
DOCKSIDE CAFE INC
FINN MARVIN LAW OFFICES OF
GALLERY MELISSA DMD
KEHOE & PLAYTER
MACDONALD MICHAEL F ATTORNEY
MACDONALD, TIMOTHY J
MANCINI ANTHONY F
MANCUSO LEONARD N
MC GLOIN & GUSTAFSON
MORAN & SWEENEY
PARKER COMPANY LIMITED THE
QUINN OF LYNN INSURANCE CORP
SAFE HARBOR RETIREMENT PLG
SAVASTA JOSEPH A COMPANY INC
SEAPORT CHIROPRACTIC
SHUTZER LAURIOR & STEWART
SOBELMAN RUSSELL
VALLE, MARY E
VOLK ROGER L CPA
WEILER MERRY C
ZIMMAN H O INC

154 ALLEN, RITA
BARENBOIM, HERMAN S
BARTON, ALBERT J

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 2000 (Cont'd)

154 BELOSTOCK, NATALIE
BROWN, SUSAN J
CARUSO, THOMAS
CERRONE, ROBYN
CHEONG, VINCENT
CHRISTOPHER, FRANK
CLEVENGER, SANDRA
COGAN, KENNETH A
DAVIS, J
DEFAZIO, BOBBY
DEFAZIO, JOHN
DOW, PHYLLIS M
DUBOIS, MICHAEL
DUNNE, ROBERT A
EISON, MICHAEL E
EREKSON, ELEANOR M
FARIOLE, L
FIRST BOSTON INSURANCE AGENCY
FITZGERALD, MILDRED B
FLYNN, AMY T
FREEDMAN, BRIAN
GASBARRO, JAMES A
GASS, SOPHIE W
GERSHMAN, MICHAEL B
GERSTENHABER, RONALD
GILROY, MAUREEN
HARAUSZ, STEPHEN A
HAYES, THOMAS E
HERCHER, WILLMOT
KENNEDY, EDWARD T
KING, THOMAS
LESTER, DONALD R
MACDONALD, JOHN K
MAPLE, CERVO
MARSHA LAND PLAYNICK CO
MELANSON, JOSEPH P
MILLER, MARILYN
MONDELLO, GUIDO
MUSE, MICHAEL J
MUSINSKY, A
PERLINO, E
PLAVNICK, L
POPKIN, DOUGLAS F
PROVO, STEVE
RANTA, BARBARA B
RICHARD, ANNE L
RODRIGUE, LOUIS
ROWE, HARVEY
SCALI, PAUL B
SCHWARTZ, EARL E

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 2000 (Cont'd)

154	SEAPORT LANDING MARINA INC
	SEVINOR, RALPH W
	SWEETLAND, M
	WELCH, MARY J
	WILLIAMS, S M
276	R & B IMPORTS LTD
282	U-HAUL CO OF BOSTON INC
295	LYNNWAY AUTO SALES INC
1100	DOWNING, CECIL
5050	GIAMPA, L

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 1995

95	IAPPINI PAUL
98	LYNNWAY ENTERPRISES INC
150	RAPID TAX
152	ADCCO INCORPORATED
	AMERICAN LBLTY & RECOVERTY
	BEST PETROLEUM INC
	CERULLI MICHAEL ATTORNEY
	DIAL CORP
	FREEMAN THOMAS J
	GALLERY MELISSA DMD
	HARTLEY JOHN M
	HARVARD FINANCIAL SERVICES
	LARKIN & LARKIN
	MACDONALD MICHAEL F ATTORNEY
	MC GLOIN & GUSTAFSON
	MORAN & SWEENEY
	OSHEA WILLIAM
	PORTLAND SHELLFISH SALESINC
	QUINN OF LYNN INS CORP
	QUINN OF LYNN INSURANCE CORP
	RIGHT TURN INC
	SAFE HARBOR RETIREMENT PLG
	SANPHY PODIATRY
	SAVASTA JOE CO
	SEAPORT INSURANCE AGENCY INC
	SOBELMAN RUSSELL
	VIGEANT ALBERT F
154	CITY OF LYNN SEAPORT LND MRNA
	FIRST BOSTON INSURANCE AGENCY
	FRANGIOSA MASONARY
	INTERIORS BY ZOLA
	SEAPORT LANDING MARINA INC
254	SEAPORT REALTY
276	R & B IMPORTS LTD
282	U-HAUL CO OF BOSTON INC

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY ST 1995

68	DIMEGLIO, JOHN
	POULOS, ARTHUR & CLAUDIA
69	DAVIS, ALEXANDER
	JEISING, B
	MICHAUD, BEVERLY
	RAMOS, ANTONIO
	SHULMAN, NAUM
	WILSON, L
75	COLTON, D F
84	BLANCHARD, MICHAEL
93	KANNAIR, N E &
95	KING, T & K
	MANALAYSAY, FLYNN
	MASON, S
100	DOWNING, CECIL I
101	BRACKETT, SEAN M
107	MONSAM, C C
150	AIKEN, DAVID
	AYLWARD, WM F
	BERG, FRANK H
	BERG, LYNNE
	BROWN, S J
	CARROLL, EDW J
	CARROLL, FRANCIS J
	CASS, R D
	CICCONE, JOHN
	DANIELS, MEL P
	DEMPSEY, LIESELOTTE
	DROUSHIOTIS, CHRIS
	ELLIS, N & D
	EMMA, JACLYN
	FINNIGAN, WM F
	GAUDET, L & R
	GILHOOLEY, JAS J
	GINSBERG, BENJ
	GLOSBAND, A
	GOLDEN, M
	GROGAN, THOS
	HICKMAN, JOHN & SUZANNE
	HOWELL, DAVID C
	HUMMER, G B
	JACOBS, DEAN F
	LADHA, S
	LEE, S
	LEPKE, PATRICIA A
	LYNCH, KEVIN
	MEYER, C J
	MEYERS, S
	MEYERS, STEPHEN M
	MIN, YOUNG

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY ST 1995 (Cont'd)

150	MURPHY, DAVID & ANGELA
	NEWCOMB, W
	NOONAN, TIMOTHY
	O'HARE, KAREN E
	PERRY, S L
	RICHARDSON'S FUNERAL HOMES-RES
	RYCKMAN, WM E, JR
	SAGER, ARNOLD & BARBARA
	SAUNDERS, DAVID A
	SCENNA, S A
	STEVENS, ANTHONY R
	SURETTE, GILBERT E
	VISRAM, AMIN & SALINA
	WEISENFELD, C
	WEISENFELD, CARRIE
	WEISENFELD, S
	WOODS, BRENDA
	YALOFF, B
154	BALL, MARY J
	BARENBOIM, HERMAN S, ACCTNT
	BELOSTOCK, N
	CALDWELL, L
	CERRONE, ROBYN
	CHEONG, VINCENT
	CHIAVOLA, MICHAEL
	COGAN, KENNETH A
	COLE, GEO L
	CONTI, A T
	DEFAZIO, JOHN
	DOW, WALTER N
	DUNNE, ROBT A
	EREKSON, E M
	FUCILLO, L
	GAINES, GEO W
	GALLAGHER, FRANCIS J
	GALLAGHER, KWI
	GASS, NATHAN
	GERSTENHABER, RONALD
	GOLDMAN, CHAS J & JODY K
	GRIZZELL, J
	HAWN, RANDY
	HOWARD, L G
	KAIN, JAS E
	KENNEDY, EDW T
	KING, THOS & KATHERINE
	MACDONALD, JOHN K & MARY
	MAZZA, JOS & JEAN
	MCDONAUGH, FRANK
	MCGONIAGLE, WM
	MCLAUGHLIN, DANL W

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY ST 1995 (Cont'd)

154	MILLS, ELAINE
	MONDELLO, GUIDO
	MONIZ, LEONARD F JR
	MUSINSKY, A
	NEWELL, BRENDA
	PIERNI, VICTOR
	PLAVNICK, LAWRENCE & MARSHA
	PSARRIS, JOHN
	ROACH, SANDRA E
	SAVERY, K
	SCALI, PAUL B
	SCHWARTZ, EARL E
	SEVINOR, RALPH W
	SIMMONS, FAYE A
	STOUTER, THOS E
	SWEETLAND, M L
	TAYLOR, ESTELLE LANDY
	TAYLOR, SIDNEY M
	VIOLA, SEBASTIAN S
	WATT, E
	WELCH, MARIE & MARY JO
254	VARJABEDIAN, C EDWARD

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

LYNNWAY 1992

95	IAPPINI PAUL
98	LYNNWAY ENTERPRISES INC
152	BEST PETROLEUM INC
	L 3 REALTY INC
	ROBSON CHAS H
154	CITY LYN SEPRT LNDNG MRNA
	MEDICAL STRATEGIES
	SEAPORT LANDING MARINA

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY 1989

727★Stone A 585-8327
728 Freedman Benj 581-2329
730 Molin David 592-1459
732 Lefebrve Cora 593-0416
734 Hurwitz Saul 595-4398
802 Forgione Anthony
803 Kagan N 599-2747
804 Lawrence Emma
805 Berlin Geo I 599-7963
806 Pearlstein Chas 581-7126
807 Isbit
808 Chernyak Sima 592-8985
809 Rubin Dorothy H 598-6736
810 Schneider
811★Brunelle C 581-1743
812★Carito Jos G 593-6384
814 Weinstein Samuel W 593-4842
816 Poor Frances 593-6945
818 Wolke Charles R 593-0476
820 Zachari Jas
821 Gilroy Joseph 593-5105
822 Davis Geraldine Mrs 599-7097
823 Rosenblatt
824 Cushner Sayde 592-8941
825 Broderick Leonard 581-0343
826★Potyomkin Mikhal 581-3401
827 Bloom Louis 592-9267
828 Bowen Donald 599-9104
830★Guzman James 599-1254
832 Marini Amerigo 598-7861
834 Hamilton
63 Apartments
1★Robinson L 593-1001
1a No Return
2 No Return
3 Lanzo
4★Rico Janice
5 Fox
6★Rodriguez Nelson 581-6455
7 Perchenko
8 Nwokeji
9 Cantave
10 Thudin
11 Palmer
12 Mc Ree
13 Figueroa
★Jenkins Henry 599-7954
15★Wolicki
16 Newton Rouns
17 Klauck
TUDOR ST ENDS
68 Volunteer Yacht Club 595-9770
69 Sherburne Apartments
10★Caban David
21★Watson R
22 Powers Michl 599-4483
23 No Return
23★Mendez
24 Garrett
25 Spurlin Richd
31 Reese Arvan
32 Braxton Crayle
33 Vacant
34 Rivera
35★Sen Luyi
36★Brannen C M 595-0454
41 No Return
42 No Return
43 Cross Dennis 598-9017
44 Mac Guire Nola
45 Miller
46★Braun Richd 581-5118
75 Colton Davida F Mrs 592-4560
25 Khut Jenny ◎ 581-3892

NEWHALL ST ENDS

85 Vacant
86 Lynn Yacht Club Inc 595-9825
87 Office Products Services ofc equip 598-4414
91 Vacant
93 Walton Hazel Mrs ◎ 593-5789
95 Able T V & Stereo sls & serv 599-7800
★Guerrero Lucas 581-1141
Mc Carthy John J 595-4190
98 Porthole Pub restr 595-7733
100 Seaport Landing Marine 592-5821
Brennick J ◎ 593-5423
101 Cansino
Bannister
Nobles
107 Wagner Donna 598-5405
152 Robson Chas H lwyr 592-5000

10

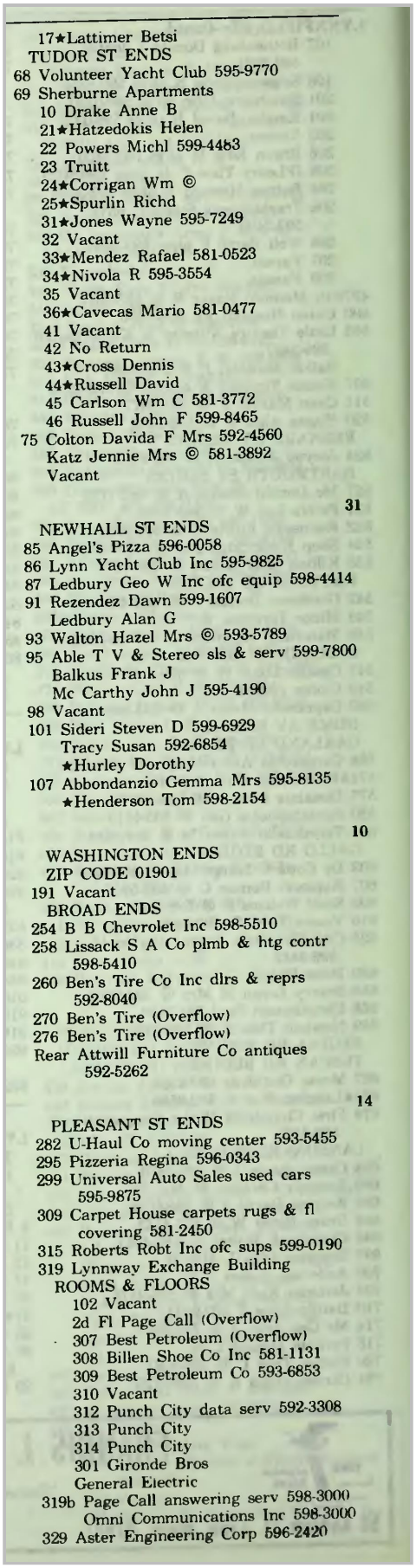
154 Seaport Landing Condominium apts
201 Freed Fred P ◎ 595-5297
202 Feldbau Rose Elliot ◎ 592-9876
203 Kennedy Edw T ◎ 593-1695
205 Nocella John A ◎ 592-6028
206 Plaunick Lawrence ◎ 592-3023
207 Waxman Dave ◎ 592-0808
208★Mak Joanna ◎ 598-3768
209 Kane Katherine ◎ 595-3184
210★Barenboim Herman 598-3141
211★Cogan Kenneth A ◎ 599-6202
214★Erekson Eleanor M 581-3922
212★Howard Lorraine G ◎ 599-2597
216★Padova Anne H ◎ 581-5592
216 Zola Richd ◎ 593-0352
301★Quadrini Frank D ◎
302★Sardo Kim ◎ 581-6927
305★Scali Paul ◎ 596-2026
307 Schwartz Earl E ◎ 593-0601
309 Canavan Thos F ◎ 593-6471
311 Campotalli Fred ◎ 595-2298
312 Popkin Douglas F ◎
402 Gross Addison ◎ 593-4924
403 Musinsley Amy ◎ 598-5954
405 Nebelkopf Cary ◎ 595-0387
407 Belostock Natalie ◎ 592-5004
408 Perlow Kenneth J ◎ 581-1966
408 Bloom Richard L ◎ 581-1966
409 Frangiosa Salvatore ◎ 587-2994
410★Shachat Chas D ◎
411 Tabata Kavumi 599-4992
412 Goldman Charles 598-2133
413★Gass Nathan 595-8701
414 Flanagan Jean M
501★Popkin Douglas
503 Cook C L ◎ 593-0907
504 Sullivan James T ◎ 593-1663
507 Howard Steven R ◎ 599-1198
508 Shapiro Harland
511★Sardo Nick ◎ 595-3834
512 Brennick Thomas A ◎ 599-4812
513★Mayo Gary L ◎
518★Crowley Peter J ◎
522 Mondello Guido ◎ 592-9952
603★Taylor Sidney M ◎
604 Seaport Chandlery 593-9669
604 Nebelkoph Susan 593-9669
WASHINGTON ENDS
ZIP CODE 01901
BROAD ENDS
254 Vacant
Rear Attwill Furniture Co antiques 592-5262

14

PLEASANT ST ENDS
31 282 U-Haul Co moving center 593-5455
295 Pizzeria Regina 596-0343

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY 1984



17★Lattimer Betsi
TUDOR ST ENDS
68 Volunteer Yacht Club 595-9770
69 Sherburne Apartments
10 Drake Anne B
21★Hatzedokis Helen
22 Powers Michl 599-4483
23 Truitt
24★Corrigan Wm ©
25★Spurlin Richd
31★Jones Wayne 595-7249
32 Vacant
33★Mendez Rafael 581-0523
34★Nivola R 595-3554
35 Vacant
36★Cavecas Mario 581-0477
41 Vacant
42 No Return
43★Cross Dennis
44★Russell David
45 Carlson Wm C 581-3772
46 Russell John F 599-8465
75 Colton Davida F Mrs 592-4560
Katz Jennie Mrs © 581-3892
Vacant

31

NEWHALL ST ENDS
85 Angel's Pizza 596-0058
86 Lynn Yacht Club Inc 595-9825
87 Ledbury Geo W Inc ofc equip 598-4414
91 Rezendez Dawn 599-1607
Ledbury Alan G
93 Walton Hazel Mrs © 593-5789
95 Able T V & Stereo sls & serv 599-7800
Balkus Frank J
Mc Carthy John J 595-4190
98 Vacant
101 Sideri Steven D 599-6929
Tracy Susan 592-6854
★Hurley Dorothy
107 Abbondanzio Gemma Mrs 595-8135
★Henderson Tom 598-2154

10

WASHINGTON ENDS
ZIP CODE 01901
191 Vacant
BROAD ENDS
254 B B Chevrolet Inc 598-5510
258 Lissack S A Co plmb & htg contr 598-5410
260 Ben's Tire Co Inc dlrs & reprs 592-8040
270 Ben's Tire (Overflow)
276 Ben's Tire (Overflow)
Rear Attwill Furniture Co antiques 592-5262

14

PLEASANT ST ENDS
282 U-Haul Co moving center 593-5455
295 Pizzeria Regina 596-0343
299 Universal Auto Sales used cars 595-9875
309 Carpet House carpets rugs & fl covering 581-2450
315 Roberts Robt Inc ofc sups 599-0190
319 Lynnway Exchange Building
ROOMS & FLOORS
102 Vacant
2d Fl Page Call (Overflow)
307 Best Petroleum (Overflow)
308 Billen Shoe Co Inc 581-1131
309 Best Petroleum Co 593-6853
310 Vacant
312 Punch City data serv 592-3308
313 Punch City
314 Punch City
301 Gironde Bros
General Electric
319b Page Call answering serv 598-3000
Omni Communications Inc 598-3000
329 Aster Engineering Corp 596-2420

LYNNWAY 1979

37 Flynn Genevieve C © 598-2610
38 Fitzgerald Gerald J © 595-2583
40 Mc Carty Theresa Mrs © 595-4118
42 Roach Timothy J © 598-4543

32

LYNNWAY —FROM 375 LYNN SHORE DR TO REVERE LINE WD 4 PRECINCT 4 WD 5 PRECINCT 4 WD 6 PRECINCT 4

ZIP CODE 01902
17 Christie's Inc restr 598-1122
SURFSIDE RD BEGINS
31 Richdale Superette (Br) dairy prod 599-9823
35★Doane Michl G 595-3329
★Doane Lawrence
39 Apartments
1 Vacant
41 Burnett Howard F © 595-8665
45 Seaworms bait dlr
46 Redwood Lounge 595-9490
48 Star Sign Co 595-2322
Rent A Crane Co
49 Daley Robt T © 598-1831
63 Apartments
1 Sully
1a Burns Devina Mrs 595-3830
2 O'Neil
3 Gomez
4 Vacant
5 Rizo Nicholas 599-1792
6 Vacant
7 Ausiello
8 Vacant
9 Vacant
10 Berit
11 Vacant
12 Winters Geo F 599-2068
12a Vacant
16★Fenton L 581-2189
17★Guida Harry W 595-4866
TUDOR ST ENDS
68 Volunteer Yacht Club 595-9770
69 Sherburne Apartments
10★Drake Anne B
21★Regan B
22 Kessell
23★Truitt Clifton 598-5095
24 Vacant
25★Clinton Barbara Mrs 599-4200
31★Casey Michl J
32★Feldman Kenneth L 598-9472
33★Galley Donald C
34 Wilson
35★Kirk James
36★Kergarauat Jean Claude 599-4139
41★Amdur J D 598-5386
42★Dominique L M 595-3835
43 Glass Albert J
44 Emerson Frank W 592-1724
45★Carlson Wm C
46 Russell John F 599-8465
75 Colton Davida F Mrs 592-4560
Katz Saml ©
Leavey Terrence
★Weisfeller Boris

31

NEWHALL ST ENDS
85 Angel's Pizza restr 595-0508
86 Lynn Yacht Club Inc 595-9825
87 Ledbury Geo W Inc ofc equip 598-4414
91 Ross Lloyd G 592-5805
Ledbury Alan G
93 Walton John P © 593-5789
95 North Star Electronics 599-7800
Able T V sls & serv 599-7800
Bean Douglas S 592-8251
Mc Carthy John J 595-4190
98 Vacant
101 Vacant
107 Abbondanzio Gemma Mrs 595-8135
Speranza Victor 592-9213

10

WASHINGTON ENDS
122 Vacant
125 Port Hole Pub restr 595-7733
130 Lynnway Amoco gas sta 595-8966
133 Hutchinson Drug Co Inc 592-5812
Medicare Equipment Supply Co Inc 595-7900
135 Vacant
157 Shawmut Merchants Bank (Br) 581-5200
172 Bill & Bob's Sandwich Shop 595-8978
180 Lynnway Marine boat renting 595-9033
181 Top Gas 599-9438
ZIP CODE 01901
187 Laundry Center 595-9535
189 Russ' Barber Shop 595-9747
191 First East Savings 598-2060
195 Stop & Shop (Br) gro & meats 595-8028
211 Friendly Ice Cream (Br) restr 595-5757
BROAD ENDS
254 Beacon Chevrolet Inc 598-5510
258 Lissack S A Co plmb & htg contr 598-5410
260 Ben's Tire Co Inc 592-8040
270 Len Richd G Co telv sls & serv 592-1834
276 Vacant

14

PLEASANT ST ENDS
282 Lynnway Moving Center 581-0800
295 Lyn-Gate Auto Center 599-6409
299 Beech Cycles Inc 599-2709
Raven Motor Car Co 581-1759
309 Carpet House discount factory outlet 581-2450
315 Roberts Robt Inc ofc sups 599-0190
319 Lynnway Exchange Building
ROOMS
102 Vacant
2nd Fl Midland Management & Marketing Inc phys 581-5300
2nd Fl Keating Paul R lwyr 581-5305
208 Smith David H Inc (Overflow) real estate
209 Smith David H Inc (Overflow)
210 Smith David H Inc 599-0300
210 C W A Local 1302
212 Vacant
213 Telcer Telephone USa Inc 593-9141
214 Vacant
217 Block Stanley H phys 592-0449
217 Bukowski Alex W phys 592-0449
301 Hill Alexander Advertising 599-6822
307 Vacant
308 Allied District Local 128 Amalgamated meat ctrs 592-0212
309 Best Petroleum Co 593-6853
310 Leonnig Enterprises Inc import sls brokers 599-5716
312 Bryant Data Service 592-3308
313 Bryant Data Service (Overflow)
314 Bryant Data Service (Overflow)
315 Vacant
319b Page Call answering serv 598-3000
Omni Communications Inc 598-3000
330 North American Philips (Norelco) lighting equip 599-7500
BUBIER TER BEGINS
333 Dunkin Donuts (Br) 599-9435
KINGMAN BEGINS
349 Aamco Transmissions 599-5100
354 Paul's Luxury Cars auto dlr 581-1268
361 Duddy's Radial Tire Center 581-3470
364 Harbor Mall (Side Entrance)
Vacant
Hancock John Mutual Life Insurance 595-2433
BLOSSOM ST ENDS
BLOSSOM ST EXTN BEGINS
377 For Pete's Sake restaurant 595-9503
395 Notini Albert H & Sons Inc 581-7800
ZIP CODE 01905

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY 1974

LYNNWAY—Contd
Vacant
39 Apartments
1★Zoulaiam Aramo
2 Fratangelo Palmina Mrs
3 Sullivan Cath 595-0374
4 Boulanger Charles
5 Alfred Saml M 595-6679
6 Holdren Wm
7 Bradley Annabella Mrs
8 Pastore Murgida 595-7648
9 Dondis Herbert
10 Brewer Lydia T Mrs 595-5471
11 Lappin Jayne 599-1139
12 Grob Ida
41 Burnett Howard F © 595-8665
46 Vacant
48 Roland Geo Co ice cream 595-9045
Vacant
Vacant
49 Daley Robt T © 598-1831
63 Apartments
1 Lavan Charles N 595-1848
1a Burns Harry 595-9521
2 Brooks
3 Vialle Stuart 592-2980
4 Vacant
5★Black Michl 599-4271
6 Colton Ray 599-2149
7 Harris Mabel
8 Vacant
9 Nurse Jacqueline 598-8297
10 Topham Edw 599-3482
11 Luuko Paul 599-1076
12 Winters Geo F 599-2068
12a Vacant
14★Meehan James 581-7062
15 Wilson Richd
16★Gipson Ramon 598-9056
17 Redmond Marie Mrs 599-2307
TUDOR ST ENDS
68 Volunteer Yacht Club 595-9770
69 Sherburne Apartments
10★Margarone Joseph 581-6056
21 Vacant
22★Rouillard Barbara
23 Dyer John F 598-9413
24 Hanson
25★Clinton Gerald 599-9059
31★Talbot Philip 599-8257
32★Martel Martin 595-6884
33★Pillsbury Vernon 599-2151
34★Klane Lawrence 581-7563
35★Legasey Ruth
36★Hart Frank 593-2598
41 Malesweski Richd
42 Knowles Delina
43 Crimble
44★Legasey John 599-6267
45★Corcoran James
46 Hatch Wm
75 Colton Leonard A 592-4560
Vacant
Vacant
Vacant

31

NEWHALL ST ENDS
85 Richdale Milk Store (Br) gro 599-9823
86 Lynn Yacht Club Inc 595-9825
87 Ledbury Geo W Inc ofc equip 598-4414
91 Ross Lloyd G 592-5805
Toszkoski Constant
93 Walton John P © 593-5789
95 Wholesale Bldg Manco Whse
★Bean Douglas S 592-8251
Mc Carthy John J 595-4190
98 Bay State Cutting Die Co Inc 592-1890
101 Priest Robt I 598-3958
Finnegan Blanche Mrs 592-8266
Francis Robt G
107 Abbondanzio Gemma Mrs 595-8135
★La Fracia Anthony 592-9213
WASHINGTON ST ENDS
115 Inflatable Boat Center Of New England 599-4206

10

WASHINGTON ENDS
122 Beef & Sea restr 595-9197
125 Blue Dolphin restr 581-2632
130 Lynnway Amoco gas sta 595-8966
133 Hutchinson Drug Co Inc 592-5812
135 Vacant
172 Bill & Bob's Sandwich Shop 595-8978
180 Lynnway Marine boat renting 595-9033
181 Top Gas 599-9438
ZIP CODE 01901
187 Laundry Center self serv 595-9535
189 Russ' Barber Shop 595-9747
191 Lynn Institution For Savings (Br) 598-2060
195 Merchants-Warren National Bank Of Salem 745-8500
Stop & Shop (Br) gro & meats 595-8028
211 Friendly Ice Cream (Br) 595-5757
BROAD ENDS
254 Beacon Chevrolet Inc 598-5510
258 Lissack S A Co htg & ventilating contr 598-5410
260 Ben's Tire Co Inc 592-7502
270 Len Richd G Co telv sls & serv 592-1834
276 Vacant

14

PLEASANT ST ENDS
280 Vacant
282 Vacant
284 Vacant
295 Artie's Texaco 595-9674
299 Beech Cycles Inc 599-2709
309 Carpet House discount factory outlet 581-2450
315 Roberts Robt Inc ofc sups 599-0190
319 Lynnway Exchange Building
102 Vacant
103 Vacant
107 Vacant
204 Vacant
207 Packard Instrument Sales Corp scientific measuring equip 599-2115
208 Vacant
209 Vacant
210 Vacant
211 Vacant
212 Allied District Local No 128 (Overflow)
213 Allied District Local No 128 592-0212
214 Vacant
215 Vacant
216 Vacant
217 Vacant
301 La Femme Elegante Inc 599-1141
302 La Femme Elegante Inc (Overflow)
303 Vacant
304 Vacant
305 Vacant
306 Vacant
307 Vacant
308 Vacant
309 Vacant
310 Prudential Insurance Co Of America The 599-6960
312 Bryant Data Service 592-3308
313 Bryant Data Service (Overflow)
314 Bryant Data Service (Overflow)
315 Vacant
316 Tessler Benj lwyr 593-4000
319a Vacant

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY 1969

LYNNWAY--CONTD
68 VOLUNTEER YACHT CLUB 595-9770
69 SHERBURNE APARTMENTS
1 STEPHENS JOSEPHINE H MRS 595-3116
1A LESBURT HELENA M 598-1868
2 RICKSON MARION
3 VACANT
4 QUINN NELLIE MRS
5 RICHAROSON HAROLD L 593-0019
6 DUNN THOS F
7 VACANT
8 MARTIN PHILLIP
9 MC CANN EILEEN MRS
10 BRYANT BLANCHE B MRS
11 BRYANT HILLIARD S
12 ANTAYA PHILIP 593-0481
14 FRANKS IRVING 599-3935
15 DUNN NORMA 599-7684
16 VACANT
17 NEVES RICHD
18 VACANT
STREET CONTINUED
75 COLTON LEONARD A 595-6926
KALOGERIS LEO

31

---NEWHALL ST ENOS
85 BEACHWAY BAKERY & DELICATESSEN 595-9566
86 LYNN YACHT CLUB INC 595-9825
87 LEDBURY GEO W INC OFC EQUIP 598-4414
91 ROSS LLOYD G 592-5805
TOSZKOSKI CONSTANT
93 WALTON JOHN P ● 593-5789
95 A B C REALTY CO INC 595-1410
BROWNE ROBT J INC GENL CONTRS 595-1411
BEANE DOUGLAS S 592-8251
MC CARTHY JOHN J 595-4190
98 BAY STATE CUTTING DIE CO 592-1890
101 PRIEST ROBT I 598-3958
FINNEGAN BLANCHE MRS 592-8266
103 FRANCIS ROBT G 598-8218
107 KING FREOK C ● 598-4072
---WASHINGTON ST ENOS
115 TRADE WIND COIFFURES 599-9422
117 TRADE WIND (OVERFLOW)

10

---WASHINGTON ENOS
122 BILL & BOB'S SANDWICH SHOP RESTR 595-8978
124 HARBOR LOUNGE INC COCKTAIL LOUNGE 598-1444
125 BLUE DOLPHIN RESTR 595-9502
130 LYNNWAY AMOCO GAS STA 595-8966
133 HUTCHINSON DRUG CO INC 592-5812
135 VACANT
172 BURGER BOY INC RESTR 599-2286
180 LYNNWAY MARINE BOAT RENTING 595-9033
---ZIP CODE 01901
187 LAUNDRY CENTER SELF SERV 599-9831
189 RUSS' BARBER SHOP 595-9747
191 LYNN INSTITUTION FOR SAVINGS (BR) 598-2060
195 JOHNSON PRODUCTS 599-9438
STOP & SHOP (BR) GRO & MEATS 595-9537
211 FRIENDLY ICE CREAM (BR) 595-5757
---BROAD ENOS
254 BEACON CHEVROLET INC 598-5510
258 LISSACK S A CO HTG & VENT CONTR 598-5410
260 BEN'S TIRE CO INC 592-7502
270 LEN-RICHD G CO TELV SLS & SERV 592-1834
276 VACANT
278 VACANT

14

---PLEASANT ST ENOS
280 VACANT
281 BAY STATE PETROLEUM INC (BR) GAS STA 595-8927
282 WHITING MARINE WORKS BOAT RENTAL & REPAIRS 595-8976
284 VACANT
295 NORTH SHORE SERVICE STATION INC 595-9097
299 MALONEY MOTORS USED CARS 599-2727
309 MASSACHUSETTS GLASS INC 592-4010
315 ROBERTS-ROBT INC OFC SUPS 599-0190
319 LYNNWAY EXCHANGE BUILDING
HOMEMAKERS LOAN & CONSUMERS DISCOUNT CO 599-7100
INDUSTRIAL ASSOCIATES PHYSICAL EXAM 599-2494
NORTH SHORE DENTAL PORCELAINS LABORATORIES INC 599-5850
BRYANT DATA SERVICE 592-3308
TAB ENGINEERING INC MECHANICAL CONTRS 593-1100
HUERAS BEAUTY STUDIO INC BEAUTY SHOP 599-1141
PRUDENTIAL INSURANCE CO 599-6960
STARRATT JAMES I ARCHT 593-2698
LIPTON THOS J INC (BR) WHOL TEA 599-4131
REGNANTE REGNANTE & TESSLER LWYRS 595-8700
U S M MACHINERY CO DIVISION OF U S M CORP 592-1300
HARTFORD INSURANCE GROUP 593-5325
GENERAL ELECTRIC CREDIT CORP 595-7770
ALLIED DISTRICT LOCAL NO 128 592-0212
PACKARD INSTRUMENT SALES CORP SCIENTIFIC MEASURING EQUIP 599-2115
INTERNATIONAL PERSONNEL SERVICE 593-6010
GENERAL MOTORS ACCEPTANCE CORP (BR) 598-5210
327 HASKELL F H LUMBER CORP 592-3300
330 CHAMPION LAMP WORKS DIV ITT ILLUMINATION INC 593-2000
---BUBIER TER BEGINS
333 DUNKIN DONUTS (BR) 595-9219
---KINGMAN BEGINS
349 AAMCO TRANSMISSION 599-5100
354 ROY'S SUNOCO SERVICE STATION 595-9719
361 RAYMOND'S TIRE STORE (BR) 595-9893
364 ATLANTIC BUILDING & SUPPLY CO INC 593-5500
369 JACK & MACKS SERVICE STA 592-8060
NORTH SHORE BATTERY CO 592-8060
370 VACANT
---BLOSSOM ENOS
377 VARLEY'S DINER 592-1091
395 HANSEN ENGINEERING & MACHINERY CO INC 598-5810
405 VACANT
---ZIP CODE 01905
411 MIDAS MUFFLER SHOP 598-9811
417 RELIABLE TIRE CO 592-7105
---SHEPARD ST ENOS
429 LIBBY BROTHERS GAS STA 595-9640

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY 1966

---TUDOR ENDS
68 VOLUNTEER YACHT CLUB 595-9770
69 SHERBURNE APARTMENTS
1 STEPHENS JOSEPHINE H MRS
595-3116
1A LESBURT HELENA M 598-1868
2 RICKESON FRED
3 TRECARDEN GENEVIEVE
EATON FRANCES MRS
5 AINSWORTH LILLIAN L
592-5102
7 MC CANN EILEEN MRS
8 VACANT
9 KLEIN HYMAN 595-7729
10 BRYANT CLYDE L
11 BRYANT HILLIARD S
12 ANTAYA PHILIP 593-0481
14 FRANKS IRVING
15 VACANT
16 KNOWLES DELINA
17 VACANT
18 BOUTOT GEO 595-6244
STREET CONTINUED
75 COTTON LEONARD A 595-6926
NO RETURN
KALOGERIS LEO

31

---NEWHALL ENDS
85 BEACHWAY BAKERY & DELICATESSEN
595-9566
86 LYNN YACHT CLUB INC 595-9825
87 LEDBURY GEO W INC TYPEWRITERS
598-4414
91 VACANT
93 WALTON JOHN P ® 593-5789
95 VACANT
SCOTT ANNIE F MRS 593-9655
O'BRIEN JOSEPH
98 BAY STATE CUTTING DIE CO
592-1890
101 PRIEST ROBT I 598-3958
VACANT
103 PUSTORINO PETER T 595-5234
107 KING FREDK C ®
---WASHINGTON ENDS
115 VACANT
117 VACANT

10

---WASHINGTON ENDS
122 BILL & BOB'S RESTR 595-8978
124 HARBOR LOUNGE INC COCKTAIL
LOUNGE 598-1444
125 CLUB WHITE WHALE
CLUB WHALE ASSOCIATES INC
RESTR 595-9590
130 LYNNWAY AMOCO GAS STA
595-8966
133 HUTCHINSON DRUG CO INC
592-5812
172 VACANT
180 LYNNWAY MARINE BOAT RENTING
595-9033
189 RUSS' BARBER SHOP 595-9747
191 LYNN INSTITUTION FOR SAVINGS
(BR) 598-2060
195 BRADLEE'S GRO & MEATS
595-9537
---BROAD ENDS
254 BEACON CHEVROLET INC 598-5510
258 LISSACK S A CO HTG & VENT
CONTR 598-5410
260 BEN'S TIRE CO INC 592-7502
276 ANSIN HARRY WASTE CO PAPER
STOCK 598-4451
278 VACANT

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY 1962

Street continued
41 Burnett Howard F © 595-8665
45 Vacant
46 Redwood Lounge 595-9490
47 Vacant
48 Roland Geo Co ice cream 592-9365
49 Daley Dennis A © 598-1831
63 **Apartments**
1 Lavan Chas N 595-1848
2 No return
3 Domey Josephine M Mrs 595-3949
4 Gendron Edw T
5 Himmelstein Sarah Mrs 595-3024
6 Vialle Stuart F 592-2980
7 Vacant
8 Vacant
9 Vacant
10 Zide Lillian Mrs
11 Powers John L 598-4573
12 Winter Geo R 595-6951
12A Zieff Hannah Mrs
14 Kapson Sylvia Mrs 592-7257
15 Sakellar Benj
16 Ritter Grace C Mrs 593-2399
17 Snyder Ethel Mrs 595-3832
18 Buffum Carolyn E Mrs
Tudor ends
68 Volunteer Yacht Club 595-9770
69 **Sherburne Apartments**
Apartments:
1 Stephens Josephine H Mrs 595-3116
1A Lesburt Helena M
2 No return
3 Trecartin Genevieve E
4 Graven Margt
5 Ainsworth Lillian L 592-5102
6 No return
7 Hue Maud B Mrs 595-1429
8 Swanson Eric H 595-1844
9 Klein Hyman 595-7729
10 Bryant Clyde L
11 Bryant Hilliard S
12 Patrizzi Michl 592-2661
14 No return
15 Ross Lloyd G 592-5805
16 Knowles Delina M Mrs
17 Collette Geo A
18 No return
Street continued
75 Katz Saml A © 592-3178
Kalogeris Leo
Newhall ends
83 Beachway Bakery & Delicatessen 595-9566
86 Lynn Yacht Club Inc 595-9825
87 Ledbury Geo W Inc typewriters 598-4414
91 Markandonis Sofoklis © 593-1983
Meno Chas
93 Walton John P © 593-5789
95 Scott Bertram A 593-9653
97 Dunn Eddie Ski Shop 598-5124

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY 1962

LYNNWAY—Contd
98 Bay State Cutting Die Co 592-1890
99 Vacant
101 Priest Robt I 592-8179
Finnigan Edw
103 Shosterman Lena Mrs ◎ 593-8512
106 Brooks-Sprague Corp whol seafood 595-1410
107 King Fredk C ◎

10

Washington ends
120 Lynn Beach Miniature Golf
122 Lickin' Chicken restr
124 Blew Ankor Inc cocktail lounge 598-1444
125 Club White Whale
130 Lynnway Amoco gas sta 595-8966
133 Hutchinson Drug Co Inc 595-7900
172 Shore Drive Esso gas sta 595-9208
180 Lynnway Marine boat renting bait and tackle 595-9033
Broad ends
254 Beacon Chevrolet used cars 598-4726
258 Lissack S A Co htg and ventilating contr 598-4726
260 Ben's Tire Shop used tires 592-7502
276 Ansin Harry Waste Co paper stock 598-4451
278 Gene's Gulf Station 595-8932
Pleasant ends

14

280 Hutchinson Lbr Co 592-5300
281 Bay State Petroleum Inc gas sta 595-8927
282 Whiting Marine Works boat rental and reprs 595-8976
284 Ray's Cities Serv 595-9095
295 Plourde's Esso Serv Sta 595-9898
299 Lynn Auto Wrecking Co Inc 592-0490
309 Lynnway Auto Glass Co 595-4010
315 Knox Joseph E & Co Inc cutting die mfrs 592-3422
319 Martin Willard D Ins Agcy Inc 595-1122
Martin Willard D Inc real est and ins mortgages 595-1122
327 Haskell F H Lbr Corp 592-3300
330 Consolidated Electric Lamp Co 593-2000
Champion Lamp Works 593-2000
Bubier ter begins
333 Dunkin Donuts 598-2716
Kingman begins
349 Vacant
350 Shore Line Lobster Co 592-4626
354 Roy's Sunoco Serv Sta 595-9719
361 Raymond's Tire Stoar 595-9893
364 Atlantic Building & Sup Co Inc

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY 1957

LYNNWAY—From 375 Lynn Shore dr to Revere line, wd 4, prect 2, wd 5, prect 1, wd 6, prects 1 and 2

3△Jack in the Box restr
17△Christie's restr
Surfside rd begins
31△Surfside Pharmacy
35 Vacant 1
△Lohr Gertrude Mrs 2
39 **Apartments**
1 Babineau J Frank
△Gordon Jacob
2△Fratangelo Jos
Geelbrock Jos
3 Rosen E
4△Epstein Hyman
5△Woolfson Solomon
Lafrenier A F
6 Lambert Gerald
Landers Ella
41△Burnett Howard F
45 Frank & Jim's Bait Shop
46△Roland's restr
47△Bedard Jos A
48△Roland Geo Co ice cream
49 Daley Dennis A
63 **Apartments**
Neal Thos E bsmt

Target Street	Cross Street	Source
✔	-	Polk's City Directory

LYNNWAY 1957

LYNNWAY--Contd
63--Apartments—Contd
1 Lavan Chas
2 Pelter D J
3 Domey Josephine
4 Gendron Edw T
5△Himmelstein Sarah Mrs
6 Feldman Bessie Mrs
8△Higgins Laura D
9△Aster Lena
12△Donovan Jos M
15 Sakellar Benj
16 Ritter Grace C Mrs
17△Snyder E Mrs

Tudor ends

68△Volunteer Yacht Club
69 **Sherburne Apartments**
1 Vacant
2 Johnson Alice Mrs
3 Trecartin Genevieve E
5 Randall E
6△Chakonas Jas T
7△Hue Maud B
8△Swanson Eric H
9△Klein Hyman
10 Bryant Clyde L
12△Pillsbury M Etta Mrs
15△Ross Lloyd G
16△Horne Eliz E
18 Little Robt
75△Katz Saml A 1
△Canning Madeline M Mrs 2

Newhall ends

83△Beachway Bakery & Delicatessen
86△Lynn Yacht Club Inc
87△Ledbury Geo W Inc typewriters
91 Markandonis Sofoklis 1 ◎
△Pappas Peter T 2
93△Walton John P 1
Brennan Mary A 2
95△Scott Bertram 2
△Keefe John A 3
98△Bay State Cutting Die Co
99 Vacant store
101△Priest Robt 1 2
Visalli Angelina Mrs 3
103 Abbott Geo L 1
106△Brooks & Sprague Inc lobsters ◎
107 King Fredk C

Washington ends

124△King Lobster Pond
133△Hutchinson Drug Co Inc
180△Lynnway Marine boat renting bait and tackle

Broad ends

258△Lissack S A Co plmb & htg
260△Ben's Tire Shop

Pleasant ends

276△Ansin Waste Corp paper stock
278△Lynnway Service Sta
280△Smith-Rowland Co fertilizer mfrs
281△Rubin Benj gas sta
282 Whiting Marine Works boat rental and reprs
284△Lynnway Cities Serv
288 Lamper, Reed & Costolo stge
295△MacDuff Jos H gas sta
299△Lynn Auto Wrecking Co Inc
309△Lynnway Auto Glass Co
315△Knox Jos E & Co Inc cutting die mfrs
319△Coleman Oldsmobile Co Inc used car lot
323△Napco Inc machinists
327△Haskell F H Lbr Co
330△Consolidated Elec Lamp Co
△Champion Lamp Works div Consolidated Elec Lamp Co

Bubier begins

341△Dunkin Donuts

Kingman begins

349△Devlin E J Co plmb and htg
350△Lobster Pool Restr
△Shore Line Lobster Co
354△Turcotte Roy E gas sta
361△Humpty Dumpty restr
364△Atlantic Building & Sup Inc
369△Jepsky Jack gas sta
370△Liberty Auto Seat Covers Co

Blossom ends

377△Varley's Diner
397△Waltham Horological Corp cable component mfrs
411△Reliable Tire Co

Shepard ends

429△Libby Bros gas sta
436△Lynn Gas & Elec Co works
439△Bailey Builders Sup Co

Gas Wharf rd crosses

451 Vacant
456 Sea Crest Cadillac-Pontiac Inc car lot
475△United Auto Sales Co used cars
480△Harbor Auto Sales Co
487△Shreier Saml auto radiator repr
△Harry's Mtr Mart power lawn mowers
491△West End Beverage Co
496△North Shore Cutting Die Co Inc
497△Lynnway Recreation Center bowling
506△Lynn Ornamental Iron Works
512△Blanchard E C Co Inc genl contrs and engs

Colburn begins

516△Lynnway Paint & Sup Inc
△Comito Lindo C pntr & dec 2
517△Beacon Chevrolet Inc
525△Nordin Robt M gas sta
526△State Street Garage

Commercial crosses

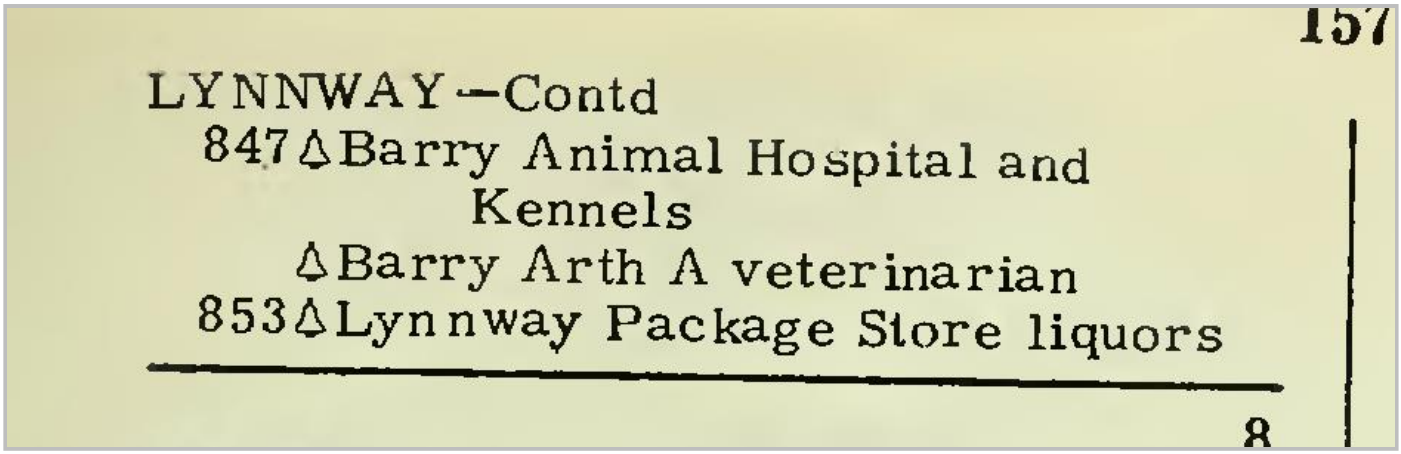
535△Phillips Ralph M gas sta
540△Dee's Empire Adhesives Co
Dee's Adhesives & Chemicals
543△Whittredge Portable Buildings Co
552△Rose J W Motor Co Inc autos
555△Essex Plate Glass Co
562△Hawkes Grinding Co tools and gauges

Chester begins

567△Stephenson Mfg Co sht mtl wkrs
△Lynn Iron Fdry Inc
580△Harrison Dispatch Co trucking ◎
585△Feldman F & Sons Lbr Co
595△Bayside Mtrs
604△Lynnway Diner
611△American Lumber & Sup Co
613△Gauld's Auto Tops
617△Capano's Auto Parts
619△Manvil Building Wrecking Co
623△Johnson Howard D Co restr
626△West Lynn Creamery milk dlrs
642△Doughnut Hole The
650 Loew's E M Open Air Theatre
657△Shoe Drive In Inc shoe dlrs
671△Mohawk Mtrs used cars
675△United States Govt Offices Naval Reserve Training Center
700△Lynn Minit-Man-Car Wash
727△Turn Style Inc clo
750△US Govt Offices US Army Anti-Aircraft Artillery
751△Tree Land Inc landscape gdnrs
793△Homestead Drive-In Inc restr
795△Dairy Queen ice cream

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY 1957



157

LYNNWAY—Contd

847 △Barry Animal Hospital and Kennels

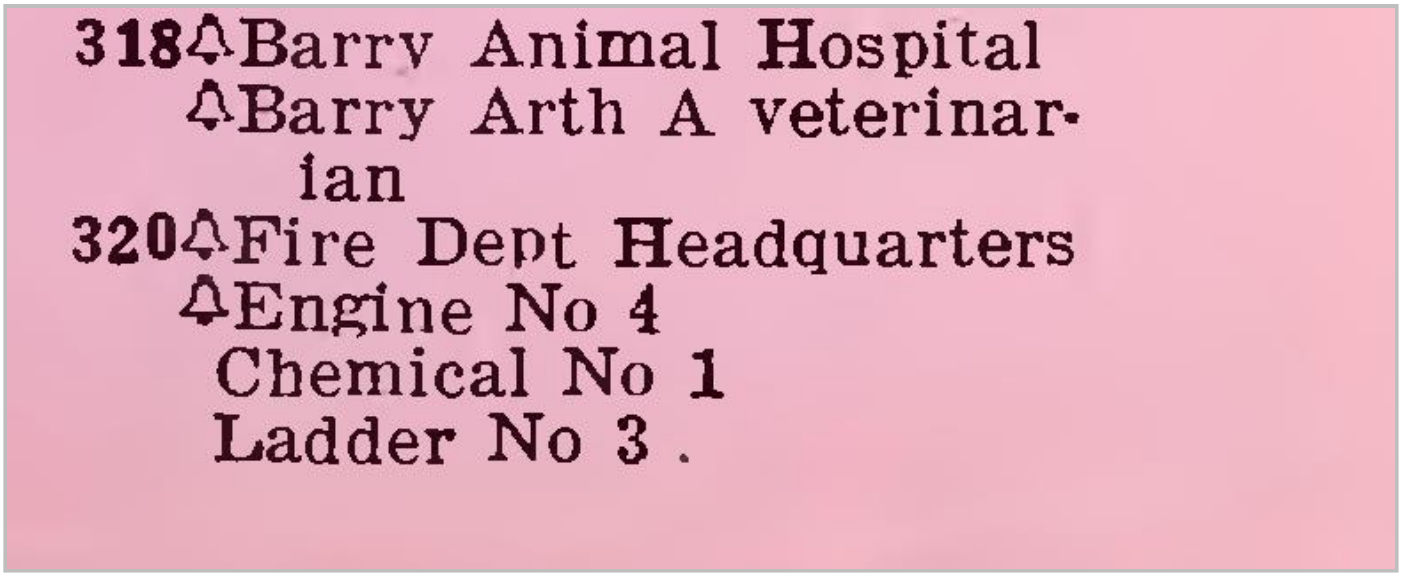
△Barry Arth A veterinarian

853 △Lynnway Package Store liquors

8

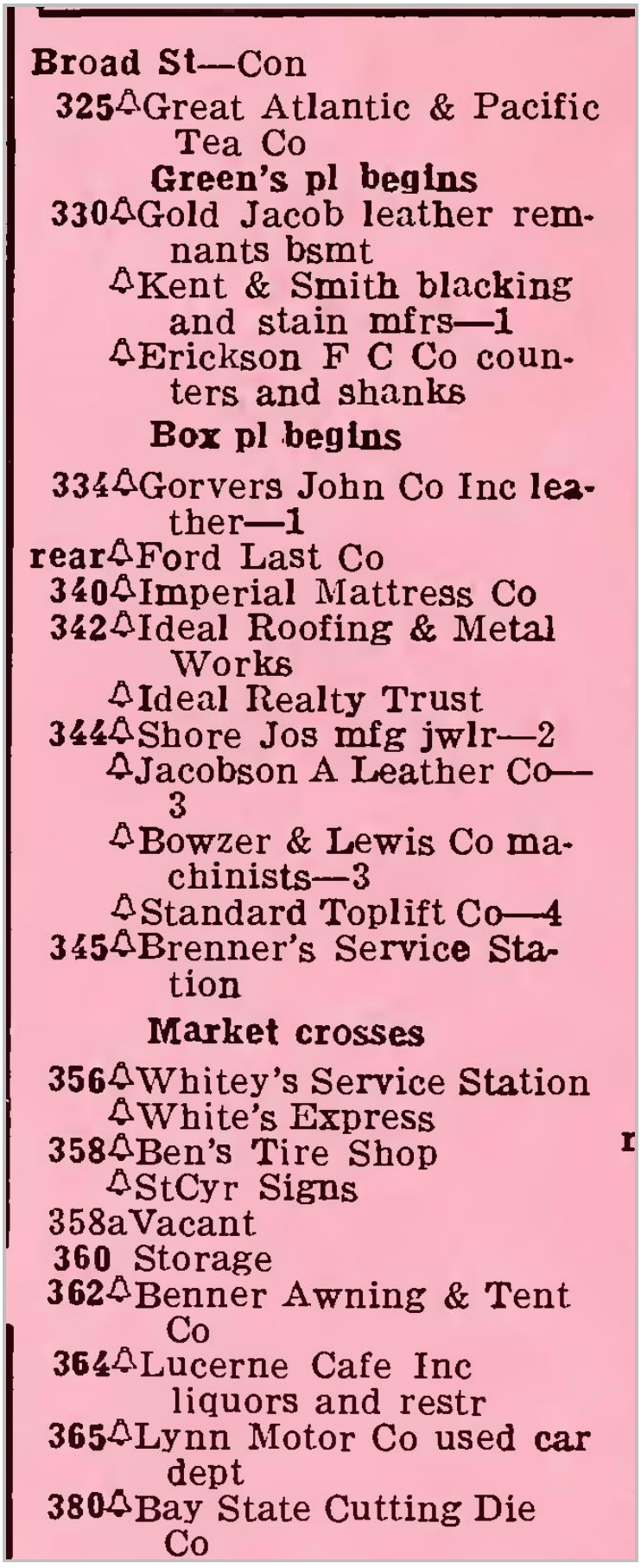
Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1953



Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1953



Broad St—Con

325 Great Atlantic & Pacific Tea Co

Green's pl begins

330 Gold Jacob leather remnants bsmt

Kent & Smith blacking and stain mfrs—1

Erickson F C Co counters and shanks

Box pl begins

334 Gorvers John Co Inc leather—1

rear Ford Last Co

340 Imperial Mattress Co

342 Ideal Roofing & Metal Works

Ideal Realty Trust

344 Shore Jos mfg jwlr—2

Jacobson A Leather Co—3

Bowzer & Lewis Co machinists—3

Standard Toplift Co—4

345 Brenner's Service Station

Market crosses

356 Whitey's Service Station

White's Express

358 Ben's Tire Shop

StCyr Signs

358a Vacant

360 Storage

362 Benner Awning & Tent Co

364 Lucerne Cafe Inc liquors and restr

365 Lynn Motor Co used car dept

380 Bay State Cutting Die Co

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1953

934 Nick's Submarine Bar restr
Scott Bertram—2
Keefe John—3
942 Walton John P—1
Walton Nora Mrs—2 ◎
949 Storage
953 Brennan Wm H—1
Pomakis Michl—2
956 Markandonis Sofoklis —1 ◎
Pappas Peter T—2
958 Ledbury Geo W Inc typewriters and office equipment
962 Vacant
964 Beachway Bakery & Delicatessen variety
965 Traibman M gro ◎
967 Traibman Haskell

Newhall ends

071 Lynn Yacht Club Inc ◎
Lynn Yacht Club Wharf
975 Slavin Bertha C Mrs gro ◎
977 Slavin Bertha C Mrs—1 ◎
Murphy Geo L—2
Murphy Wm J—2
Collins John H—3
York Bertha Mrs
994 Katz Saml A—1 ◎
McKenna Richd—2
Hanley Danl—2
995 Taylor Mary Mrs—1
Stratouly Snero—2
Tammaro Raymond—3
995a Porter Marie Mrs—bsmt
997 Atwell Thos—1
Yianitsas Efstratos—2
Tarzopoulou Athens—3
997a Wood Anna Mrs—bsmt
1003 Porter Sherman R—2
Trahant Raymond L roofing and shtmtl work h—3
1004 Sherburne Apartments
apt *1* Stephens Josephine Mrs
1a LaFreniere Arth F
2 Masiello Rose P Mrs
3 Avery Edw E
4 Trecartin Genevieve
5 Robinson Eva M Mrs
6 Grant David
7 O'Donnell J
8 Swanson E H
9 Klein H
10 Bryant Clyde L
11 Chakonas J
12 Pillsbury M Etta Mrs
14 Roy Emery
15 Perry Ernest P
16 Winer Philip M
1005 Thibodeau Edw G—1

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1953

1012 Raymond Apartments
bsmt Feldman L Mrs
apt 1 Lavan Chas
3 Domey Josephine
4 LeBlanc Existe
5 Himmelstein Sarah Mrs
6 Feldman Bessie Mrs
7 Frost Gertrude Mrs
8 Higgins L
9 Koff Myer
10 Wolshin Myer
12 Donovan Jos M
12a Snyder E Mrs
14 Saunders W
15 Sakellar Benj
16 Berman Abr
17 Goldberg Dora Mrs
18 Feldman Wolff
1015 Preist Robt I—1
1017 Lucantonio Jerry—2
Allen Rudolph A—3
1021 Masiello Frank—1
DeJesus Manuel—1
Babineau Frank—2
Ross Lloyd—2
Petropoulos Andrew—3
Ritter Grace O Mrs—3
rear Volunteer Yacht Club
Tudor ends
1027 Ernie's Market
1029 Furey Wm C—2
Hackett Stanley P—2
Hunter Robt W—3
rear Haggett W Leon live bait
1031 Vacant
1035 Foss Wm—1
Simensen Peter—1
Pasquale Rose Mrs—2
Budreau Laura Mrs—2
Allen June—3
Hoffman Rose Mrs—3
1039 Chakonas Thos—1
Voulgaris John—1
Burtman Chas—2
Cooper John C—2
Dufour Geo J—3
Feldman Louis—3
1054 Daley Edw A
1057 Vacant
1058 Daley Dennis A
1064 Vacant
1078 Burnett Howard F
1086 Belle The apts
apt 12 Brook Herbert E
14 Girard Robt
21 Smith Lester E
22 Lambert Gerald
24 Alfred Saml
32 Clark Rose Mrs
33 Hurley Edmund T
34 Landers Ella
1092 Vacant—1
Lohr Gertrude Mrs—2
1094 Surfside Pharmacy
1097 Linden's Beach Service Station
Snrfside rd begins
Trattic rd begins
Nahant rd begins
1126 Christie's restr
1130 Vacant
Beach rd ends
Lynn Shore dr ends

3
WASHINGTON AVENUE fr

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1948

318 Keefe Animal Hospital
Keefe Fred veterinarian
320 Fire Dept Headquarters
Engine No 4
Chemical No 1
Ladder No 3
325 Fleming Edwin gas sta
Green's pl begins
330 Gold Jacob leather remnants bsmt
Kent & Smith blacking and stain mfrs—1
Erickson F C Co counters and shanks
Box pl begins
334 Williams & Lait Inc used shoe machines—1
Gorvers John Co Inc leather—1
Handverger Saml Co leather dealers
rear Ford Last Co
340 Imperial Mattress Co

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1948

342 Ideal Roofing & Metal Works
Ideal Realty Trust
344 Shore Jos mfg jwlr—2
Jacobson A Leather Co—3
Bowzer & Lewis Co machinists—3
Golden John Leather Co
Selkis Arth leather

Market st crosses

356 Whitey's Service Station
White's Express
358 Ben's Tire Shop
Hanson H G uphol

358a Vacant
360 Naumkeog Casket Co
362 Benner Awning & Tent Co

364 Alloy Welding Co
380 Bay State Cutting Die Co

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1948

934 Portnoy Harry tailor—1
Pauline's Beauty Shop
Comninos Constantino—2 ◎
Keehn Donald—3
942 Walton John P—1
Walton Nora Mrs—2 ◎
949 Burpee's G M C Sales & Service auto dlrs
953 Bouchard Philip—1
Bergeron Alphonse—2
956 Markandonis Sofoklis—1 ◎
Fidler Donald F—2
958 Vic and Vins radio supply
966 Vacant
962 Vacant
964 Beachway variety
965 Traibman M gro ◎
967 Traibman Mayer—1 ◎
Cohen Jacob—2
Newhall st ends
971 Lynn Yacht Club Inc ◎
Lynn Yacht Club Wharf
975 Slavin Bertha C Mrs gro
977 Slavin Bertha C Mrs—1 ◎
Murphy Geo L—2
Murphy Wm J—2
Collins John H—3
Goss Cath Mrs—3
994 Powers Wm H—bsmt
White Wm T—1
LeBlanc Louis—2
Katz Saml A—2 ◎
995 Taylor Mary Mrs—1
Stratouly Spero—2
Marino Mary Mrs—3
995aPerkins Cath Mrs—bsmt
997 Bohannon Martha Mrs—1
Yianitsas Efstratos—2
Tarzopoulou Athens—3
997aWood Anna Mrs—bsmt
1003 Washburn Walker E—2
Trahant Raymond L roofing and shtmtl work h—3
1004 Sherburne Apartments
apt *1* Stephens Josephine Mrs
" *1a*Frawley Thos E jr
" *2* Masiello Rose P Mrs
" *3* Avery Edw E
" *4* Graven Margt
" *5* Burke Wm J
" *6* Keating Harold F
" *7* Holland Fredk
" *8* Ryan Henry
" *9* Guilbert Louis Z
" *10* Bryant Clyde L
" *11* Grant David R
" *12* Pillsbury Eug
" *14* Holbrook Ruth Mrs
" *15* Davison Robt L
" *16* Crocker Sadie Mrs
" *17* Allen Paul
" *18* Halliday Mildreth
1005 Thibodeau Edw G—1
1012 Raymond Apartments
apt *1* Lavin Chas
" *2* Bushong Helen
MacMillen Virginia M
" *4* Siskind Harry
" *5* Reither Jos
" *6* Feldman Hyman
" *8* Johnson Marie Mrs
" *9* Koff Myer
" *10* Himmelstein Sarah Mrs

Aparlments—Con
" *11* Parshley Jos K
" *12* Donovan Jos M
" *12a*Cole Roy G jr
" *14* Bass David S
" *15* Sakellar Benj
" *16* Berman Abr
" *17* Himmelstein Harry
" *18* Rosenbaum Annie Mrs
1015 DiFulvio Thos—1
1017 Lucantonio Jerry—2
Allen Rudolph A—3
1021 Golden Diana Mrs—1
DeVito Orlando—1
Babineau Frank—2
Ross Lloyd—2
Petropoulas Andrew—3
Ritter Grace O Mrs—3
rear Volunteer Yacht Club
Tudor st ends
1027 Rich Nathan gro
1029 Lerner Morris—2
Furey Wm C—2
Hunter Robt W—3
rear O'Connor Chas M
1031 Vacant
1035 Deam Athena—1
Simensen Peter—1
Zebrowski Jeannette Mrs—2
Budreau Laura Mrs—2
Anderson Gerald J—3
Kline Hyman—3
1039 Chakonas Thos—1
Voulgaris John—1
Burtman Chas—2
Cooper John C—2
Dufour Geo J—3
Feldman Louis—3
1054 Daley Mary A Mrs ◎
1057 Vacant
1058 Daley Dennis A
1064 Burnett Kath R
1078 Quamo Polivi L
1086 Belle The apts
apt *11* Fisher Exilda E Mrs
" *12* Murphy John W
" *14* James Harry A
" *15* Sussman Mary Mrs
" *21* Snow Fredk I
" *22* Lambert Gerald
" *23* Winnikor Bertha
" *24* Alfred Saml
" *31* Shukle Elsie Mrs
" *32* Clark Rose Mrs
" *33* Hurley Edmund T
" *34* O'Brien John W
1092 Cohen Jacob—1
Lohr Gertrude Mrs—2
1094 Lohr Gortrude Mrs gro
1096 Finley Mabelle Mrs
1099 Jepsky Jacob gas sta
Surfside rd begins
Traffic rd begins
1126 Christie's restr
1130 Vacant
Nahant rd begins
Beach rd ends
Lynn Shore dr ends

WASHINGTON AVENUE fr Walnut near Saugns line to Fairmount av Lynnhurst wd **7** prect 3
W Sigourney st ends
26 Lavoranti Saverio ◎
32 Scibelli Paolo ◎

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1943

318 Keefe Animal Hospital
320 Fire Dept Headquarters
Engine No 4
Chemical No 1
Ladder No 3
325 Bailey Robt E gas sta
Green's pl begins
330 Kent & Smith blacking and stain mfrs—1
Durkee Shoe Co mfrs—2
Molk Sol shoe findings—2
Nute Bros shoe mfrs—2
Sellwell Shoe Form Co Inc—2

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1943

Building—Con
Erickson Frank C counters and shanks—3
Box pl begins
334 Williams & Lait Inc used shoe machines—1
Gorvers John leather—1
Leader Last Co Inc—2
rear Ideal Roofing and Metal Works—bsmt
Ideal Blower Works shtmtlwkrs
Ford Last Co—1
White's Express—1
Super Grade Heel Co
340 Imperial Mattress Co
342 General Home Improvement Co carps
344 Shore Jos mfg jwlr—2
Jacobson A Leather Co—3
Bowzer & Lewis Co machinists—3
S & B Leather Co leather scraps—4
Market st crosses
356 Henderson Louis H gas sta
358 Vacant
rear Vacant
358a Vacant
360 Magarian Rug Cleansers—2
362 Benner Awning & Tent Co
364 Ingram's Diner
380 Bay State Cutting Die Co

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1943

934 Portnoy Harry tailor—1
Pauline's Beauty Shop
LeBrasseur Leon—2
Comninos Constantino—3 ◎

942 Pariseau Ludgie F chiropractor h—1
Walton Nora Mrs—2 ◎

949 Storage

953 Thibodeau Edw G—1
Powell G John—2 ◎

956 Markandonis Sofoklis—1 ◎
Collette Albert J—2

960 Vacant

962 Vacant

964 Beachway Bakery

965 Traibman Mayer gro ◎

967 Traibman Mayer—1 ◎
Cohen Jacob—2

968 Shosterman Alex

Newhall st ends

971 Lynn Yacht Club Inc ◎
Lynn Yacht Club Wharf

975 Slavin Louis gro

977 DeMarco John—1
Murphy Wm J—2
Murphy Jos F—2
Collins John H—3
Murphy Nora Mrs—3

994 Brickley Alice H Mrs—1
Bates Aubrey W—2
Boudreau Arthur —2

995 Taylor Mary Mrs—1
Stratouly Spero—2
Goss Carol Mrs—3

995a Golden Diana Mrs—bsmt

997 Johnson Ralph—1
Yianitsas Efstratos—2
Tarzopoulou Athens—3

997a Vacant—bsmt

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1943

1003 Washburn Chas I—2
Trahant Raymond L
roofing and shtmtl
work h—3
1004 Sherburne Apartments
apt *1* Langill Jas L
" *1a* Leonard Milton E
" *2* Erickson Winifred Mrs
" *3* Avery Edw E
" *4* Valente Perry
" *5* Burke Wm J
" *6* Sherburne Martha Mrs
◎
" *7* Stephens Josephine Mrs
" *8* Smith Earl
" *9* Guilbert Louis Z
" *10* Bryant Clyde L
" *11* Allen Maurice E
" *12* Nunes Robt A
" *14* Ryan Harry
" *15* Davis Louise A Mrs
" *16* Noyes Donald
" *17* Allen Paul
" *18* Halliday M
1005 Mahar Ernest P—1
1012 Raymond Apartments
apt *1* Lavan Chas C
" *2* Cahill Ethel Mrs
" *3* Smith Chas D
" *4* Gannett Chas T
" *5* Collins Robt M
" *6* Feldman Hyman
" *7* Micunis Ida Mrs
" *8* Freedman Jos
" *9* Koff Myer
" *10* Berfield Benj
" *11* Jacobs Benj F
" *12* Leonard Arthur E
" *12a* Murray Walter E
" *14* Freedman Benj
" *15* Sakellar Benj
Andrew Helen Mrs
" *17* Kohanski Stephen J
" *18* Sprague Chas D
1015 DiFulvio Thos—1
1017 Langford Ronald J—2
Perlino Rocco—3
1021 Lucantonio Jerry—1
Allen Rudolph A—1
Babineau Frank—2
Kaplan Robt—2
Xinogaly Philip E—3
Ritter Grace O Mrs—3
rear Volunteer Yacht Club
Tndor st ends
1025 O'Connor Chas M
1027 Vacant
1029 Lerner Morris—2
Furey Wm C—2
Hunter Robt W—3

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1943

Washington St—Con

1031 Vacant
1035 Deam Christie—1
Simensen Peter—1
Multanen Rose M Mrs—2
Budreau Laura Mrs—2
Anderson Gerald J—3
Kline Hyman—3
1039 Chakonas Thos—1
Manger Mary Mrs—1
Burtman Chas—2
Cooper John C—2
Wolfson Simon—3
Feldman Louis—3
1054 Daley Mary A Mrs ◎
1057 Vacant
1058 Daley Dennis A
1064 Burnett Mildred Mrs ◎
1078 Quamo Polivi L
1086 Belle The apts
apt *11* Fisher Exilda E Mrs
" *12* Gorman Robt
" *14* Clayman Celia Mrs
" *15* Harris Louis
" *21* Snow Fredk I
" *22* Flynn Velma Mrs
" *23* Alfred Saml
" *24* Fishbane Chas
" *25* Shukle Elsie Mrs
" *31* Walker Helen Mrs
" *32* Clark Rose L Mrs
" *33* Fish Benj
" *34* Sulkin Robt
1092 Haskell Richd S—1
Penn Benj—2
1094 Lohr Gertrude Mrs gro
1096 Lohr Gertrude Mrs
1099 Jepsky Jacob gas sta

Surfside rd begins

Traffic rd begins

1102 Same as 3 Surfside rd
1124 Vacant
1126 Vacant
1130 Vacant

Nahant rd begins
Beach rd ends
Lynn Shore dr ends

WASHINGTON AVENUE fr

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1939

318 Ellsworth Battery Service
320 Fire Dept Headquarters
Engine No 4
Chemical No 1
Ladder No 3
325 Mulhall Donald F gas sta
Green's pl begins
330 Lynn Bed Spring Co Inc
Kent & Smith blacking and stain mfrs—1
Gold Jacob leather remnants—2
Sellwell Shoe Form Co Inc—2
Zamcheck David J shoe linings—2
Erickson Frank C counters and shanks—3
Box pl begins
334 Williams & Lait Inc used sewing machines—1
Gorvers John leather—1
Leader Last Co Inc—2
rear Ford Last Co—1
White's Express—1
Ideal Roofing and Metal Works—2
340 Imperial Mattress Co
342 Barnes Chas shoe findings
344 Shore Jos mfg jwlr—2
Sprague Leather Co—2
Tower Perforating Tube & Die Co machinery mfrs—3
Jacobson A Leather Co—3
Bowzer & Lewis Co machinists—3
New England Factory Damaged Shoe Repairing—4
Market st crosses
356 Henderson Louis H gas sta
358 Whittredge Supply Co mason's supplies
rear Boston Sand & Gravel Co
358a Vacant
360 Rex Machine Co perforating dies and tubes—2
362 Benner Awning & Tent Co
364 Ingram's Diner
380 Bay State Cutting Die Co

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1939

934 Portnoy Harry tailor h —1
Brown Clarence—2
Comninos Constantino—3 ◎
942 Stone Frank L—1
Walton Nora Mrs—2 ◎
949 Lynn Beach Garage ◎
953 Multanen Otto—1
Powell G John—2 ◎
956 Markandonis Sofoklis —1 ◎
Collette Albert J—2
960 Traibman Meyer gro
964 Beachway Bakery
965 Keefe John A gro ◎
967 Keefe John A ◎
968 Tsitmis Theo G—1
Chjaris Frank G—2
Spaulding Frank A—3

Newhall st ends

971 Lynn Yacht Club Inc ◎
Yacht Club Wharf
975 Slavin Louis gro
977 Vacant—1
Murphy Jos F—2
Ready Frank M—2
Collins John H—3
Dunbar Edwin F—3
994 Brickley Alice H Mrs—1
Durgin Frank L—2
995 Taylor Thos W—1
Stratouly Spero—2 ◎
Hyland Chas W—3
995a McCarthy John J
997 Caloumbe Aurora L—1
Yianitsas Efstratas—2
Terzopoulos Athens—3
997a Macinnis Allan—bsmt
1003 Vaine Edwd F—2
Trahant Raymond L—3
1004 Cherburne Apartments
apt *1* Langill Jas L
" *1a*Campbell Amos L
" *2* Klass Shepard S
" *3* Avery Edwd E
" *4* Harney Frank
" *5* Burke Wm J
" *6* Stevenson Eric W
" *7* Bryant Clyde L
" *8* Bridges Earl
" *9* Guilbert Louis Z
" *10* Doucette Jaqueline Mrs
" *12* Feero Welsley D
" *14* Getchell Geo F
" *15* Davis Louise A Mrs
" *16* Smith Robt
" *17* Currier Harry E
" *18* Voltz Fredk
1005 Murphy Nora J Mrs

Target Street	Cross Street	Source
✓	-	Polk's City Directory

LYNNWAY (FKA BROAD AND WASHINGTON STREETS) 1939

1012 Raymond Apartments
apt 1 Famularo Frank P
" 3 Morgan Lillian E Mrs
" 4 Goldstein Katie Mrs
" 5 Robson John T
" 6 Merritt Mabel F Mrs
" 9 Smith Chas D
" 10 Berfield Benj
" 11 Jacobs Benj F
" 12 Smith Walter E
" 12a Lane Edwd S
" 14 Freedman Benj
" 15 Sakellar Benj
" 16 Lavan Chas
" 17 Kohanski Stephen J
" 18 Leonard Arthur E
1015 DiFulvio Thos—1
1017 Langford Ronald J—2
Perlino Rocco—3
1021 LeBrasseur Leon J—1
Lucantonio Jerry—1
Stockbridge Frank V—2
Babineau Frank—2
Xinogaly Philip E—3
Ritter Grace O Mrs—3
rear Volunteer Yacht Club
Tudor st ends
1025 O'Connor Chas M
1027 Lerner Morris gro
1029 Lerner Morris—2
Washburn Chas I—2
Hunter Robt W—3
1031 Wong Sam lndry h
1035 Pearl Jacob—1
Deam Christie—1
Pearl Frank—2
Budreau Laura Mrs—2
Comeau Jules F—3
Kline Hyman—3
1039 Chakonas Thos—1
Manger Mary Mrs—1
Kaplan Hyman pntr h—2
Burtman Chas—2
Cooper John C—3
Wolfson Siegel—3
1054 Daley Mary A Mrs ◎
1057 Vacant
1058 Daley Dennis A
1064 Burnett Mildred Mrs ◎
1078 Quamo Polivi L
1086 Belle The apts
apt 11 Fisher Exilda E Mrs
" 14 Clayman Celia Mrs
" 15 Tarr Wm A
" 21 Snow Fredk I
" 22 Hess Ella E Mrs
" 23 Jaffe Anna Mrs
" 24 Koff Meyer
" 31 Fitterman Wm
" 32 Clark Harry E
" 33 Osgood Melvin E
1092 Vacant—1
Sakellar Sokrat N—2
1094 Lohr Gertrude Mrs gro
1096 Lohr Gertrude Mrs
1097 Shevach Max gas sta
Surfside rd begins
Traffic rd begins
1102 Same as 3 Surfside rd
1124 Kalogeris Jas restr
1126 Deam Christie restr
1130 Vacant
Nahant rd begins
Beach rd ends
Lynn Shore dr ends

WASHINGTON AVENUE fr Walnut near Saugus line to Fairmount av Lynnhurst wd 7 prect 3
W Sigourney st ends
26 Lavoranti Saverio ◎
32 Scibelli Paolo ◎
Mullen st ends
Newcomb av ends

***WASHINGTON SQUARE** junction of Broad and Nahant wd 4 prect 1
0 Oxford Hall
0 Oxford Club
9 Breed Nathaniel P phys

WASS fr 16 Eutaw av to 15 Tracy av wd 3 prect 10
5 Tufts Carrie A ◎
12 Lewis Earl C ◎

WATERFORD fr 95 Woodman to Batchelder's ct wd 6 prect 6
5 Ellingson Jacob ◎
9 Blood Irving G ◎
11 McGovern Wm J ◎
13 Brown Jas
17 Taylor Wm C ◎
19 Conway Patk M ◎
23 Powers J Wm ◎
Seward Michl J
27 Garaziani Rocco ◎
29 Fitzgerald Patk J ◎
31 Lenihan David D ◎
33 McGinn Francis A—1
Lezzelle Antonio—2
37 Cody Chas V

***WATERHILL** fr 96 Federal to 123 Cottage wd 6 prect 6
3 Vacant
5 Maranatos Pericles—1
Liberty Jos—1
Vacant—2-3
10 Lakis Thos G—1
Raimo Genaro—1
Conti Ferdinand—2
14 Raimo Michl—1 ◎
Russo Dominic A—2
16 Hayden Margt G Mrs—1 ◎
Vacant—2
26 Vacant
28 O'Connor Ellen M Mrs ◎
31 Nestor John F ◎
32 Landers Jos F—1
Clancy Patk J—2

ATTACHMENT 7
Historical Topographic Maps

Lynn Heritage State Park
154 Lynnway
Lynn, MA 01902

Inquiry Number: 5393000.4
August 15, 2018

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

08/15/18

Site Name:

Lynn Heritage State Park
154 Lynnway
Lynn, MA 01902
EDR Inquiry # 5393000.4

Client Name:

Stantec
400 Crown Colony Drive Suite 200
Quincy, MA 02169
Contact: Andrew Martzolf

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Stantec were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# NA

Project: 179410750- Lynn Heritage Par

Coordinates:

Latitude:	42.458733 42° 27' 31" North
Longitude:	-70.94365 -70° 56' 37" West
UTM Zone:	Zone 19 North
UTM X Meters:	340190.05
UTM Y Meters:	4702541.07
Elevation:	3.74' above sea level

Maps Provided:

2012	1944
1997	1943
1985	1903
1970	1892
1956	
1949	
1947	
1946	

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2018 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

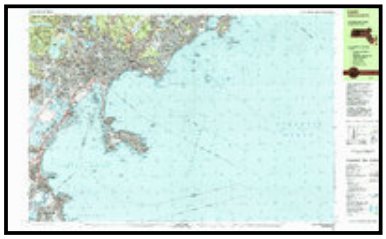
2012 Source Sheets

Lynn
2012
7.5-minute, 24000

1997 Source Sheets

Lynn
1997
7.5-minute, 25000
Aerial Photo Revised 1997

1985 Source Sheets



Lynn
1985
7.5-minute, 25000
Aerial Photo Revised 1978

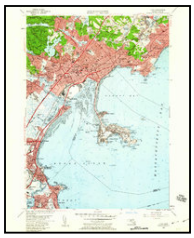
1970 Source Sheets

Lynn
1970
7.5-minute, 24000
Aerial Photo Revised 1969

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1956 Source Sheets



Lynn
1956
7.5-minute, 24000
Aerial Photo Revised 1955

1949 Source Sheets

Lynn
1949
7.5-minute, 31680

1947 Source Sheets

Lynn
1947
7.5-minute, 25000

1946 Source Sheets

Lynn
1946
7.5-minute, 31680

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1944 Source Sheets

Lynn
1944
7.5-minute, 24000

1943 Source Sheets

Lynn
1943
7.5-minute, 25000

1903 Source Sheets

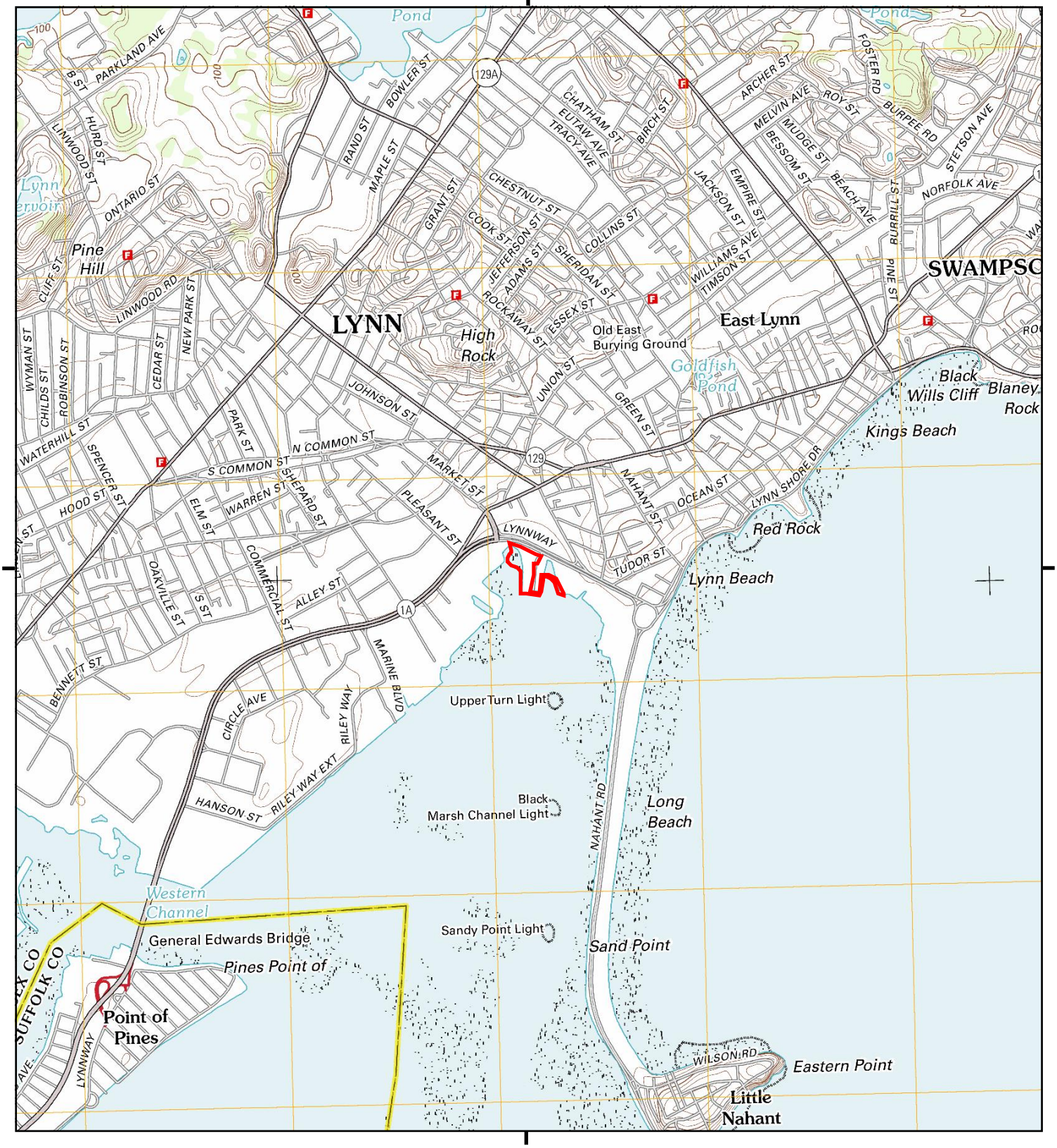
Boston Bay
1903
15-minute, 62500

1892 Source Sheets

Boston Bay
1892
15-minute, 62500

Historical Topo Map

2012



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

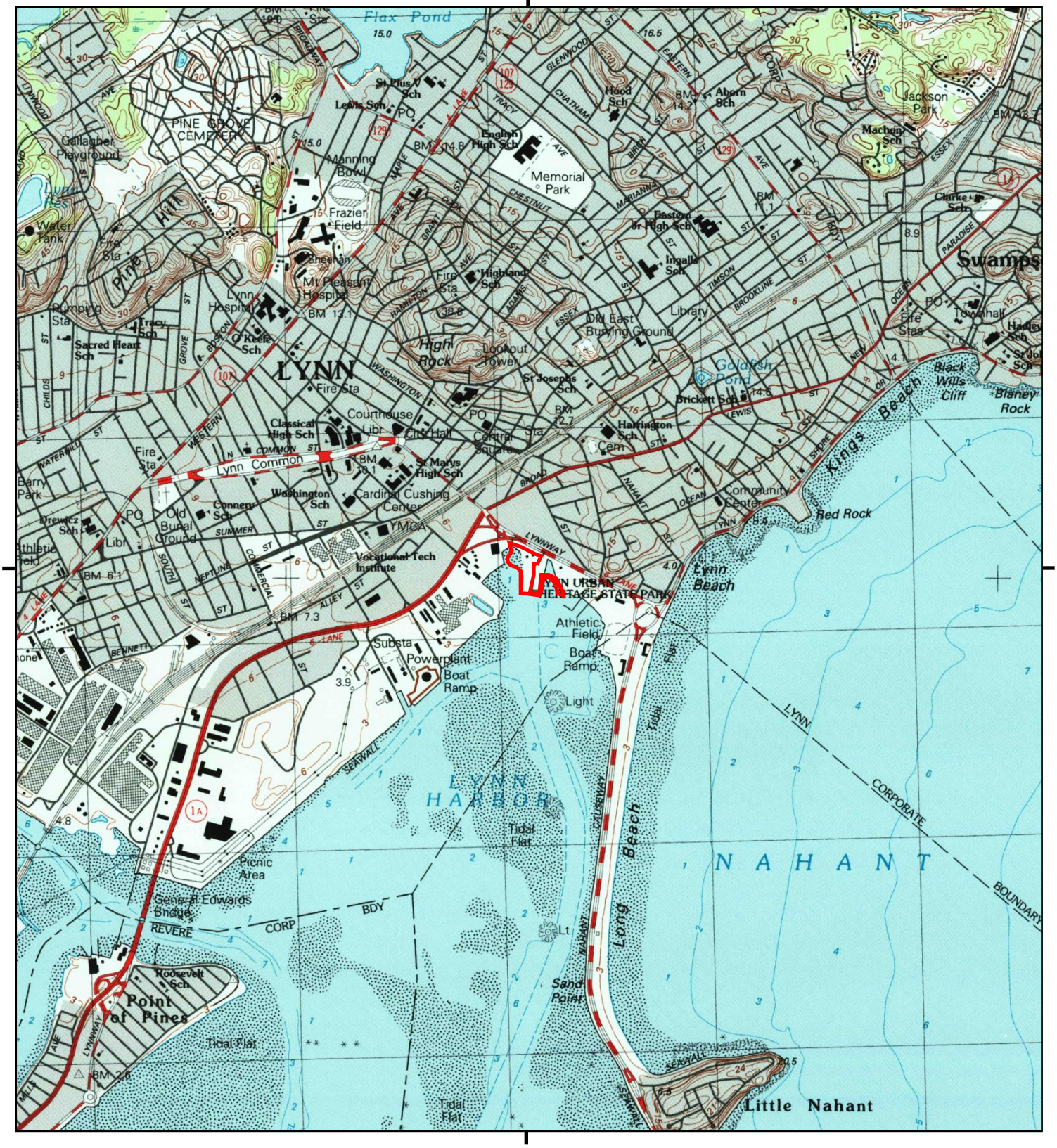
TP, Lynn, 2012, 7.5-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N

Historical Topo Map

1997



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lynn, 1997, 7.5-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N

Historical Topo Map

1985

This report includes information from the following map sheet(s).

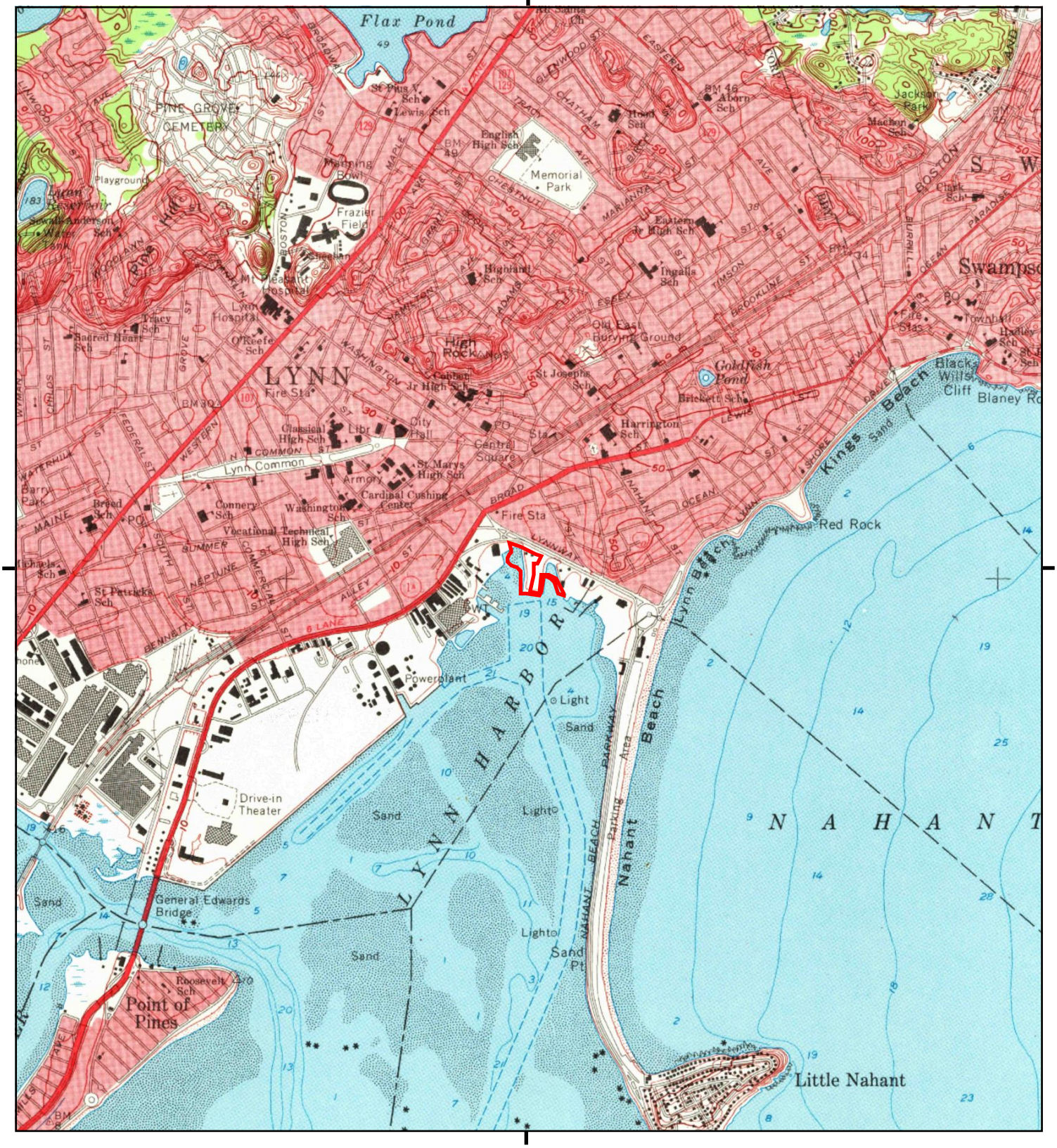
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lynn, 1985, 7.5-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

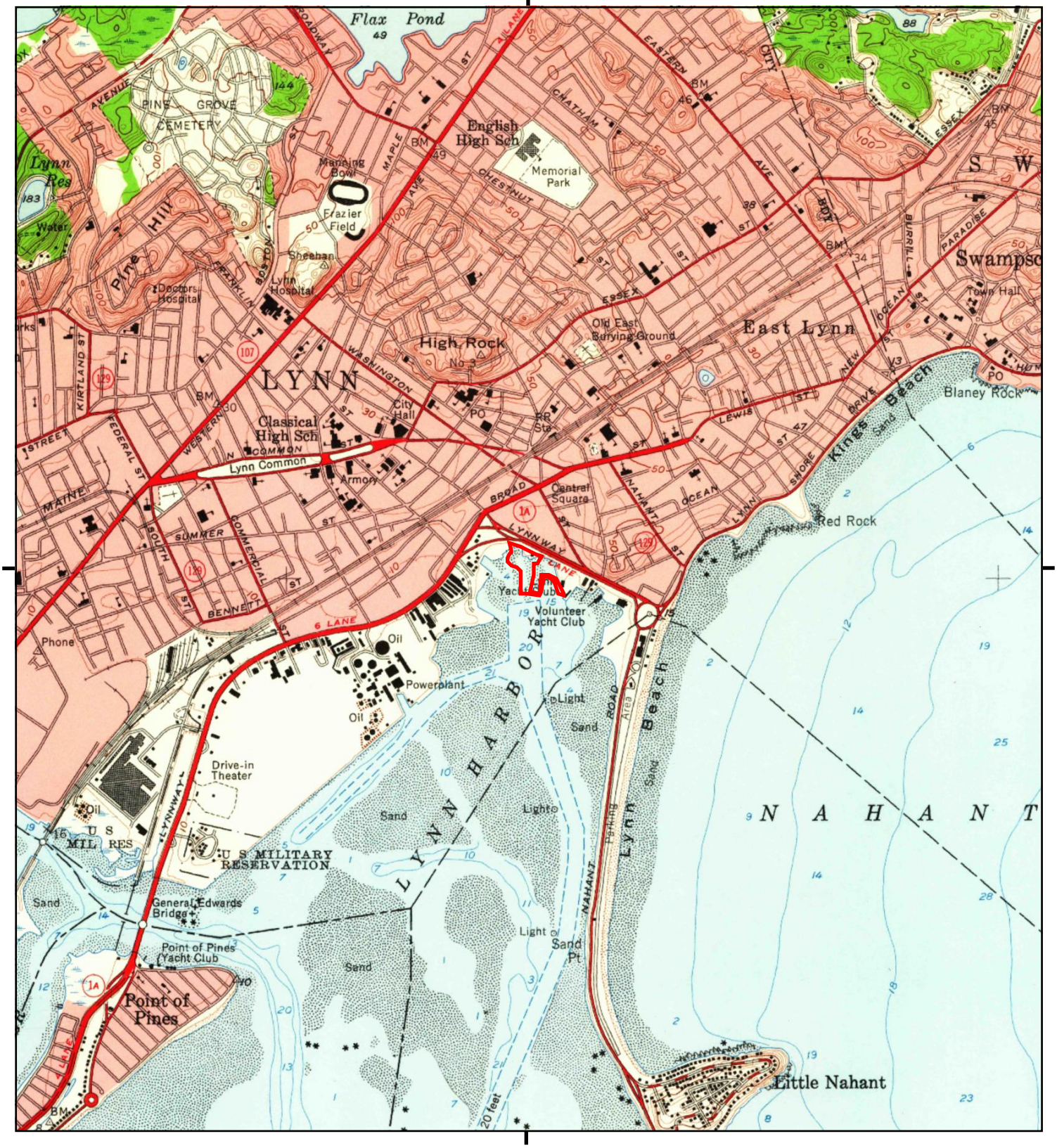
TP, Lynn, 1970, 7.5-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N

Historical Topo Map

1956



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

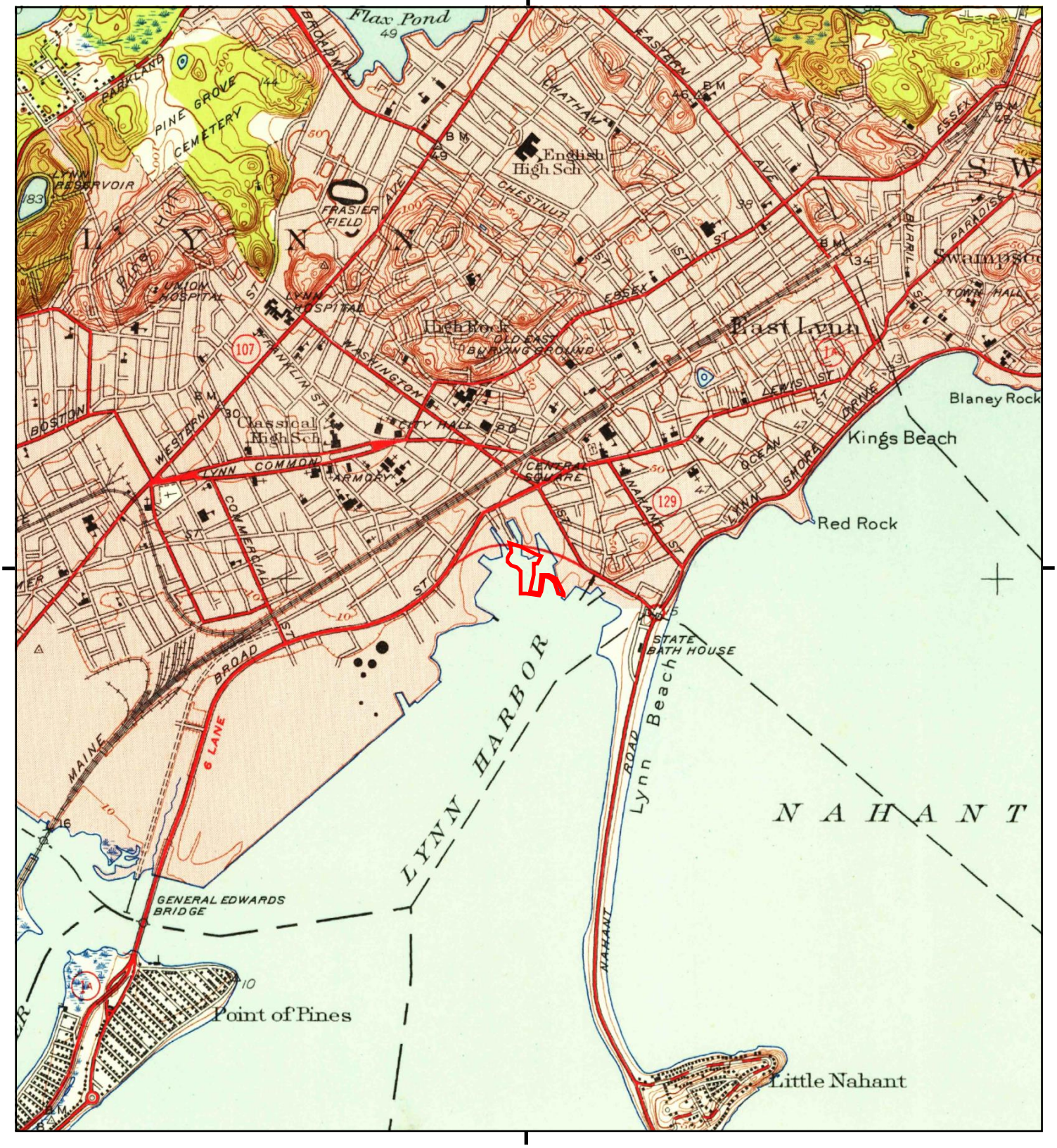
TP, Lynn, 1956, 7.5-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N

Historical Topo Map

1949



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

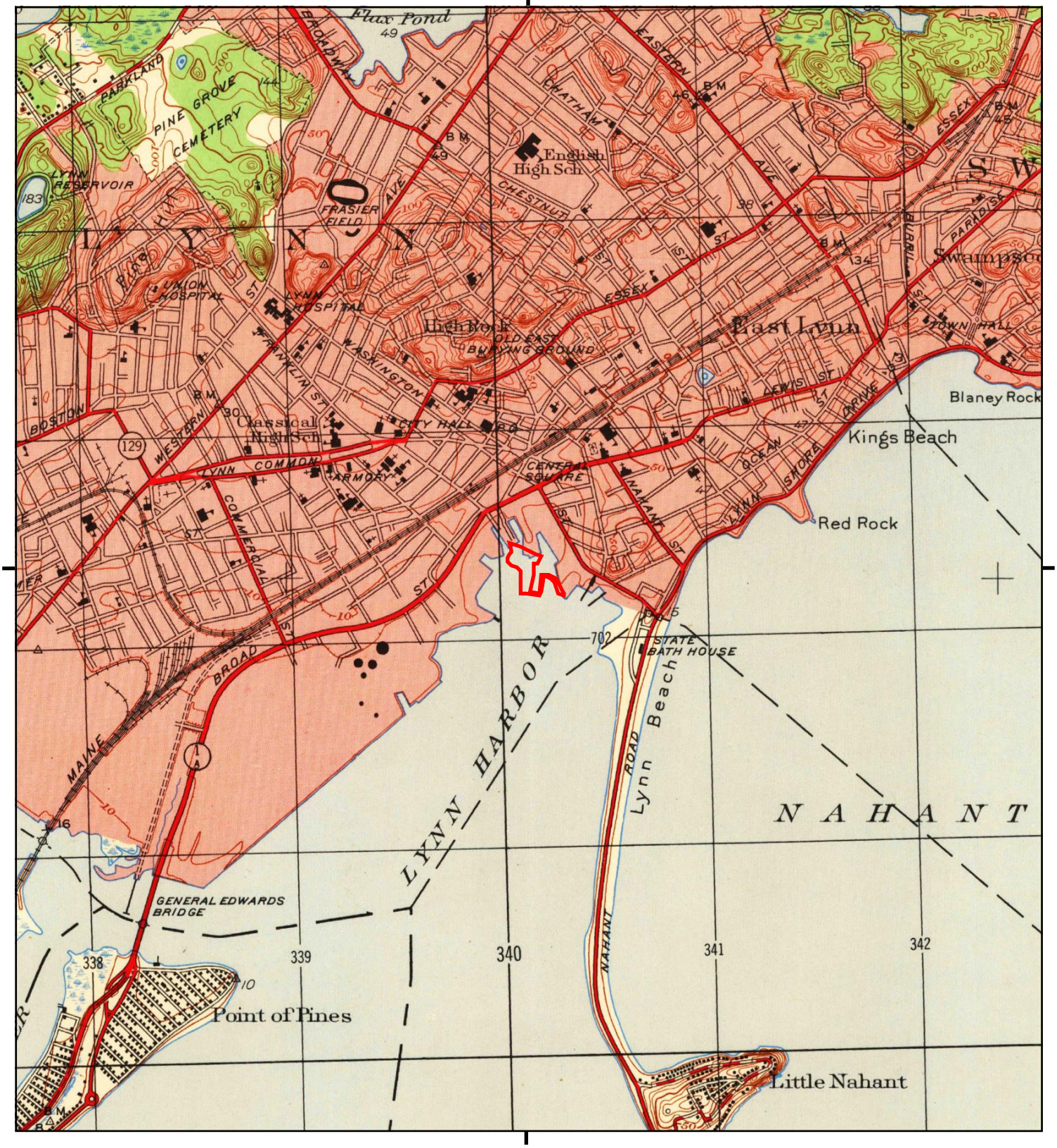
TP, Lynn, 1949, 7.5-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N

Historical Topo Map

1947



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lynn, 1947, 7.5-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N

This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lynn, 1946, 7.5-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N

This report includes information from the following map sheet(s).

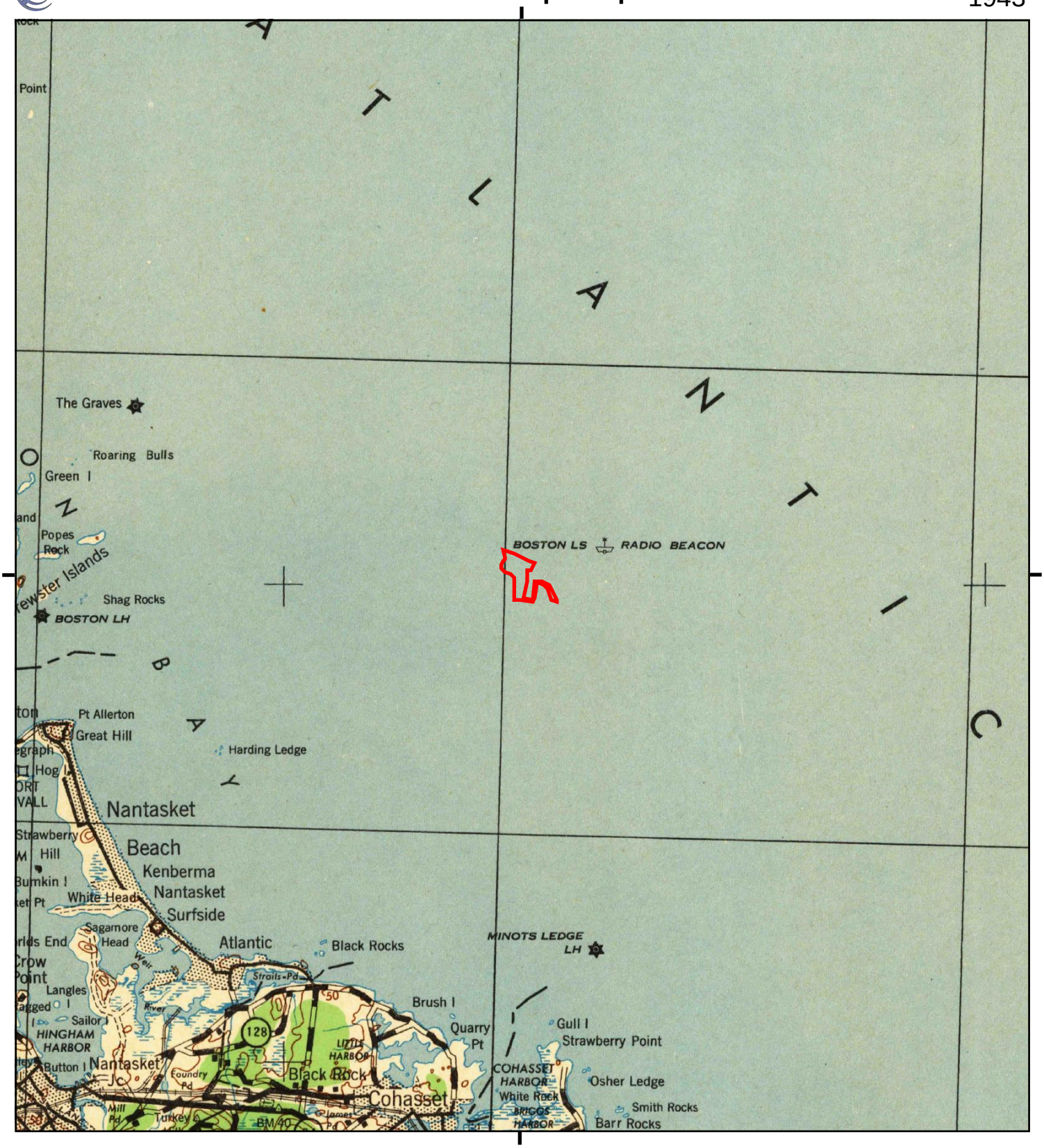
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lynn, 1944, 7.5-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Lynn, 1943, 7.5-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N

This report includes information from the following map sheet(s).

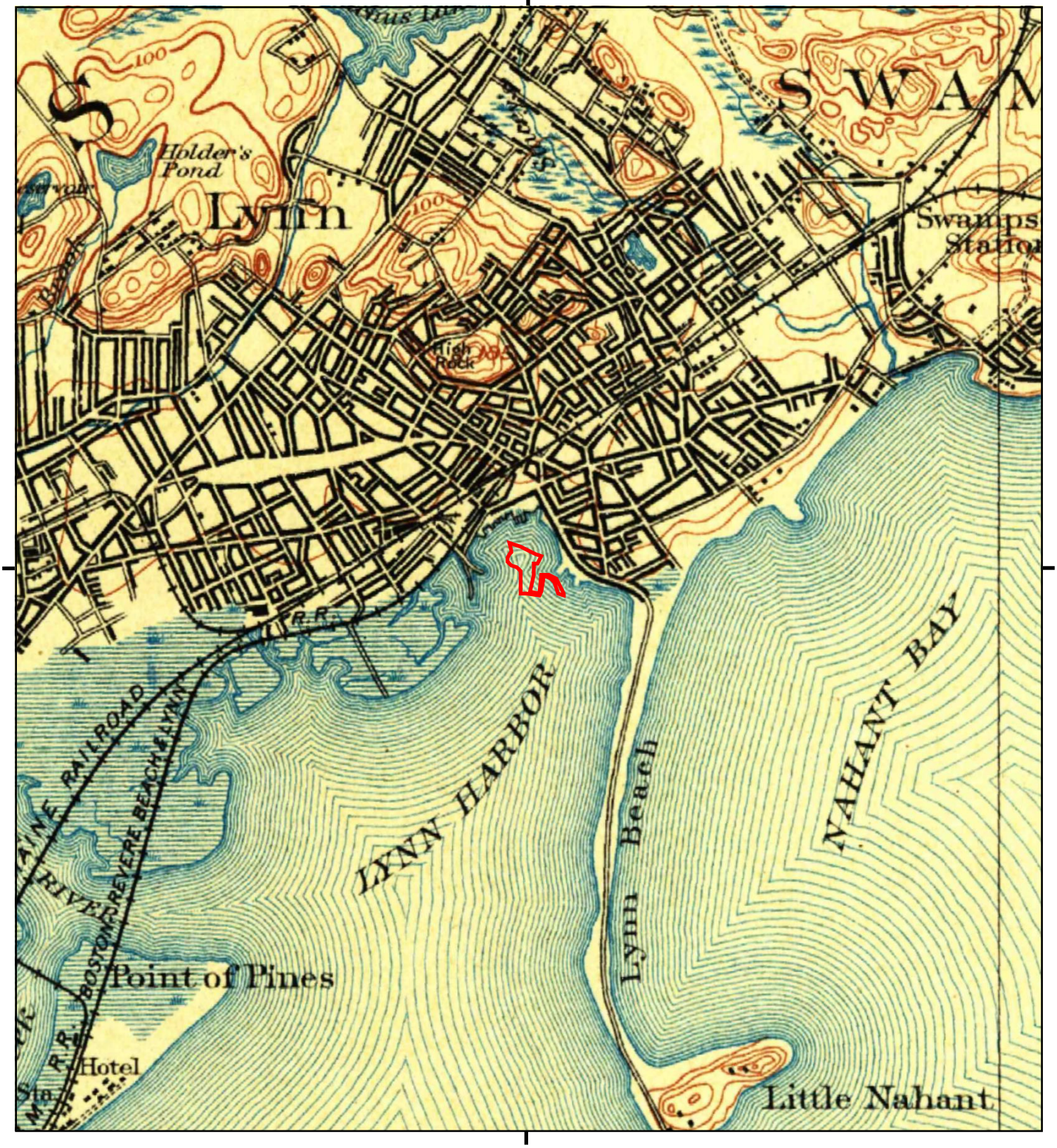
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Boston Bay, 1903, 15-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Boston Bay, 1892, 15-minute

SITE NAME: Lynn Heritage State Park
ADDRESS: 154 Lynnway
Lynn, MA 01902
CLIENT: Stantec

N

ATTACHMENT 8

Sanborn Insurance Maps

Lynn Heritage State Park
154 Lynnway
Lynn, MA 01902

Inquiry Number: 5393000.3
August 15, 2018

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

08/15/18

Site Name:

Lynn Heritage State Park
154 Lynnway
Lynn, MA 01902
EDR Inquiry # 5393000.3

Client Name:

Stantec
400 Crown Colony Drive Suite 200
Quincy, MA 02169
Contact: Andrew Martzolf

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Stantec were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 6552-487A-8557

PO # NA

Project 179410750- Lynn Heritage Park

Maps Provided:

1972
1950
1938
1908
1893
1887

Sanborn® Library search results

Certification #: 6552-487A-8557

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

Stantec (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2018 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

Sanborn Sheet Key

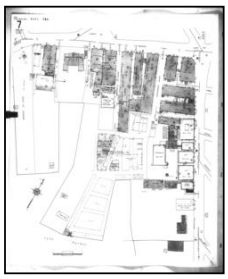
This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1972 Source Sheets

Volume 1, Sheet 7
1972

Volume 1, Sheet 60
1972

1950 Source Sheets



Volume 1, Sheet 7
1950

Volume 1, Sheet 10
1950

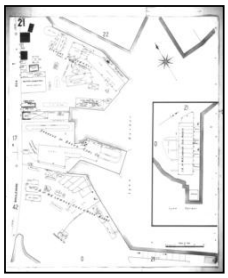
Volume 1, Sheet 60
1950

1938 Source Sheets

Volume 1, Sheet 7
1938

Volume 1, Sheet 60
1938

1908 Source Sheets



Volume 1, Sheet 21
1908

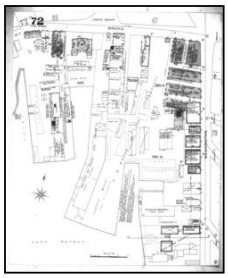
Volume 1, Sheet 22
1908

Volume 1, Sheet 24
1908

Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

1893 Source Sheets



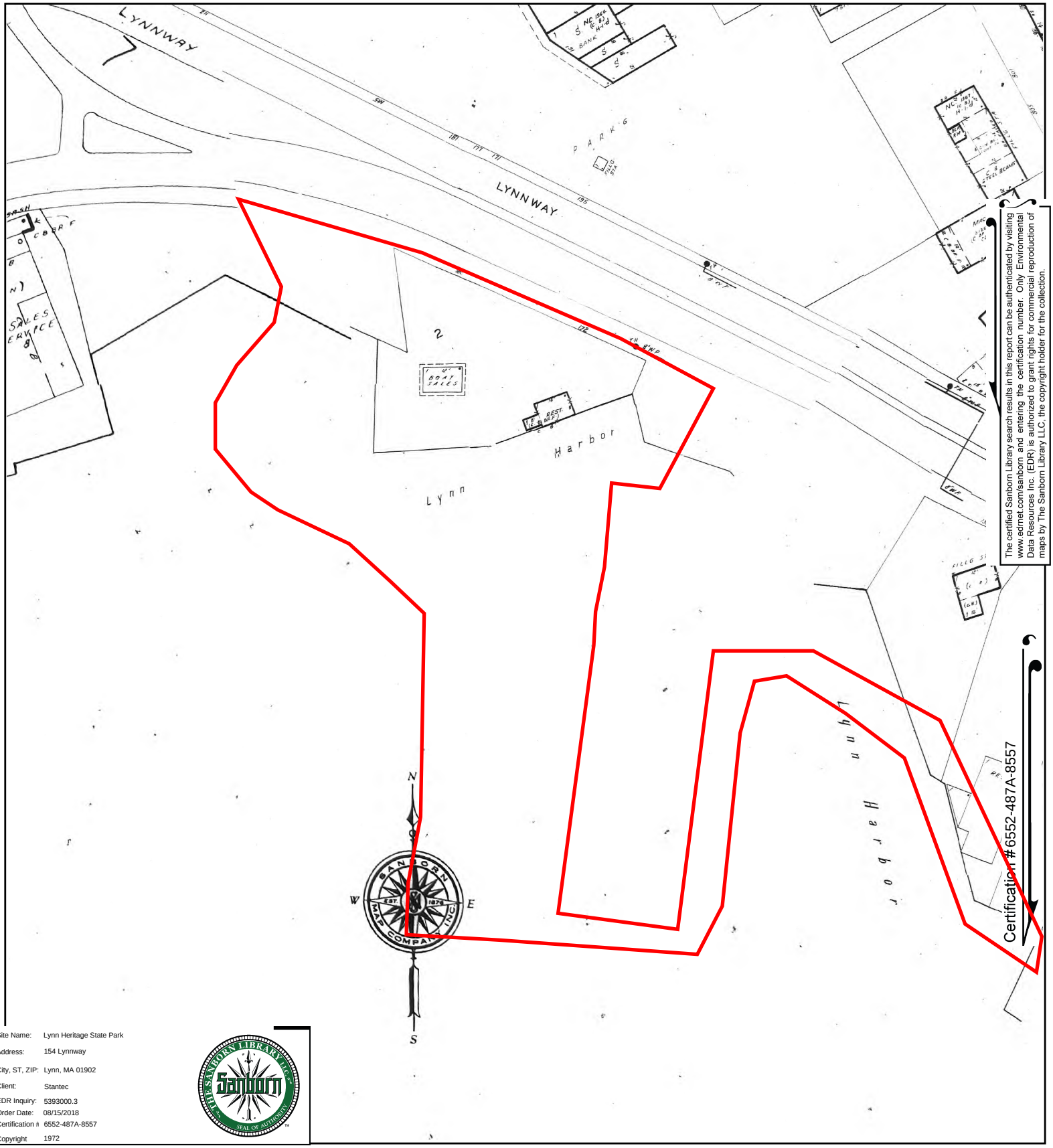
Volume 1, Sheet 72
1893

Volume 1, Sheet 78
1893

1887 Source Sheets

Volume 1, Sheet 10
1887

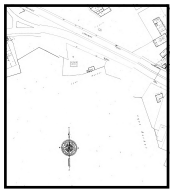
Volume 1, Sheet 11
1887

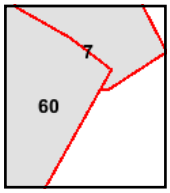


The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Site Name: Lynn Heritage State Park
Address: 154 Lynnway
City, ST, ZIP: Lynn, MA 01902
Client: Stantec
EDR Inquiry: 5393000.3
Order Date: 08/15/2018
Certification #: 6552-487A-8557
Copyright: 1972

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

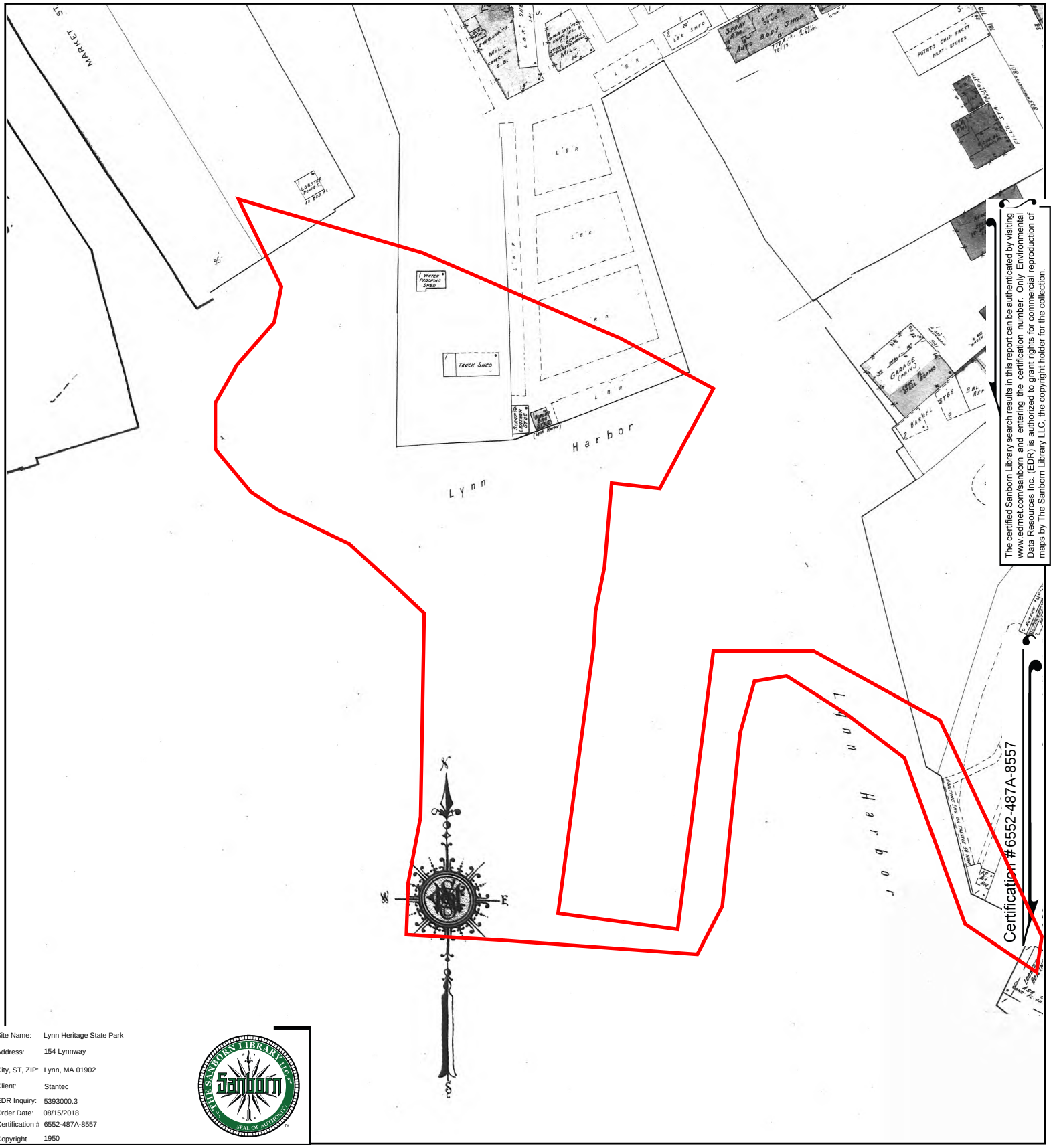




Volume 1, Sheet 60
Volume 1, Sheet 7

0 Feet 150 300 600

N

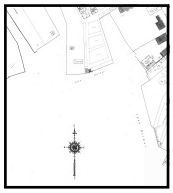


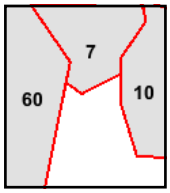
The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Certification #6552-487A-8557

Site Name: Lynn Heritage State Park
Address: 154 Lynnway
City, ST, ZIP: Lynn, MA 01902
Client: Stantec
EDR Inquiry: 5393000.3
Order Date: 08/15/2018
Certification #: 6552-487A-8557
Copyright: 1950

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

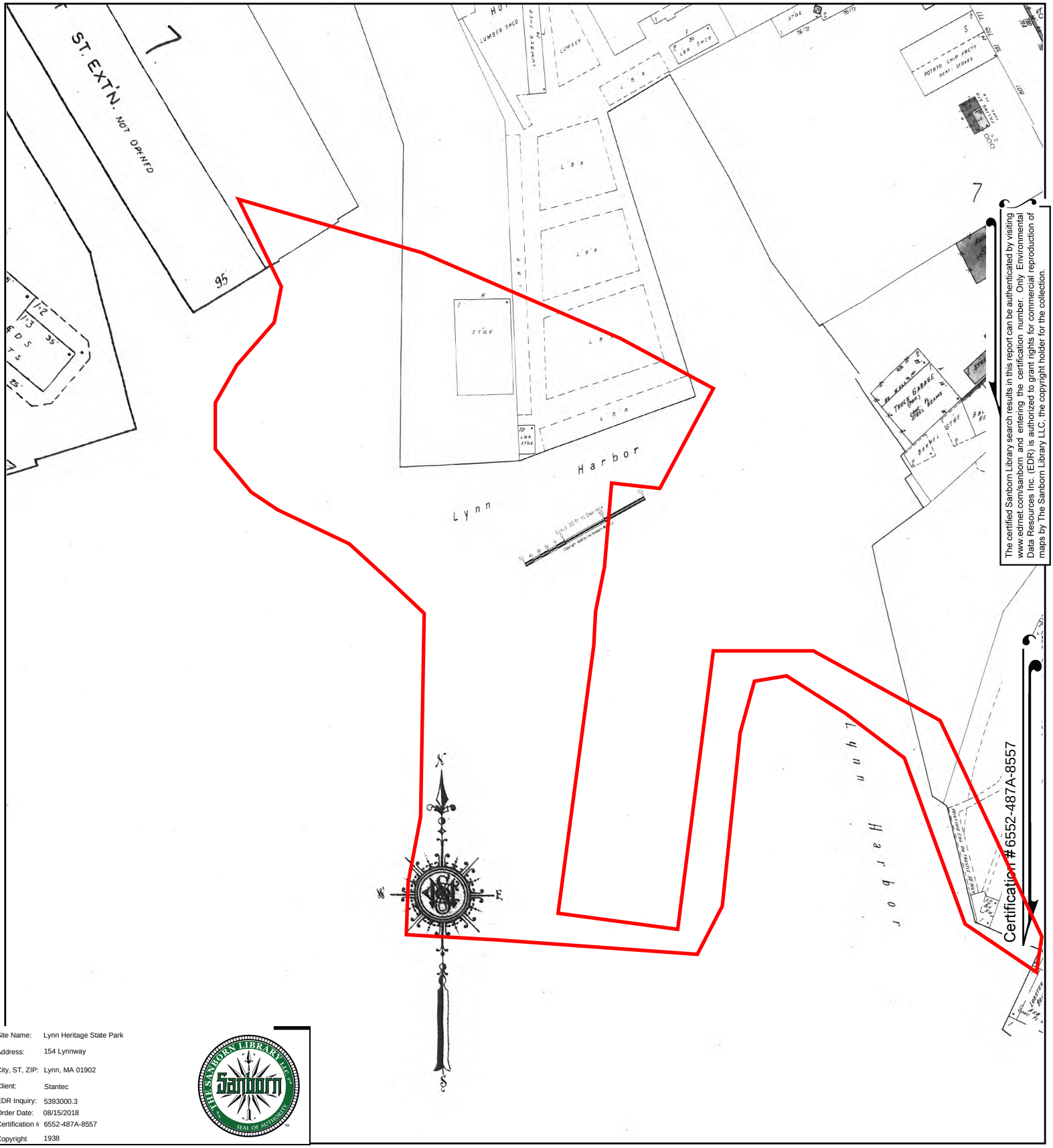




Volume 1, Sheet 60
Volume 1, Sheet 10
Volume 1, Sheet 7

0 Feet 150 300 600

N

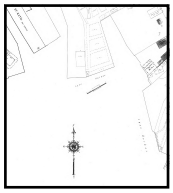


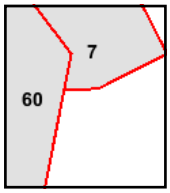
The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Site Name: Lynn Heritage State Park
Address: 154 Lynnway
City, ST, ZIP: Lynn, MA 01902
Client: Stantec
EDR Inquiry: 5393000.3
Order Date: 08/15/2018
Certification #: 6552-487A-8557
Copyright: 1938

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

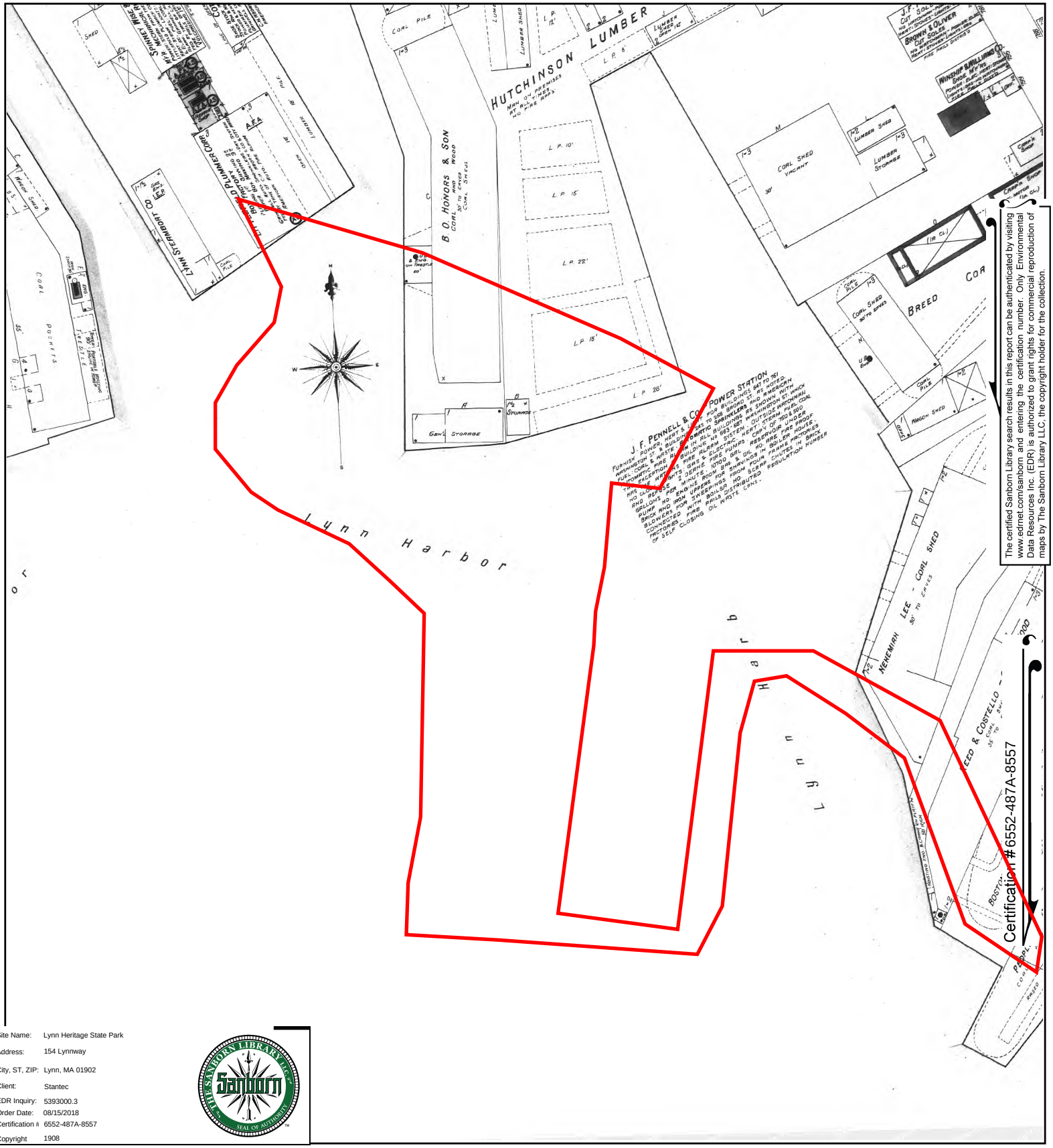
0 Feet 150 300 600





Volume 1, Sheet 60
Volume 1, Sheet 7

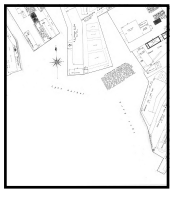
N

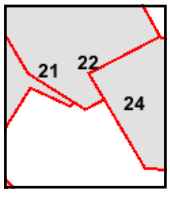


The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Site Name:	Lynn Heritage State Park
Address:	154 Lynnway
City, ST, ZIP:	Lynn, MA 01902
Client:	Stantec
EDR Inquiry:	5393000.3
Order Date:	08/15/2018
Certification #:	6552-487A-8557
Copyright	1908

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

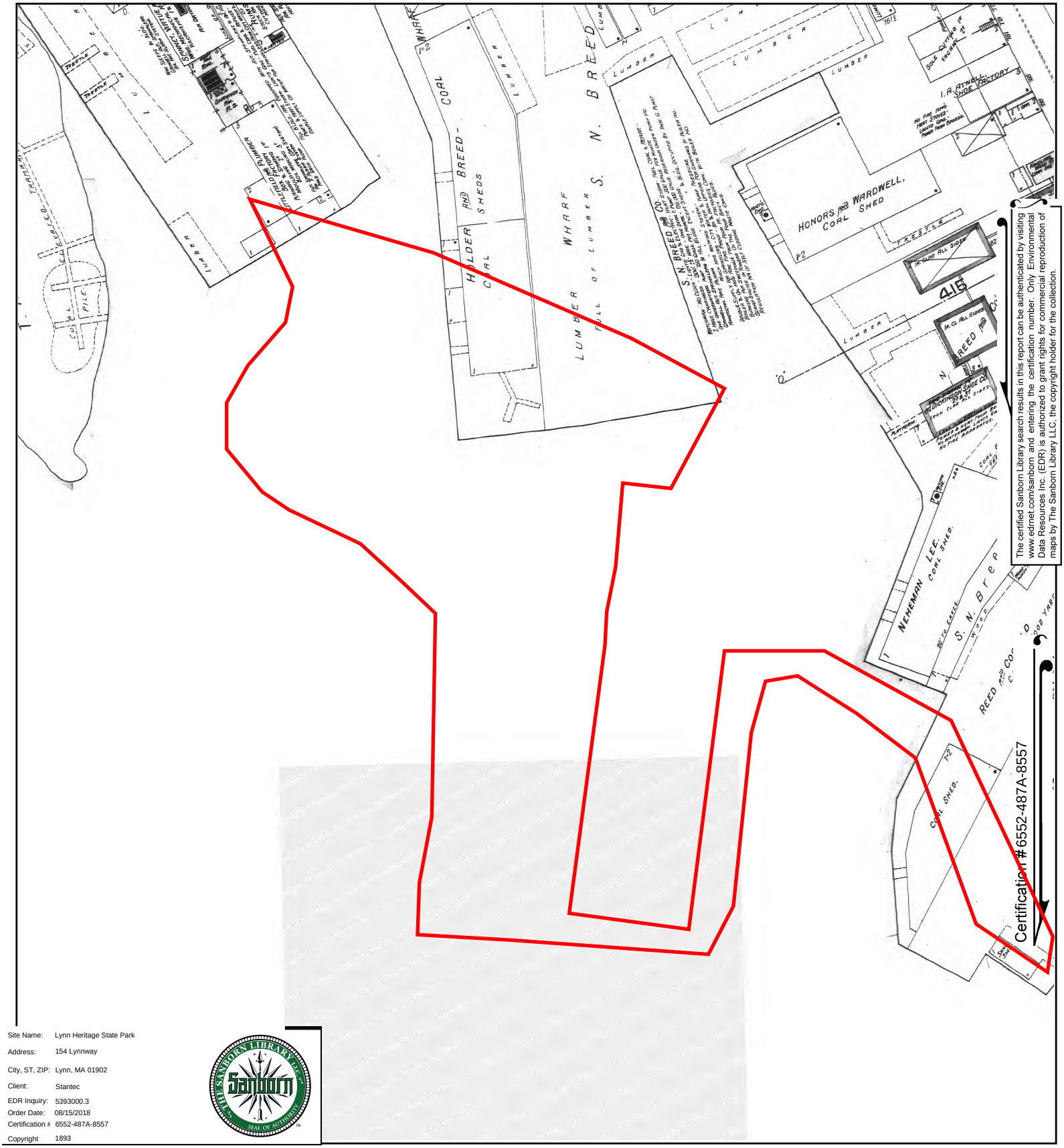




Volume 1, Sheet 24
Volume 1, Sheet 22
Volume 1, Sheet 21

0 Feet 150 300 600

N

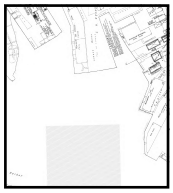


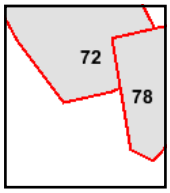
The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Site Name: Lynn Heritage State Park
Address: 154 Lynnway
City, ST, ZIP: Lynn, MA 01902
Client: Stantec
EDR Inquiry: 5393000.3
Order Date: 08/15/2018
Certification #: 6552-487A-8557
Copyright 1893

THE SANBORN LIBRARY LLC
Sanborn
SEAL OF AUTHENTICITY

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

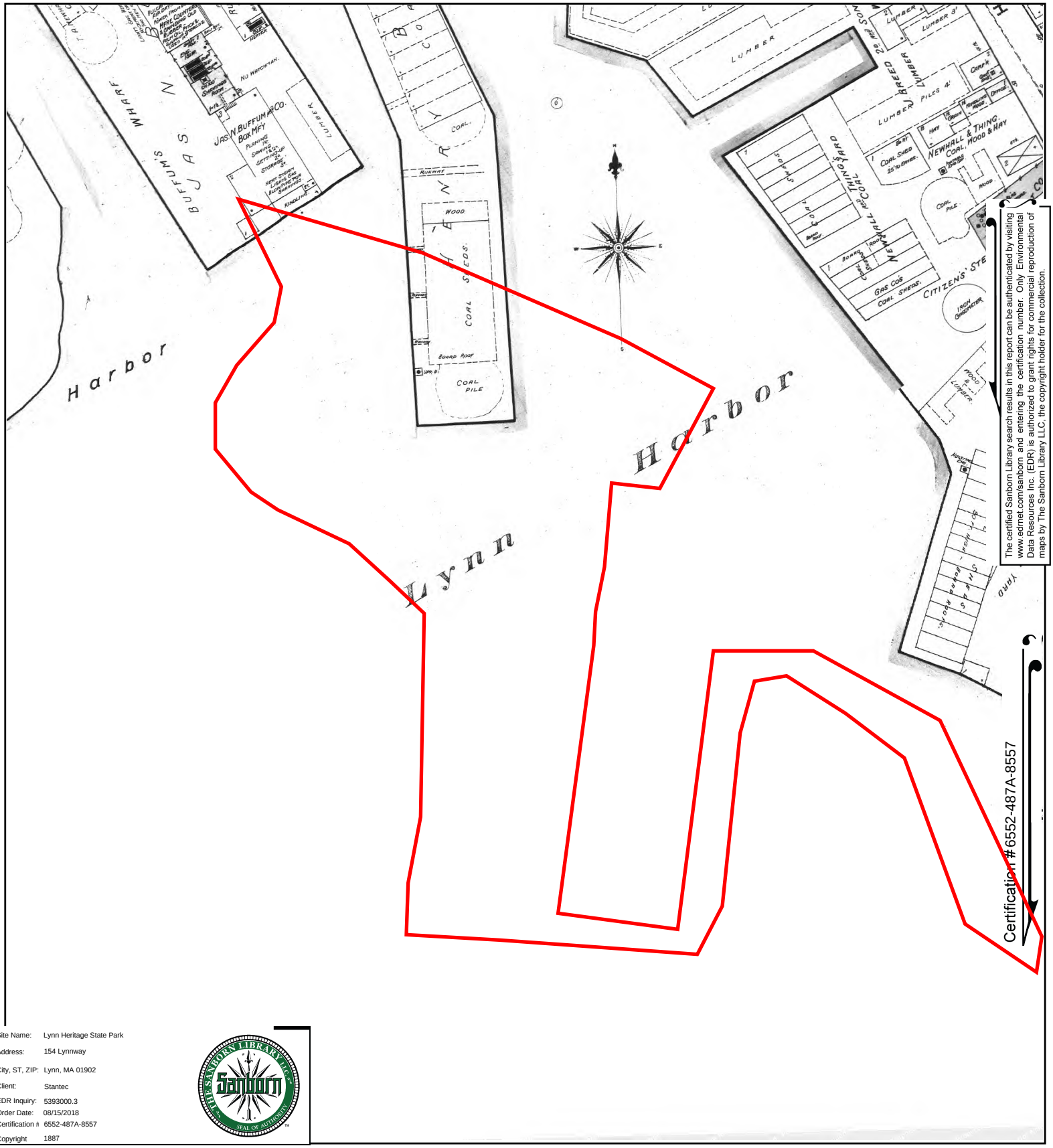




Volume 1, Sheet 78
Volume 1, Sheet 72

0 Feet 150 300 600

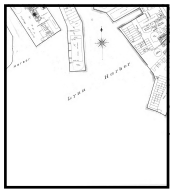
N

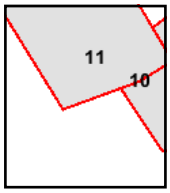


The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by The Sanborn Library LLC, the copyright holder for the collection.

Site Name:	Lynn Heritage State Park
Address:	154 Lynnway
City, ST, ZIP:	Lynn, MA 01902
Client:	Stantec
EDR Inquiry:	5393000.3
Order Date:	08/15/2018
Certification #:	6552-487A-8557
Copyright	1887

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.





Volume 1, Sheet 11
Volume 1, Sheet 10

0 Feet 150 300 600

N

ATTACHMENT 9
Historic Aerial Photos

Lynn Heritage State Park

154 Lynnway

Lynn, MA 01902

Inquiry Number: 5393000.8

August 16, 2018

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

08/16/18

Site Name:

Lynn Heritage State Park
154 Lynnway
Lynn, MA 01902
EDR Inquiry # 5393000.8

Client Name:

Stantec
400 Crown Colony Drive Suite 200
Quincy, MA 02169
Contact: Andrew Martzolf

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2016	1"=500'	Flight Year: 2016	USDA/NAIP
2012	1"=500'	Flight Year: 2012	USDA/NAIP
2008	1"=500'	Flight Year: 2008	USDA/NAIP
1995	1"=500'	Acquisition Date: March 29, 1995	USGS/DOQQ
1986	1"=500'	Flight Date: April 01, 1986	USDA
1978	1"=500'	Flight Date: April 23, 1978	USGS
1970	1"=500'	Flight Date: October 29, 1970	USDA
1969	1"=500'	Flight Date: April 09, 1969	USGS
1960	1"=500'	Flight Date: May 01, 1960	USGS
1955	1"=500'	Flight Date: December 01, 1955	USGS
1952	1"=500'	Flight Date: August 26, 1952	USDA
1938	1"=500'	Flight Date: November 16, 1938	USGS

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, Inc. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, INC. SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, INC. BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF ENVIRONMENTAL DATA RESOURCES, INC. IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT. Purchaser accepts this Report "AS IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

Copyright 2018 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, Inc. or its affiliates. All other trademarks used herein are the property of their respective owners.

INQUIRY #: 5393000.8
YEAR: 2016
= 500'
N
EDR

INQUIRY #: 5393000.8
YEAR: 2012
= 500'
N
EDR

INQUIRY #: 5393000.8

YEAR: 2008

= 500'

N

EDR

INQUIRY #: 5393000.8

YEAR: 1995

= 500'

N

EDR

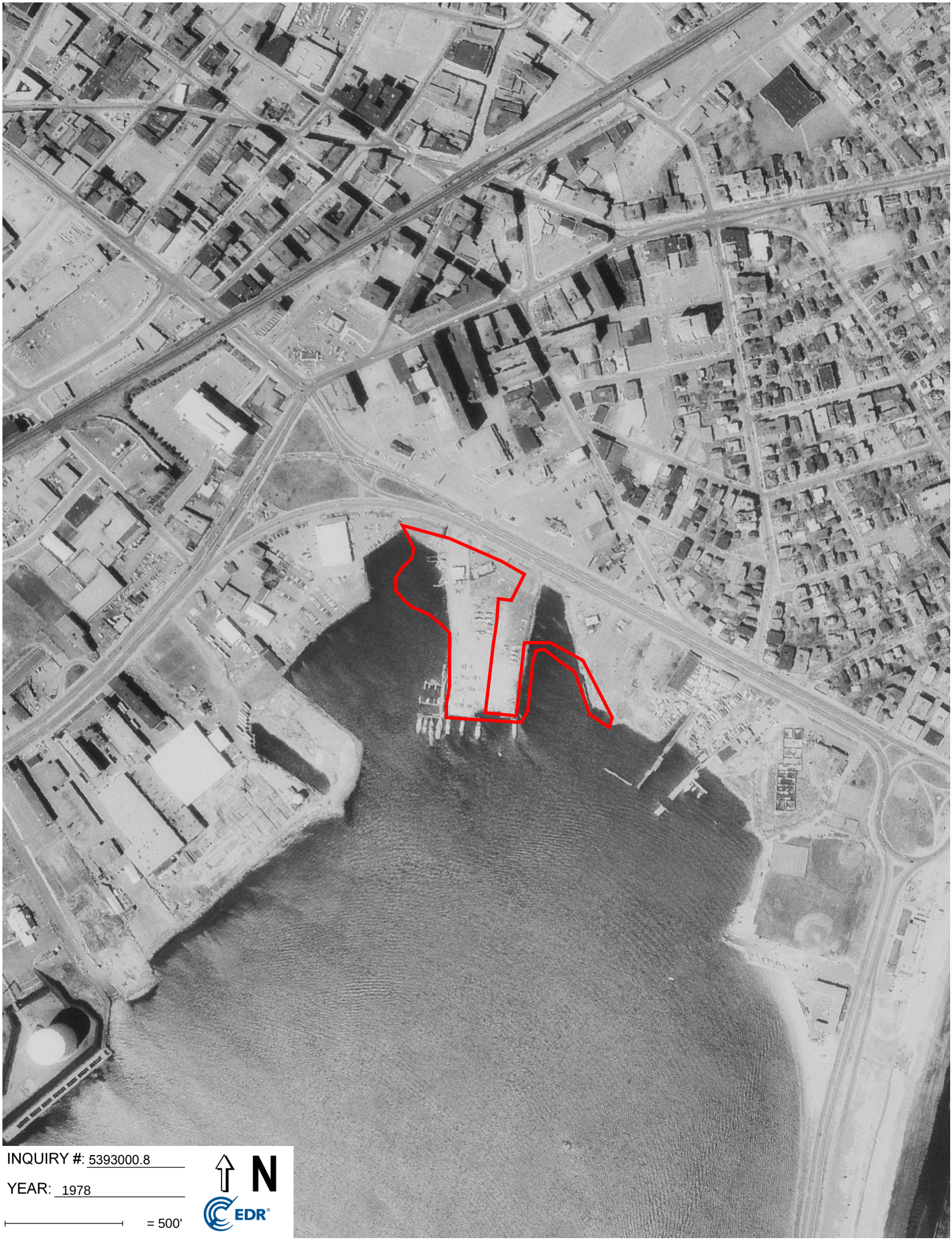
INQUIRY #: 5393000.8

YEAR: 1986

= 500'

N

EDR



INQUIRY #: 5393000.8

YEAR: 1978

= 500'

N

EDR

INQUIRY #: 5393000.8

YEAR: 1970

= 500'

N

EDR

INQUIRY #: 5393000.8

YEAR: 1969

= 500'

N

EDR

INQUIRY #: 5393000.8

YEAR: 1960

= 500'

N

EDR

INQUIRY #: 5393000.8

YEAR: 1955

= 500'

N

EDR