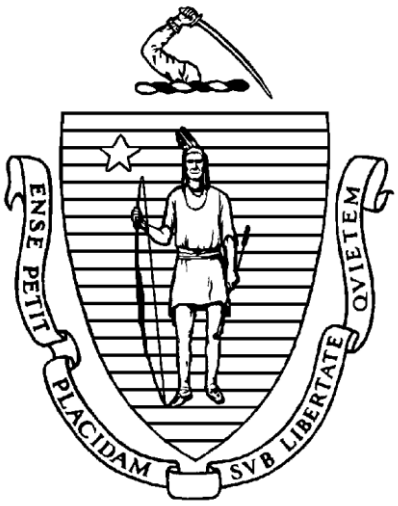


Department of Conservation and Recreation

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. P26-3663-C2A (4062-C)
Title: Boston Harbor Islands Waterfront Repairs
Location: Boston Harbor Islands: Lovells, Georges, Spectacle, Grape Islands and 30 Shipyard Drive, Hingham, MA
Counties: Suffolk, Norfolk and Plymouth

GENERAL BID proposals shall be submitted on a form furnished by the Department and will be received until 12:00 PM on Thursday , March 19, 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 virtual pre-bidding conference for prospective bidders will be held Thursday, 2/26/2026 at 10:00am and may be accessed through the link below.

https://teams.microsoft.com/meet/21133450209927?p=UsKzSLK35hk0YbGLvj
Platform: Microsoft Teams
Meeting ID: 211 334 502 099 27
Passcode: px2Hd3q6

Repair and rehabilitate marine infrastructure within Boston Harbor Islands State Park. Work includes rehabilitation of deteriorated waterfront structures and removal and disposal of failed marine structures and appurtenances.

The estimated project cost is **$ 705,000**

The work is to be accomplished within 182 calendar days of a notice to proceed. Liquidated damages in the amount of **$750.00** 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 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.: P26-3663-C2A (4062-C)

Title: Boston Harbor Islands Waterfront Repairs
Location: Boston Harbor Islands: Lovells, Georges, Spectacle, Grape Islands and 30 Shipyard Drive, Hingham, MA
Counties: Suffolk, Norfolk and Plymouth

Project Scope: Repair and rehabilitate marine infrastructure within Boston Harbor Islands State Park. Work includes rehabilitation of deteriorated waterfront structures and removal and disposal of failed marine structures and appurtenances

Deadline for filing general bids is 12:00 P.M. on Thursday, March 19, 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 decision, 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 for 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 10 (ten) 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: Mark Georgian, Project Manager
Department of Conservation and Recreation

Email: mark.n.georgian@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 thru 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 this Section 7 are 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, 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.

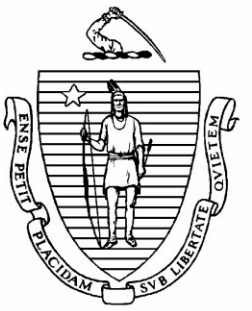
-Department of Conservation and Recreation-Contractor Agreement
-Certificate of Corporate Vote
-Joint Venture Authorization (if appropriate)
-Performance and Payment Bonds with power of attorney
-Certificates of Insurance evidencing coverages in amounts required by the Contract Documents.
-Any other 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.

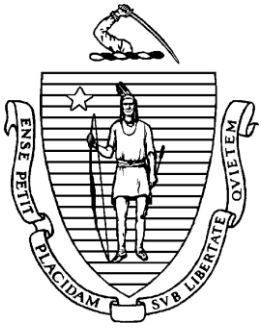
Bidder/Contractor Name: _____

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

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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.

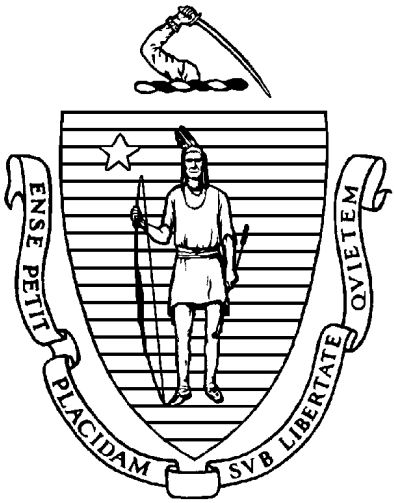
Request No.	Date:	Amount:
Request No.	Date:	Amount:
Request No.	Date:	Amount:

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

SPECIAL CONDITIONS

1. **Spectacle Island Completion Requirement**
   All work at spectacle Island shall be fully completed on or by June 6, 2026.

2. **Sail Boston 2026 Restrictions**
   Sail Boston is scheduled to take place in July 2026. To avoid conflicts with event preparation and public use, the following restrictions shall apply from July 10 through July 17, 2026, inclusive:
   a. No construction equipment, materials, temporary facilities, or debris shall be stored at any project site.
   b. All affected areas shall be left in a clean, safe, and fully usable condition for public access.
   c. No construction work shall occur onsite during this period.

BOSTON HARBOR ISLANDS
WATERFRONT IMPROVEMENTS

SPECIFICATIONS

dcr
Massachusetts

Department of Conservation & Recreation
Waterways & Coastal Engineering

10 Park Plaza, Suite 6620
Boston, MA 02116

FEBRUARY 2026
P26-3663-C2A (4062-C)

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SECTION 01 11 00

SUMMARY OF WORK

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK

A. Work Included:

1. The Project, of which the Work of this Contract is titled "Boston Harbor Islands Waterfront Repairs," includes all labor, materials, equipment, and services required to perform the Work and to maintain safe operation and safe access at the site during construction.

2. This Contract is a multi-site, marine-based rehabilitation project involving work from barges, floats, and temporary marine access. Quantities are condition-dependent and not all work can be fully quantified prior to construction

3. The Work primarily consists of repair, rehabilitation, and selective demolition at existing waterfront facilities within Boston Harbor Islands State Park. Work includes, but is not limited to, rehabilitation of the Lovells Island steel barge; replacement and repair of pile guides; salvage and removal of debris from the mudline, including a float and pile guide; disposal of failed gangways and floats; and repair of damaged or worn gangway components.

4. Limited new construction is included, consisting of the installation of a new Staff Gangway at Georges Island.

5. As part of the Work, existing steel barges at the project locations shall be assessed by a qualified Marine Surveyor as specified herein.

END OF SECTION

SECTION 01 25 13

SUBMITTALS AND SUBSTITUTIONS

PART 1 - GENERAL

1.1 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 Engineer.
2. The Contractor may require their subcontractors to provide drawings, setting diagrams, and similar information to help coordinate the Work, but such data shall remain between the Contractor and their subcontractors and will not be reviewed by the Engineer.

C. Definitions:
1. "Or equivalent":
   a. Where the phrase "or equivalent," or "or equivalent as accepted by the Engineer," 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 Engineer.
   b. The decision of the Engineer shall be final.

D. 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.

1.2 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 add the statement below to all submittals.

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 statement to each submittal, certify that this coordination has been performed. Submittals which do not bear the requisite statement 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 Engineer.

C.

1.3 SUBMITTALS

A. Make submittals of Shop Drawings, Samples, substitution requests, and other items in accordance with the provisions of this Section.

PART 2 - PRODUCTS

2.1 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 electronically in PDF format.
2. Blueprints will not be acceptable.

C. One electronic set of shop drawings with the Engineer's review comments will be returned to the Contractor. The Contractor may distribute as required for their purposes.

2.2 MANUFACTURERS' LITERATURE

A. Where contents of submitted literature from manufacturers include data not pertinent to the submittal, clearly show which portions of the contents are being submitted for review.

B. Submit manufacturers' data electronically in PDF format for review. One electronic set of manufacturer's data with the Engineer's review comments will be returned to the Contractor. The Contractor may distribute as required for their purposes.

2.3 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 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 Engineer.

2.4 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 Engineer for selection.xxx

PART 3 - EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

A. Consecutively number all submittals.

B. When material is resubmitted for any reason, transmit under a new letter of transmittal and with a new transmittal number.

C. On re-submittals, cite the original submittal number for reference.

D. Clearly label each submittal with a reference to the appropriate Specification Section for which the submittal is made.

E. Accompany each submittal with a letter of transmittal showing all information required for identification and checking.

F. 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.

G. 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 Engineer for their review upon request.

3.2 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.

3.3 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 Engineer following the receipt of the submittal.

3.4 ENGINEER'S REVIEW

A. Review by the Engineer does not relieve the Contractor from responsibility for errors or omissions that may exist in the submitted data.

B. Revisions:
1. Make revisions required by the Engineer.
2. If the Contractor considers any required revision to be a change, they shall so notify the Engineer.
3. Make only those revisions directed or accepted by the Engineer.

C. Engineer's Review Stamp: The Engineer's review stamp will indicate the status of the submittal, and corresponding action to be taken by the Contractor as follows:
1. No Exceptions Taken: When the 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.
2. Make Corrections Noted: When the Engineer marks the submittal “Make Corrections Noted”, 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. Amend and Resubmit: When the Engineer marks the submittal “Amend and Resubmit”, the Work covered by the submittal may proceed provided it complies with the notations on the submittal and requirements of the Contract Documents. The submittal must be revised to comply with the notations on the submittal and

requirements of the Contract Documents and must then resubmitted to the Engineer. Final payment depends on that compliance.

4. Rejected – See Remarks: When the Engineer marks the submittal "Rejected – See Remarks", do not proceed with the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise and prepare a new submittal according to the notations, resubmit without delay. Repeat if necessary to obtain a different action mark.
5. Do not use or allow others to use submittals marked "Resubmit" at the Project Site or elsewhere where Work is in progress.

END OF SECTION

SECTION 01 31 19

PROJECT MEETINGS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work included: To enable orderly review during progress of the Work and to provide for systematic discussion o

1.2 1.2

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.

1.3 SUBMITTALS

A. Agenda items: To the maximum extent practicable, advise the Engineer at least 24 hours in advance of project meetings regarding items to be added to the agenda.

B. Minutes:

C. The Engineer will compile minutes of each project meeting and will furnish one copy to the Contractor and required copies to the Owner.

D. Recipients of copies may make and distribute such other copies as they wish.

E. Maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 MEETING SCHEDULE

A. Except as noted below for Pre-construction Meeting, project meetings will be held monthly and as needed.

B. Coordinate as necessary to establish mutually acceptable schedule for meetings.

3.2 MEETING LOCATION

A. The Engineer will establish meeting location. To the maximum extent practicable, meetings will be held at the job site.

3.3 PRE-CONSTRUCTION MEETING

A. Pre-construction Meeting will be scheduled to be held within 21 days after the Owner has issued the Contract.
   1. Provide attendance by authorized representatives of the Contractor, including the Contractor's Representative and major subcontractors.
   2. The Engineer will advise other interested parties, including the Owner, 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, 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 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.

3.4 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.
   3. Identify problems that impede planned progress.
   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 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 Engineer in writing.
3. Challenge to minutes shall be settled as priority portion of "old business" at the next regularly scheduled meeting.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 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 for the Contractor's personnel.
   3. Sanitary facilities.
   4. Enclosures such as tarpaulins, barricades, and canopies.
   5. Temporary fencing of the construction site.

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.

1.2 PRODUCT HANDLING

A. Maintain temporary facilities and controls in proper and safe condition throughout progress of the Work.

1.3 SECURITY

A. Restrict the access of all persons entering upon the Project Location in connection with the Work to the Owner 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 Owner.

PART 2 - PRODUCTS

2.1 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 or generators 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.

2.2 FIELD OFFICES AND SHEDS

A. Contractor's facilities:
1. Provide a temporary field office building and sheds adequate in size and accommodation for Contractor's offices, supply, and storage. As a minimum, equip the Contractor's field office shall be capable sharing digital documents and making and receiving phone calls.

B. Sanitary facilities:
1. Provide temporary sanitary facilities in the quantity required by applicable health regulations for use by all personnel.
2. Always maintain in a sanitary condition.

2.3 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.

2.4 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 the Owner, or the property of others that may be present on site.

PART 3 - EXECUTION

3.1 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 Engineer.

END OF SECTION

SECTION 01 74 23

CLEANING

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work included: Throughout the construction period, maintain the buildings and site in a standard of cleanliness as described in this Section.

1.2 QUALITY ASSURANCE

A. Conduct daily inspection, and more often, if necessary, to verify that requirements for cleanliness are being met.

B. Comply with pertinent requirements of governmental agencies having jurisdiction.

PART 2 - PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

A. Provide required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 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

A. PROGRESS CLEANING
   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.
   5. Items exposed to staining agents (e.g., epoxy, cementitious materials, oils, sealants, or other chemicals) shall be promptly and thoroughly cleaned upon exposure. If not cleaned in a timely manner, and residue results in aesthetic or

performance degradation, the Contractor shall remove and replace the affected work at no additional cost to the Owner.

6. Any work damaged, defaced, or improperly executed shall be removed and replaced in a manner that fully restores the affected area to its originally intended function, performance, and appearance. Partial or cosmetic repairs resulting in visibly mismatched, functionally compromised, or otherwise substandard work will not be accepted.
7. Should Contractor leave site for more than 2 weeks, Contractor shall leave the site clean and free of debris. The facility shall be left in a condition suitable for use by DCR Staff.

B. Site
1. Daily, or 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 3.1-A-1 above.
3. Always maintain the site in a neat and orderly condition.

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.

3.2 FINAL CLEANING

A. 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 3.1 above.

B. Site:
1. Unless otherwise specifically directed by the Engineer, broom clean walking surfaces withing and adjacent to the site.
2. Completely remove resultant debris.

C. Structures:
1. Exterior:
2. Maintain existing finishes in a similar condition.
3. New coatings and surfaces shall be protected and maintained as needed to maintain a uniform and clean appearance.
4. In the event of stubborn stains not removable with water, the Engineer may require light sandblasting or other cleaning at no additional cost to the Owner.

D. Schedule final cleaning as approved by the Engineer to enable the Owner to accept a completely clean Work.

3.3 CLEANING DURING OWNER'S OCCUPANCY

A. Should the Owner occupy the Work or any portion thereof prior to its completion by the Contractor and acceptance by the Owner, responsibilities for interim and final cleaning shall be determined by the Engineer in accordance with the General Conditions of the Contract.

END OF SECTION

SECTION 02 00 10

SITE PREPARATION

PART 1 - GENERAL

1.1 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 State, Local, and Federal regulations 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 clearly 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. 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 on how to proceed.
6. 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.

1.2 REFERENCES

A. Section 02 41 00 —Selective Demolition

1.3 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, must 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.

1.4 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 review and approval prior to mobilization and related site preparation operations.

B. Provide pre-repair and post-repair photographs of barge, gangway, and pile guide repairs, and document the length of the Lovells Pile Gangway recovered.

C. Spill management plan.

1.5 PROTECTION

A. Protect structures, utilities, and other facilities from damage caused by equipment, transportation, disposal, and other hazards created by work operations.

B. Protect existing structures and facilities that are adjacent to the work area from damage caused by the Contractors project operations. Repair all damage caused by the Contractor, to the satisfaction of the Engineer, at the sole expense of the Contractor

C. 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.

1.6 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.

1.7 EXISTING SERVICES

A. Arrange and pay for disconnecting, removing, capping, and plugging utility services as indicated on the Contract Documents. Disconnect and stub off.

1.8 ENVIRONMENTAL PROTECTION

A. Comply fully with all State, Local, and Federal regulations including performance of any miscellaneous work required to ensure full compliance and not otherwise covered by individual items in the contract.

B. Provide measures to prevent any construction debris from falling into the water. Any material falling into the water shall be retrieved immediately.

C. Deploy a trash boom and silt curtain where any disturbance to the mudline is probable.

PART 2 - PRODUCTS

2.1 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.

PART 3 - EXECUTION

3.1 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. 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.

3.2 INSPECTION

A. The Engineer must be notified at least 48 hours in advance of all project material(s) shipments in order to make arrangements for the shipment to be inspected as they arrive to the site.

B. 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.

C. 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 deemed acceptable by the Engineer, or for any reason are placed outside the prescribed limits of the work.

PART 4 - COMPENSATION

4.1 MEASUREMENT

A. Measurement for Item 02 00 10-1 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.

B. Item 02 00 10-1 MOBILIZATION/DEMOBILIZATION shall include all work to identify site conditions including but not limited the completion of pre-construction submittals, obtaining any necessary permits and approvals not already in place for the work specified in accordance with the Contract, full reimbursement for the premiums actually paid for Performance and Payment Bonds, all costs connected with the mobilization of the Contractor's equipment, barges, coordination, submittals and preparation for access to the offloading laydown area(s) as required; support equipment or vessels (including all equipment needed for debris handling, separation and disposal), procurement of materials needed for construction, temporary facilities, installation of security measures, management of stormwater during construction, installation and maintenance of erosion control measures, and registration/ training of project personnel, compliance with on-site security measures, and construction of environmental controls required by the Permits with respect to protection of the environment; and the coordination with the regulatory agencies, and any other work that is necessary.

4.2 PAYMENT

A. Payment for Item 02 00 10 MOBILIZATION/DEMOBILIZATION will be at the LUMP SUM contract price. This price shall include mobilization, demobilization, shall include compensation for project preparations, procurement and assembly of all equipment, erosion controls, materials, supplies, permits, labor and bonds required for the prosecution of the work not otherwise included in other pay items and upon completion of the work as specified and directed, the clean-up of the work areas, removal of equipment, materials and supplies from the work area and all incidental work described in the specifications and contract documents and all items not otherwise called out for individual price breakdown.

B. A maximum of 60% of the total Mobilization/ Demobilization in Bid Item 01000-01 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. The Project Engineer and/or DCR may request from the Contractor and Contractor must provide documentation to fully and adequately substantiate, account for and demonstrate actual costs for labor, equipment, material(s) and supply invoices, purchase orders, and/or other appropriate records as deemed necessary by the Project Engineer and/or DCR for mobilization activities. If upon application for payment, the Contractor fails to demonstrate with verified documentation funds expended for mobilization as stated herein, then the Project Engineer and/or DCR reserves the right to pay the Contractor only for actual expenditures or a reasonable approximation thereof, as solely 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.

C. There will be only one mobilization paid for. If for any reason the Contractor must shut down and remove their equipment from the site and then remobilize again, the Owner

D. There will be no separate measurements of quantities or payments for other work described in this Section.

4.3 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
02 00 10-1	MOBILIZATION & DEMOBILIZATION	LUMP SUM

END OF SECTION

SECTION 02 41 00

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 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. Reinstall these items as indicated on the drawings such that they are undamaged and fit for their intended purpose.

C. Drawings and general provisions of Contract, including General and Special Conditions and Specification sections, apply to work of this section.

D. This work also includes but is not limited to the following:
1. Remove and dispose of the pile stub at Lovells Island (LI: GP-2).
2. Remove and dispose of the winch hood and electrical service at Lovells Island.
3. Remove and dispose of Georges Island pile guide(s) to be replaced.
4. Remove and dispose of the Spectacle Island pile guide from the mudline at SI:GP-4.
5. Remove and dispose of Spectacle Island Pile Guides not being rehabilitated
6. Remove and dispose of the sunken barge at Grape Island.
7. Remove and dispose of the winch hood and electrical service at Grape Island.
8. Removal of steel floats and gangways at 30 Shipyard Drive in Hingham including

The listed items are representative and do not limit the Contractor's responsibility to remove all items shown, noted, or reasonably implied by the Contract Documents

1.2 QUALITY ASSURANCE

A. Use adequate numbers of skilled work personnel 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.

1.3 SUBMITTALS

A. The Contractor shall submit a detailed disposal plan to the Engineer and DCR for review prior to commencement of demolition. This plan shall include quantities and types of items that are to be removed and disposed. 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.

B. 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.

C. For all submerged or marine-recovered items, including pile guides, piles, and floating structures, submit documentation identifying the recovery location, material type, disposal facility, and final disposition. Include weight tickets, bills of lading, and disposal certifications as applicable.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 DEMOLITION

A. Secure the Engineer's review of the items scheduled for selective demolition.

B. Demolish and remove the scheduled items.

C. Completely remove items scheduled to be so demolished and removed, leaving surfaces clean, solid, and ready to receive new materials specified elsewhere. Field dress exposed metals.

D. The Contractor may not place demolition equipment on portions of the facility not slated for demolition without prior written authorization.

E. In all Contractor activities, comply with pertinent regulations of governmental agencies having jurisdiction.

F. Except for items specifically scheduled for reuse or to be turned over to the Owner, 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.

3.2 REPLACEMENTS

A. In the event of demolition or damage caused to any items not so scheduled to be demolished, promptly replace such items with prior approval of the Owner which shall be at no additional cost to the Owner as such costs are the full responsibility of the Contractor.

3.3 ALTERATIONS TO REUSED ITEMS

A. 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, else the Contractor is responsible for the replacement of the item(s) that result from their failure to properly reuse and deliver an equal standard item as defined herein. Drawings are to be presented to the Engineer for review prior to making any alterations; however, this review does not relieve the Contractor of their responsibilities as indicated elsewhere in this Contract.

3.4 SUBMERGED AND SUNKEN ITEMS

A. Where indicated, recover and remove submerged or sunken items, including but not limited to pile guides, broken piles, and floating structures. Perform recovery operations in a controlled manner to prevent further debris generation, damage to existing structures, or disturbance of surrounding sediments. Retrieve all practicable debris associated with the removed items and dispose of recovered materials in accordance with the requirements of this Section.

B. The existing pile stub at Lovells Island shall be removed in its entirety concurrent with installation of the barge. Removal shall be performed regardless of whether the pile stub is fully exposed at the time of construction. Dispose of removed materials in accordance with Section 02 81 00 – Transportation and Disposal.

3.5 ENVIRONMENTAL

A. During demolition, salvage, and recovery operations in or adjacent to navigable waters, prevent the release of fuels, oils, lubricants, floatation materials, debris, or other pollutants. Provide containment, recovery, and cleanup measures as necessary to control turbidity and prevent environmental contamination. Immediately remove any debris or pollutants released as a result of the Work at no additional cost to the Owner.

3.6 REMOVAL OF EXISTING ELECTRICAL COMPONENTS

A. Where indicated or encountered during demolition, remove abandoned or inactive electrical conduit, wiring, and associated appurtenances back to the nearest electrical box or point of origin. Verify that all circuits to be removed are de-energized prior to removal. Cap, terminate, or remove conductors in a safe and code-compliant manner. Provide covers on all open boxes and seal all unused conduit penetrations to maintain enclosure integrity and prevent water intrusion. Dispose of removed materials off-site in accordance with applicable regulations.

PART 4 - COMPENSATION

4.1 MEASUREMENT

A. Measurement for Item 02 41 00-1 GRAPE ISLAND – DEMOLITION 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 or as required to complete the Work as specified.

B. Measurement for Item 02 41 00-2 SHIPYARD DRIVE – DEMOLITION 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 or as required to complete the Work as specified.

4.2 PAYMENT

A. Payment for Item 02 41 00-1 GRAPE ISLAND – DEMOLITION will be at the LUMP SUM contract price. This price shall include full compensation for furnishing and performing all demolition and salvage work at Grape Island, including removal and disposal of the sunken steel float, removal and disposal of deteriorated steel appurtenances, removal and disposal of inactive electrical conduit and wiring as indicated, transportation and disposal or recycling of demolished materials, and the furnishing of all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the GRAPE ISLAND – DEMOLITION as shown on the Drawings and as herein specified.

B. Payment for Item 02 41 00-2 SHIPYARD DRIVE – DEMOLITION will be at the LUMP SUM contract price. This price shall include full compensation for furnishing and performing all demolition and salvage work at 30 Shipyard Drive, Hingham, Massachusetts, including removal and disposal of the steel barges and appurtenances, removal and disposal of aluminum gangways, transportation and disposal or recycling of demolished materials, and the furnishing of all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the SHIPYARD DRIVE – DEMOLITION as shown on the Drawings and as herein specified.

ITEM	DESCRIPTION	UNIT
02 41 00-1	GRAPE ISLAND – DEMOLITION	LUMP SUM
02 41 00-2	SHIPYARD DRIVE – DEMOLITION	LUMP SUM

END OF SECTION

SECTION 02 81 00

TRANSPORTATION AND DISPOSAL

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Contractor shall properly transport and dispose of all items, including solid hazardous and nonhazardous wastes removed from the site to appropriate disposal facilities. Contractor shall characterize all waste prior to offsite disposal as noted within to determine if they are hazardous or non-hazardous. This includes waste designated for disposal by the Engineer as well as the waste generated by Contractor. The Contractor shall be responsible, and will be held accountable, for assuring that all sampling, analysis, transportation, and disposal requirements of the receiving facility and federal, state, and local governments are complied with and properly documented.

1.2 SUBMITTALS

A. All final versions of weight slips, material shipping records, completed bills of lading, or hazardous waste manifests for material generated at the site and transported and disposed of offsite.

PART 2 - PRODUCTS

2.1 MATERIALS AND EQUIPMENT

A. All equipment supplied shall be in good working condition. Equipment and machinery delivered to the site, including haul trucks that have visible oil or hydraulic fluid leaks, will not be allowed on site until satisfactorily repaired. Contractor is responsible for the cleanup of any oil or hydraulic fluid spills at Contractor's expense

PART 3 - EXECUTION

3.1 TRANSPORTATION

A. All waste disposal facilities used by the Contractor shall be submitted to the Engineer for approval. Contractor shall not use any disposal facility that does not have the Engineer’s approval. Prior to shipment of wastes off the site, Contractor shall confirm with the Engineer by written communication from the designated Transportation, Storage, or Disposal Facility (TSDF) that it is authorized, has the capacity, and will provide or assure that the ultimate disposal method is followed for the particular waste on the manifest. Additionally, Contractor shall confirm by written communication from the designated transporter(s) that they are authorized to deliver the manifested waste to the designated TSDF or Solid Waste Management Facility (SWMF).

B. To the maximum extent practicable, salvage and recycle demolition materials, including steel, aluminum, and timber, in lieu of disposal. Separate recyclable materials from waste streams where feasible. Deliver recyclable materials to licensed recycling facilities. Include documentation of recycled materials with disposal submittals, identifying material type and destination facility.

3.2 MANIFESTING AND DOCUMENTATION

A. Contractor shall complete all required manifest forms and Bill of Lading forms for proper transportation and disposal of materials off site. Contractor shall present the documents for proper signatory by the Owner. Contractor shall promptly provide Engineer a physical and electronic copies of all final bills of lading, manifests, Certificates of Disposal, and/or papers involved in shipping of material off the site, as well as any weight tickets or receipts for delivery of materials to the site, or delivery to a disposal facility.

PART 4 - COMPENSATION

4.1 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section as it is to be included in other Bid Items.

END OF SECTION

SECTION 05 12 00

STRUCTURAL STEEL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Work included: Provide miscellaneous structural steel items including but not limited to accessories as shown on the Drawings, specified herein, and needed for a complete and proper installation.

1.2 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 documentation demonstrating the qualifications of the marine surveyor in accordance with the Contract requirements.

E. Submit a written marine survey report for each island documenting the scope of the survey, observed conditions, photographic documentation, ultrasonic thickness testing results (including test locations and measured thicknesses), a summary of findings, and recommended repair locations consistent with the Contract Documents.

F. Include a summary of ultrasonic thickness testing identifying test locations and recorded thickness readings.

G. Where the Contractor believes the marine survey indicate steel conditions beyond those reasonably inferable from the Contract Documents, submit a brief memorandum identifying such conditions and associated repair impacts.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Quality Assurance

1. Use adequate number of skilled work personnel 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. Perform welding with electric arc process and in accordance with AWS "Code for Arc and Gas Welding in Building Construction".
3. In addition to complying with pertinent codes and regulations, comply with:
   a. The American Institute of Steel Construction, AISC, "Steel Construction Manual", Sixteenth Edition.

B. New structural steel shapes shall conform to ASTM A992 or ASTM A572 Grade 50 unless otherwise noted. Where specifically indicated for marine exposure, steel shapes shall conform to ASTM A690.

C. Steel plates, angles, channels, and bar stock shall conform to ASTM A572 Grade 50 unless otherwise noted.

D. Welding materials and procedures shall conform to AWS D1.1. Electrodes shall be E70XX or as required for the base materials being welded.

E. Carbon steel carriage bolts and lag screws shall conform to ASTM A307, Grade A.

F. High strength structural bolts shall conform to ASTM F3125 Grade A325 with hexagonal heads.

G. Carbon steel nuts shall conform to ASTM A563 unless otherwise noted.

H. Carbon steel washers (except against timber): Shall conform to ASTM F436.

I. Stainless steel bolts and studs shall conform to ASTM F593. Stainless steel nuts shall conform to ASTM F594. Stainless steel hardware shall be Type 316 unless otherwise specified.

J. Provide non-conductive isolation washers or sleeves where stainless steel fasteners connect dissimilar metals.

K. Welding Materials: AWS D1.1; Type E70XX or type required for materials being welded.

L. Remove coatings, corrosion, and contaminants in weld areas and prepare to sound metal prior to welding. Do not weld over coated or deteriorated surfaces.

M. 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 for field measurements 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 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.

N. 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. No field modifications will be permitted unless expressly approved by the Engineer.
2. Steel Sections: Unless specifically noted otherwise, all steel sections shall be shop coated prior to delivery to site in accordance with Section 09 97 13 Coating on Steel Waterfront Structures.
3. Carbon steel bolts, nuts, and washers shall be hot-dip galvanized. Galvanizing for high-strength bolts shall conform to ASTM F2329. Galvanizing for other hardware shall conform to ASTM A153.
4. Field Touch-Up of Epoxy-Coated Items: Shall be performed in accordance with Section 09 97 13 Coating on Steel Waterfront Structures.
5. Field Touch-Up of Hot-Dipped Galvanized Items: Touch-up shall be performed with Tnemec 90-97 Tneme-Zinc primer or equivalent accepted by the Engineer. Surface preparation and coating application shall be in strict accordance with manufacturers' written instructions.

O. Cathodic Protection
1. Provide and install a sacrificial anode cathodic protection system on the Lovells Island float as part of the rehabilitation work. Install anodes in a manner that does not interfere with float operation, mooring systems, utilities, or access.

P. Other Material

1. 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.

Q. 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

3.1 INSTALLATION

A. Existing Conditions

1. Examine the areas of Work and verify field conditions affecting access, coordination, and execution of the Work. Do not proceed with Work of this section until conditions affecting access, safety, or coordination have been addressed.
2. Provide a qualified marine surveyor to assess the interior and exterior condition of each barge identified in the Contract Documents prior to commencement of rehabilitation work. The survey shall include a visual inspection of accessible hull plating, framing, deck structures, pile guides, attachments, and areas of known or suspected deterioration. Provide a written report documenting observed conditions, photographic documentation, and recommended repair locations.
3. Marine survey and ultrasonic thickness testing shall be performed by an independent marine surveyor or firm. The surveyor shall be qualified and possess one or more of the following qualifications:
   a. Society of Accredited Marine Surveyors (SAMS®)
   b. The National Association of Marine Surveyors (NAMS-CMS)
   c. Professional Engineer with relevant experience
4. The survey shall be completed prior to initiation of structural steel repairs.
5. As part of the marine survey, perform ultrasonic thickness testing at selected locations on each barge to assess remaining steel thickness.
6. UT testing shall be conducted at representative locations including, but not limited to, areas of visible corrosion, dented or deformed plating, splash zones, areas adjacent to pile guides, and other locations where section loss is suspected.
7. Document UT readings and test locations in the survey report.
8. Ultrasonic thickness testing and marine survey activities described in the Contract Documents are intended to identify existing steel conditions affecting repair requirements and identifying future maintenance needs. Steel repairs reasonably

inferable from the Contract Documents and typical deterioration associated with the age, exposure, and service of the structures are included in the Work. Where UT results identify substantial section loss or structural deterioration not reasonably observable prior to construction, the Engineer may direct additional steel repairs by Change Order in accordance with the Contract.

B. Erection
   1. Surveys:
      a. Establish benchmarks necessary for accurate erection of structural steel.
      b. Check elevations of 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 09 97 13, Coating of Steel Waterfront Structures.

PART 4 - COMPENSATION

4.1 MEASUREMENT

A. Measurement for Item 05-12-00-1 LOVELLS ISLAND – MARINE SURVEYOR 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 or as required to complete the Work as specified.

B. Measurement for Item 05-12-00-2 GEORGES ISLAND -– MARINE SURVEYOR 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 or as required to complete the Work as specified.

C. Measurement for Item 05-12-00-3 SPECTACLE ISLAND – MARINE SURVEYOR 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 or as required to complete the Work as specified.

D. Measurement for Item 05-12-00-4 GRAPE ISLAND – MARINE SURVEYOR 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 or as required to complete the Work as specified.

E. Measurement for Item 05-12-00-5 LOVELLS ISLAND – BARGE REHABILITATION 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 or as required to complete the Work as specified.

F. Measurement for Item 05-12-00-6 GEORGES ISLAND – BARGE REHABILITATION 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 or as required to complete the Work as specified.

G. Measurement for Item 05-12-00-7 SPECTACLE ISLAND – BARGE REHABILITATION 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 or as required to complete the Work as specified. Payment for Spectacle Island items is contingent upon completion in of this Work prior to June 6, 2026.

4.2 PAYMENT

A. Payment for Item 05 12 00-1 LOVELLS ISLAND – MARINE SURVEY will be at the LUMP SUM contract price. This price shall include full compensation for performing the marine survey of the barge(s) identified in the Contract Documents and furnishing all required reports and submittals specified herein, including all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the LOVELLS ISLAND – MARINE SURVEY as shown on the Drawings and as herein specified.

B. Payment for Item 05 12 00-2 GEORGES ISLAND – MARINE SURVEY will be at the LUMP SUM contract price. This price shall include full compensation for performing the marine survey of the barge(s) identified in the Contract Documents and furnishing all required reports and submittals specified herein, including all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the GEORGES ISLAND – MARINE SURVEYOR as shown on the Drawings and as herein specified.

C. Payment for Item 05 12 00-3 SPECTACLE ISLAND – MARINE SURVEY will be at the LUMP SUM contract price. This price shall include full compensation for performing the marine survey of the barge(s) identified in the Contract Documents and furnishing all required reports and submittals specified herein, including all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the SPECTACLE ISLAND – MARINE SURVEY as shown on the Drawings and as herein specified.

D. Payment for Item 05 12 00-4 GRAPE ISLAND – MARINE SURVEY will be at the LUMP SUM contract price. This price shall include full compensation for performing the marine survey of the barge(s) identified in the Contract Documents and furnishing all required reports and submittals specified herein, including all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the GRAPE ISLAND – MARINE SURVEY as shown on the Drawings and as herein specified.

E. Payment for Item 05 12 00-5 LOVELLS ISLAND – BARGE REHABILITATION will be at the LUMP SUM contract price. This price shall include full compensation for providing and installing structural steel barge rehabilitation work at Lovells Island, including replacement of failed pile guides, replacement of UHMW wear blocks on pile guides, repair of damaged hull plating near Guide Pile-2, replacement of sacrificial anodes, surface preparation and coating of the deck and as necessary to complete structural repairs, removal and reinstallation of the barge as required, securing and reinstalling the gangway as needed to perform the Work, removal and disposal of the deteriorated winch hood and associated abandoned electrical service, removal of the existing pile stub at Guide Pile-2, and the furnishing of all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the LOVELLS

ISLAND – BARGE REHABILITATION as shown on the Drawings and as herein specified.

F. Payment for Item 05 12 00-6 GEORGES ISLAND – BARGE REHABILITATION will be at the LUMP SUM contract price. This price shall include full compensation for providing and installing repairs and replacement of pile guides and their connecting brackets, surface preparation and coating work necessary to complete structural repairs, and the furnishing of all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the GEORGES ISLAND – BARGE REHABILITATION as shown on the Drawings and as herein specified.

G. Payment for Item 05 12 00-7 SPECTACLE ISLAND – BARGE REHABILITATION will be at the LUMP SUM contract price. This price shall include full compensation for providing and installing pins, hatch bolts installation of reserve pile guides, and repairs to existing pile guides and associated connecting brackets as shown on the Drawings, surface preparation and coating work necessary to complete structural repairs, salvage of designated pile guides including Pile Guide-4, disposal of pile guides not slated for repair, disposal of the floating timber pile, and the furnishing of all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the SPECTACLE ISLAND – BARGE REHABILITATION as shown on the Drawings and as herein specified.

4.3 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
05 12 00-1	LOVELLS ISLAND – MARINE SURVEY	LUMP SUM
05 12 00-2	GEORGES ISLAND – MARINE SURVEYOR	LUMP SUM
05 12 00-3	SPECTACLE ISLAND – MARINE SURVEY	LUMP SUM
05 12 00-4	GRAPE ISLAND – MARINE SURVEY	LUMP SUM
05 12 00-5	LOVELLS ISLAND – BARGE REHABILITATION	LUMP SUM
05 12 00-6	GEORGES ISLAND – BARGE REHABILITATION	LUMP SUM
05 12 00-7	SPECTACLE ISLAND – BARGE REHABILITATION	LUMP SUM

END OF SECTION

SECTION 05 50 00

MISCELLANEOUS METALS

PART 1 - GENERAL

1.1 WORK SPECIFIED

A. The Work covered under this Section of these Specifications consists of providing all plant, labor, supervision, equipment, appliances, and materials, and in performing all operations in connection with the installation of metal fabrication, all in strict accordance with the Contract Documents.

1.2 SUBMITTALS

A. The Contractor shall submit shop drawings detailing fabrication and erection of each metal fabrication indicated or otherwise included directly or indirectly by reference or necessity for construction. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items. Provide templates for anchors and bolts specified for installation under other Sections.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Quality Assurance

1. Use adequate number of skilled work personnel 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. The Owner reserves the right of approval of any Subcontractor 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.
   b. Acceptable schedule of unit prices for measurement and payment in event of changes in the Work of this Section.
3. Perform welding with the electric arc process in accordance with the applicable American Welding Society (AWS) Structural Welding Code. Welding of steel shall conform to AWS D1.1. Welding of aluminum shall conform to AWS D1.2. All structural welds shall be performed by welders certified by the American Welding Society (AWS) for the appropriate welding application.
4. In addition to complying with pertinent codes and regulations, comply with:
   a. American Institute of Steel Construction (AISC), Steel Construction Manual, for steel design and fabrication.
   b. Aluminum Association (AA), Aluminum Design Manual, for aluminum design and fabrication.

c. The American Institute of Steel Construction, AISC, "Steel Construction Manual", Sixteenth Edition.

5. All connections shall be designed by the steel fabricator except those specifically detailed on the Contract Documents. Submit design calculations for review if requested by Owner.
6. All references to SSPC shall be interpreted as Steel Structures Painting Council Manual, Systems and Specifications, now part of the Association for Materials Protection and Performance (AMPP).

B. Ferrous Metals

1. Steel Plate, Diamond Plate, and Bar Stock: ASTM A 36.
2. Steel Pipe: ASTM A 53, standard weight (Schedule 40).
3. Welding Rods and Bare Electrodes: Select according to AWS specifications for the metal alloy to be welded.

C. Aluminum Metals

1. Aluminum Plate, Diamond Plate, and Bar Stock: ASTM B209, alloy 6061-T6 unless otherwise noted.
2. Aluminum Pipe and Structural Tubing: ASTM B241, alloy 6061-T6 unless otherwise noted.
3. Welding Rods and Bare Electrodes: Select in accordance with AWS specifications for the aluminum alloy to be welded.

D. 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. Field modifications are not permitted without the expressed written consent of the Engineer.
2. Steel Sections: Unless specifically noted otherwise, all steel sections shall be shop coated prior to delivery to site in accordance with Section 09 97 13, Coating of Steel Waterfront Structures.
3. Bolts, nuts, and washers shall be hot-dip galvanized in accordance with ASTM A153 where used in carbon steel applications, and shall be Type 316 stainless steel where used in aluminum or marine-exposed applications, unless otherwise noted on the drawings.
4. Field Touch-Up of Epoxy-Coated Items: Shall be performed in accordance with Section 09 97 13, Coating of Steel Waterfront Structures.
5. 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.

E. General Fabrication

1. Form metal fabrications from materials of size, thickness, and shapes indicated but not less than that needed to comply with performance requirements indicated. Work to dimensions indicated or accepted on shop drawings, using proven details of fabrication and support. Use type of materials indicated or specified for various components of each fabrication.
2. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges.
3. Remove sharp or rough areas on exposed traffic surfaces.
4. Weld corners and seams continuously to comply with the following:
   a. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
   b. Obtain fusion without undercut or overlap.
   c. Remove welding flux immediately.
   d. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing, and contour of welded surface matches those adjacent.
5. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of type indicated or, if not indicated, Phillips flathead (countersunk) screws or bolts. Locate joints where least conspicuous.
6. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.
7. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
8. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
9. Fabricate joints that will be exposed to weather in a manner to prevent water entry or provide weep holes where water may accumulate.
10. Where indicated, repair existing metal structures, including the Lovells Island barge, by straightening, heat-forming, or cutting and replacing damaged portions, as required to restore the original profile and structural integrity. Provide new steel plate inserts or reinforcement where material has been permanently deformed or section loss is present. All repair welding shall conform to applicable AWS standards.
11. Repairs to barge hull plating and framing shall be executed in a manner that restores or maintains watertight integrity and is suitable for continuous marine service. After completion of repairs, clean, prepare, and recoat repaired areas to match adjacent surfaces and provide equivalent corrosion protection.

F. Hardware and Anchors

1. Furnish bent, or otherwise custom-fabricated, bolts, plates, anchors, hangers, dowels, and other miscellaneous metal components as required for framing and

support, and for anchoring or securing work to concrete, timber, or other structures.
2. Fabricate items to sizes, shapes, and dimensions required. Furnish malleable-iron washers for heads and nuts that bear on wood structural connections and furnish steel washers elsewhere.

G. Miscellaneous Steel Trim

1. Unless otherwise indicated, fabricate units from structural steel shapes, plates, and bars of profiles shown with continuously welded joints, and smooth exposed edges. Miter corners and use concealed field splices wherever possible
2. Provide cutouts, fittings, and anchorages as required to coordinate assembly and installation with other work. Provide anchors, welded to trim, for embedding in concrete or masonry construction, spaced not more than 6 inches from each end, 6 inches from corners, and 24 inches on center (OC), unless otherwise indicated.
3. Galvanize miscellaneous steel trim at all exterior locations and as indicated.

H. Steel Finishes
1. Rust-inhibitive, Alkyd Primer: Product to be Devguard 4160 manufactured by Devoe Coatings or equivalent accepted by Engineer. Apply 1 coat minimum 2.0-2.5 mils dry film thickness; color to be selected by Owner.
2. Galvanizing:

   For those items indicated for galvanizing, apply zinc coating by the hot dip process complying with the following requirements:
   a. ASTM A153 for galvanizing iron and steel hardware.
   b. ASTM A123 for galvanizing both fabricated and un-fabricated iron and steel products made of uncoated rolled, pressed, and forged shapes, plates, bars, and strip 0.0299 inch thick or thicker.
3. Epoxy Coating: Finish items per Section 09 97 13, Coating of Steel Waterfront Structures, where noted in Contract Documents.

I. Isolation of Dissimilar Metals

1. Where aluminum components are in direct contact with carbon steel, galvanized steel, or stainless steel components, provide non-conductive isolation materials (such as UHMW-PE, neoprene, nylon, or equivalent) to minimize galvanic corrosion. Isolation materials shall be installed in a manner that does not impair structural performance or intended movement of the connection.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Field Measurements

1. Check actual locations of all adjacent structures along with other construction to which metal fabrications must fit by accurate field measurements before fabrication. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

B. General Installation

1. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing miscellaneous metal fabrications. Set metal fabrication accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
2. Field Welding shall comply with the following requirements:
   a. Prior to field welding on existing steel, clean base metal in the weld area to remove rust, scale, coatings, grease, moisture, and other contaminants that would impair weld quality. Surface preparation shall extend a minimum of 2 inches from the weld zone and shall be sufficient to permit sound welds, but shall not require abrasive blasting unless otherwise directed.
   b. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
   c. Obtain fusion without undercut or overlap.
   d. Remove welding flux immediately.
   e. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing, and contour of welded surface matches those adjacent.

C. Field Touch-Up of Finishes

1. Touch-up of Galvanizing: Thoroughly clean galvanized steel by SSPC-SP 3 Power Tool Cleaning method at all damaged, scratched and field-welded galvanized surfaces. Apply a zinc-rich primer such as Cathacoat 304V by Devoe Coatings or equivalent accepted by Engineer. Touch-up repair shall conform to ASTM A780 and shall overlap a minimum of 2" with hot dip galvanized surfaces. Allow to dry to a minimum dry film thickness of 2.0-4.0 mils.
2. Touch-up of Epoxy Coating: Thoroughly clean all field-welded, damaged, scratched, and chipped coating areas per SSPC-SP 2 Hand Tool Cleaning. Remove all rust and weld slag. Field touch-up areas shall be coated with epoxy coating with material specified in Section 09 97 13, Coating of Steel Waterfront Structures. Overlap touch-up 2” minimum with existing coating.

D. Coordinate construction to ensure that actual dimensions correspond to guaranteed dimensions. Allow for trimming and fitting.

PART 4 - COMPENSATION

4.1 GENERAL

A. There will be no separate measurement of quantities or payments for work covered by this Section as it is to be included in other Bid Items.

END OF SECTION

SECTION 09 97 13

COATING OF STEEL WATERFRONT STRUCTURES

PART 1 – GENERAL

1.1 WORK SPECIFIED

The work includes: 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 miscellaneous ancillary items.

1.2

QUALITY ASSURANCE

A. Use adequate numbers of skilled work men or women 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. The Owner, 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:

1. Documented successful experience in performing work of a similar nature.
2. Acceptable schedule of unit prices for measurement and payment in 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 mean The Society for Protective Coatings (formerly the Steel Structures Painting Council).

E. Structural steel fabrications shall be received by coating applicator free of all oil and grease.

F. Surface preparation shall be in accordance with the most recent edition of the Society of Protective Coatings Specifications and additional requirements contained in the Contract Documents.

G. Engineer’s Access. Provide safe access and time for the Engineer or his authorized representative(s) for inspection of all phases of work, including but not limited to surface preparation, the application of each coat of paint, including stripe coats, and for the inspection of the completed system. Provide access for

sampling and testing paint material components. Samples may be subject to chemical and physical testing. Materials found to be of unsatisfactory quality will be rejected.

1.3

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.

1.4 PRODUCT DELIVERY AND STORAGE

A. The Contractor guarantees that material shall be stored in a safe manner consistent with the manufacturer's recommendations.

PART 2 – PRODUCTS

2.1 COATING SYSTEM

A. Store coating materials in accordance with the manufacturer's written recommendations and protect from temperature extremes and moisture.

B. All coating materials within a system shall be compatible, supplied by a single manufacturer, and applied in accordance with the manufacturer's written instructions.

C. Surface preparation shall conform to the requirements of the coating specification and manufacturer's recommendations. Remove rust, scale, oil, grease, salts, and contaminants prior to coating.

D. Use immersion-grade, two-component epoxy systems for all steel surfaces at or below the splash zone or subject to periodic immersion.

E. Topcoats exposed to sunlight shall be aliphatic polyurethane or polysiloxane for UV stability.

F. Stripe-coat all welds, edges, bolts, corners, and attachments prior to full coat application using the same product as the intermediate coat unless otherwise recommended by the manufacturer.

G. Apply coatings only when ambient conditions, steel temperature, and relative humidity are within manufacturer limits. Do not apply coatings to wet or damp surfaces or when condensation is present or expected before cure.

H. Observe manufacturer minimum and maximum recoat windows. Prepare surfaces as required where recoat windows are exceeded.

I. Repair coating damage caused by fabrication, handling, or installation in accordance with the coating manufacturer's written repair procedures.

J. Non-skid aggregate shall be aluminum oxide or approved equal, broadcast into the wet intermediate coat on deck areas and sealed with the finish coat.

PART 3 – EXECUTION

3.1 SURFACE PREPARATION:

A. Surfaces shall be prepared in strict accordance with the protective coating system manufacturers' written instructions.

B. Pre-Cleaning. Remove all oil, grease, and other adherent deleterious substances from areas to be painted, in accordance with SSPC-SP 1 "Solvent Cleaning", prior to abrasive blast cleaning.

C. Abrasive Blast Cleaning. Abrasive blast clean the entire surface in accordance with the cleanliness and profile required by the manufacturer's Product Data Sheet. The profile shall be assessed per ASTM D 4417. All new structural steel shall be cleaned in accordance with SSPC SP-10, "Near White Blast Cleaning". The abrasive blast media shall meet SSPC-AB1 "Mineral & Slag Abrasives", SSPC-AB 2 "Cleanliness of Recycled Ferrous Metallic Abrasives", or SSPC-AB3 "Ferrous Metallic Abrasives." If the material for the project is heavily rusted or pitted, or as directed by the Engineer, measure the non-visible contaminant and remove in accordance with SSPC-Guide 15 "Field Methods for Retrieval and Analysis of Soluble Salts on Steel and Other Nonporous Substrates" to ensure detectable chloride levels are less than 10 micrograms per square centimeter.

D. Compressed air supply lines shall be equipped with oil traps and moisture separators. Conduct a white blotter test in accordance with ASTM D 4285 to verify the cleanliness of the compressed air. Conduct the test at least once per shift for each compressor system. Sufficient freedom from oil and moisture is confirmed if no soiling or discoloration is visible on the paper.

E. Lighting: Provide adequate lighting for all surface preparation, paint application, and inspection work. Maintain a minimum of 10 foot-candles for surface preparation and painting, and a minimum of 30 foot-candles of general area lighting for inspection. Increase the lighting if workers or other personnel have difficulty seeing. Use explosion-proof lighting.

F. Where cathodic protection systems are provided, coordinate coating systems, surface preparation, and anode installation to ensure compatibility between coatings and sacrificial anodes. Do not coat anodes, anode attachment points, or

electrical contact surfaces required for proper cathodic protection system function.

3.2 PROTECTIVE COATING APPLICATION

A. The protective coating shall be installed in strict accordance with manufacturers' written instructions. Coating is to be applied in two coats to achieve a minimum overall dry film thickness consistent with the surface treatment and coating schedule in the scope, or as otherwise indicated in the contract drawings.

B. Conditions for Application. Apply the paint material to clean dry surfaces. Comply with the atmospheric conditions specified below, or the written recommendations of the manufacturer, whichever is most stringent. Do not apply materials when:

1. The temperature of the air or substrate is below 40°F or greater than 100°F, or is forecasted to drop below 40°F before the coating dries in accordance with the dry times specified in the manufacturer's recommendations.
2. The temperature of the air or substrate is below 40°F or greater than 100°F, or is forecasted to drop below 40°F before the coating dries in accordance with the dry times specified in the manufacturer's recommendations.
3. The relative humidity is above 85%
4. There is or will be rain, mist, fog or snow during application and/or cure.
5. The manufacturer's requirements for reaction time after mixing are not satisfied.

C. Stripe Coats. Apply a stripe coat to corners, weld seams, around nuts and bolts or as otherwise directed in the contract documents. Do not apply the full coat of primer any sooner than a minimum of 15 minutes or within the manufacturer's recoat window after the application of the stripe coat, or any later than the manufacturer's recommended recoat times. Inspection personnel shall be notified and be given ample time to verify and approve the stripe coat application. Do not apply the full coat of primer until the Engineer has approved the striping. The coating material used for the stripe coat is typically the intermediate coat, but for painting metalizing or galvanize, the urethane finish coat is striped.

D. Intermediate and Topcoat. The color of the topcoat shall be as specified in the contract documents. The intermediate coat color shall contrast with both the primer and topcoat. Stripe coats may be tinted as necessary to assure proper coverage. Coating materials used to apply piece marks shall be compatible with the existent and any subsequent coats.

E. Recoat Interval. Comply with the coating manufacturer's minimum and maximum recoat interval for each coating layer. Ensure that each coating layer is sufficiently

cured before applying the next scheduled coating layer.

F. Field Applied Coatings-Touchup of Primer and Intermediate Coat(s). Prior to applying field touch-up coatings, verify that all surfaces, including installed bolts, nuts and zinc-rich primer around connection plates are thoroughly cleaned of grease, oil, chalk, bird droppings, lubricants and other surface interference material. Use pressure washing or solvent cleaning, as appropriate, to remove the interference material. Use hand and power tool cleaning for spot repair of localized damage to the coating system. Pressure wash, using 1500 psi water pressure, all surfaces primed with zinc-rich primer to remove zinc salts. Do not proceed with touchup and painting until the Engineer has accepted the surface cleaning. Repair any damaged areas of coating and reapply all affected coating layers. Perform field touchup in areas around bolts, nuts, connection plates, and other areas that had not previously been painted.

G. Removal/Repair of Unsatisfactory Material. The coating system is unsatisfactory if any of the following defects occur: abrasion damage, peeling, blistering, wrinkling, excessive runs or sags. It is also unsatisfactory if there is evidence of application under unfavorable conditions; the workmanship is poor; unauthorized coating material was used; or for other reasons determined by the Engineer. Repair procedures for unsatisfactory material shall be submitted to the Department for approval prior to performing related work. Remove and replace unsatisfactory coating layers at no additional cost to the Department as specified below.

H. Bare steel exposed less than 4”x4” area (unless otherwise noted in the contract documents). When the defective paint or damage extends to the bare steel or bare steel is exposed in areas less than 4” x 4” in size, clean the surface by power tool cleaning to SSPC-SP11 for field repairs and SSPC-SP7 or SP16 for shop repairs. Feather the surrounding paint to expose a minimum of ½” of each coat and to provide a smooth transition into the surrounding intact, adherent material. Select a primer recommended by the manufacturer of the intermediate and topcoat. For new steel, apply a spot coat of zinc-rich primer to the prepared surface. Follow with a spot coat of the intermediate and topcoat.

I. Bare steel exposed greater than 4”x4” area (unless otherwise noted in the contract documents). When the defective paint or damage extends to the bare steel in areas greater than 4” x 4” in size for each discrete damaged location, blast clean the area in accordance with SSPC SP10, feather the surrounding paint and repair as described above.

J. Primer or intermediate coat exposed. When the damaged or defective paint extends to the primer or intermediate coat, and for primed areas around and on connection plates, clean the surface by hand or power tool cleaning. Clean in accordance with SSPC SP2 or SSPC SP3 to remove oxidation, zinc-salts, or contamination from the surface. Do not burnish or polish the surface. Supplement hand and power tool cleaning with pressure washing (1500 psi minimum)

accompanied by scrubbing with stiff bristled brushes or other means as necessary. Feather the surrounding material to expose a minimum of ½" of each coat and to provide a smooth transition into the surrounding intact, adherent coating material.

K. All repairs. For all repairs, roughen the paint in overcoat areas with 80 grit sandpaper to assure good adhesion of the overcoat material to the underlying paint. Also, solvent clean in accordance with SSPC SP1 and re-paint the affected areas with the intermediate and topcoat.

L. All holidays or other imperfections in the coating shall be removed or repaired at the Contractors expense prior to final acceptance of the Work.

M. For organic zinc-rich primers, stripe-coat all corners resulting from sawing, burning, or shearing operations.

N. Surfaces requiring field touch-up of any required areas shall be prepared as described in paragraph 3.1-A above or by the following procedure:

1. Clean all surfaces to be repaired per SSPC-SP1 Solvent Clean to remove chlorides and general surface contamination.
2. Grind all welded areas to provide a smooth surface with no sharp edges.
3. Feather existing coatings back to sound material.
4. 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.
5. Stripe-coat all welds and edges with the epoxy coating prior to painting to insure adequate film thickness.

O. No surface shall be accepted until all defects, holidays, and repairs have been completed and verified by the Engineer.

Table 1 – Lovells Island Barge Surface Treatment and Coating Schedule

Component / Zone	Surface Preparation	Coating System Primer / Intermediate / Finish	Total DFT (mils)	Notes
Deck	SSPC-SP 10 (Near-White Blast);	High-build epoxy (4 mil) / High-build epoxy + non-skid broadcast (6 mil) / Aliphatic polyurethane or polysiloxane (2 mil)	≥ 12 (excluding texture)	Round edges 1⁄16 in min.; stripe coat welds and kevel bases; non-skid on deck only.
Dry Sidewall (3.5 ft band)	SSPC-SP 7 or SP 16 (Sweep Blast) or (Coarse Power Tool)	Surface-tolerant epoxy mastic (4 mil) / Epoxy mastic build (4 mil) / Aliphatic polyurethane or polysiloxane (2 mil)	≥ 10 (existing + new) Do not exceed manufacturer's maximum recommended total DFT.	Maintain 2–3 mil anchor on bare steel; abrade sound coating to matte finish; stripe welds and stiffeners.
Splash Zone & Bottom	SSPC-SP 10 (Near-White Blast);	Zinc-rich or high-build epoxy primer (3 mil) / High-build epoxy immersion (6 mil) / High-build epoxy or optional polyurethane above waterline (3 mil)	≥ 12	Treat continuous belt ±18 in about waterline and bottom; mask anodes within 2–3 in of welds; stripe welds and fender contact arcs.
New Welds	SSPC-SP 5 (White Metal Blast); 2–3 mil profile	Zinc-rich epoxy (3 mil) / Match adjacent zone / Match adjacent zone	Match adjacent	Stripe immediately after priming.

PART 4 – COMPENSATION

4.1 MEASUREMENT

A. Measurement for Item ADDITIONAL ALTERNATIVE-1 LOVELLS ISLAND – SIDEWALL RECOATING 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 ADDITIONAL ALTERNATIVE-2 LOVELLS ISLAND – SPLASH ZONE & BOTTOM RECOATING will be made on a LUMP SUM basis complete to the lines and grades indicated by the Contract Drawings.

4.2 PAYMENT

A. Payment for Item ADDITIONAL ALTERNATIVE No. 1 LOVELLS ISLAND – SIDEWALL RECOATING will be at the LUMP SUM contract price. This price shall include full compensation for providing surface preparation and coating of the barge sidewalls as shown on the Drawings, and the furnishing of all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the LOVELLS ISLAND – SIDEWALL RECOATING as shown on the Drawings and as herein specified.

B. Payment for Item ADDITIONAL ALTERNATIVE No. 2 LOVELLS ISLAND – SPLASH ZONE & BOTTOM RECOATING will be at the LUMP SUM contract price. This price shall include full compensation for providing surface preparation and coating of the barge splash zone and bottom as shown on the Drawings, and the furnishing of all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the LOVELLS ISLAND – SPLASH ZONE & BOTTOM RECOATING as shown on the Drawings and as herein specified.

PAYMENT ITEMS:

ITEM	DESCRIPTION	UNIT
ADD ALT NO. 1	LOVELLS ISLAND – BARGE SIDEWALL RECOATING	LUMP SUM
ADD ALT NO. 2	LOVELLS ISLAND – BARGE SPLASH ZONE & BOTTOM RECOATING	LUMP SUM

END OF SECTION

SECTION 35 50 00

GANGWAYS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Special Conditions and Specification sections, apply to work of this section.

1.2 SUMMARY

A. The work to be done under this section consists of furnishing all materials, labor, supervision, tools, and equipment, and performing all operations necessary to complete assembly of timber floats and aluminum gangways, as shown on the Contract Drawings and as herein specified.

1. To accommodate the removal and reinstallation of rehabilitation of the Lovells Island Barge, lift and secure the steel barge access gangway and reset the gangway.
2. Repair the rollers on the barge access gangway at Lovells Island shown in the contract drawings.
3. Following barge
4. Install a new “Staff Gangway” on the timber pier at Georges Island as shown on the contract drawings.
5. Furnish and install one new 3-foot x 45-foot +/- aluminum “Staff Gangway” on the timber pier at Georges Island extending to timber floats as shown on the contract drawings.
6. Repairs the aluminum landing and “MLW Gangway” extending from shore to the Lovejoy Float at Georges Island as shown in the contract drawings.

1.3 SUBMITTALS

A. Samples of materials and/or certificates of compliance with the Specifications shall be furnished for approval, as requested.

B. The Contractor shall supply shop drawings and cut sheets of the following:

1. Aluminum gangway, including all connection details and the gangway landing system, consisting of a landing plate, transition plate, and lateral and vertical guide components.
2. All associated hardware and fasteners.

1.4 REFERENCES

A. For items within this Contract not otherwise specified, materials and workmanship shall conform to applicable industry standards, the publications listed in Section 1.5, and manufacturer recommendations.

1.5 TECHNICAL SPECIFICATION/PUBLICATION

A. ASTM International (ASTM):

A 36 or A588	Structural Steel.
A 123	Zinc (Hot Galvanized) Coatings on Products Fabricated from Rolled Pressed, and Forged Steel Shapes, Plates, Bars, and Strip.
A 153	Zinc Coating (Hot-Dip) on Iron and Steel Hardware.
A 307	Carbon Steel Externally and Internally Threaded Standard Fasteners.

B. Aluminum Association, Inc. (AA):

AA ADM-1	Aluminum Design Manual.

C. AWPA:

C1	All Timber Products-Preservative Treatment by Pressure Processes.
C2	Lumber, Timbers, Bridge Ties and Mine Ties-Preservative Treatment by Pressure Processes.
C18	Pressure Treated Materials in Marine Construction
M2	Inspection of Treated Timber Products.
M4	Care of Preservative-Treated Wood Products.
P5	Water-Borne Preservatives.

D. American Welding Society (AWS):

D1.2	Structural Welding Code – Aluminum.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Aluminum Gangways

1. The completed structures shall be designed to withstand the following design live loads and environmental conditions:
   a. 100 pound per square foot uniform live surcharge load
   b. 500-pound concentrated live load on a 4” x 4” area
   c. 25 pound per square foot snow load
   d. Wind loads shall be determined by the Engineer of Record in accordance with the currently adopted Massachusetts State Building Code (780 CMR) and ASCE/SEI 7 (latest edition adopted by 780 CMR), using site-appropriate wind speed and exposure category.

e. Vertical deflection shall be limited to L/240.
f. Horizontal deflection shall be limited to L/300.

2. Handrails for gangways shall be designed to resist a uniform applied horizontal load of 20 pounds per linear foot applied at the top of the rail and a 200-pound load applied in any direction and at any point along the handrail. Handrails shall be 42-inches in height, measured from the finished deck surface and shall contain a mid-rail halfway between the top rail and the walking surface.
3. Structural members for aluminum gangways shall be 6061-T6 aluminum alloy. Decking and handrail components shall be 6063-T6 aluminum alloy. Aluminum extrusions shall conform to applicable requirements of current aluminum industry standards. Extruded pipe for handrails and structural members shall be a minimum of 1-1/2 inches in diameter.
4. Decking for gangways shall consist of extruded aluminum slats, embossed to provide a non-slip surface, and shall not exceed 9 inches in width, with no more than 3/8 inch air space between adjacent slats. Decking slats shall be placed transversely on the ramp. Decking slats shall be mechanically interlocked to form a continuous deck surface.
5. Hardware: Bolts, rods, nuts, washers, screws, and other fasteners shall be Type 316 stainless-steel.
6. Gangways shall be equipped with decking, handrails and landing plates that meet current Massachusetts Architectural Access Board standards.
7. Decking for gangways shall consist of interlocking extruded aluminum slats, embossed to provide a non-slip surface. Slats shall be mechanically interlocked to form a continuous deck surface and shall not exceed 9 inches in width, with no more than 3/8 inch air space between adjacent slats.
8. Gangways shall be provided with a hinge or connection system suitable for the intended installation, including gallows-type, fifth-wheel-type, or piano-hinge-type connections, as shown on the drawings or approved by the Engineer. Hinge and connection components shall be securely attached to the gangway structure and the supporting fixed structure in accordance with the approved shop drawings.
9. All aluminum welding shall conform to AWS D1.2
10. The Contractor shall submit fabricator's calculations showing all applied loads and connection forces for new gangways and for any modified or replaced hinge or connection systems, for review by the Engineer of Record. Calculations shall be stamped by a Professional Engineer licensed in the Commonwealth of Massachusetts.
11. Rollers for gangways shall be UHMW-PE with black ultraviolet light inhibitor added, or an equivalent as accepted by the Engineer.
12. Gangways shall be securely fastened to fixed structures as shown on the drawings. If applicable, utilities running on the gangway shall be installed so as not to interfere with the access area of the gangway or to be damaged during normal operations.
13. Anti-skid threshold plates shall be provided at the bottom of the ramp and shall be 3/8" aluminum plate, 6061-T6 aluminum alloy, medium pattern, non-polished finish.

PART 3 - EXECUTION

3.1 GENERAL

A. TIMBER FLOATS

1. Timber shall be closely fitted, accurately set to required lines and levels, and rigidly secured in place with galvanized through bolts, as shown on the Contract Drawings. The following requirements shall be met:
   a. Holes for bolts of a size to insure a driving fit.
   b. Where indicated, holes shall be counter bored.
   c. All timber shall be placed with the sap wood on the top side of the piece, if possible.
   d. Washers shall be placed under both bolt heads and nuts.
   e. 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.
   f. Countersunk holes in tops of timber shall be filled flush with epoxy after timbers have been fastened securely.
   g. Where damaged or cut for fitting, or during handling, treated timber shall be given two brush coats of Wood Preservative Treatment.

3.2 INSTALLATION

A. Floats, aluminum gangway ramp, and accessories

1. The Contractor shall furnish and install any float revisions, new aluminum gangways, transition plates, wheel assemblies, and all associated accessories and reset the State Police floats system. The Contractor shall coordinate and schedule the shipment of these materials in concert with the project construction schedule. The materials will be carefully rigged, unloaded, and stockpiled in accordance with manufacturer's directions. The Contractor shall install, align, final fit, bolt up, and adjust the supplied units in strict accordance with manufacturer's directions, and shall deliver a completed finished assemblage satisfactory to the engineer.
2. The floats shall be carefully placed in the water by an adequately sized crane; no pushing or sliding of the floats on paved or other surfaces will be permitted. The installation and location of the furnished items shall conform with the project plans. Failure to properly install the various components may be grounds for requiring the Contractor to replace any unsatisfactory materials in kind at their own expense.

3.3 CORROSION PROTECTION

1. Hardware used to connect CCA treated timber, including bolts, nuts, washers, etc., shall be hot dip galvanized steel conforming to the requirements of ASTM A153.
2. Hardware used to connect MCA treated timber shall be Type 316 stainless steel.

3. Any installation of dissimilar materials shall be properly insulated to avoid contact of dissimilar metals and to minimize or eliminate corrosion in a marine environment. Float connection to pier structures shall be properly insulated to avoid contact of dissimilar metals and to minimize or eliminate corrosion in a marine environment

PART 4 - COMPENSATION

4.1 MEASUREMENT

A. Measurement for Item 35 50 00-1 LOVELLS ISLAND – GANGWAY REPAIRS 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 or as required to complete the Work as specified.

B. Measurement for Item 35 50 00-2 GEORGES ISLAND – LOVEJOY GANGWAY REPAIRS 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 or as required to complete the Work as specified.

C. Measurement for Item 35 50 00-3 GEORGES ISLAND – NEW STAFF GANGWAY 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.

4.2 PAYMENT

A. Payment for Item 35 50 00-1 LOVELLS ISLAND – GANGWAY REPAIRS will be at the LUMP SUM contract price. This price shall include full compensation for providing and installing new gangway rollers, UHMW wear blocks, and repair or replacement of threaded axles, and the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the LOVELLS ISLAND – GANGWAY REPAIRS as shown on the Drawings and as herein specified.

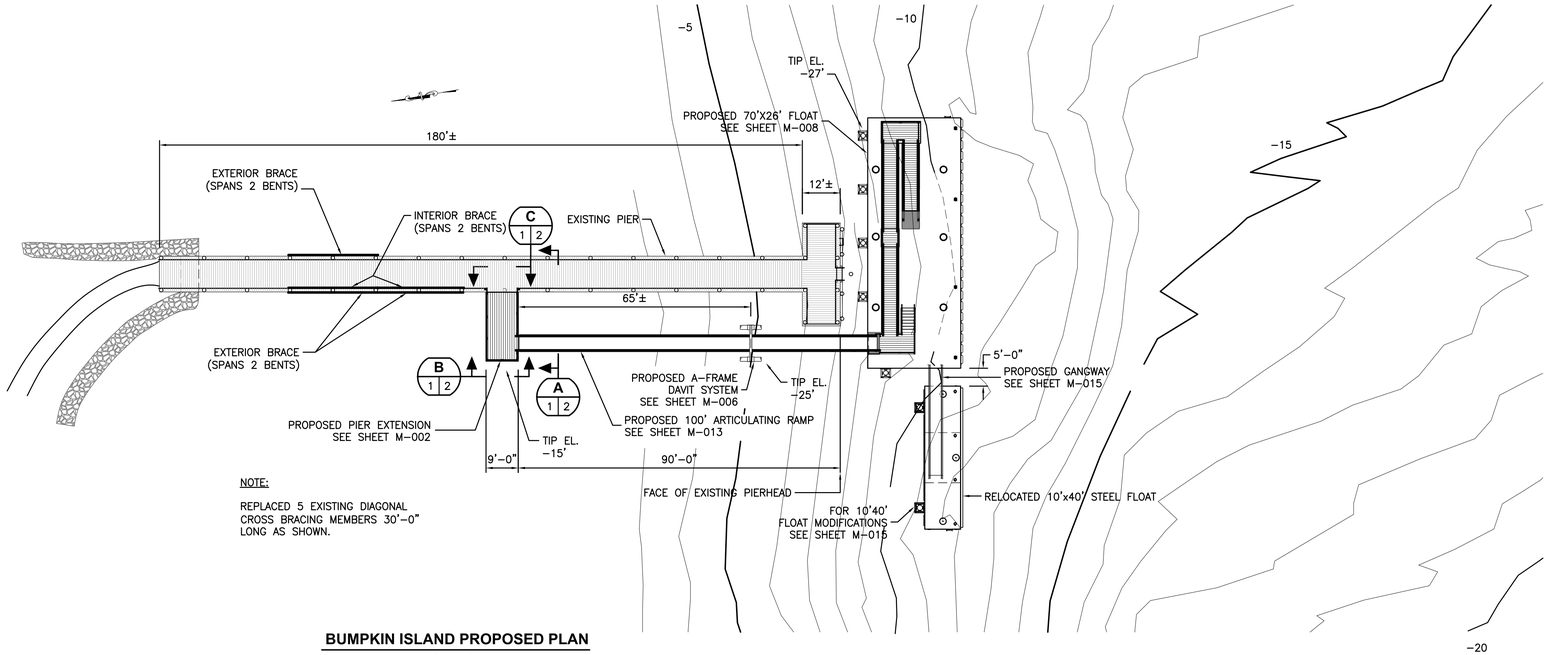
B. Payment for Item 35 50 00-2 GEORGES ISLAND – LOVEJOY GANGWAY REPAIRS will be at the LUMP SUM contract price. This price shall include full compensation for providing and installing new transition plates, gangway rollers, UHMW wear strips, and repair of the existing Mean High Water (MHW) Lovejoy Gangway, including the gangway landing guard, gangway roller support, and fifth wheel system, and the furnishing of all labor, materials, tools, and equipment, and all other incidental work necessary to complete the GEORGES ISLAND – LOVEJOY GANGWAY REPAIRS as shown on the Drawings and as herein specified.

C. Payment for Item 35 50 00-3 GEORGES ISLAND – NEW STAFF GANGWAY will be at the LUMP SUM contract price. This price shall include full compensation for furnishing, fabricating, delivering, and installing the new aluminum staff gangway, including the gangway superstructure, decking, handrails, hinge or connection assemblies at the fixed structure, landing and transition plates, rollers, wear blocks, lateral and vertical guidance components at the float interface, lifting point(s) compatible with the existing davit, all associated hardware and fasteners, and the furnishing of all labor, supervision, materials, tools, equipment, and all other incidental work necessary to complete the GEORGES ISLAND – NEW STAFF GANGWAY as shown on the Drawings and as herein specified.

4.3 PAYMENT ITEMS

ITEM	DESCRIPTION	UNIT
35 50 00-1	LOVELLS ISLAND – GANGWAY REPAIRS	LUMP SUM
35 50 00-2	GEORGES ISLAND – LOVEJOY GANGWAY REPAIRS	LUMP SUM
35 50 00-3	GEORGES ISLAND – NEW STAFF GANGWAY	LUMP SUM

END OF SECTION

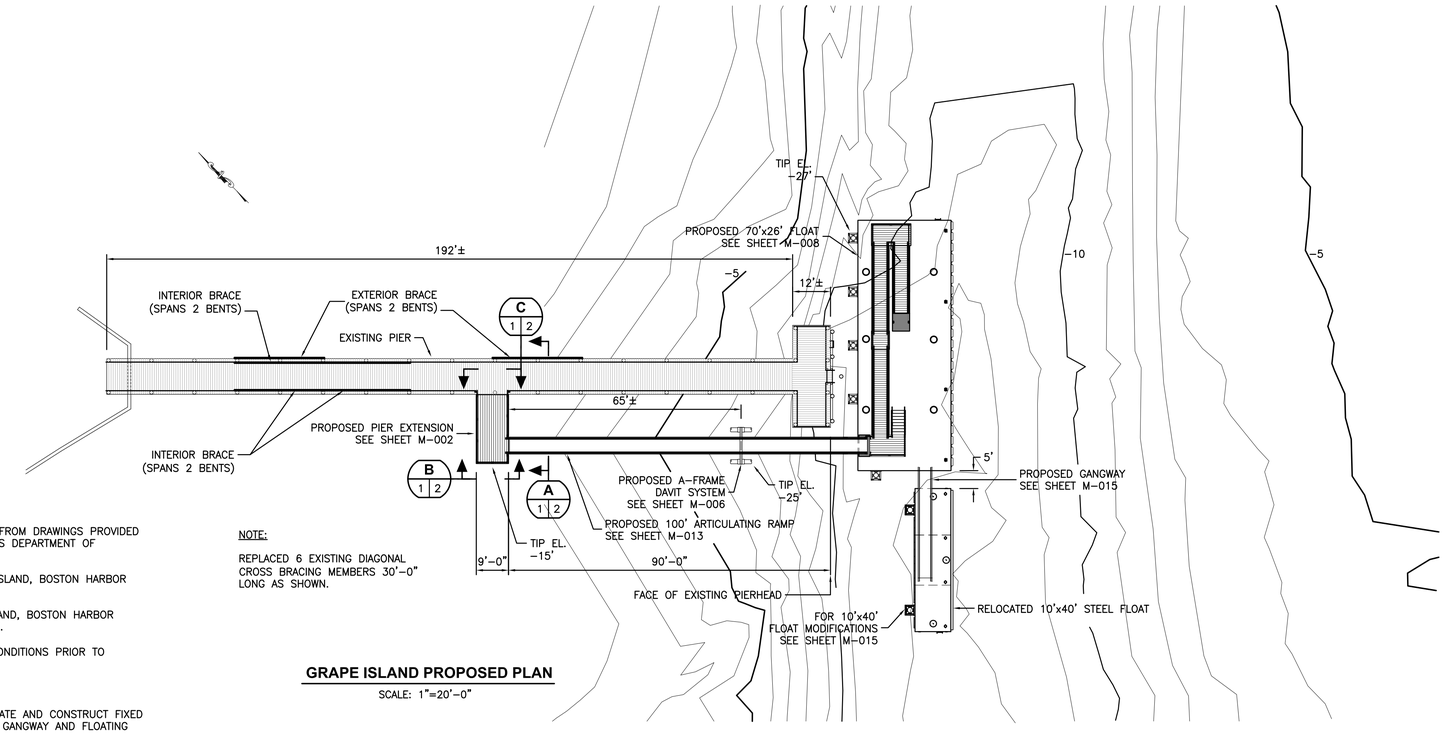


NOTE:

REPLACED 5 EXISTING DIAGONAL CROSS BRACING MEMBERS 30'-0" LONG AS SHOWN.

BUMPKIN ISLAND PROPOSED PLAN

SCALE: 1"=20'-0"



NOTE:

REPLACED 6 EXISTING DIAGONAL CROSS BRACING MEMBERS 30'-0" LONG AS SHOWN.

GRAPE ISLAND PROPOSED PLAN

SCALE: 1"=20'-0"

NOTE:
SOUNDINGS IN FEET BELOW MLW (0.0')

GENERAL NOTE:

1.) EXISTING PIER PLANS AND SOUNDINGS FROM DRAWINGS PROVIDED BY THE COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL MANAGEMENT; TITLED:

CONSTRUCTION OF TIMBER PIER BUMPKIN ISLAND, BOSTON HARBOR ISLANDS STATE PARK, DATED: APRIL, 1976.

CONSTRUCTION OF TIMBER PIER GRAPE ISLAND, BOSTON HARBOR ISLANDS STATE PARK, DATED: MARCH, 1976.

2.) CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK.

3.) SEQUENCE OF WORK:

A.) THE CONTRACTOR SHALL LOCATE AND CONSTRUCT FIXED PIER EXTENSION PRIOR TO INSTALLING THE GANGWAY AND FLOATING DOCK.

B.) THE CONTRACTOR SHALL POSITION THE FLOATING DOCK SYSTEM PRIOR TO INSTALLING THE MOORING PILES AND SHALL USE THE MOORING PILE GUIDES AS A TEMPLATE.

4.) CONTRACTOR SHALL LOCATE A-FRAME DAVIT SYSTEM SO THAT THE 100 FOOT ARTICULATING GANGWAY IS CENTERED IN FRAME.

AS BUILT

CHILDS ENGINEERING CORPORATION
BOX 333 MEDFIELD, MASSACHUSETTS 02052 U.S.A.
Phone: (508) 359-8945 Fax: (508) 359-2751
E-mail: mail@childseng.com

Mark	Description	Date	Appr.

Designed by: RPP | Date: 12/20/04
Drn. by: APL | Cal. by: RPP | Design file no. 180804.1-01
Reviewed by: RPP | Plot Scale: 1"=0'-1"

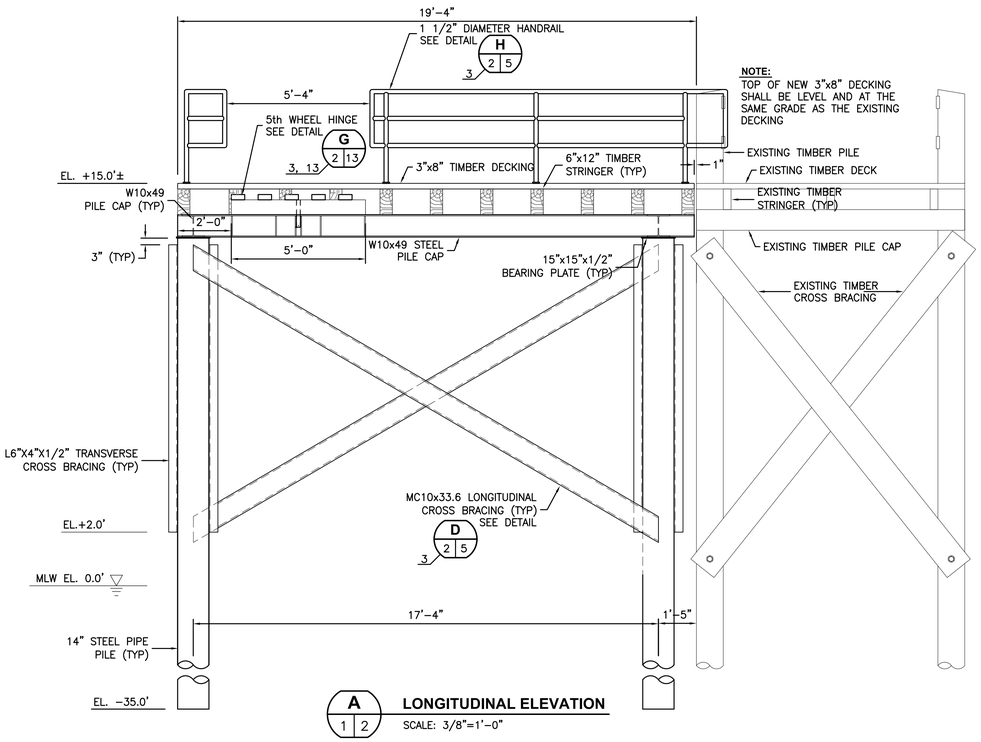
ACCESSIBLE FLOATING DOCKS
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLAND
BOSTON, MA

GRAPE AND BUMPKIN ISLAND
PROPOSED PLAN

Sheet reference number:
M-001
Sheet 1 of 15

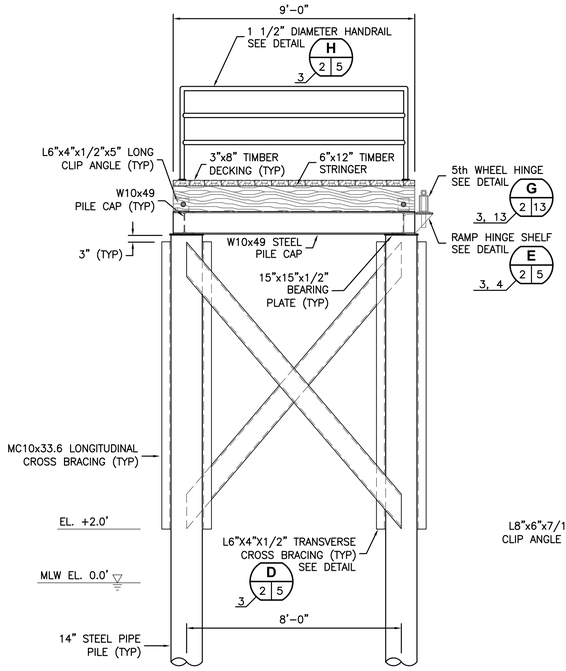
APPENDIX A

Lovells Island and Grape Island 2012
BHI Accessible Floating Docks As-Built

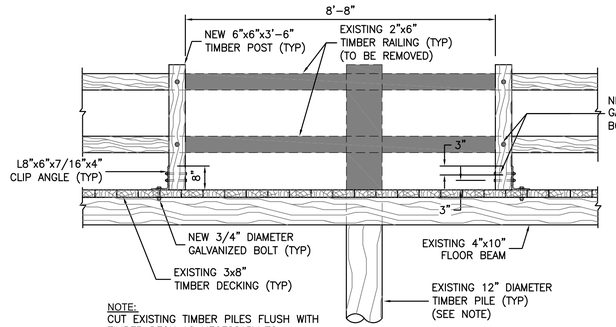


NOTE:
TOP OF NEW 3"x8" DECKING SHALL BE LEVEL AND AT THE SAME GRADE AS THE EXISTING DECKING

A 1 2 **LONGITUDINAL ELEVATION**
SCALE: 3/8"=1'-0"

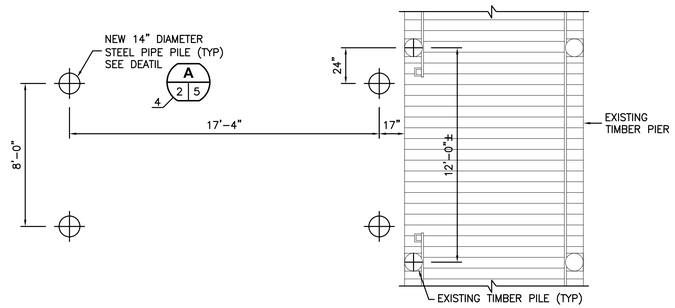


B 1 2 **TRANSVERSE ELEVATION**
SCALE: 3/8"=1'-0"

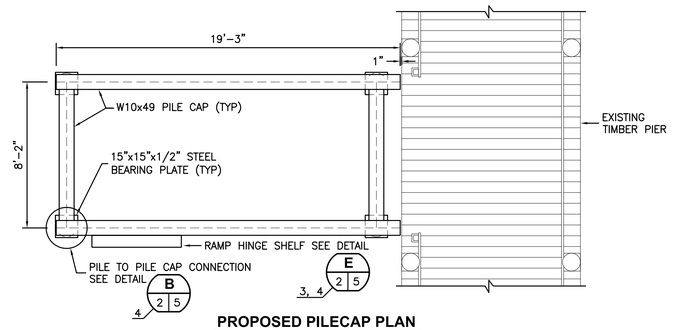


NOTE:
CUT EXISTING TIMBER PILES FLUSH WITH TIMBER DECK AS NECESSARY TO ACCOMMODATE NEW FIXED PIER. INSTALL NEW 6"x6" TIMBER POST TO SUPPORT EXISTING TIMBER HANDRAIL

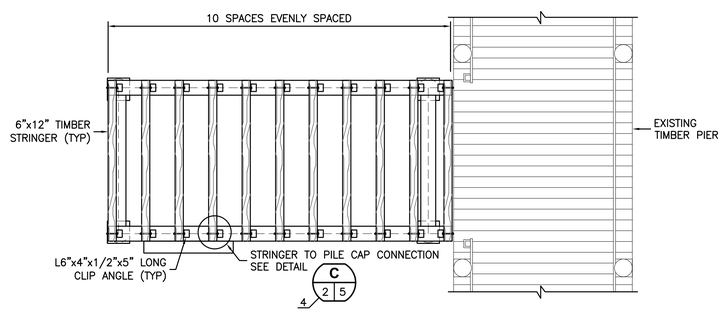
C 1 2 **EXISTING RAILING MODIFICATION**
SCALE: 1/2"=1'-0"



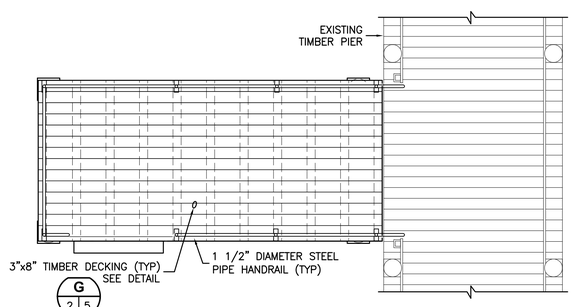
PROPOSED PILE PLAN
SCALE: 1/4"=1'-0"



PROPOSED PILECAP PLAN
SCALE: 1/4"=1'-0"



PROPOSED STRINGER PLAN
SCALE: 1/4"=1'-0"



PROPOSED DECK PLAN
SCALE: 1/4"=1'-0"

AS BUILT

CHILDS ENGINEERING CORPORATION
BOX 333 MEDFIELD, MASSACHUSETTS 02052 U.S.A.
Phone: (508) 359-8945 Fax: (508) 359-2751
E-mail: mail@childseng.com

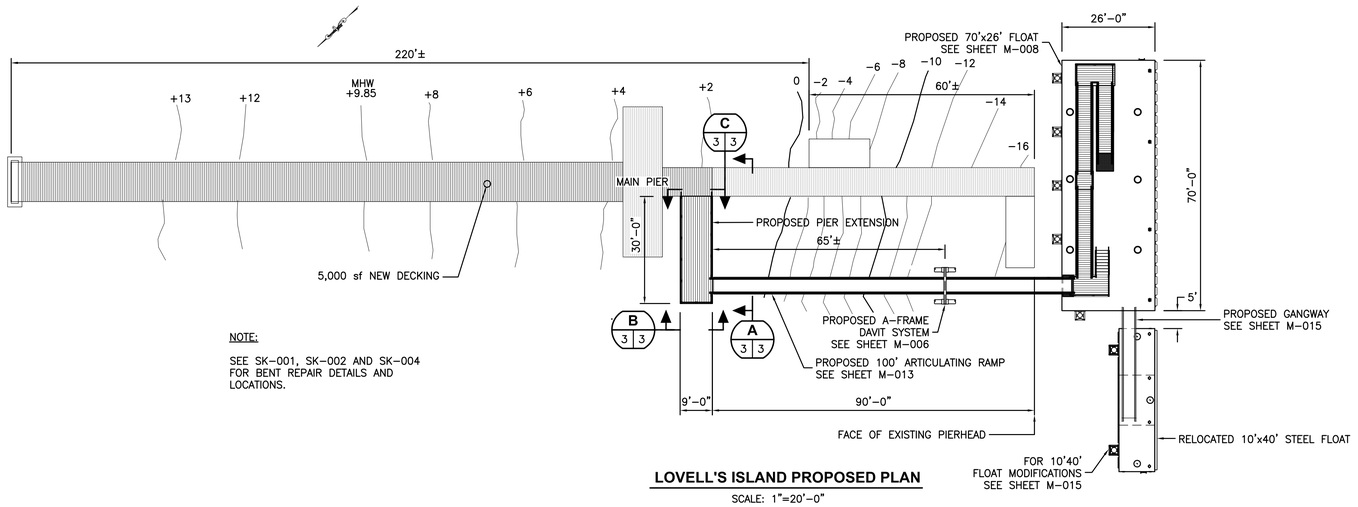
Mark	Description	Date	Appr

Date: 12/20/04
Designed by: RPP
Drawn by: APL
Cad file: RPP
Design file no. 180804.1-02
Reviewed by: RPP
Plot Scale: 1"=0'-1"

ACCESSIBLE FLOATING DOCKS
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLAND
BOSTON, MA

GRAPE AND BUMPKIN ISLAND
PROPOSED PIER PLAN
AND ELEVATIONS

Sheet reference number:
M-002
Sheet 2 of 15



NOTE:

SEE SK−001, SK−002 AND SK−004 FOR BENT REPAIR DETAILS AND LOCATIONS.

LOVELL'S ISLAND PROPOSED PLAN

SCALE: 1"=20'−0"

NOTE:
SOUNDINGS IN FEET BELOW MLW (0.0')

GENERAL NOTE:

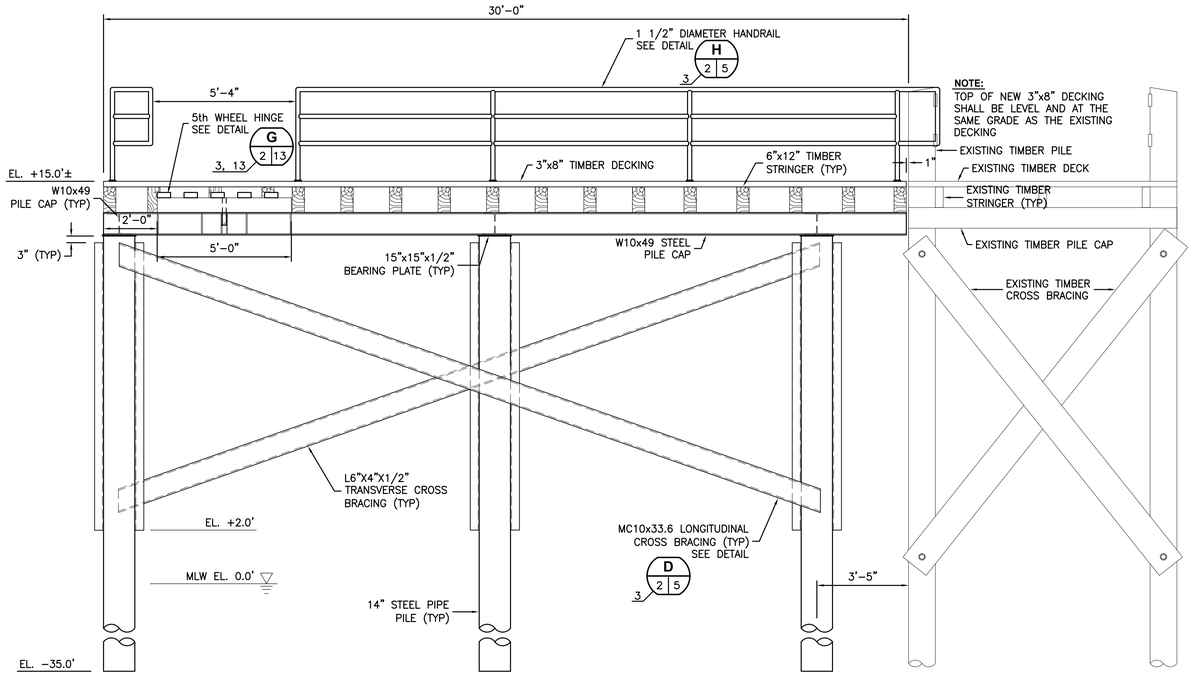
1.) CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING WORK.

2.) SEQUENCE OF WORK:

A.) THE CONTRACTOR SHALL LOCATE AND CONSTRUCT FIXED PIER EXTENSION PRIOR TO INSTALLING THE GANGWAY AND FLOATING DOCK.

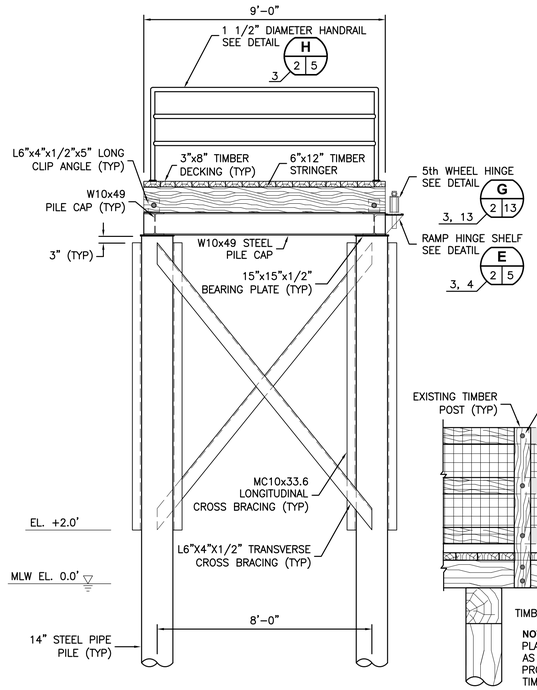
B.) THE CONTRACTOR SHALL POSITION THE FLOATING DOCK SYSTEM PRIOR TO INSTALLING THE MOORING PILES AND SHALL USE THE MOORING PILE GUIDES AS A TEMPLATE.

3.) CONTRACTOR SHALL LOCATE A−FRAME DAVIT SYSTEM SO THAT THE 100 FOOT ARTICULATING GANGWAY IS CENTERED IN FRAME.



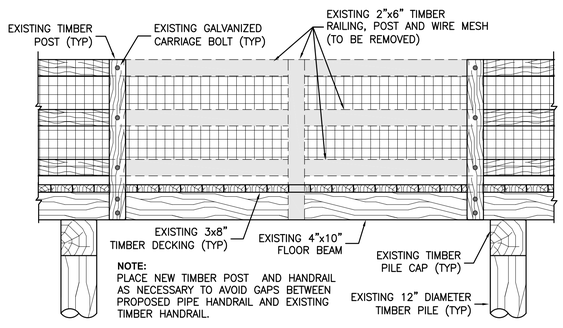
A LONGITUDINAL ELEVATION

3 3 SCALE: 3/8"=1'−0"



B TRANSVERSE ELEVATION

3 3 SCALE: 3/8"=1'−0"



NOTE:
PLACE NEW TIMBER POST AND HANDRAIL AS NECESSARY TO AVOID GAPS BETWEEN PROPOSED PIPE HANDRAIL AND EXISTING TIMBER HANDRAIL.

C EXISTING RAILING MODIFICATION

3 3 SCALE: 1/2"=1'−0"

AS BUILT

CHILDS ENGINEERING CORPORATION
BOX 333 MEDFIELD, MASSACHUSETTS 02052 U.S.A.
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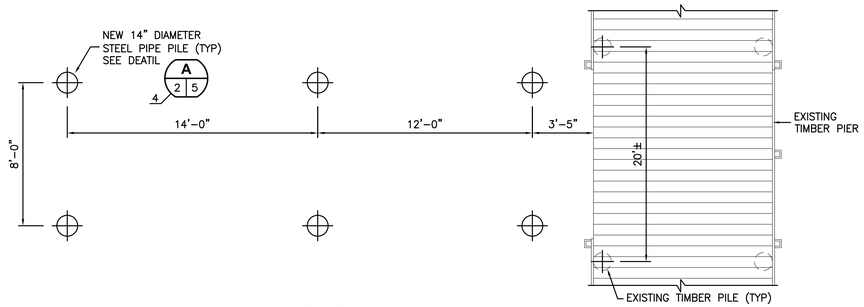
Mark	Description	Date	Appr.

Date: 12/20/04
Design file no.: 180804.1−03
Plot Scale: 1"=0'−1"
Designed by: RPP
Cad by: RPP
Reviewed By: RPP
Dwn by: APL

ACCESSIBLE FLOATING DOCKS
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLAND
BOSTON, MA

LOVELL'S ISLAND
PROPOSED PLAN
AND ELEVATIONS

Sheet reference number:
M−003
Sheet 3 of 15



PROPOSED PILE PLAN

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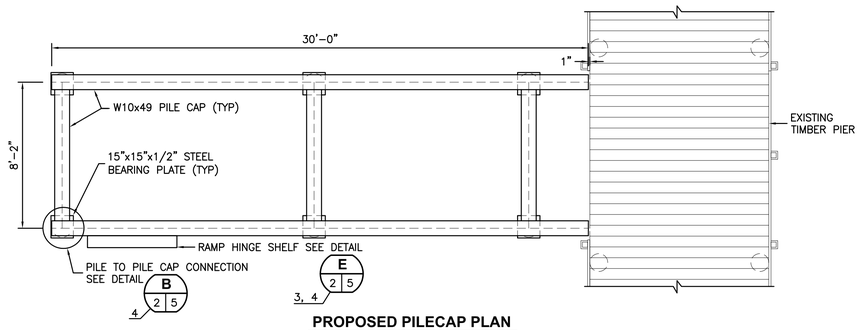
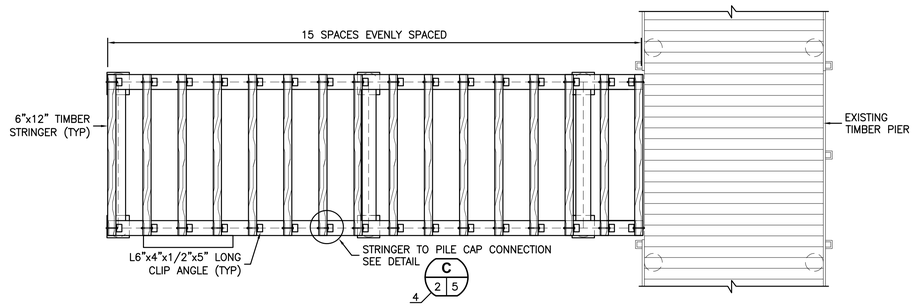


PROPOSED PILECAP PLAN

SCALE: 1/4"=1'-0"



PROPOSED STRINGER PLAN

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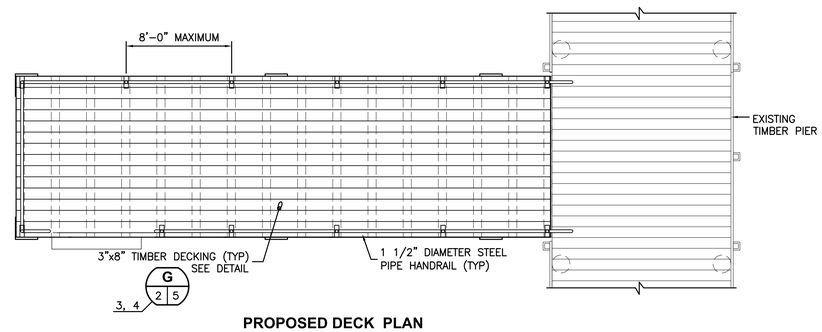

PROPOSED DECK PLAN

SCALE: 1/4"=1'-0"

AS BUILT

CHILDS ENGINEERING CORPORATION
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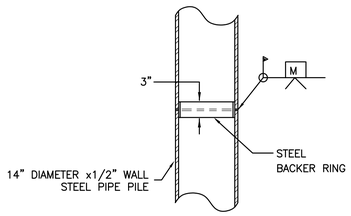
Mark	Description	Date	Appr

Designed by: RPP
Date: 12/20/04
Drawn by: APL
Cad by: RPP
Design file no. 180804.1-04
Plot Scale: 1"=0'-1"
Reviewed by: RPP

ACCESSIBLE FLOATING DOCKS
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLAND
BOSTON, MA

LOVELL'S ISLAND
PROPOSED PIER PLAN

Sheet reference number:
M-004
Sheet 4 of 15



SECTION

A 2 5 — **PILE SPLICE DETAIL** (4)

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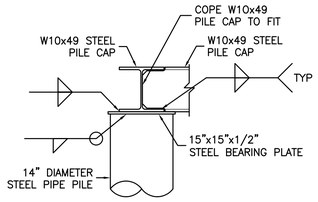

B 2 5 — **PILE/PILE CAP CONNECTION DETAIL** (4)

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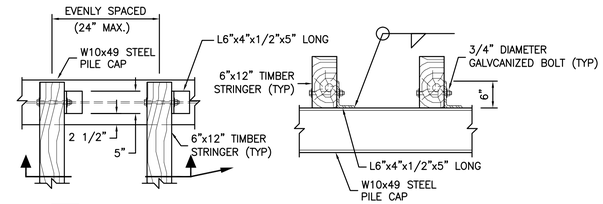
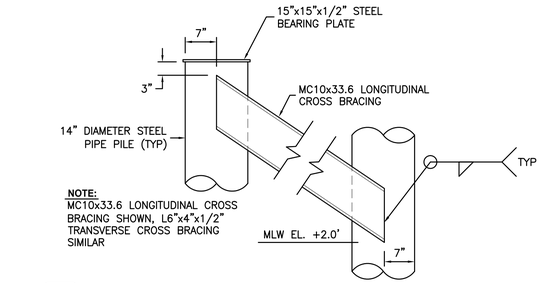


C 2 5 — **PILE CAP/ STRINGER CONNECTION DETAIL** (4)

SCALE: 3/4"=1'-0"



D 2 5 — **CROSS BRACING CONNECTION DETAIL** (3)

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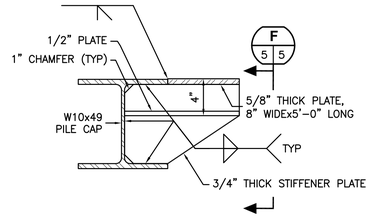
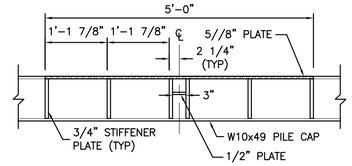


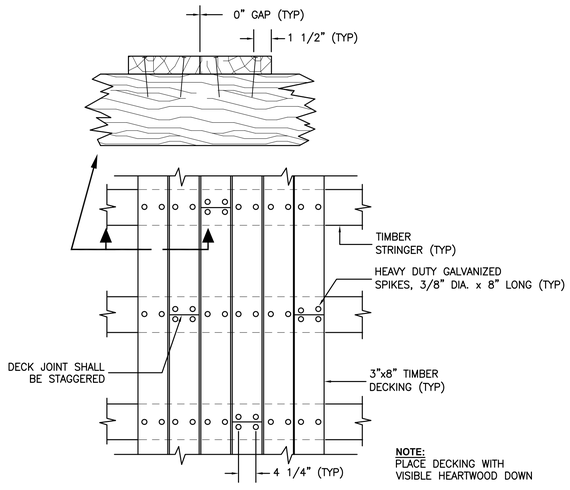
E 2 5 — **RAMP HINGE SHELF DETAIL** (3, 4)

SCALE: 1 1/2"=1'-0"



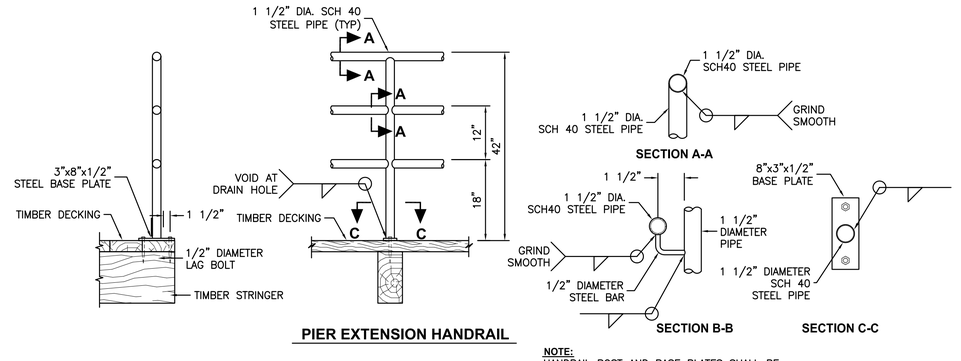
F 5 5 — **RAMP HINGE SHELF DETAIL ELEVATION**

SCALE: 3/4"=1'-0"



G 2 5 — **DECKING DETAIL** (3, 4)

SCALE: 1/2"=1'-0"



PIER EXTENSION HANDRAIL

NOTE:
HANDRAIL POST AND BASE PLATES SHALL BE
LOCATED AT STRINGER LOCATIONS.

H 2 5 — **FIXED PIER EXTENSION HANDRAIL DETAIL** (3)

SCALE: 3/4"=1'-0"

AS BUILT

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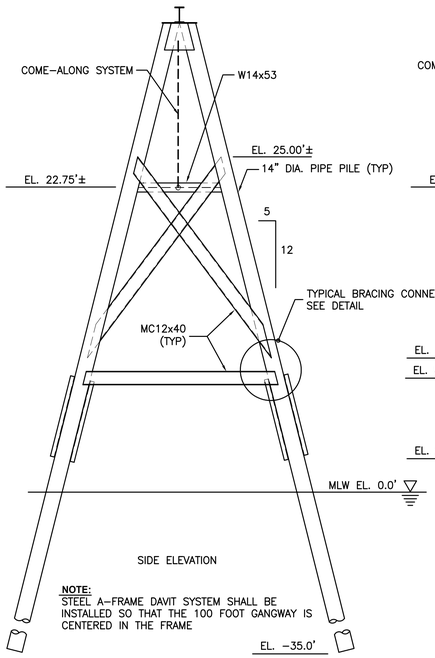
Mark	Description	Date	Appr.

Designed by: RPP
Drawn by: APL
Cad file: RPP
Reviewed by: RPP
Date: 12/15/04
Design file no.: 180804.1-05
Plot Scale: 1"=1'-1"

ACCESSIBLE FLOATING DOCKS
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLAND
BOSTON, MA

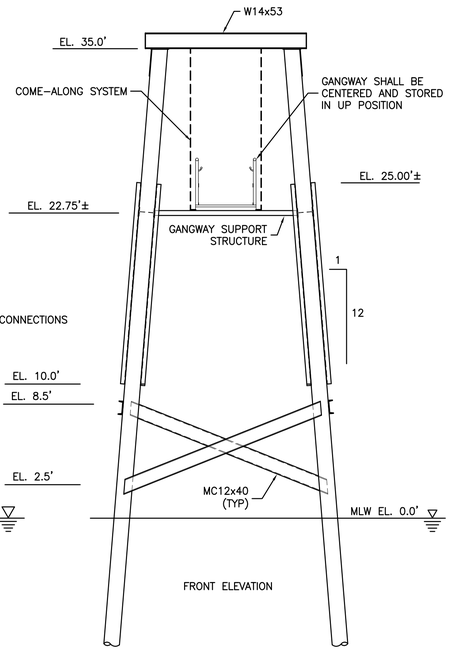
FIXED PIER DETAILS

Sheet reference number: M-005
Sheet 5 of 15



SIDE ELEVATION

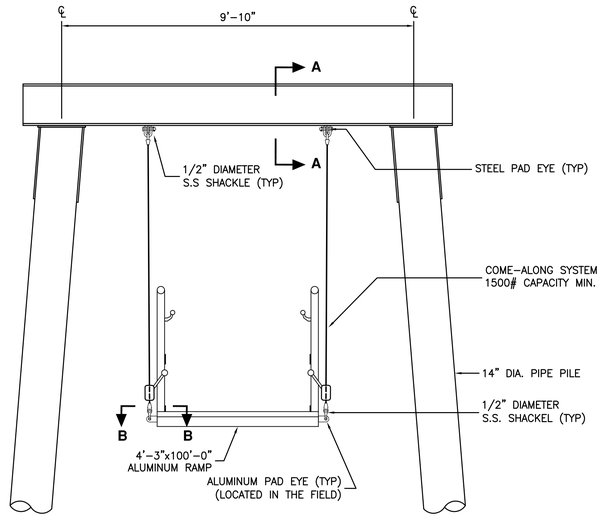
NOTE:
STEEL A–FRAME DAVIT SYSTEM SHALL BE INSTALLED SO THAT THE 100 FOOT GANGWAY IS CENTERED IN THE FRAME



FRONT ELEVATION

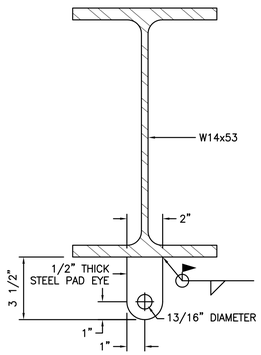
A-FRAME DAVIT SYSTEM

SCALE: 3/16"=1'–0"



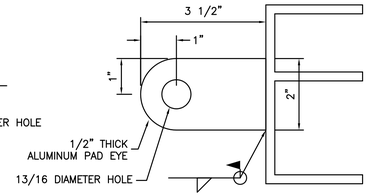
RAMP CONNECTION DETAIL

SCALE: 1/2"=1'–0"



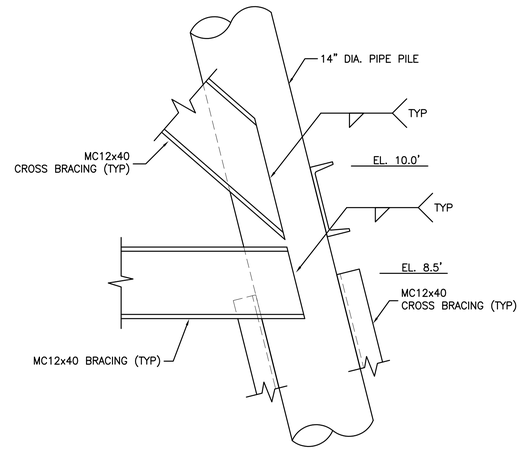
SECTION A-A

SCALE: 3"=1'–0"



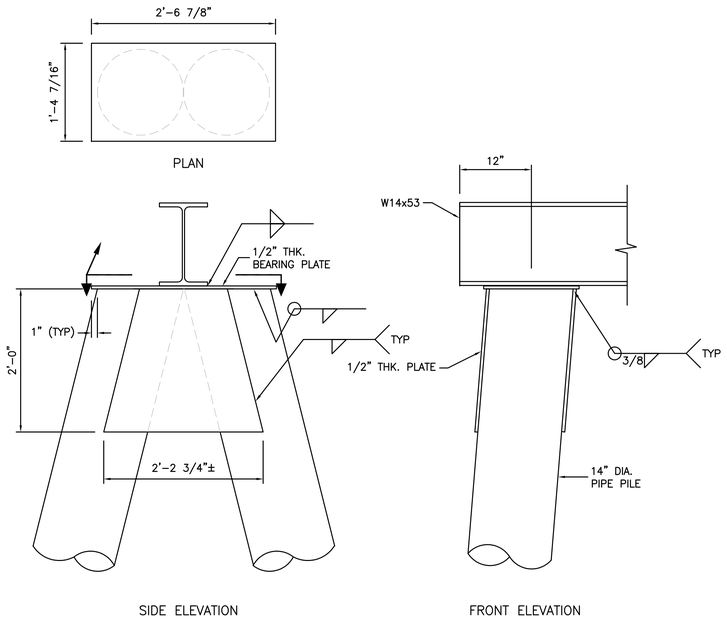
SECTION B-B

SCALE: 6"=1'–0"



TYPICAL BRACING CONNECTION DETAIL

SCALE: 1"=1'–0"

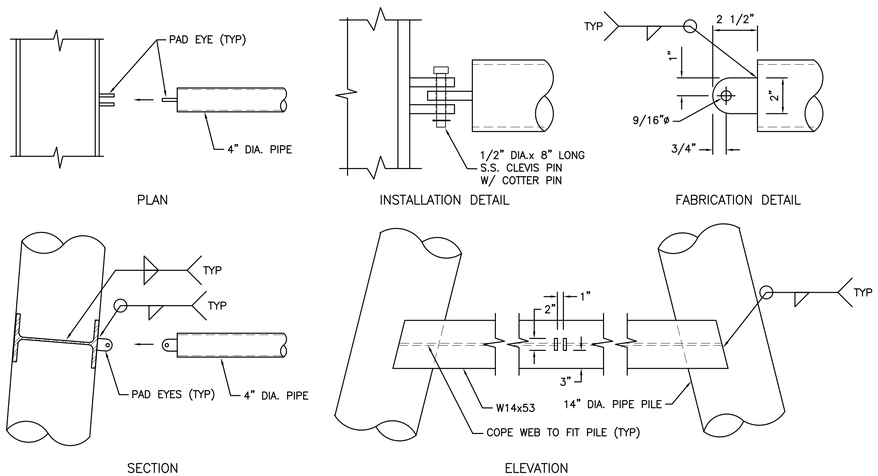


SIDE ELEVATION

FRONT ELEVATION

A-FRAME TOP DETAIL

SCALE: 1"=1'–0"



GANGWAY SUPPORT STRUCTURE

SCALE: 1"=1'–0"

AS BUILT

CHILDS ENGINEERING CORPORATION
BOX 333 MEDFIELD, MASSACHUSETTS 02052 U.S.A.
Phone: (508) 359–8945 Fax: (508) 359–2751
E–mail: mail@childseng.com

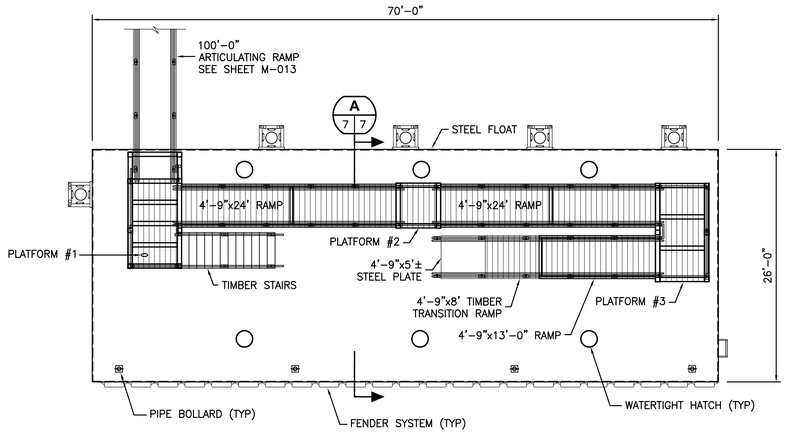
Mark	Description	Date	Appr.

Date: 12/20/04	Design File no. 160804.1–06	Plot Scale 1"=0'–1"	
Designed by: RPP	Drawn by: TEQ	Chk'd by: RPP	Reviewed by: RPP

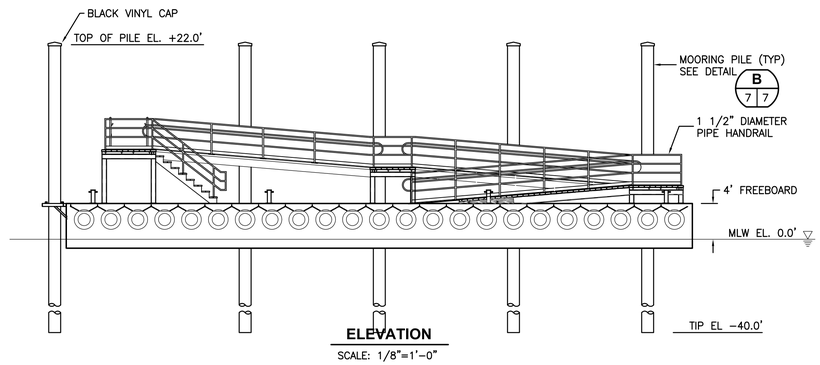
ACCESSIBLE FLOATING DOCKS
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLAND
BOSTON, MA

A–FRAME DETAILS

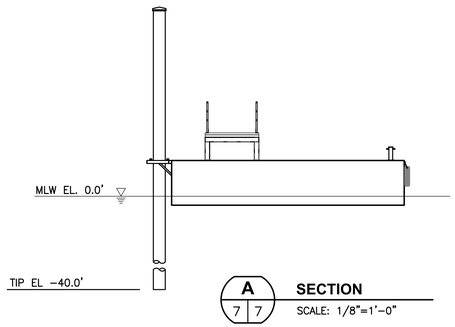
Sheet reference number:
M–006
Sheet 6 of 15



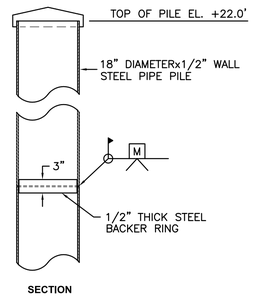
PROPOSED PLAN
SCALE: 1/8"=1'-0"



ELEVATION
SCALE: 1/8"=1'-0"



A 7 7 **SECTION**
SCALE: 1/8"=1'-0"



SECTION

B 7 7 **MOORING PILE DETAIL**
SCALE: 3/4"=1'-0"

AS BUILT

CHILDS ENGINEERING CORPORATION
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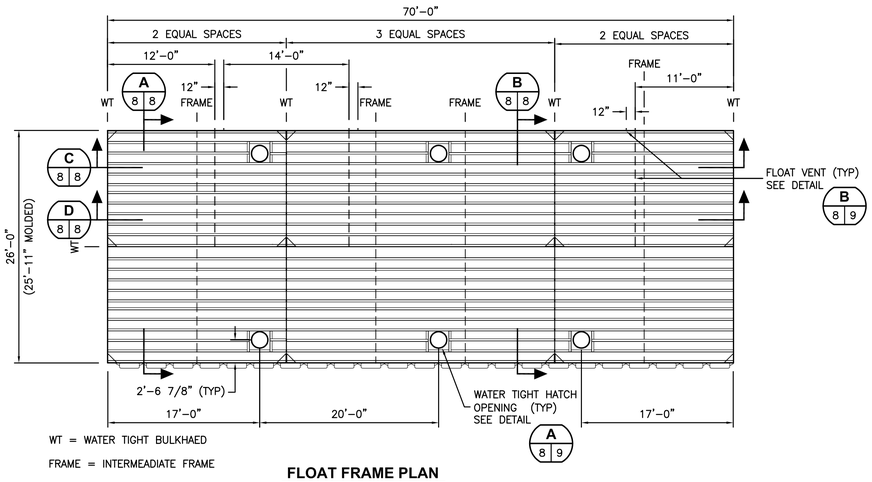
Mark	Description	Date	Appr.

Designed by: RPP	Cad by: RPP	Date: 12/20/04	Plot Scale: 1"=0'-1"
Det. by: APL	Reviewed by: RPP	Design file no. 180804.1-07	

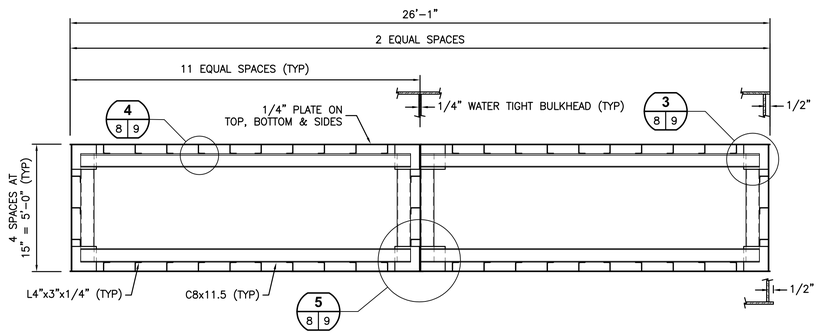
ACCESSIBLE FLOATING DOCK SYSTEM
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLANDS
BOSTON, MA
26'x70' STEEL FLOAT
GENERAL PLAN

Sheet reference number:
M-007
Sheet 7 of 15



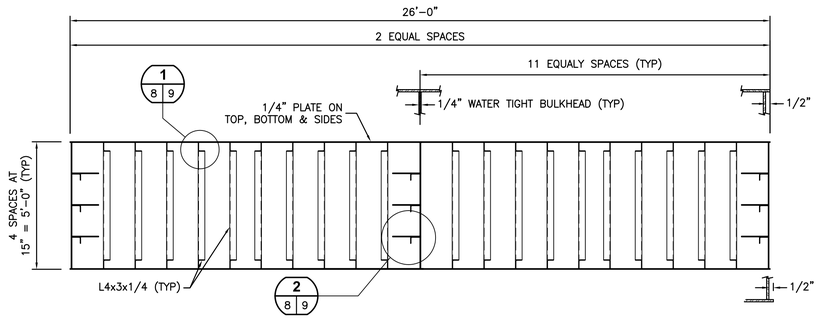
FLOAT FRAME PLAN

SCALE: 1/8"=1'-0"



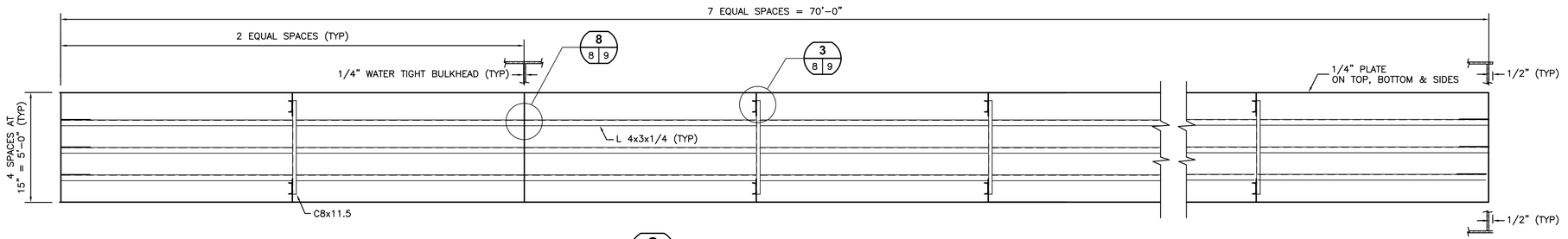
A 8 8 **INTERMEDIATE FRAME CROSS SECTION**

SCALE: 3/8"=1'-0"



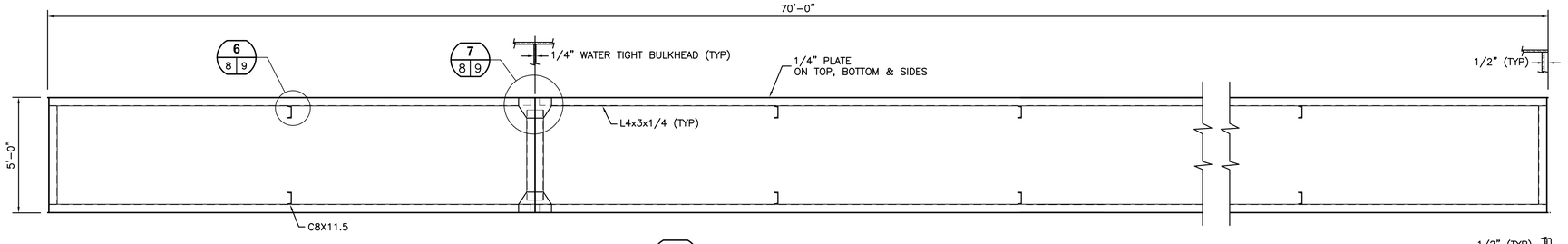
B 8 8 **WATER TIGHT AND END BULKHEAD CROSS SECTION**

SCALE: 3/8"=1'-0"



C 8 8 **WATER TIGHT BULKHEAD LONGITUDINAL CROSS SECTION**

SCALE: 3/8"=1'-0"



D 8 8 **INTERMEDIATE FRAME LONGITUDINAL CROSS SECTION**

SCALE: 3/8"=1'-0"

AS BUILT

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Phone: (508) 359-8945 Fax: (508) 359-2751
E-mail: mail@childseng.com

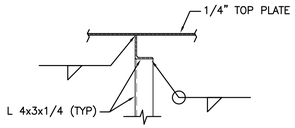
Mark	Description	Date	Appr

Designed by	Date: 12/20/04
RPP	
Drawn by	Cad file
APL	RPP
Reviewed by	Plot Scale
RPP	1"=0'-1"

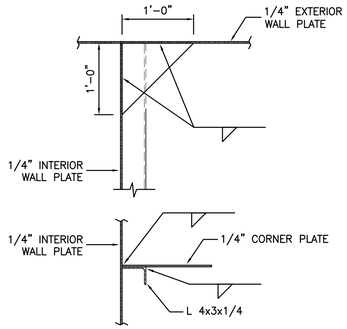
ACCESSIBLE FLOATING DOCK SYSTEM
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLANDS
BOSTON, MA

26'x70' STEEL FLOAT
FRAMING PLAN AND SECTIONS

Sheet reference number:
M-008
Sheet 8 of 15



1 | 8 9 **DETAIL**
SCALE: 1"=1'-0"



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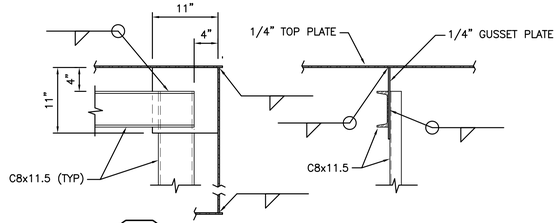

3 | 8 9 **DETAIL**
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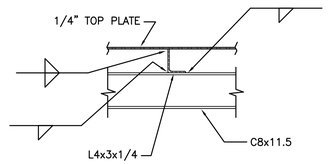
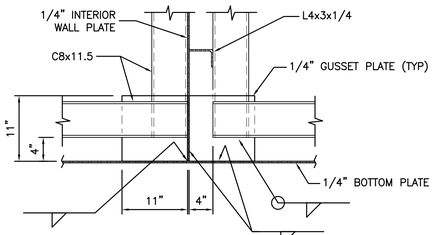
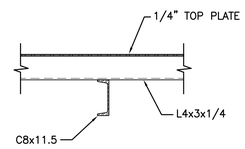


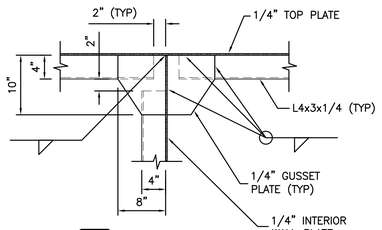
4 | 8 9 **DETAIL**
SCALE: 1"=1'-0"



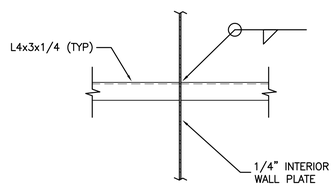
5 | 8 9 **DETAIL**
SCALE: 1"=1'-0"



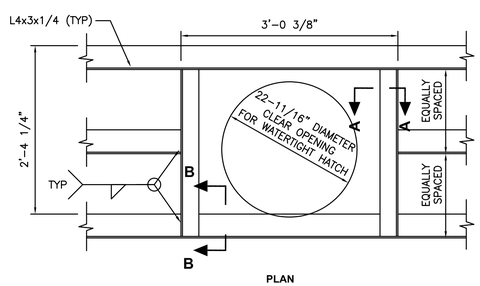
6 | 8 9 **DETAIL**
SCALE: 1"=1'-0"

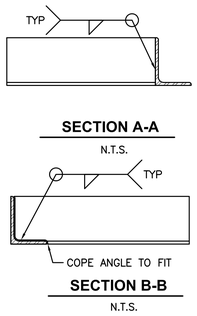


7 | 8 9 **DETAIL**
SCALE: 1"=1'-0"

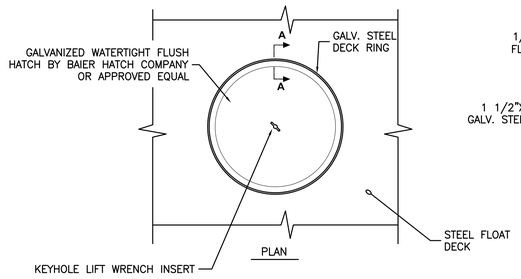


8 | 8 9 **DETAIL**
SCALE: 1"=1'-0"

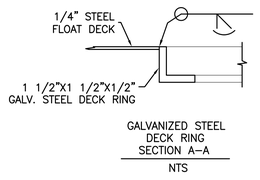


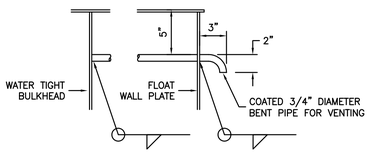


A | 8 9 **WATER TIGHT HATCH OPENING DETAILS**
SCALE: 1"=1'-0"



TYPICAL WATER TIGHT HATCH DETAILS
SCALE: 1"=1'-0"





B | 8 9 **FLOAT VENT**
SCALE: 1 1/2"=1'-0"

AS BUILT

CHILDS ENGINEERING CORPORATION
BOX 333 MEDFIELD, MASSACHUSETTS 02052 U.S.A.
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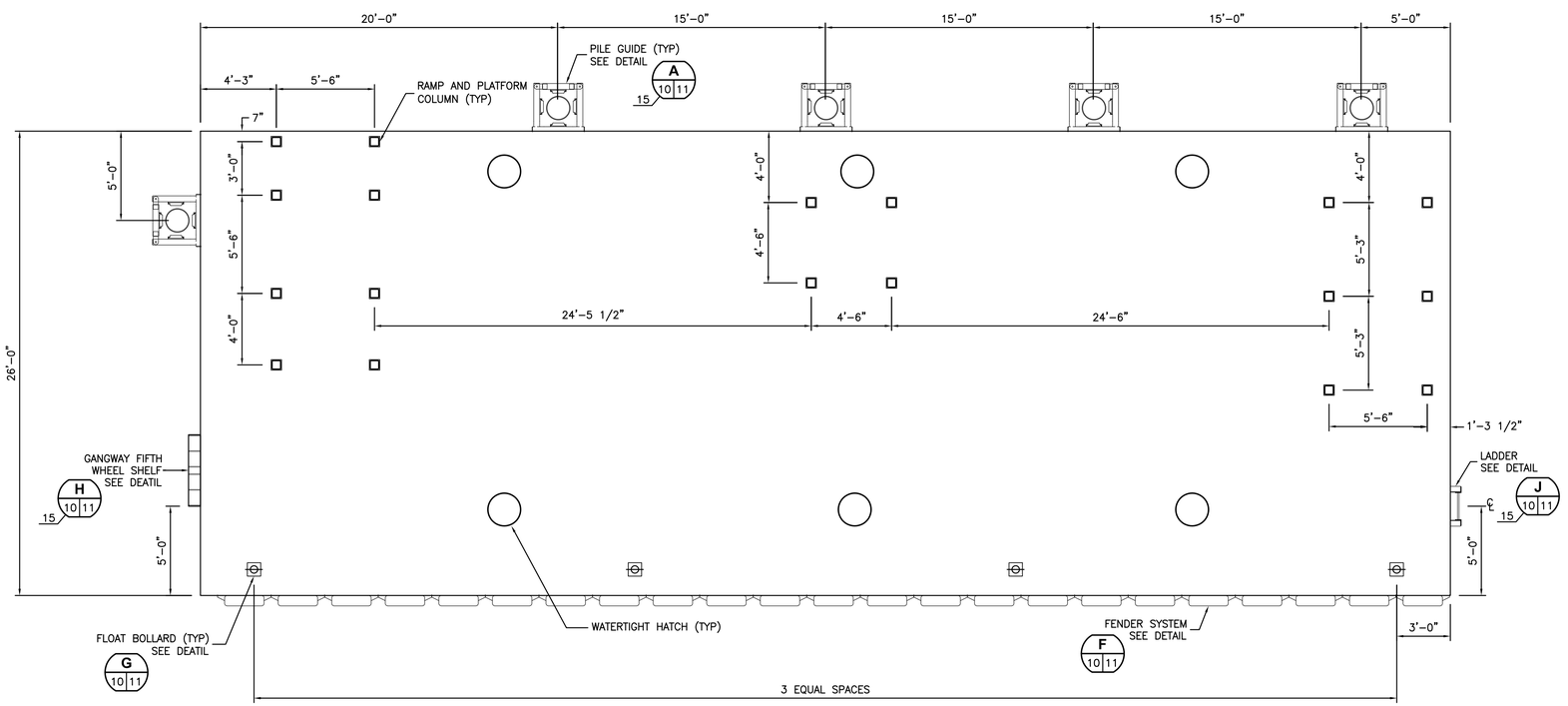
E-mail: mail@childseng.com

Mark	Description	Date	Appr

Designed by: RPP
Drawn by: APL
Date: 12/20/04
Check by: RPP
Design file no.: 180804.1-09
Reviewed by: RPP
Plot Scale: 1"=0'-1"

ACCESSIBLE FLOATING DOCK SYSTEM
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLANDS
BOSTON, MA
26'x70' STEEL FLOAT FRAMING DETAILS

Sheet reference number: M-009
Sheet 9 of 15



DECK LAYOUT PLAN

SCALE: 1/4"=1'-0"

AS BUILT

CHILDS ENGINEERING CORPORATION
BOX 333 MEDFIELD, MASSACHUSETTS 02052 U.S.A.
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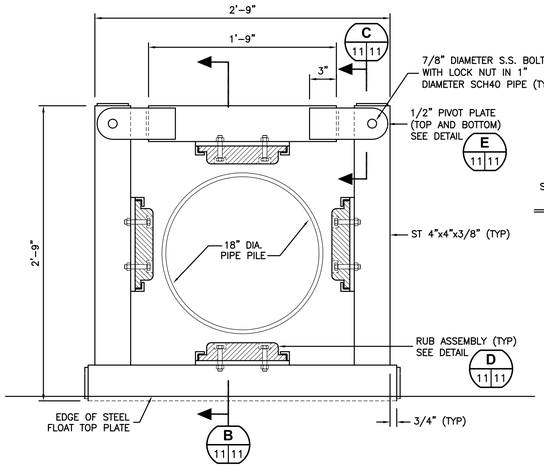
Mark	Description	Date	Appr.

Designed by RPP	Date: 12/20/04		
Det. by APL	Ck'd by RPP	Design file no. 180804.1-10	Plot Scale 1"=0'-1"
	Reviewed by RPP		

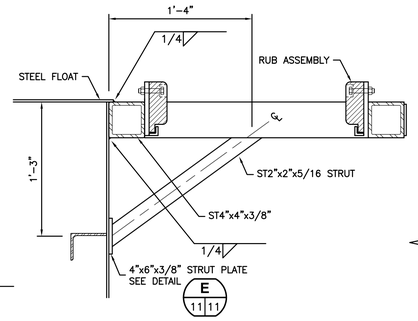
ACCESSIBLE FLOATING DOCK SYSTEM
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLANDS
BOSTON, MA

26'x70' STEEL FLOAT
DECK LAYOUT

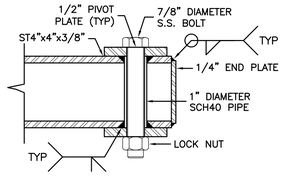
Sheet reference number: M-010
Sheet 10 of 15



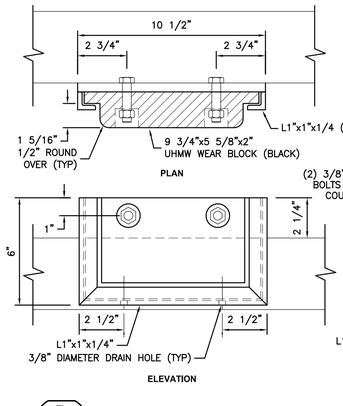
A 15 10 11 — **PILE GUIDE BRACKET PLAN**
SCALE: 1 1/2"=1'-0"



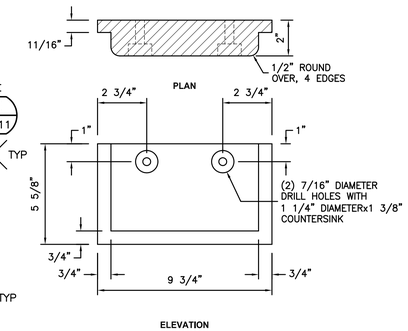
B 11 11 — **PILE GUIDE BRACKET**
SCALE: 1 1/2"=1'-0"



C 11 11 — **SECTION C-C**
SCALE: 3"=1'-0"



D 11 11 — **RUB ASSEMBLY DETAIL**
SCALE: 3"=1'-0"



UHMW WEAR BLOCK
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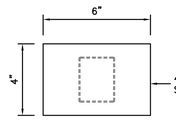
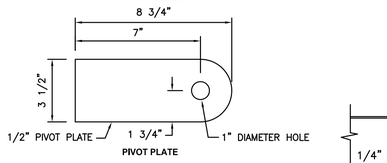
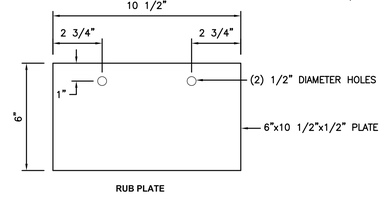


STRUT PLATE

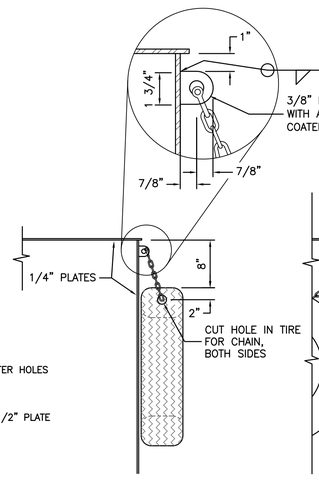


PIVOT PLATE

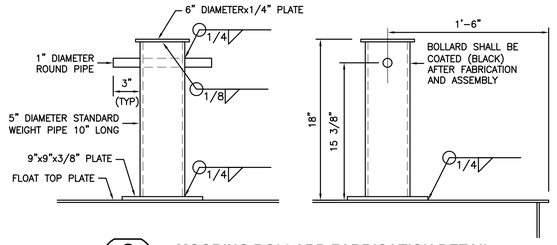


RUB PLATE

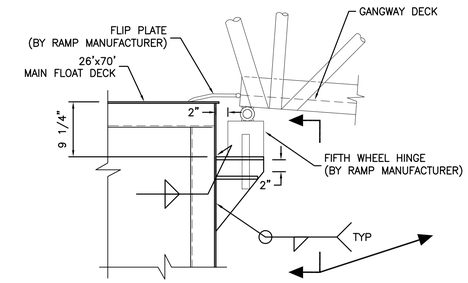
E 11 11 — **PLATE FABRICATION DETAILS**
SCALE: 3"=1'-0"

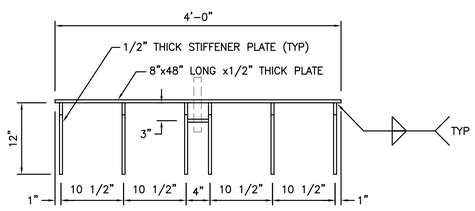


F 10 11 — **FENDER DETAIL**
SCALE: 1"=1'-0"

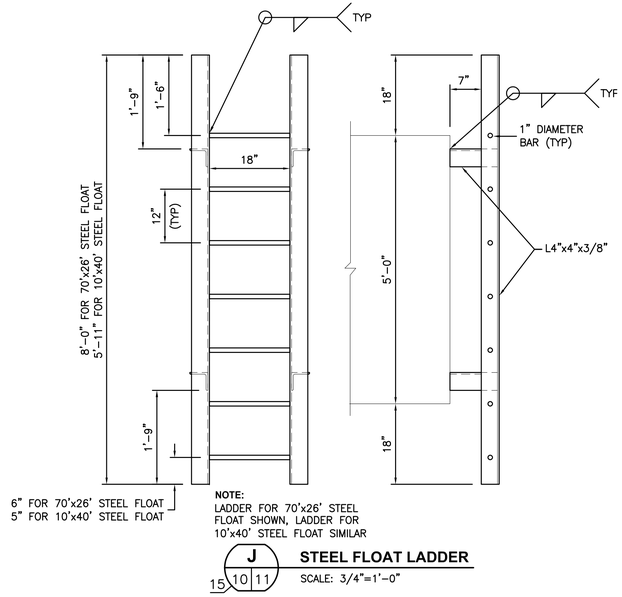


G 10 11 — **MOORING BOLLARD FABRICATION DETAIL**
SCALE: 1 1/2"=1'-0"





H 15 10 11 — **GANGWAY FIFTH WHEEL SHELF DETAIL**
SCALE: 1"=1'-0"



NOTE:
LADDER FOR 70'x26' STEEL FLOAT SHOWN, LADDER FOR 10'x40' STEEL FLOAT SIMILAR

J 15 10 11 — **STEEL FLOAT LADDER**
SCALE: 3/4"=1'-0"

SPECIFICATIONS

1.) STEEL PLATE SHALL BE ASTM A36.

2.) STRUCTURAL STEEL TUBING SHALL BE ASTM A500, GRADE B.

3.) ALL WELDING SHALL BE PERFORMED BY CURRENTLY CERTIFIED AWS WELDERS. WELDING RODS SHALL CONFORM TO AWS E70XX GRADE.

A.) WELD ALL PLATES WITH MINIMUM 1/4" FILLET WELD (UNLESS OTHERWISE NOTED) ALL AROUND FOR A WATERTIGHT WELD.
B.) WELD STRUCTURAL TUBES TOGETHER WITH FULL PENETRATION WELDS TO DEVELOP FULL STRENGTH OF STRUCTURAL TUBE.

4.) ENTIRE ASSEMBLY SHALL BE HOT DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.

5.) ULTRA HIGH MOLECULAR WEIGHT (UHMW) POLYETHYLENE SHALL BE VIRGIN MATERIAL WITH ULTRA-VIOLET INHIBITORS.

AS BUILT

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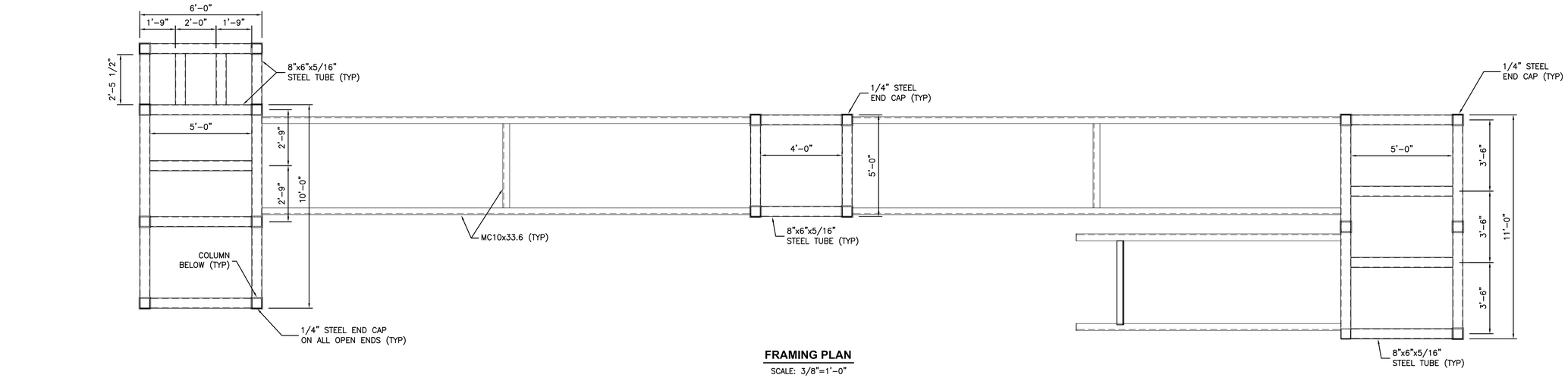
Mark	Description	Date	Appr

Date: 12/20/04 | Design file no. 180804.1-11 | Plot Scale 1"=0'-1"
Designed by: RPP | Det. by: RPP | Reviewed by: RPP
Dwn. by: APL

ACCESSIBLE FLOATING DOCK SYSTEM
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLANDS
BOSTON, MA

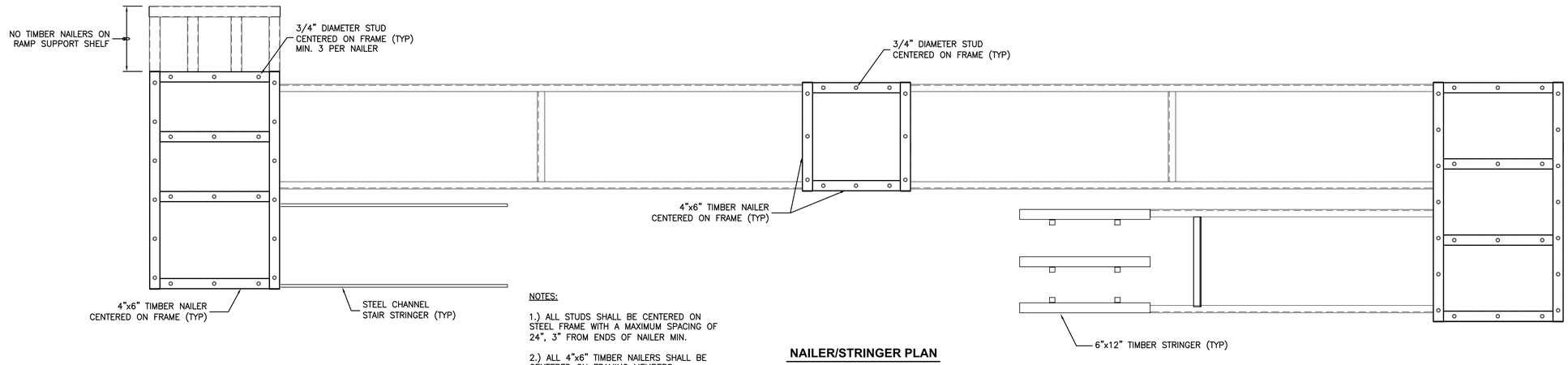
ADDITIONAL FLOAT DETAILS

Sheet reference number: M-011
Sheet 11 of 15



FRAMING PLAN

SCALE: 3/8"=1'-0"



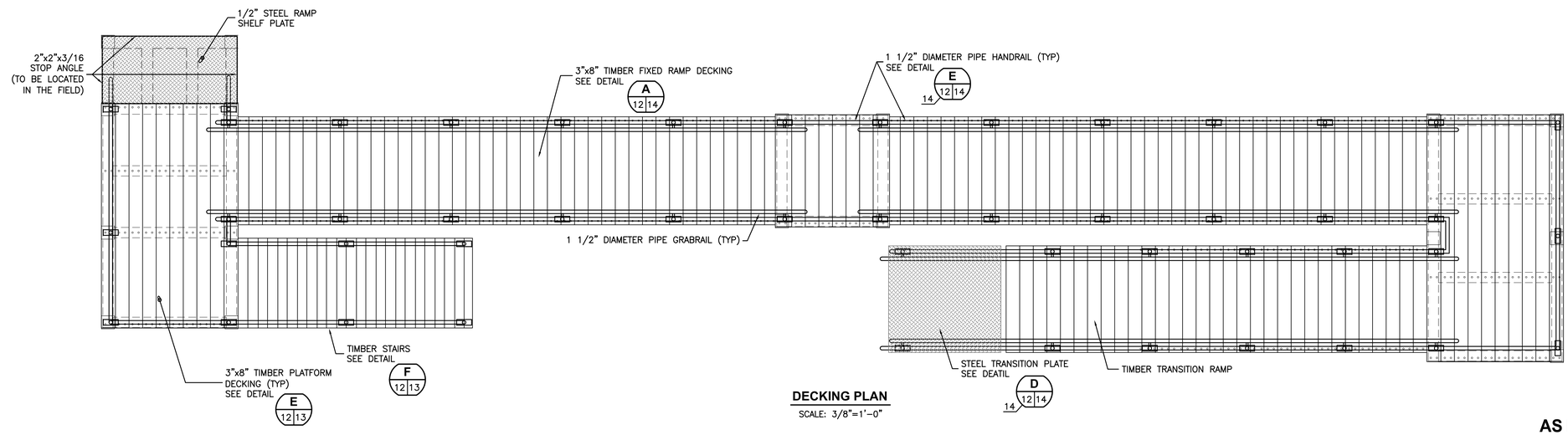
NOTES:

1.) ALL STUDS SHALL BE CENTERED ON STEEL FRAME WITH A MAXIMUM SPACING OF 24", 3" FROM ENDS OF NAILER MIN.

2.) ALL 4"x6" TIMBER NAILERS SHALL BE CENTERED ON FRAMING MEMBERS.

NAILER/STRINGER PLAN

SCALE: 3/8"=1'-0"



DECKING PLAN

SCALE: 3/8"=1'-0"

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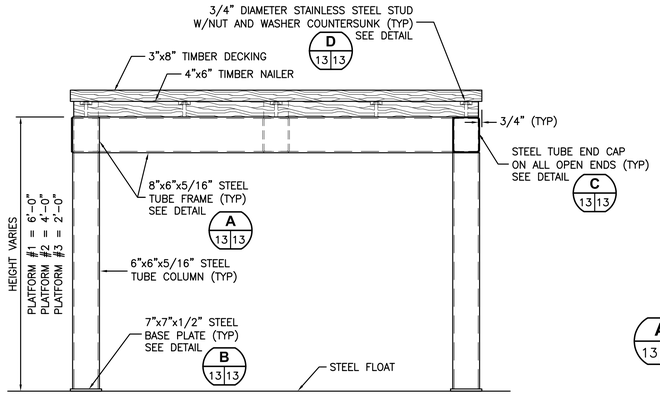
Mark	Description	Date	Appr.

Designed by: RPP	Cad by: RPP	Design File no. 180804.1-12	Date: 12/20/04
Det. by: APL	Reviewed by: RPP	Plot Scale: 1"=0'-1"	

ACCESSIBLE FLOATING DOCK SYSTEM
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLANDS
BOSTON, MA

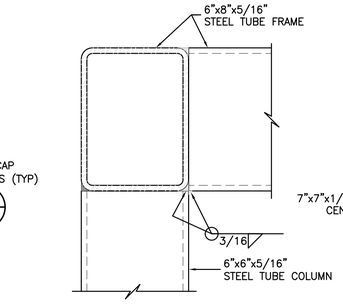
FIXED RAPM PLATFORM AND STAIR DETAILS

Sheet reference number: M-012
Sheet 12 of 15



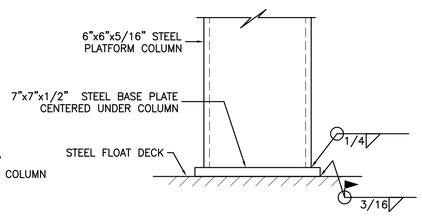
TYPICAL PLATFORM ELEVATION

SCALE: 3/4"=1'-0"



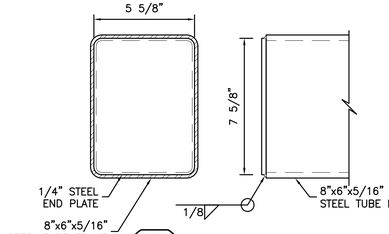
A 13|13 FRAME ASSEMBLY DETAIL

SCALE: 3"=1'-0"



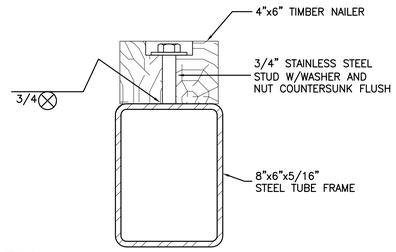
B 13|13 COLUMN BASE PLATE DETAIL

SCALE: 3"=1'-0"



C 13|13 END CAP DETAIL

SCALE: 3"=1'-0"



D 13|13 NAILER CONNECTION

SCALE: 3"=1'-0"

ARTICULATING RAMP SHELF PLATE SECTION

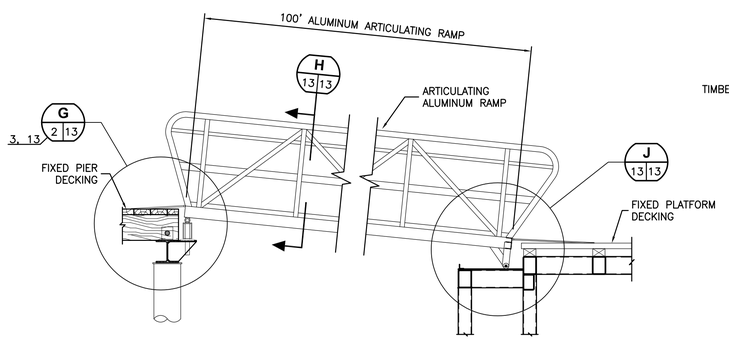
SCALE: 1 1/2"=1'-0"

E 12|13 NAILER/DECKING ATTACHMENT DETAIL

SCALE: 1 1/2"=1'-0"

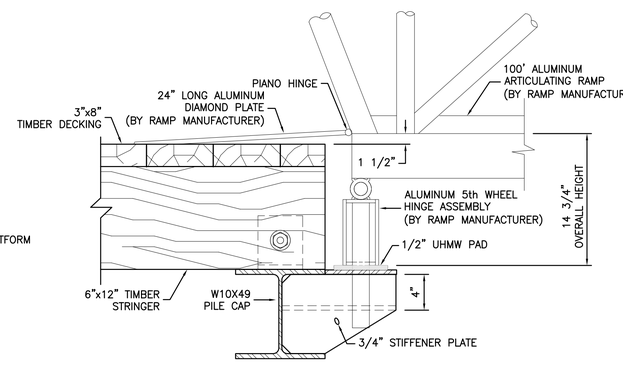
F 12|13 STAIR DETAIL

SCALE: 3/4"=1'-0"



ARTICULATING ALUMINUM RAMP ELEVATION

SCALE: 3/8"=1'-0"

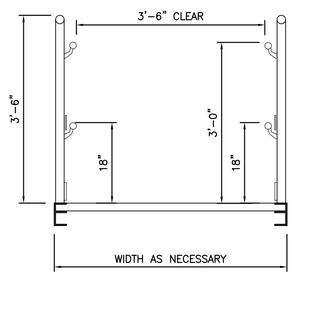


NOTE:
RAMP AND HINGE ASSEMBLY BY RAMP MANUFACTURER

G 2|13 5th WHEEL SECTION

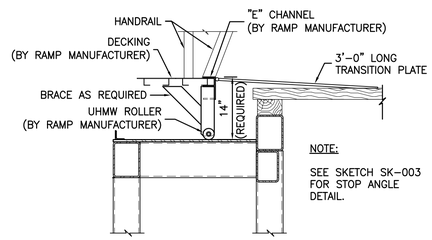
3,13

SCALE: 1 1/2"=1'-0"



H 13|13 ARTICULATED RAMP SECTION

SCALE: 3/4"=1'-0"



NOTE:

SEE SKETCH SK-003 FOR STOP ANGLE DETAIL.

J 13|13 ARTICULATED RAMP END @ PLATFORM

SCALE: 3/4"=1'-0"

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CHILDS ENGINEERING CORPORATION
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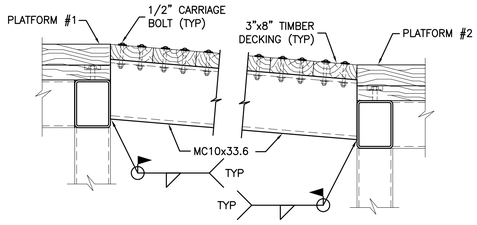
Mark	Description	Date	Appr

Designed by: RPP | Date: 12/20/04
Det. by: APL | Design file no. 180804.1-13
Reviewed by: RPP | Plot Scale 1"=0'-1"

ACCESSIBLE FLOATING DOCK SYSTEM
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLANDS
BOSTON, MA

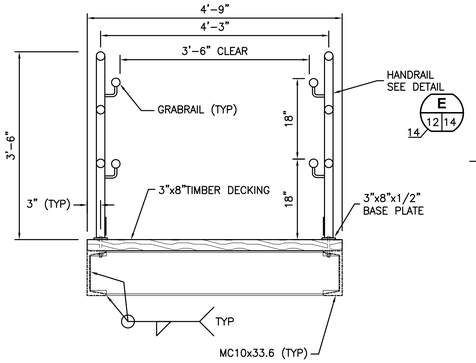
PLATFORM , STAIR AND 100' ARTICULATING RAMP DETAILS

Sheet reference number:
M-013
Sheet 13 of 15



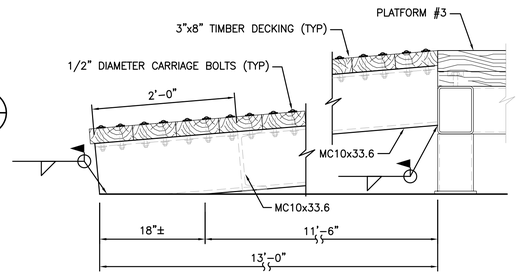
TYPICAL FIXED RAMP TO PLATFORM CONNECTION

SCALE: 1"=1'-0"



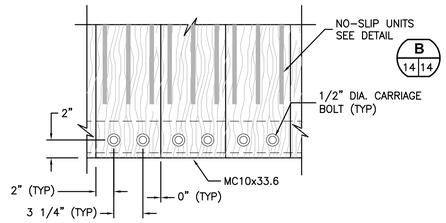
TYPICAL FIXED RAMP SECTION

SCALE: 3/4"=1'-0"



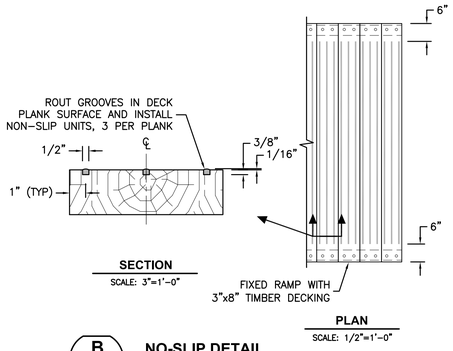
FIXED RAMP TO FLOAT CONNECTION

SCALE:1"=1'-0"



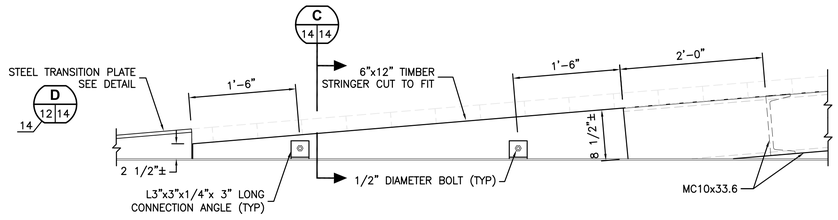
A 12|14 RAMP DECK CONNECTION DETAIL

SCALE: 1 1/2"=1'-0"



B 14|14 NO-SLIP DETAIL

SCALE: 3"=1'-0"



TIMBER TRANSITION RAMP TO FLOAT CONNECTION

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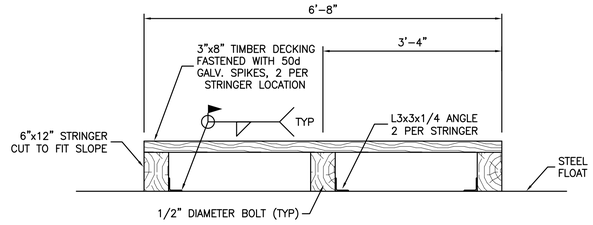
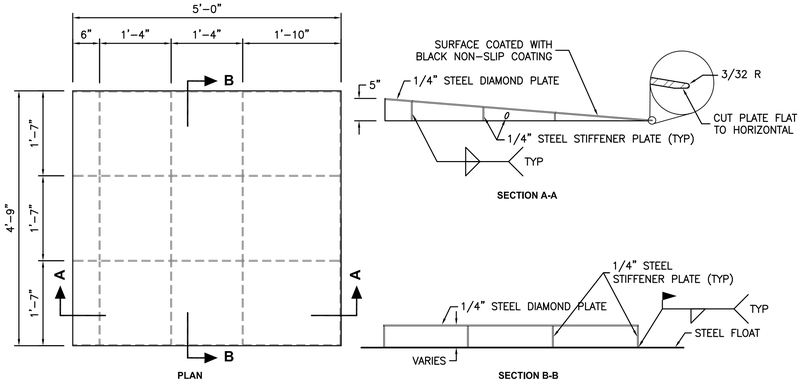


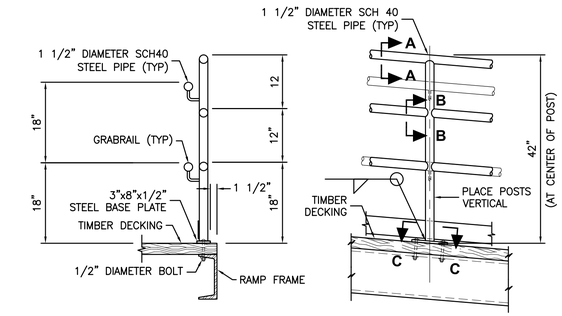
C 14|14 TIMBER TRANSITION RAMP SECTION

SCALE: 3/4"=1'-0"

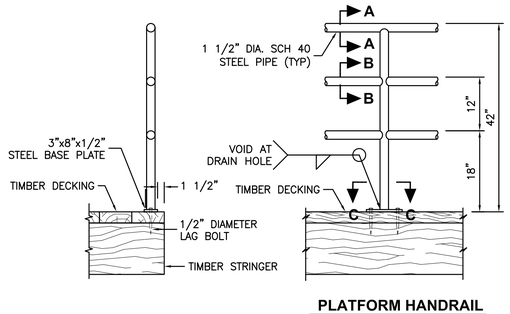


D 14|12|14 STEEL TRANSITION PLATE DETAIL

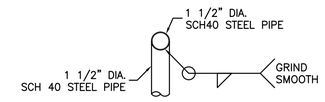
SCALE: 3/4"=1'-0"



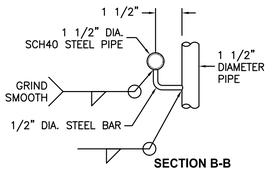
FIXED RAMP HANDRAIL



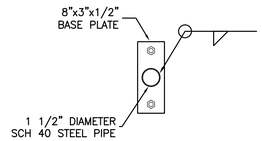
PLATFORM HANDRAIL



SECTION A-A



SECTION B-B



SECTION C-C

NOTE:
HANDRAIL POST AND BASE PLATES SHALL BE LOCATED AT SLEEPER LOCATIONS

E 14|12|14 FIXED RAMP/PLATFORM HANDRAIL DETAIL

SCALE: 3/4"=1'-0"

AS BUILT

CHILDS ENGINEERING CORPORATION
BOX 333 MEDFIELD, MASSACHUSETTS 02052 U.S.A.
Phone: (508) 359-8945 Fax: (508) 359-2751
E-mail: mail@childseng.com

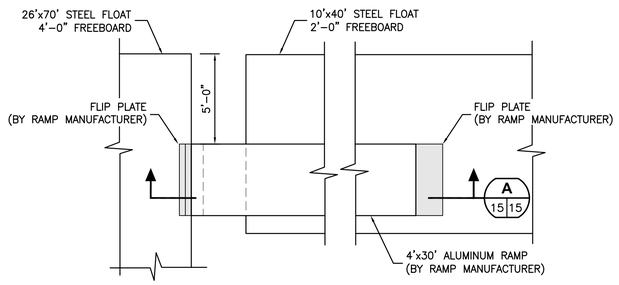
Mark	Description	Date	Appr.

Designed by: RPP	Cad by: RPP	Date: 12/20/04	Design file no. 180804.1-14
Dwn by: APL	Reviewed by: RPP	Plot Scale: 1"=1'-1"	

ACCESSIBLE FLOATING DOCK SYSTEM
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLANDS
BOSTON, MA

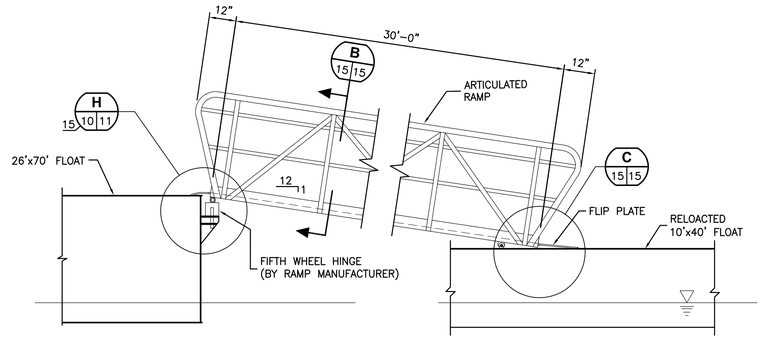
FIXED RAMP DETAILS

Sheet reference number: M-014
Sheet 14 of 15



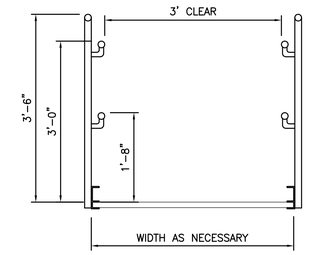
4'x30' GANGWAY PLAN

SCALE: 1/4"=1'-0"



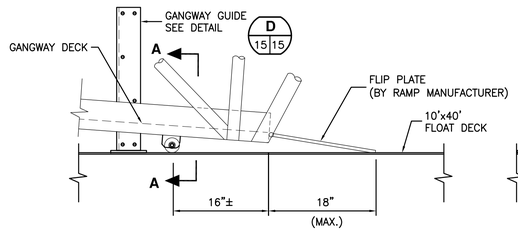
A 15 15 **ACCESSIBLE GANGWAY ELEVATION**

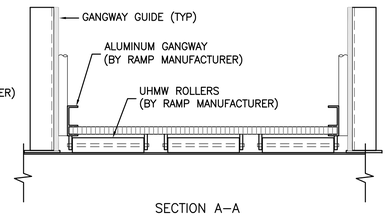
SCALE: 3/8"=1'-0"



B 15 15 **ALUMINUM GANGWAY SECTION**

SCALE: 3/4"=1'-0"

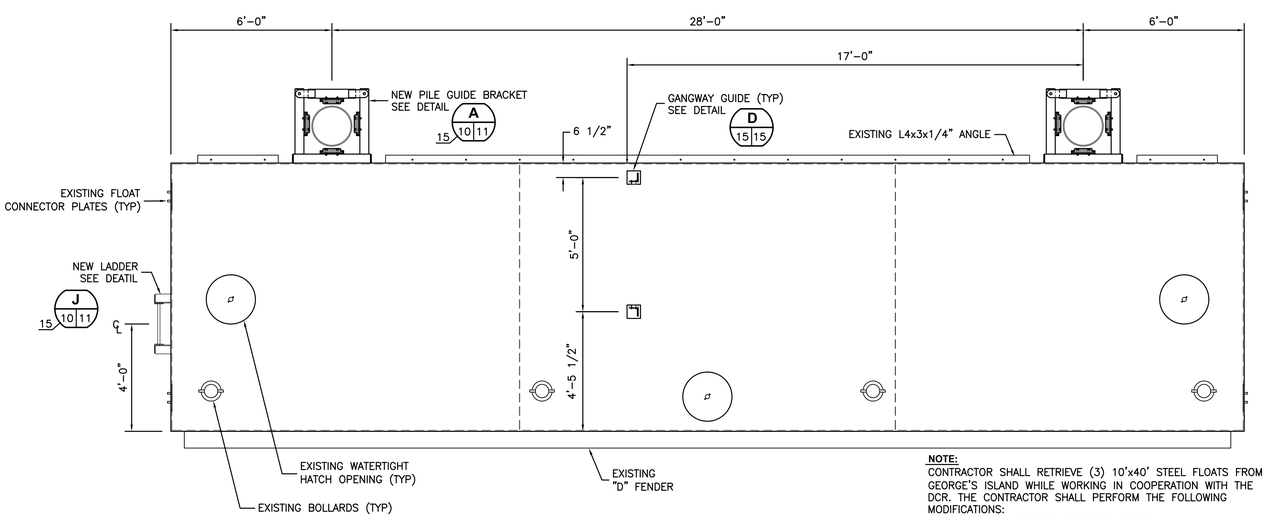




SECTION A–A

C 15 15 **GANGWAY ROLLER DETAIL**

SCALE: 1"=1'-0"



MODIFICATIONS TO RELOACTED 10'x40' FLOAT

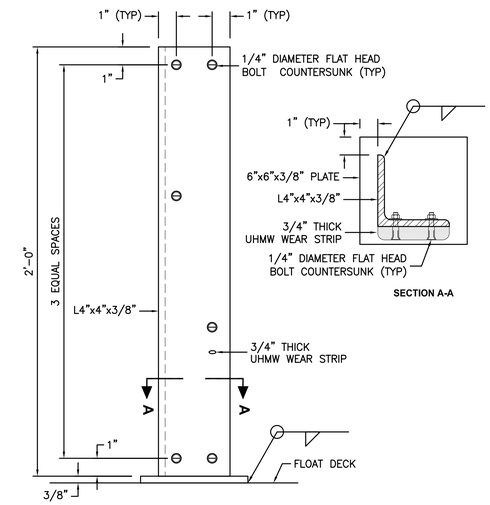
SCALE: 3/8"=1'-0"

NOTE:

CONTRACTOR SHALL RETRIEVE (3) 10'x40' STEEL FLOATS FROM GEORGE'S ISLAND WHILE WORKING IN COOPERATION WITH THE DCR. THE CONTRACTOR SHALL PERFORM THE FOLLOWING MODIFICATIONS:

1.) INSTALL NEW PILE GUIDE BRACKETS
2.) INSTALL NEW GANGWAY GUIDES
3.) INSTALL NEW LADDER

CONTRACTOR SHALL RELOCATE ONE MODIFIED STEEL FLOAT TO EACH OF THE ISLANDS, LOVELL'S, GRAPE AND BUMPKIN



D 15 15 **GANGWAY GUIDE DETAIL**

SCALE: 3"=1'-0"

AS BUILT

CHILDS ENGINEERING CORPORATION
BOX 333 MEDFIELD, MASSACHUSETTS 02052 U.S.A.
Phone: (508) 359-8945 Fax: (508) 359-2751
E-mail: mail@childseng.com

Mark	Description	Date	Appr

Date: 12/20/04
Design file no. 180804.1-15
Print Scale: 1"=0"-1"
Designed by: RPP
Cad by: RPP
Rev. by: APL
Reviewed by: RPP

ACCESSIBLE FLOATING DOCK SYSTEM
HARBOR ISLAND ALLIANCE
BOSTON HARBOR ISLANDS
BOSTON, MA

30' ARTICULATING GANGWAY AND 10'x40' STEEL FLOAT MODIFICATION DETAILS

Sheet reference number:
M-015
Sheet 15 of 15

APPENDIX B

Georges Island Record Drawing 1999
C21H1 Lovejoy Gangway Barge

BOSTON
INTERSTATE I-93

F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	-	1996		44

MASSACHUSETTS HIGHWAY DEPARTMENT

CENTRAL ARTERY (I-93) / TUNNEL (I-90) PROJECT

PLAN AND PROFILE OF HIGHWAYS

IN THE CITY OF

BOSTON

SUFFOLK COUNTY

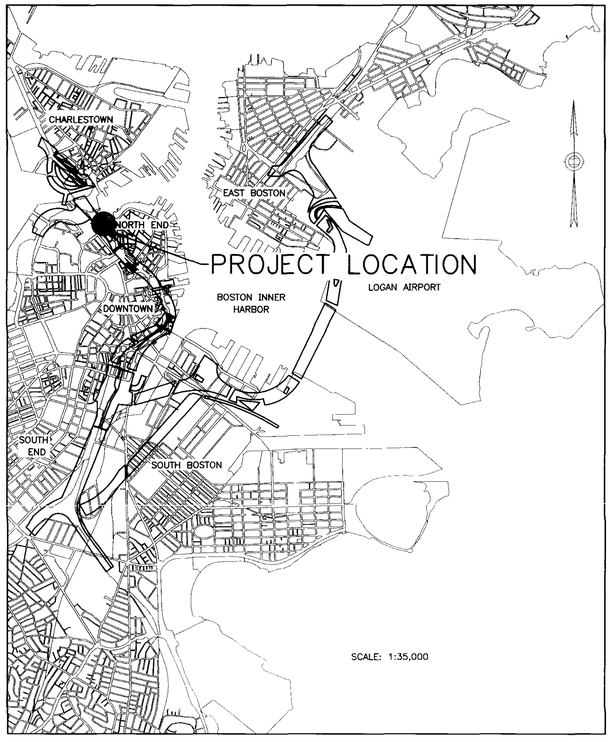
FEDERAL AID PROJECT ------

CONTRACT NO. C21H1

WATER TRANSPORTATION DOCKING FACILITY
LOVEJOY WHARF

MASS HIGHWAY

CENTRAL ARTERY TUNNELS



SCALES-AS NOTED

THE 1988 SPECIFICATIONS, THE 1977 CONSTRUCTION STANDARDS, THE 1988 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS AND THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1 - 1986) WILL GOVERN, AS MODIFIED HEREIN.

DESIGN DESIGNATION - NOT APPLICABLE

PREPARED BY

Robert E. Batalino — Oct 16 1995
FAY, SPOFFORD & THORNDIKE, INC. — DATE
SECTION DESIGNER

SUBMITTED FOR APPROVAL

3 Nov 95
BECHTEL/PARSONS BRINCKERHOFF — DATE
MANAGEMENT CONSULTANTS

RECOMMENDED FOR APPROVAL

17 JAN 96
I-93/I-90 DIRECTOR OF DESIGN AND ENGINEERING — DATE

1/22/96
I-93/I-90 PROJECT DIRECTOR — DATE

Paul B. Lindsay, P.E. 2/2/96
CHIEF ENGINEER MASSACHUSETTS HIGHWAY DEPARTMENT — DATE

APPROVED

2/2/96
COMMISSIONER — DATE
MASSACHUSETTS HIGHWAY DEPARTMENT

RECORD DRAWING - APPROVED R. Mac Donald 12/20/99
B/PB RESIDENT ENGINEER ROBERT R. MAC DONALD DATE

RECORD DRAWING

CONFORMED

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

NA — NA
DIVISION ADMINISTRATOR — DATE

VOLUME 2 0F 3

BOSTON
INTERSTATE I-93

F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	-	1996	1	44

SHEET 1 OF 1 , GENERAL

GENERAL

SHEET No.	DRAWING No.	TITLE
--	--	TITLE SHEET
1	G-001	INDEX OF DRAWINGS

SURVEY

SHEET No.	DRAWING No.	TITLE
2	Y-001	LOVEJOY WHARF - EXISTING SURVEY PLAN
3	Y-002	SURVEY CONTROL - LOVEJOY WHARF - PART 1
4	Y-003	SURVEY CONTROL - LOVEJOY WHARF - PART 2

CIVIL

SHEET No.	DRAWING No.	TITLE
5	C-001	LOVEJOY WHARF - GRADING, PAVING AND DRAINAGE
6	C-002	LOVEJOY WHARF - TRAFFIC MITIGATION PLAN
7	C-003	LOVEJOY WHARF - CONTRACTOR'S STAGING AREAS

ARCHITECTURE

SHEET No.	DRAWING No.	TITLE
8	A-001	LOVEJOY WHARF - LOCATION PLAN
9	A-002	LOVEJOY WHARF - SITE PLAN
10	A-003	LOVEJOY WHARF - SHADE STRUCTURE PLAN
11	A-004	LOVEJOY WHARF - FLOATING DOCK, PLAN AND ELEVATIONS
12	A-005	LOVEJOY WHARF - SHADE STRUCTURE ELEVATIONS
13	A-006	LOVEJOY WHARF - RAIL AND CANOPY DETAILS
14	A-007	LOVEJOY WHARF - GATE AND WINDSCREEN DETAILS
15	A-008	WINDSCREEN TYPICAL DETAILS
16	A-009	MISCELLANEOUS DETAILS

STRUCTURAL

SHEET No.	DRAWING No.	TITLE
17	S-001	DESIGN DATA AND GENERAL NOTES - STRUCTURAL
18	S-002	LOVEJOY WHARF - PILE AND FRAMING PLANS
19	S-003	LOVEJOY WHARF - DECK PLAN
20	S-004	SHADE STRUCTURE - PLAN AND DETAILS
21	S-005	SHADE STRUCTURE - DETAILS
22	S-006	FLOATING DOCK - PLAN AND SECTIONS
23	S-007	FLOATING DOCK - DETAILS
24	S-008	FIXED RAMPS - PLAN AND ELEVATIONS
25	S-009	FIXED RAMPS - SECTIONS AND DETAILS
26	S-010	GANGWAYS - PLANS AND SECTIONS

ELECTRICAL

SHEET No.	DRAWING No.	TITLE
27	E-001	ELECTRICAL LEGEND AND GENERAL NOTES
28	E-002	LOVEJOY WHARF - ELECTRICAL SITE PLAN
29	E-003	LOVEJOY - SHADE STRUCTURE, ELECTRICAL PLAN
30	E-004	DETAILS - LIGHTING CONTROL CABINET

STANDARD DRAWINGS

GENERAL

SHEET No.	DRAWING No.	TITLE
31	SD-G-002	ABBREVIATIONS, SYMBOLS AND GENERAL NOTES - SHEET 1 OF 5
32	SD-G-003	ABBREVIATIONS, SYMBOLS AND GENERAL NOTES - SHEET 2 OF 5
33	SD-G-004	ABBREVIATIONS, SYMBOLS AND GENERAL NOTES - SHEET 3 OF 5
34	SD-G-005	ABBREVIATIONS, SYMBOLS AND GENERAL NOTES - SHEET 4 OF 5
35	SD-G-006	ABBREVIATIONS, SYMBOLS AND GENERAL NOTES - SHEET 5 OF 5

CIVIL

SHEET No.	DRAWING No.	TITLE
36	SD-C-106	CONDUIT MEASUREMENT AND INSTALLATION
37	SD-C-151	PEDESTRIAN RAMPS
38	SD-C-152	PEDESTRIAN RAMPS

HIGHWAY ARCHITECTURE

SHEET No.	DRAWING No.	TITLE
39	SD-H-401	CONSTRUCTION PHASE - TEMPORARY PEDESTRIAN SYSTEM
40	SD-H-402	CONSTRUCTION PHASE - PEDESTRIAN COVERED WALKWAY
41	SD-H-403	CONSTRUCTION PHASE - CONSTRUCTION BARRICADE AND FENCE, AND PANEL TYPES
42	SD-H-404	CONSTRUCTION PHASE - INFORMATION/DIRECTION STANDARD PLANTER, TRASH BARREL, PEDESTRIAN CROSSING BEACON, TOWER/GATEWAY

RIGHT - OF - WAY

THE RIGHT- OF - WAY PLANS, SHEETS 1 THROUGH 6, ARE NOT INCLUDED IN RECORD DRAWINGS.

DRAWINGS ADDED - ADDENDUM

SHEET No.	DRAWING No.	TITLE
43	Y-004	SURVEY CONTROL - LOVEJOY WHARF - PART 3
44	SD-C-010	EROSION CONTROL STANDARDS

RECORD DRAWING

REV	DATE	BY	SUB	APP	DESCRIPTION
3	06DEC99	EID		REM	INCORPORATED FIELD CONDITIONS
2	11JAN96	RWT	DWH	LSO	INCORPORATED ADDENDUM NO. 1
1	16NOV95				DRAWINGS ADDED-ADDENDUM

REV	DATE	BY	SUB	APP	DESCRIPTION

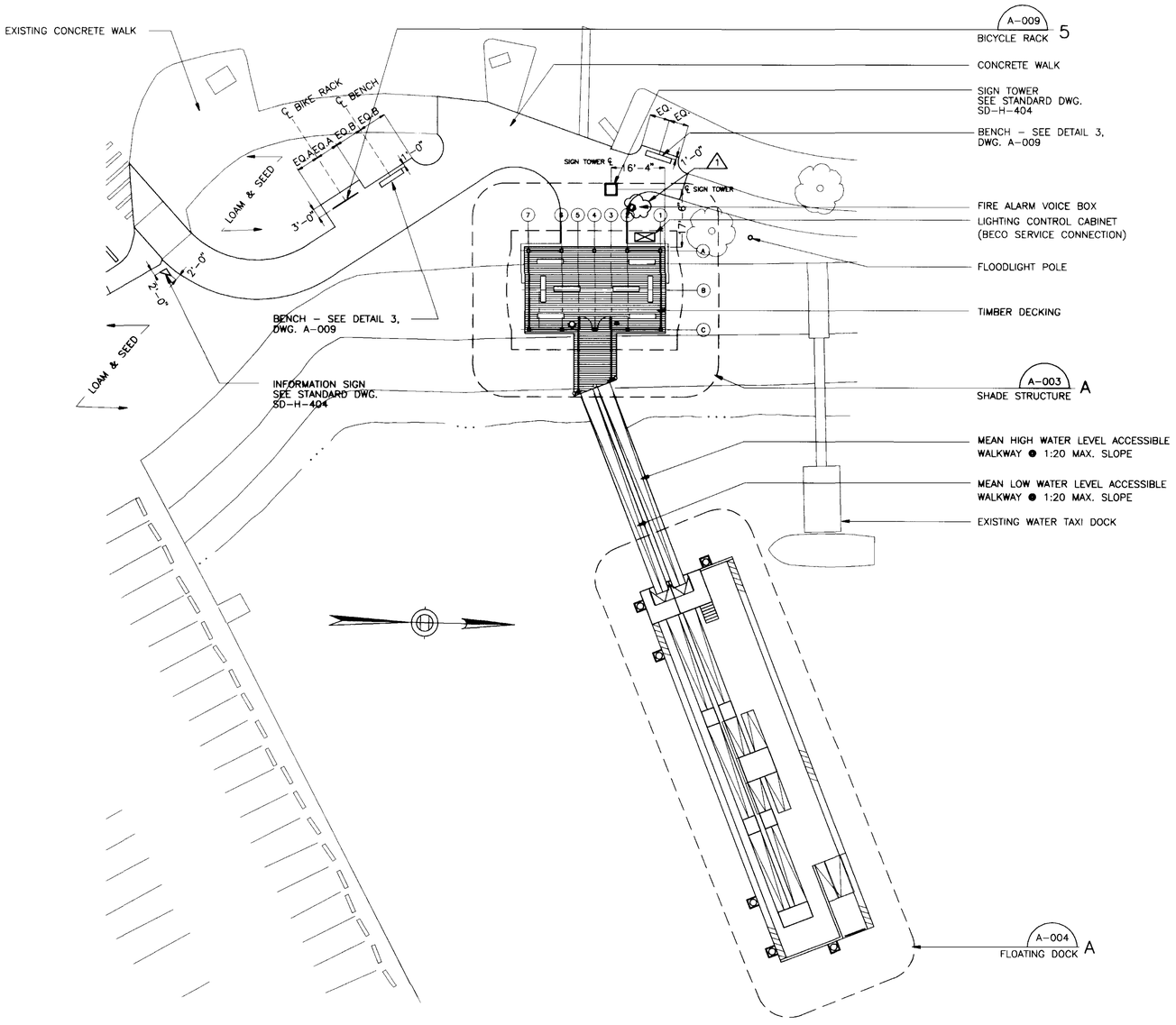
DESIGNED BY
DRAWN BY R W TRIPP
CHECKED BY A B BILLARD
IN CHARGE R E BERTOLINO
DATE 16 OCT 95

COMMONWEALTH OF MASSACHUSETTS ROBERT E. BERTOLINO No. 28[illegible] REGISTERED PROFESSIONAL ENGINEER

MASSACHUSETTS HIGHWAY DEPARTMENT
Central Artery (I-93) / Tunnel (I-90) Project
FAY, SPOFFORD & THORNDIKE, INC.
SECTION DESIGNER D021H
SUBMITTED: Robert E Bertolino
BECHTEL/ PARSONS BRINCKERHOFF
MANAGEMENT CONSULTANTS
SUBMITTED FOR APPROVAL:

WATER TRANSPORTATION DOCKING FACILITIES
INDEX OF DRAWINGS

SCALE: NONE
CONTRACT NO. C21H1
DRAWING NO. C21H1-G-001
REV. 3



GENERAL NOTES:

1. ALL DIMENSIONS AND EXISTING CONDITIONS TO BE FIELD VERIFIED PRIOR TO SUBMISSION OF SHOP DRAWING INFORMATION AND/OR PRIOR TO PROCEEDING WITH CONSTRUCTION.
2. FOR TIMBER WHARF DIMENSIONS AND DETAILS, SEE STRUCTURAL DRAWINGS.
3. FOR LIGHT FIXTURE LOCATIONS, SEE ELECTRICAL DRAWINGS.

LEGEND

- ● 8' HIGH STEEL POST – SEE STRUCT. DWGS.
- ○ 4' HIGH STEEL POST – SEE STRUCT. DWGS.
- BENCH
- TRASH RECEPTACLE
- ● TELEPHONE KIOSK

BOSTON
INTERSTATE I-93

F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	–	1996	9	44

SHEET 2 OF 9 , ARCHITECTURE

INTERSTATE 93 PROJECT 06 — MHW 0 NGVD MLW 18 FT Project Datum

ALL PLAN REFERENCES TO FUTURE WORK HAVE BEEN COMPLETED, UNLESS OTHERWISE NOTED

RECORD DRAWING

0 20 50 100
1" = 20'-0" HORIZONTAL

REV	DATE	BY	SUB	APP	DESCRIPTION
2	08DEC99	CMG		RRM	INCORPORATED FIELD CONDITIONS
1	16NOV95	DJK	MED		AS INDICATED

DESIGNED BY S. BROADHEAD
DRAWN BY J. BRANCA/SAWABINI
CHECKED BY S. BROADHEAD
IN CHARGE M. ONDRAS
DATE 16 OCT 95

REGISTERED ARCHITECT MARTHA E. ONDRAS No. 4670 BOSTON, MASS. COMMONWEALTH OF MASSACHUSETTS

MASSACHUSETTS HIGHWAY DEPARTMENT
Central Artery (I-93) / Tunnel (I-90) Project

FAY, SPOFFORD & THORNDIKE, INC.
SECTION DESIGNER D021H
SUBMITTED:

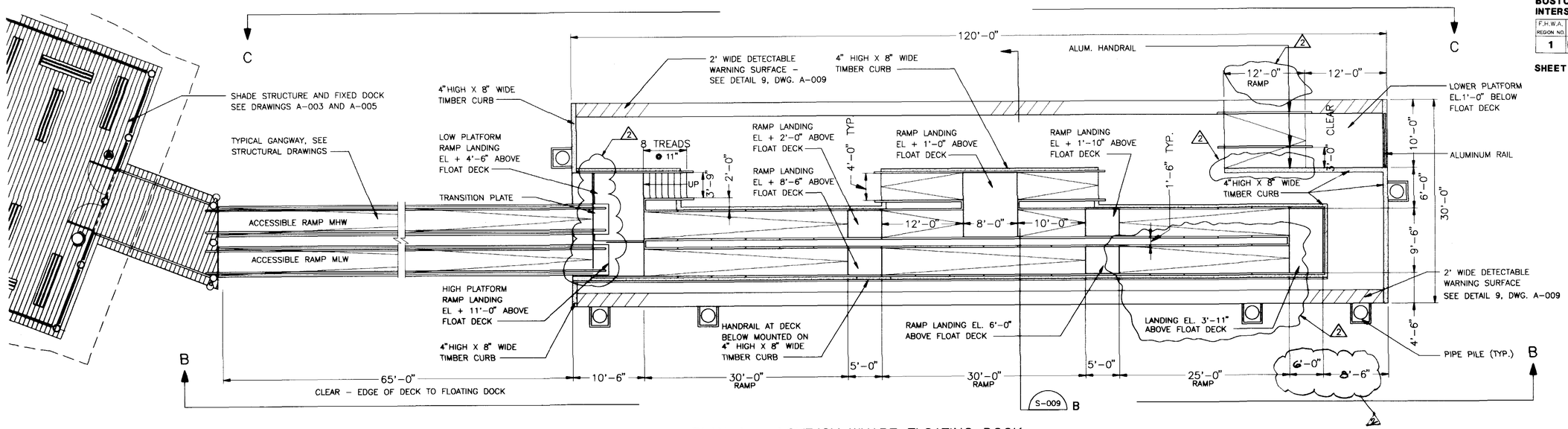
BECHTEL/ PARSONS BRINCKERHOFF
MANAGEMENT CONSULTANTS
SUBMITTED FOR APPROVAL:

CENTRAL ARTERY TUNNEL

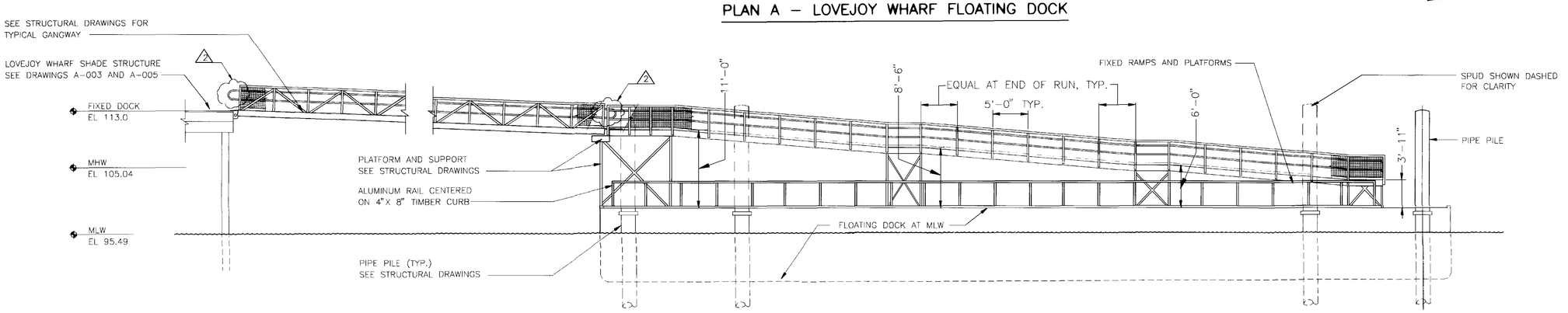
WATER TRANSPORTATION
DOCKING FACILITIES
LOVEJOY WHARF
SITE PLAN

SCALE: 1" = 20'-0"
CONTRACT NO. C21H1
DRAWING NO. C21H1-A-002
REV. 2

DRAWING PREPARED BY: ONDRAS ASSOC. ARCHITECTS, INC. , SUBCONSULTANT

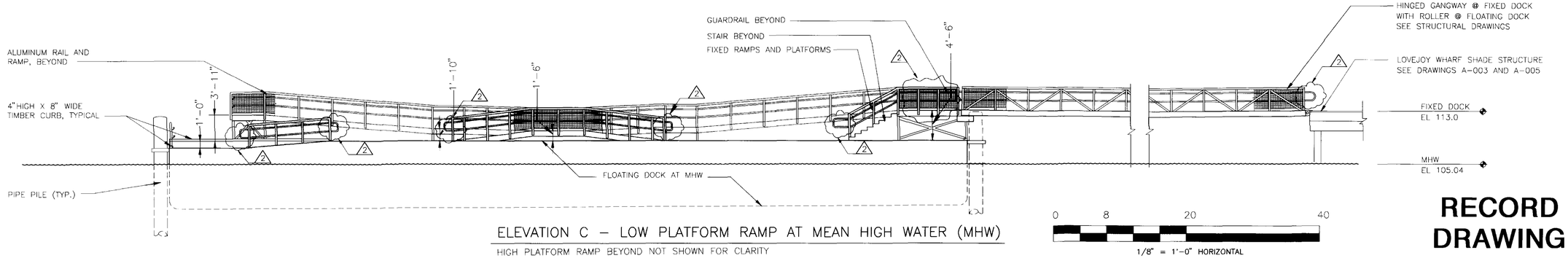


PLAN A – LOVEJOY WHARF FLOATING DOCK



ELEVATION B – HIGH PLATFORM RAMP AT MEAN LOW WATER (MLW)

LOW PLATFORM RAMP BEYOND NOT SHOWN FOR CLARITY



ELEVATION C – LOW PLATFORM RAMP AT MEAN HIGH WATER (MHW)

HIGH PLATFORM RAMP BEYOND NOT SHOWN FOR CLARITY

ALL PLAN REFERENCES TO FUTURE WORK HAVE BEEN COMPLETED, UNLESS OTHERWISE NOTED

0 8 20 40

1/8" = 1'-0" HORIZONTAL

RECORD DRAWING

REV	DATE	BY	SUB	APP	DESCRIPTION
3	08DEC95	CMG		RRM	INCORPORATED FIELD CONDITIONS
2	16NOV95	RRM	WLS	MED	AS INDICATED
1	26OCT95				AS INDICATED

DESIGNED BY S. BROADHEAD
DRAWN BY J. BRANCA/SAWABINI
CHECKED BY S. BROADHEAD
IN CHARGE M. ONDRAS
DATE 16 OCT 95

REGISTERED ARCHITECT MARTIN E. ONDRAS No. 4670 BOSTON, MASS. COMMONWEALTH OF MASSACHUSETTS

MASSACHUSETTS HIGHWAY DEPARTMENT

Central Artery (I-93)/Tunnel (I-90) Project

FAY, SPOFFORD & THORNDIKE, INC.
SECTION DESIGNER D021H
SUBMITTED: Robert E. Barletta

BECHTEL/ PARSONS BRINCKERHOFF
MANAGEMENT CONSULTANTS
SUBMITTED FOR APPROVAL:

WATER TRANSPORTATION DOCKING FACILITIES
LOVEJOY WHARF FLOATING DOCK
PLAN AND ELEVATION

SCALE: 1/8" = 1'-0"
CONTRACT NO. C21H1
DRAWING NO. C21H1-A-004
REV. 3

DRAWING PREPARED BY: ONDRAS ASSOC. ARCHITECTS, INC. , SUBCONSULTANT

BOSTON
INTERSTATE I-93

F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	-	1996	17	44

SHEET 1 OF 10 , STRUCTURAL

DESIGN DATA – STRUCTURAL

NOTE: ALL LOADINGS FROM MASS STATE BUILDING CODE, (MSBC), 5th EDITION, UNLESS NOTED OTHERWISE.

A. SHADE STRUCTURE PLATFORM

VERTICAL LOADS:	
UNIFORM LOAD	100 PSF
CONCENTRATED LOAD (ON AREA 30"x30")	2000 LB
LATERAL LOADS:	
WIND (ZONE 3, EXPOSURE C)	
REFERENCE VELOCITY	90 MPH
REFERENCE PRESSURE	21 PSF
EARTHQUAKE	
IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATION FOR BRIDGES 15th EDITION.	
ACCELERATION COEFFICIENT, A	0.17
IMPORTANCE CLASSIFICATION, IC	II
SEISMIC PERFORMANCE CATEGORY, SPC	B
SITE COEFFICIENT:	1.0
RAILING LOAD: (ANY DIRECTION)	
UNIFORM LOAD	100 PLF
CONCENTRATED LOAD	300 LB

B. SHADE STRUCTURE

VERTICAL LOADS:	
SNOW	30 PSF
LATERAL LOADS:	
WIND (ZONE 3, EXPOSURE C)	
REFERENCE VELOCITY	90 MPH
REFERENCE PRESSURE	21 PSF
UPLIFT AND HORIZONTAL FORCE. CALCULATED IN ACCORDANCE WITH MSBC.	
EARTHQUAKE	
TOTAL LATERAL SEISMIC FORCE, V	1/3 KCSW
FRAMING FACTOR, K	.67
MAXIMUM, CS	0.12
W = TOTAL DL PLUS 50% SNOW LOAD	

C. GANGWAYS / RAMPS

VERTICAL LOADS:	
UNIFORM LOAD	100 PSF
CONCENTRATED LOAD (ON AREA 30"x30")	2000 LB
LATERAL LOADS:	
WIND (ZONE 3, EXPOSURE C)	
REFERENCE VELOCITY	90 MPH
REFERENCE PRESSURE	21 PSF
RAILING LOAD: (ANY DIRECTION)	
UNIFORM LOAD	100 PLF
CONCENTRATED LOAD	300 LB

D. FLOATING DOCKS

VERTICAL LOADS:	
UNIFORM LOAD	100 PSF
CONCENTRATED LOAD (ON AREA 30"x30")	2000 LB
LATERAL LOADS:	
WIND (ZONE 3, EXPOSURE C)	
REFERENCE VELOCITY	90 MPH
REFERENCE PRESSURE	21 PSF
WIND LOAD ON BERTHED VESSEL	
VELOCITY (BASED ON ENGINEERING JUDGEMENT)	70 MPH
PRESSURE	16 PSF
WAVE (2.3 FOOT HIGH WAVE) (CALCULATED BASED ON SITE CONDITIONS)	170 PLF
CURRENT (0.4 KNOTS) (0.4' BASED ON NOAA DATA)	4 PLF
DOCKING LOAD, 1 FOOT PER SECOND (25 TON VESSEL, 10° ANGLE OF APPROACH)	3900 LB

E. DESIGN VESSEL

LENGTH	50 FT
DISPLACEMENT	25 TONS
DRAFT	3 FT

F. FOUNDATIONS

1. THE BASIS OF DESIGN FOR PILE EMBEDMENT IS AS FOLLOWS:

SOIL STRATA	UNIT WEIGHT γ, (PCF)	UNDRAINED SHEAR STRENGTH C (PSI)	FRACTION ANGLE ϕ (DEGREES)	MODULUS OF SUBGRADE REACTION K (LBS/IN^3)	SKIN FRICTION Ca (PSF)
ORGANIC SILT	105	1.4	0	5	–
SAND	115	0	33	200	–
GLACIAL TILL	130	0	38	300	–
ROCK	137	0	40	500	–

2. **ALLOWABLE END BEARING PRESSURE FOR STEEL PIPE PILES UNDER THE SHADE STRUCTURE = 25 TONS / SQ.FT.**

GENERAL NOTES

A. DESIGN

ALL COMPONENTS OF THESE FACILITIES HAVE BEEN DESIGNED BY THE WORKING STRESS METHOD.

B. TIMBER

1. ALL TIMBER SHALL BE PRESSURE TREATED.
2. TIMBER SPECIES AND GRADES SHALL BE AS FOLLOWS:

ITEM	SPECIES
DECK PLANK	DOUGLAS FIR SELECT STRUCTURAL OR SOUTHERN PINE NO. 1
STRINGERS AND PILE CAPS	DOUGLAS FIR DENSE NO. 1 OR SOUTHERN PINE NO. 1 DENSE

3. ALL TIMBER SHALL BE INSPECTED BY AN INDEPENDENT COMMERCIAL LABORATORY PRIOR TO DELIVERY TO THE SITE.
4. ALL HARDWARE AND FASTENERS SHALL BE HOT DIP GALVANIZED.
5. ALL CONNECTION PLATES AND ANGLES SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A36, UNLESS NOTED OTHERWISE.
6. ALL BOLTS AND RELATED HARDWARE SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A307, UNLESS NOTED OTHERWISE.
7. **DESIGN IS IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION OF THE NATIONAL FOREST PRODUCTS ASS., 1991 EDITION.**

C. STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A 36 UNLESS NOTED OTHERWISE.
2. STRUCTURAL STEEL PIPE FOR SHADE STRUCTURES SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A 53, AND SHALL BE PAINTED
3. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 –94
4. ALL BOLTS AND RELATED HARDWARE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A325 UNLESS OTHERWISE NOTED. ALL BOLTS ARE IN STANDARD HOLES UNLESS OTHERWISE NOTED.
5. ALL BOLTED CONNECTIONS SHALL BE SLIP RESISTANT WITH CLASS A SURFACE PREPARATION UNLESS OTHERWISE NOTED.
6. **DESIGN IS IN ACCORDANCE WITH THE 9TH EDITION OF THE MANUAL OF STEEL CONSTRUCTION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.**

D. CONCRETE

1. CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS, EXCEPT CONCRETE FOR ROCK SOCKETS, WHICH SHALL DEVELOP A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5000 P.S.I., AND CONCRETE BALLAST FOR FLOATING DOCKS SHALL DEVELOP A MINIMUM 28 DAY STRENGTH OF 3000 PSI.
2. **DESIGN IS IN ACCORDANCE WITH ACI 318-89.**

E. REINFORCEMENT

1. REINFORCEMENT SHALL BE EPOXY COATED AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION A 615 GRADE 60.
2. LAP SPLICES FOR ALL #4 BARS SHALL BE 20 INCHES. FOR HORIZONTAL #4 BARS WITH 12 OR MORE INCHES OF CONCRETE BELOW THE BAR, THE LAP LENGTH SHALL BE 27 INCHES. LAPS FOR ALL OTHER BARS SHALL BE AS INDICATED ON THE DRAWINGS.
3. REINFORCEMENT SHALL HAVE 3 INCHES CLEAR COVER, FACE OF CONCRETE TO FACE OF STEEL, UNLESS NOTED OTHERWISE.

F. ALUMINUM

1. ALL ALUMINUM SHALL BE ALLOY 6061–T6.
2. ALL BOLTS AND RELATED HARDWARE SHALL BE TYPE 316 STAINLESS STEEL.

INTERSTATE 93 PROJECT 90 — M+W, O.N.W.O, M.L.W., 100 FT, Project Datum

RECORD DRAWING

REV	DATE	BY	SUB	APP	DESCRIPTION
1	07 DEC 99	TYC		RRM	INCORPORATED FIELD CONDITIONS

DESIGNED BY D W HARVIE
DRAWN BY R L KNEELAND
CHECKED BY K W HAMMOND
IN CHARGE R E BERTOLINO
DATE 16 OCT 95

COMMONWEALTH OF MASSACHUSETTS — ROBERT E. BERTOLINO No. 29019 — REGISTERED PROFESSIONAL ENGINEER

MASSACHUSETTS HIGHWAY DEPARTMENT

Central Artery (I-93) / Tunnel (I-90) Project

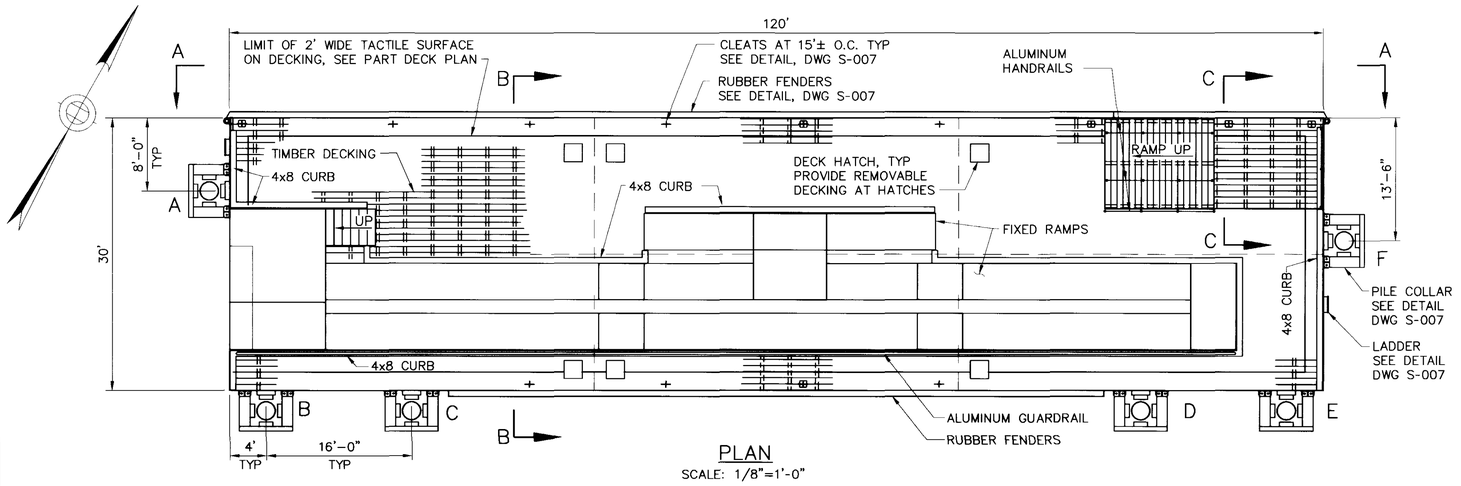
FAY, SPOFFORD & THORNDIKE, INC.
SECTION DESIGNER D021H
SUBMITTED:

BECHTEL/ PARSONS BRINCKERHOFF
MANAGEMENT CONSULTANTS
SUBMITTED FOR APPROVAL:

CENTRAL ARTERY TUNNEL

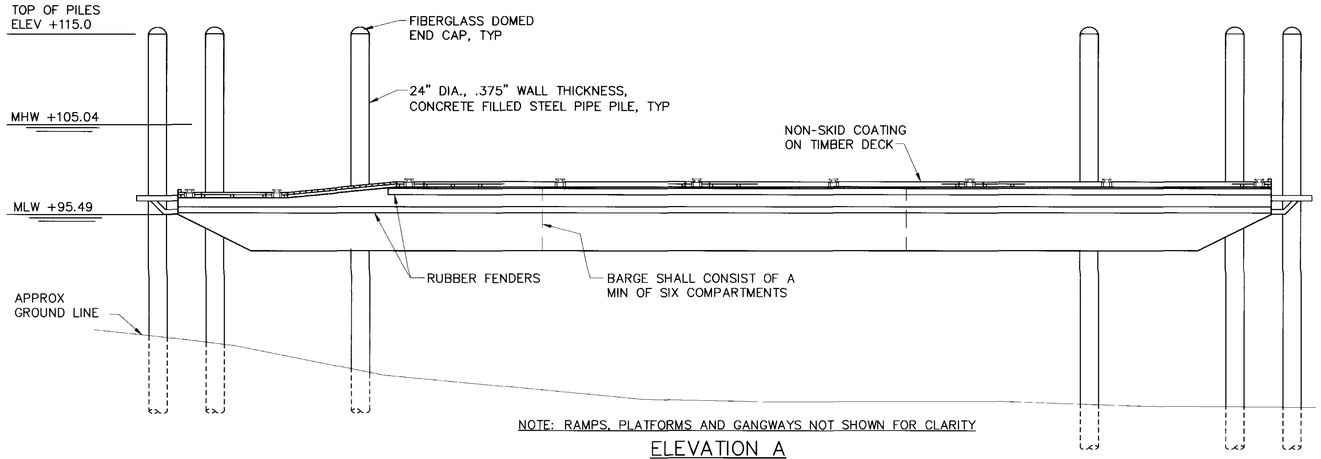
WATER TRANSPORTATION
DOCKING FACILITIES
DESIGN DATA AND GENERAL NOTES
STRUCTURAL

SCALE: NONE
CONTRACT NO. C21H1
DRAWING NO. C21H1–S–001
REV. 1



PLAN

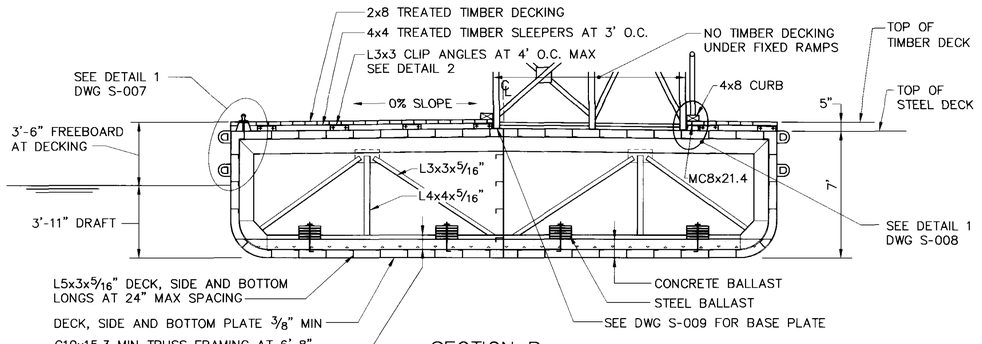
SCALE: 1/8"=1'-0"



NOTE: RAMPS, PLATFORMS AND GANGWAYS NOT SHOWN FOR CLARITY

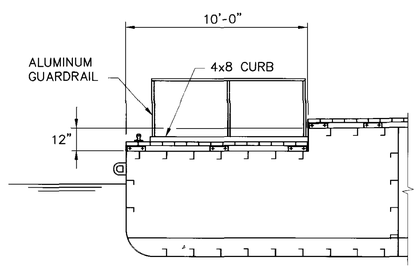
ELEVATION A

SCALE: 1/8"=1'-0"



SECTION B

SCALE: 1/4"=1'-0"



SECTION C

SCALE: 1/4"=1'-0"

GENERAL NOTES:

1. ALL GROOVE AND BUTT WELDS SHALL BE FULL PENETRATION.
2. ALL ATTACHMENTS TO THE FLOATING DOCK SHALL BE WELDED. DRILLING NOT PERMITTED.
3. ALL MEMBER SIZES GIVEN FOR FLOATS ARE MINIMUMS. CONTRACTOR SHALL FURNISH COMPLETE FLOAT DESIGN WITH P.E. STAMPED DRAWINGS AND CALCULATIONS.
4. CONCRETE BALLAST SHALL BE 3000 PSI, MINIMUM 145 POUNDS PER CUBIC FOOT UNIT WEIGHT.
5. FLOATING DOCKS TO BE PROVIDED WITH TWELVE 24 LB ZINC ANODES, MINIMUM.

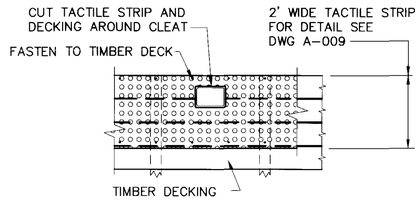
FLOATING DOCK FREEBOARD:

1. FINAL FREEBOARD TO DECK OF FLOATING DOCK SHALL BE 42 INCHES ON EACH FACE. THE FINAL FREEBOARD SHALL BE WITH ALL APPURTENANCES, INCLUDING RAMPS AND GANGWAYS, BUT WITHOUT PERSONNEL LIVE LOAD ON THE FLOATING DOCK, RAMPS AND GANGWAYS.
2. PROVIDE CONCRETE BALLAST SUCH THAT THE INITIAL FREEBOARD IS TO WITHIN ONE INCH OF THE FINAL FREEBOARD. THE CONCRETE BALLAST SHALL ACCOUNT FOR THE SELF WEIGHT OF THE FLOATING DOCK AND ALL APPURTENANCES INCLUDING RAMPS AND GANGWAYS.
3. FINAL FREEBOARD ADJUSTMENT SHALL BE PROVIDED BY STEEL PLATES ANCHORED TO THE CONCRETE WITH 3/4"ø ANCHOR BOLTS.
4. CONCRETE BALLAST SHALL BE PLACED IN A MANNER SUCH THAT THE DIFFERENCE IN HEIGHT OF CONCRETE IN ADJACENT COMPARTMENTS DOES NOT EXCEED 3 INCHES.

BOSTON INTERSTATE I-93

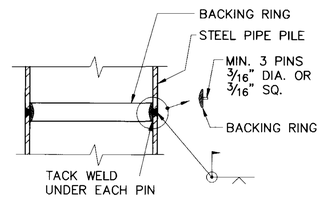
F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	-	1996	22	44

SHEET 6 OF 10 , STRUCTURAL



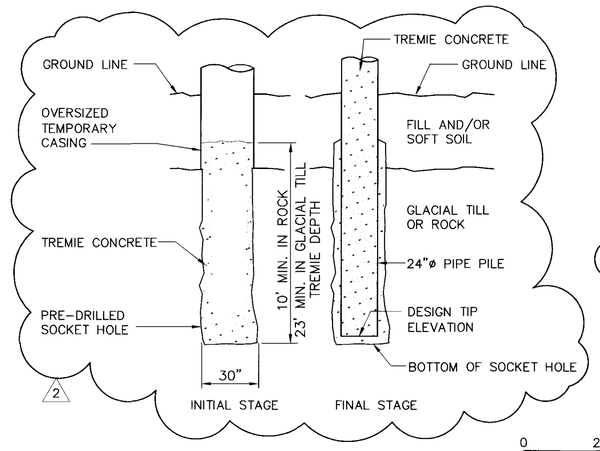
PART DECK PLAN

SCALE: 1/2"=1'-0"



DETAIL-PILE SPLICE

NOT TO SCALE



PILE INSTALLATION

NOT TO SCALE

NOTE:

PILES A,B & C:
IF ROCK ENCOUNTERED AT ELEV. +55 OR BELOW, SOCKET PILE 8 FEET INTO ROCK.
IF ROCK ENCOUNTERED ABOVE ELEV. +55, SOCKET PILE TO TIP ELEVATION +47.

PILES D,E & F:
DESIGN TIP ELEVATION = +39 (SOCKETED IN TILL)

2

ALL PLAN REFERENCES TO FUTURE WORK HAVE BEEN COMPLETED, UNLESS OTHERWISE NOTED

RECORD DRAWING

0 2 4 6 12
1/2" = 1'-0" HORIZONTAL

0 4 8 12 24
1/4" = 1'-0" HORIZONTAL

0 8 16 48
1/8" = 1'-0" HORIZONTAL

REV	DATE	BY	SUB	APP	DESCRIPTION
3	09DEC99	CMG		RRM	INCORPORATED FIELD CONDITIONS
2	16NOV95	CMK	DWH	GKP	REVISE PILE INSTALLATION & NOTE
1	26OCT95				AS INDICATED

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED BY K W HAMMOND
DRAWN BY R W TRIPP
CHECKED BY D W HARVIE
IN CHARGE R E BERTOLINO
DATE 16 OCT 95

COMMONWEALTH OF MASSACHUSETTS — ROBERT E. BERTOLINO No. 28621 — REGISTERED PROFESSIONAL ENGINEER

MASSACHUSETTS HIGHWAY DEPARTMENT

Central Artery (I-93) / Tunnel (I-90) Project

FAY, SPOFFORD & THORNDIKE, INC.
SECTION DESIGNER D021H
SUBMITTED:

BECHTEL/ PARSONS BRINCKERHOFF
MANAGEMENT CONSULTANTS
SUBMITTED FOR APPROVAL:

CENTRAL ARTERY TUNNEL

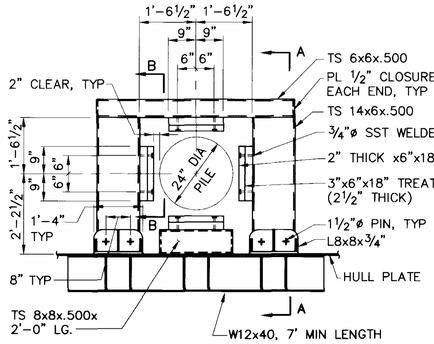
WATER TRANSPORTATION DOCKING FACILITIES
FLOATING DOCK
PLAN AND SECTIONS

SCALE: AS NOTED
CONTRACT NO. C21H1
DRAWING NO. C21H1-S-006
REV. 3

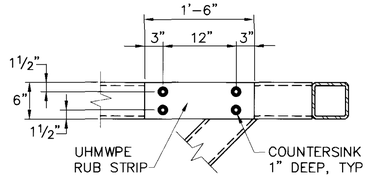
BOSTON INTERSTATE I-93

F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	-	1996	23	44

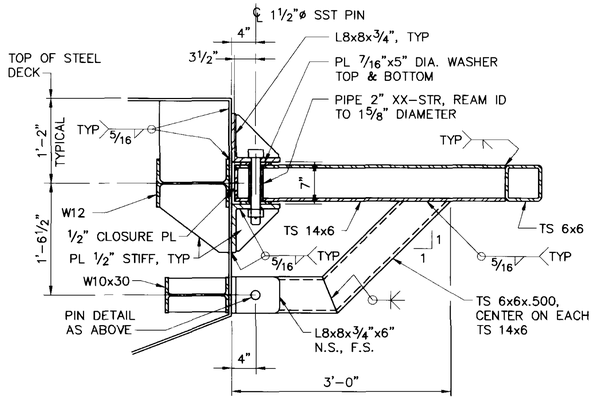
SHEET 7 OF 10 , STRUCTURAL



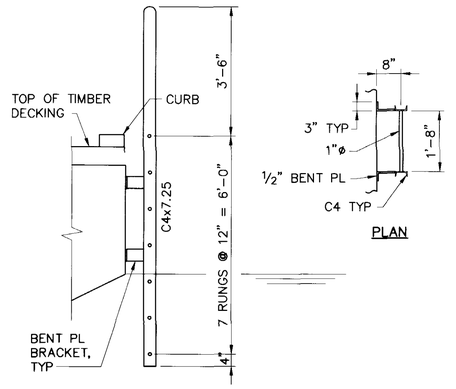
DETAIL–PILE COLLAR S-006
SCALE: ½"=1'-0"



SECTION B
SCALE: 1"=1'-0"

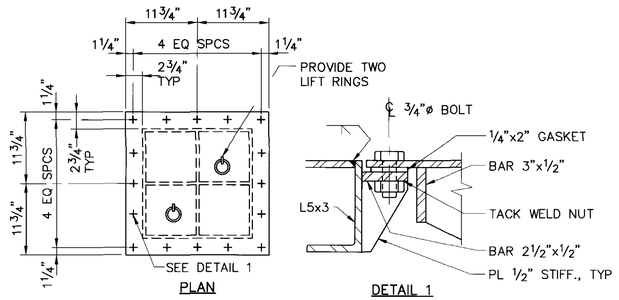


SECTION A
SCALE: 1"=1'-0"



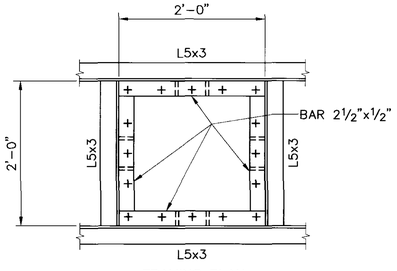
ELEVATION

DETAIL–LADDER S-006
SCALE: ½"=1'-0"

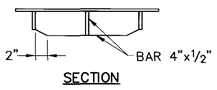


PLAN

DETAIL 1

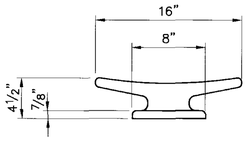


FRAMING PLAN

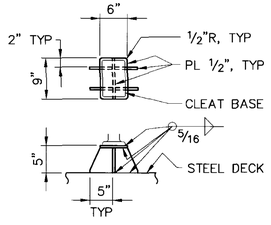


SECTION

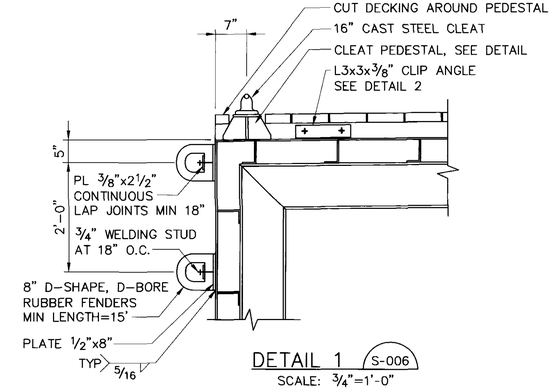
DETAIL–DECK HATCH S-006
SCALE: 1"=1'-0"



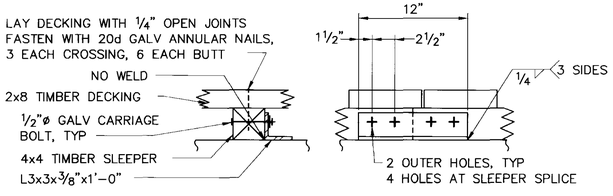
DETAIL-CLEAT
SCALE: 1½"=1'-0"



DETAIL-CLEAT PEDESTAL
SCALE: ¾"=1'-0"



DETAIL 1 S-006
SCALE: ¾"=1'-0"



DETAIL 2 S-006
SCALE: 1½"=1'-0"

ALL PLAN REFERENCES TO FUTURE WORK HAVE BEEN COMPLETED, UNLESS OTHERWISE NOTED

RECORD DRAWING

NOTES:

1. SEE DWG S-006 FOR GENERAL NOTES AND DETAILS NOT SHOWN.

0 1 2 3 4 8
¾" = 1'-0" HORIZONTAL

0 1 2 3 6
1" = 1'-0" HORIZONTAL

0 2 4 6 12
½" = 1'-0" HORIZONTAL

REV	DATE	BY	SUB	APP	DESCRIPTION
1	09DEC99	CMG		RRM	INCORPORATED FIELD CONDITIONS

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED BY K W HAMMOND
DRAWN BY R W TRIPP
CHECKED BY D W HARVIE
IN CHARGE R E BERTOLINO
DATE 16 OCT 95

ROBERT E. BERTOLINO No. 28604 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

MASSACHUSETTS HIGHWAY DEPARTMENT
Central Artery (I-93)/Tunnel (I-90) Project
FAY, SPOFFORD & THORNDIKE, INC.
SECTION DESIGNER D021H
SUBMITTED: Robert E Bertolino
BECHTEL/ PARSONS BRINCKERHOFF
MANAGEMENT CONSULTANTS
SUBMITTED FOR APPROVAL:

CENTRAL ARTERY TUNNEL

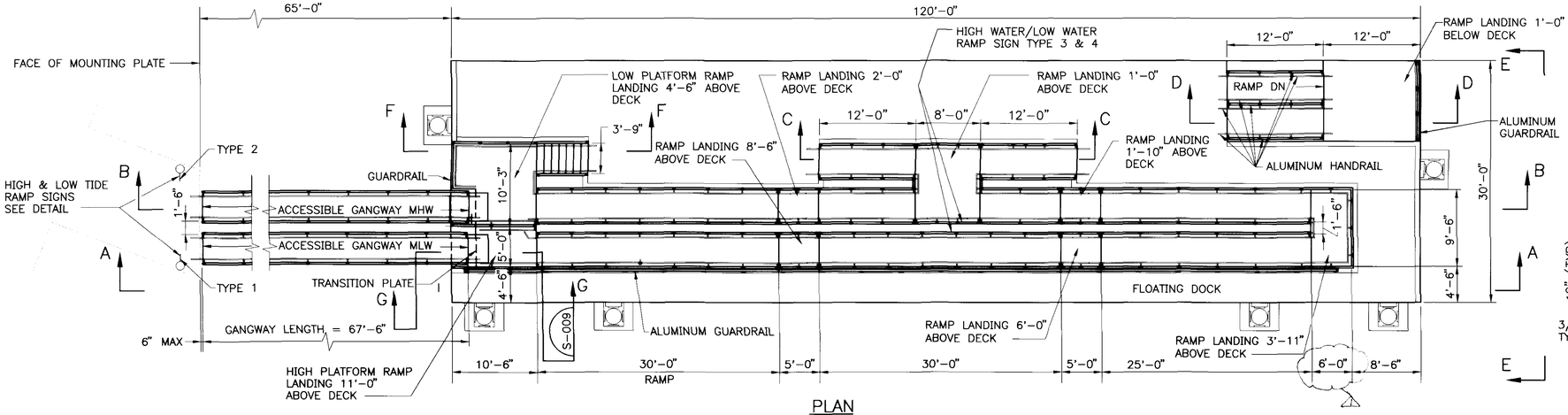
WATER TRANSPORTATION DOCKING FACILITIES
FLOATING DOCK DETAILS

SCALE: AS NOTED
CONTRACT NO. C21H1
DRAWING NO. C21H1-S-007
REV. 1

BOSTON
INTERSTATE I-93

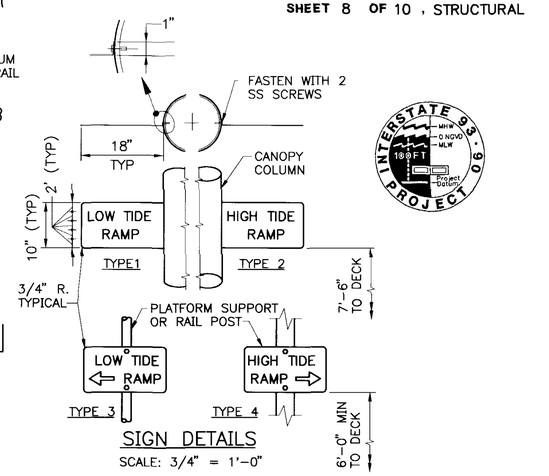
F.H.W.A. REGION NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	-	1996	24	44

SHEET 8 OF 10 , STRUCTURAL



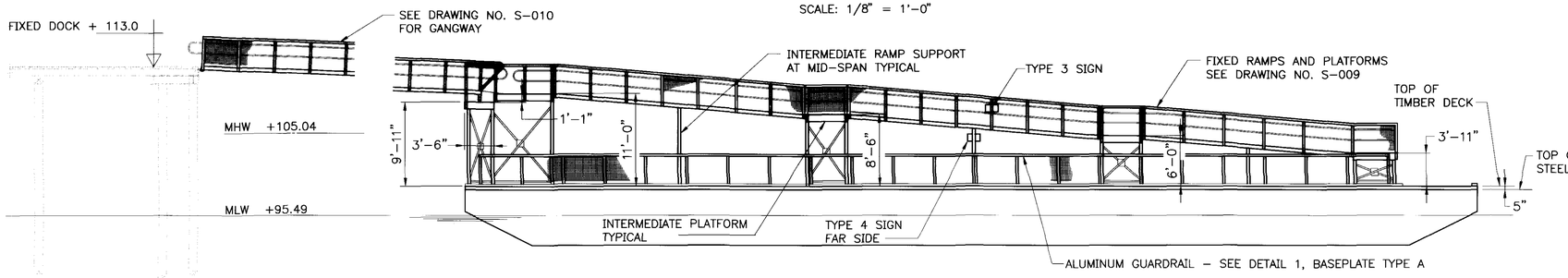
PLAN

SCALE: 1/8" = 1'-0"



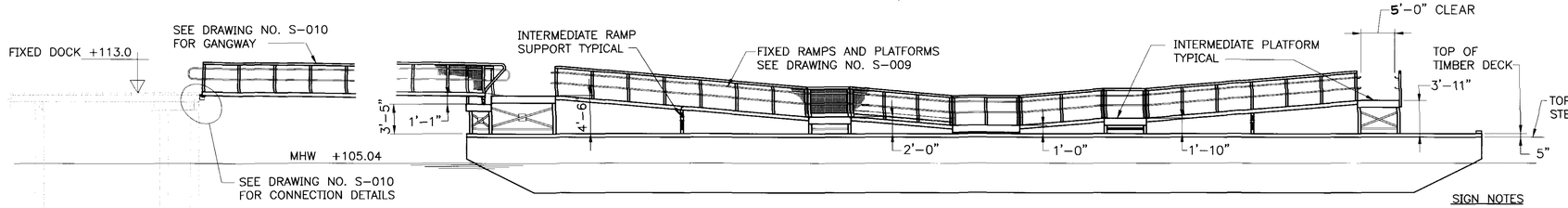
SIGN DETAILS

SCALE: 3/4" = 1'-0"



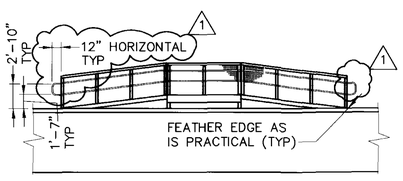
ELEVATION A - HIGH PLATFORM RAMP AT MEAN LOW WATER (MLW)

SCALE: 1/8" = 1'-0"



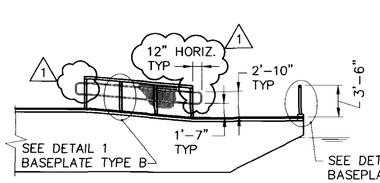
ELEVATION B - LOW PLATFORM RAMP AT MEAN HIGH WATER (MHW)

SCALE: 1/8" = 1'-0"



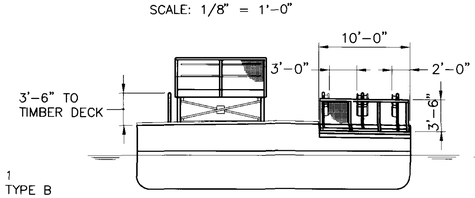
SECTION C

SCALE: 1/8" = 1'-0"



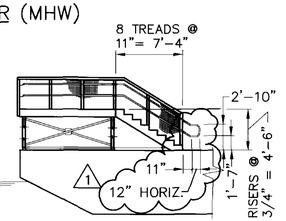
SECTION D

SCALE: 1/8" = 1'-0"



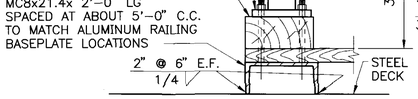
SECTION E

SCALE: 1/8" = 1'-0"



SECTION F

SCALE: 1/8" = 1'-0"



BASEPLATE TYPE B

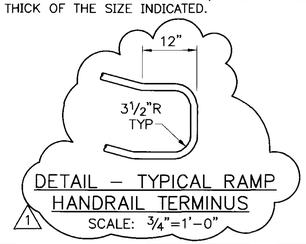
BASEPLATE TYPE A

DETAIL 1 - ALUMINUM GUARDRAIL

1 1/2" = 1'-0"

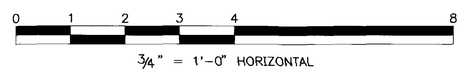
SIGN NOTES

1. SIGN SUPPORTING HARDWARE SHALL BE STAINLESS STEEL.
2. FLAT SHEET ALUMINUM SIGN PANELS FROM ALUMINUM SHEETING, ASTM B207, ALLOY 6061-T6 OR ALLOY 5052-H38, 0.080 INCHES THICK OF THE SIZE INDICATED.



DETAIL - TYPICAL RAMP HANDRAIL TERMINUS

SCALE: 3/4"=1'-0"



ALL PLAN REFERENCES TO FUTURE WORK HAVE BEEN COMPLETED, UNLESS OTHERWISE NOTED

RECORD DRAWING

REV	DATE	BY	SUB	APP	DESCRIPTION
2	09DEC99	CMG		RRM	INCORPORATED FIELD CONDITIONS
1	16NOV95				HANDRAIL TERMINUS @ RAMPS

REV	DATE	BY	SUB	APP	DESCRIPTION

DESIGNED BY K W HAMMOND
DRAWN BY M S ROSENBERG
CHECKED BY D W HARVIE
IN CHARGE R E BERTOLINO
DATE 16 OCT 95

ROBERT E. BERTOLINO No. 19042 REGISTERED PROFESSIONAL ENGINEER

MASSACHUSETTS HIGHWAY DEPARTMENT

Central Artery (I-93) / Tunnel (I-90) Project

FAY, SPOFFORD & THORNDIKE, INC.
SECTION DESIGNER D021H
SUBMITTED:

BECHTEL/ PARSONS BRINCKERHOFF
MANAGEMENT CONSULTANTS
SUBMITTED FOR APPROVAL:

CENTRAL ARTERY TUNNEL

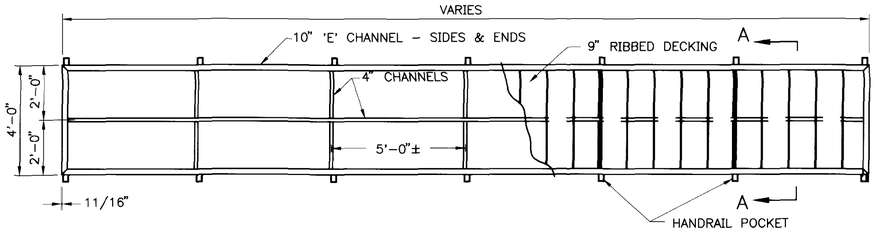
WATER TRANSPORTATION DOCKING FACILITIES
FIXED RAMPS
PLAN & ELEVATIONS

SCALE: AS NOTED
CONTRACT NO. C21H1
DRAWING NO. C21H1-S-008
REV. 2

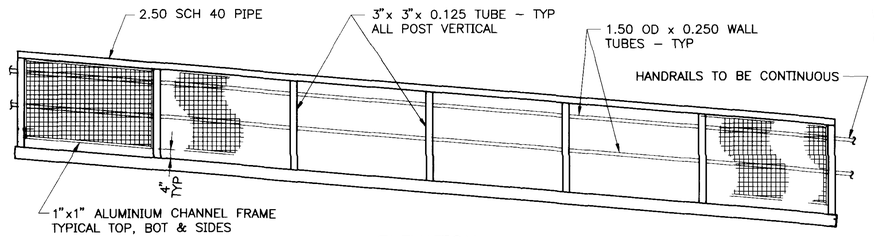
BOSTON
INTERSTATE I-93

F.H.W.A. REGION NO	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
1	MASS	-	1996	25	44

SHEET 9 OF 10 , STRUCTURAL



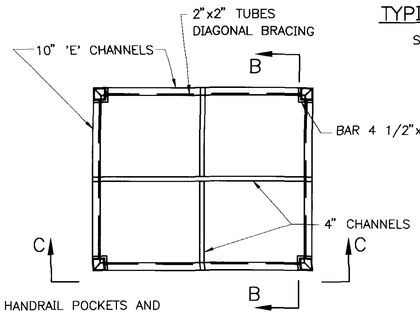
PLAN



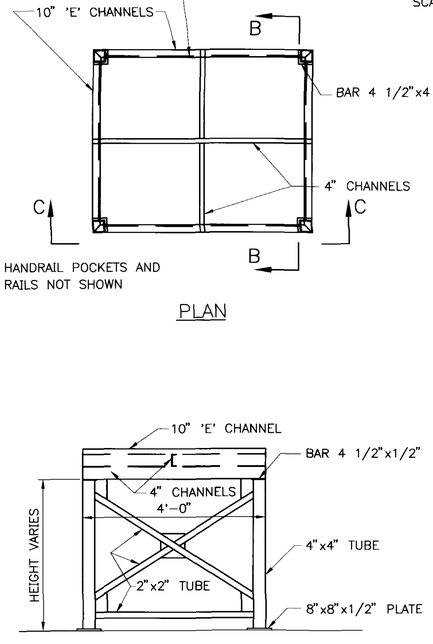
ELEVATION

TYPICAL RAMP DETAILS

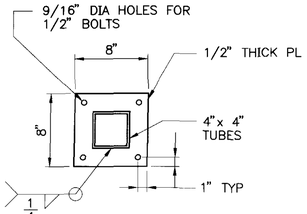
SCALE: 3/8" = 1'-0"



PLAN



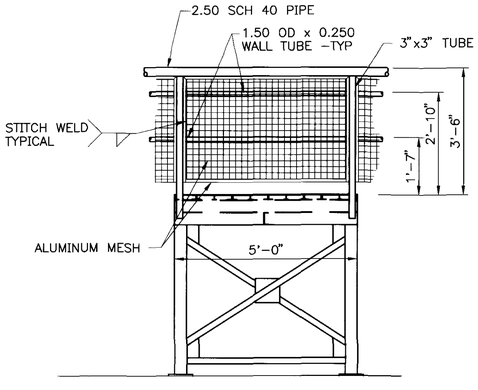
SECTION B–B



BASE PLATE DETAIL

(TYPICAL ALL BASE PLATES)

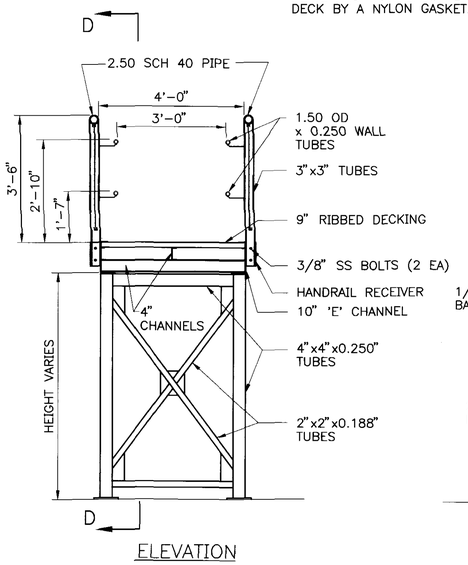
SCALE: 1–1/2" = 1'-0"



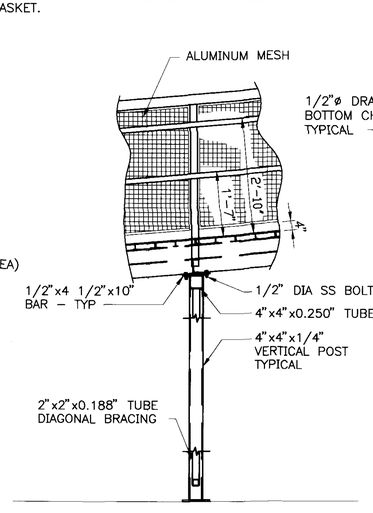
SECTION C

INTERMEDIATE PLATFORM

SCALE: 1/2" = 1'-0"



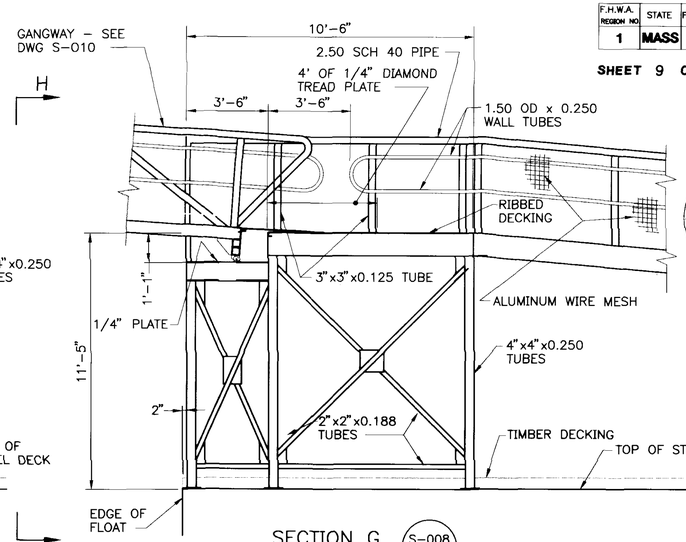
ELEVATION



SECTION D

INTERMEDIATE RAMP SUPPORT

SCALE: 1/2" = 1'-0"



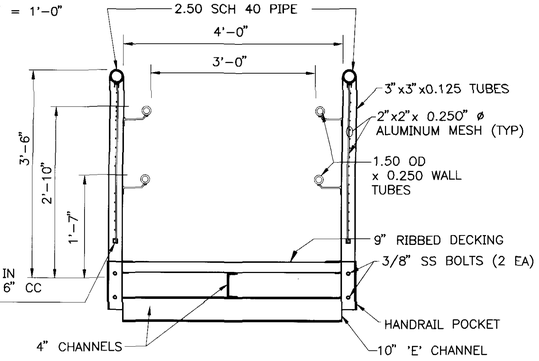
SECTION H

SCALE: 3/8" = 1'-0"

SECTION G S-008

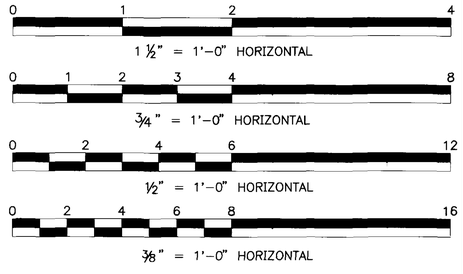
SCALE: 3/8" = 1'-0"

NOTE:
1. ALL MEMBER SIZES SHOWN ARE MINIMUMS. CONTRACTOR TO PROVIDE DESIGN DRAWINGS AND P.E. STAMPED CALCULATIONS FOR PROPOSED RAMP AND GANGWAY SYSTEM.
2. SEE NOTES ON DRAWING C21H1–S–010 FOR MATERIALS.
3. ALUMINUM BASE PLATE SST ANCHOR BOLTS TO BE STUD WELDED TO STEEL FLOAT DECK. PROVIDE NYLON BUSHINGS BETWEEN STUD, BASE PLATE AND NUT. BASE PLATE TO BE COMPLETELY SEPARATED FROM DECK BY A NYLON GASKET.



TYPICAL SECTION

SCALE: 3/4" = 1'-0"



ALL PLAN REFERENCES TO FUTURE WORK HAVE BEEN COMPLETED. UNLESS OTHERWISE NOTED

RECORD DRAWING

REV	DATE	BY	SUB	APP	DESCRIPTION
1	09DEC99	CMG		RRM	INCORPORATED FIELD CONDITIONS

DESIGNED BY K W HAMMOND
DRAWN BY M S ROSENBERG
CHECKED BY K W HAMMOND
IN CHARGE R E BERTOLINO
DATE 16 OCT 95

COMMONWEALTH OF MASSACHUSETTS ROBERT E. BERTOLINO REGISTERED PROFESSIONAL ENGINEER

MASSACHUSETTS HIGHWAY DEPARTMENT

Central Artery (I-93) / Tunnel (I-90) Project

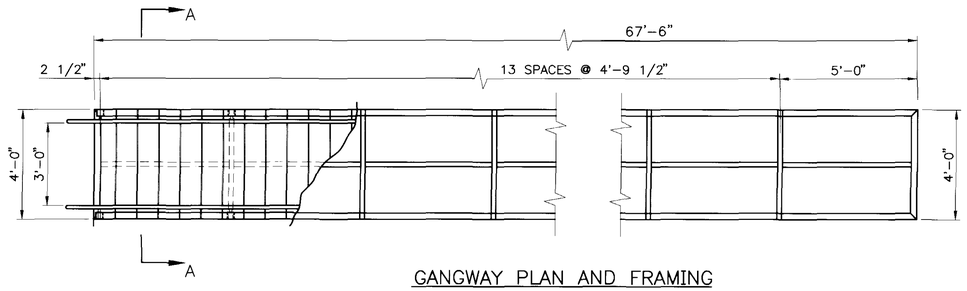
FAY, SPOFFORD & THORNDIKE, INC.
SECTION DESIGNER D021H
SUBMITTED:

BECHTEL/ PARSONS BRINCKERHOFF
MANAGEMENT CONSULTANTS
SUBMITTED FOR APPROVAL:

CENTRAL ARTERY TUNNEL

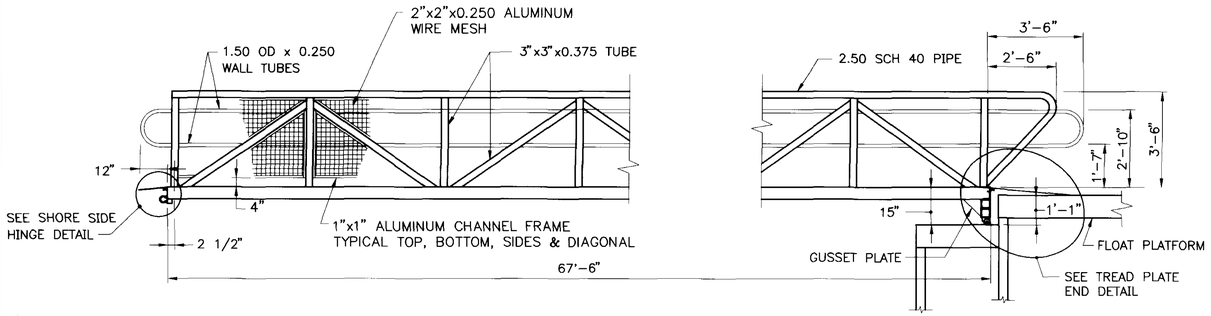
WATER TRANSPORTATION
DOCKING FACILITIES
FIXED RAMPS
SECTIONS & DETAILS

SCALE: AS NOTED
CONTRACT NO. C21H1
DRAWING NO. C21H1–S–009
REV. 1



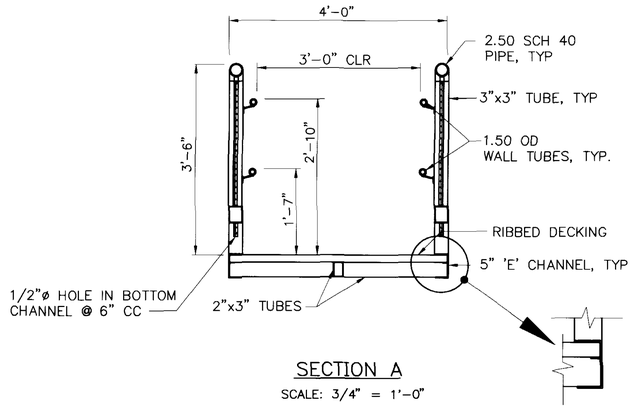
GANGWAY PLAN AND FRAMING

SCALE: 3/8" = 1'-0"



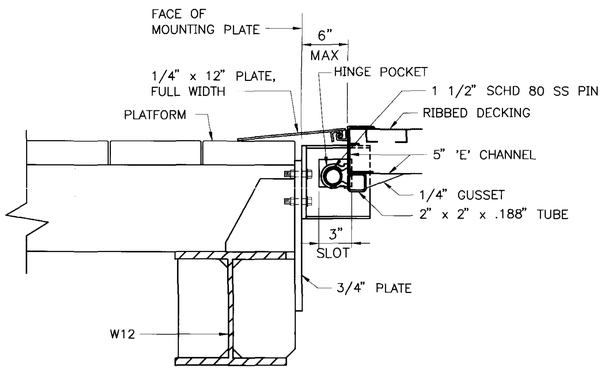
TYPICAL GANGWAY ELEVATION

SCALE: 3/8" = 1'-0"



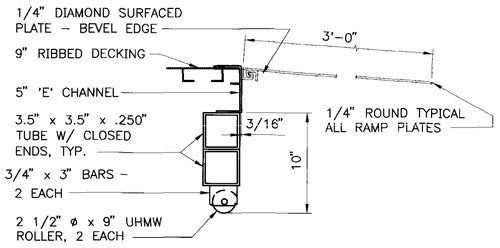
SECTION A

SCALE: 3/4" = 1'-0"



SHORE SIDE HINGE DETAIL

SCALE: 1 1/2" = 1'-0"



TREAD PLATE END DETAIL

SCALE: 1 1/2" = 1'-0"

NOTE:
1. ALL MEMBER SIZES SHOWN ARE MINIMUMS. CONTRACTOR TO PROVIDE DESIGN DRAWINGS AND P.E. STAMPED CALCULATIONS FOR PROPOSED RAMP AND GANGWAY SYSTEM.
2. ALL GANGWAY AND RAMPS SECTIONS SHALL BE FABRICATED OF ALUMINUM ALLOY 6061–T6.
3. ALL BOLTS SHALL BE TYPE 316 STAINLESS STEEL.

0 1 2 4
1 ½" = 1'–0" HORIZONTAL

0 1 2 3 4 8
¾" = 1'–0" HORIZONTAL

0 2 4 6 8 16
⅜" = 1'–0" HORIZONTAL

RECORD DRAWING

REV	DATE	BY	SUB	APP	DESCRIPTION
1	08DEC99	E ID		RRM	INCORPORATED FIELD CONDITIONS

DESIGNED BY K W HAMMOND
DRAWN BY C LINCOLN
CHECKED BY K W HAMMOND
IN CHARGE R E BERTOLINO
DATE 16 OCT 95

ROBERT E. BERTOLINO No. 29616 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

MASSACHUSETTS HIGHWAY DEPARTMENT

Central Artery (I-93) / Tunnel (I-90) Project

FAY, SPOFFORD & THORNDIKE, INC. SECTION DESIGNER D021H
SUBMITTED:

BECHTEL/ PARSONS BRINCKERHOFF MANAGEMENT CONSULTANTS
SUBMITTED FOR APPROVAL:

WATER TRANSPORTATION DOCKING FACILITIES

GANGWAYS – PLANS AND SECTIONS

SCALE: AS NOTED
CONTRACT NO. C21H1
DRAWING NO. C21H1–S–010
REV. 1

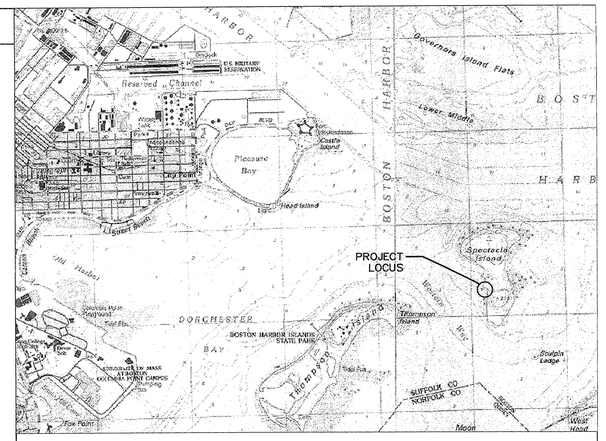
APPENDIX C

Spectacle Island 2001
Ferry Berthing Facility Plans 3346

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND

INCLUDING ADA ACCESS & WAVE SCREEN

BOSTON HARBOR
BOSTON, MA



LOCUS PLAN
SCALE: 1" = 2500'

FERRY BERTHING FACILITY DRAWINGS

SHEET 1	TITLE SHEET
SHEET 2	FACILITY LAYOUT PLAN
SHEET 3	ALUMINUM LAYOUT PLAN & SECTIONS
SHEET 4	GANGWAYS 1 & 2
SHEET 5	GANGWAYS 3 & 4
SHEET 6	PLATFORMS 1 & 2
SHEET 7	PLATFORMS 3 & 4
SHEET 8	PLATFORM DETAILS
SHEET 9	PLATFORM DETAILS
SHEET 10	RAMPS 1, 2, 3, & 4
SHEET 11	RAMP DETAILS
SHEET 12	PICKET DETAILS
SHEET 13	16 x 100 BARGE – PLAN & SECTIONS
SHEET 14	BARGE DETAILS
SHEET 15	BALLAST – PLAN & DETAILS
SHEET 16	PILE GUIDES & PILES
SHEET 17	10 x 31 BARGES – PLAN, SECTIONS & DETAILS
SHEET 18	GANGWAY LIFTS
SHEET 19	FIXED PIER – PLAN, SECTIONS & DETAILS
SHEET 20	MISCELLANEOUS DETAILS
SHEET 21	ELECTRICAL
SHEET 22	ELECTRICAL DETAILS

MARINA AND WAVE SCREEN DRAWINGS

SHEET 23	EXISTING CONDITIONS – OVERALL SITE PLAN
SHEET 24	LAYOUT AND MATERIALS PLAN
SHEET 25	MARINA DETAILS
SHEET 26	WAVE SCREEN SOUTH ELEVATIONS
SHEET 27	WAVE SCREEN WEST ELEVATIONS
SHEET 28	WAVE SCREEN DETAILS
SHEET 29	WAVE SCREEN DETAILS
SHEET 30	WAVE SCREEN DETAILS

RECEIVED JAN 21 2002

COMMONWEALTH OF MASSACHUSETTS
RONALD B. BOURNE
STRUCTURAL
No. 36051
REGISTERED PROFESSIONAL ENGINEER
7/20/01

EXISTING CONDITIONS TAKEN FROM PLANS PROVIDED BY CENTRAL ARTERY (I-93) / TUNNEL (I-90) PROJECT INCLUDING:

1. PIER INFORMATION TAKEN FROM PLANS PREPARED BY UNIVERSAL ENGINEERING FOR CASHMAN-KPA DATED 11/10/1997
2. SITE PLAN INFORMATION IS BASED ON SITE PLAN OF CENTRAL ARTERY (I-93) / TUNNEL (I-90) PROJECT CONTRACT NO. C21A2, DRAWING NO. C21A2-S-026, REV. 3.
3. EXISTING ISLAND CONTOURS AND TOPO WERE ESTABLISHED FROM PLANS PREPARED BY BECHTEL/PARSONS BRINCKERHOFF.
4. EXISTING CONTOURS BELOW HIGH TIDE LINE HAVE BEEN ESTABLISHED FROM FATHOMETER SURVEY PERFORMED BY WESTON GEOPHYSICAL, LYONS ST. BOX 550, WESTBORO MASS. 01581-0550.
5. MARINA AND WAVE SCREEN INFORMATION TAKEN FROM "SPECTACLE ISLAND RESTORATION VISITORS CENTER", CONTRACT NO. C21C1 PREPARED BY BARRIENTOS, WU AND ASSOC. INC. DATED 12/15/2000.

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MA

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
MASSACHUSETTS OFFICE OF WATERWAYS

BCE Bourne Consulting Engineering
184 West Central Street
Franklin, MA 02038
PH. (508) 528-8133 FAX. (508) 528-8077

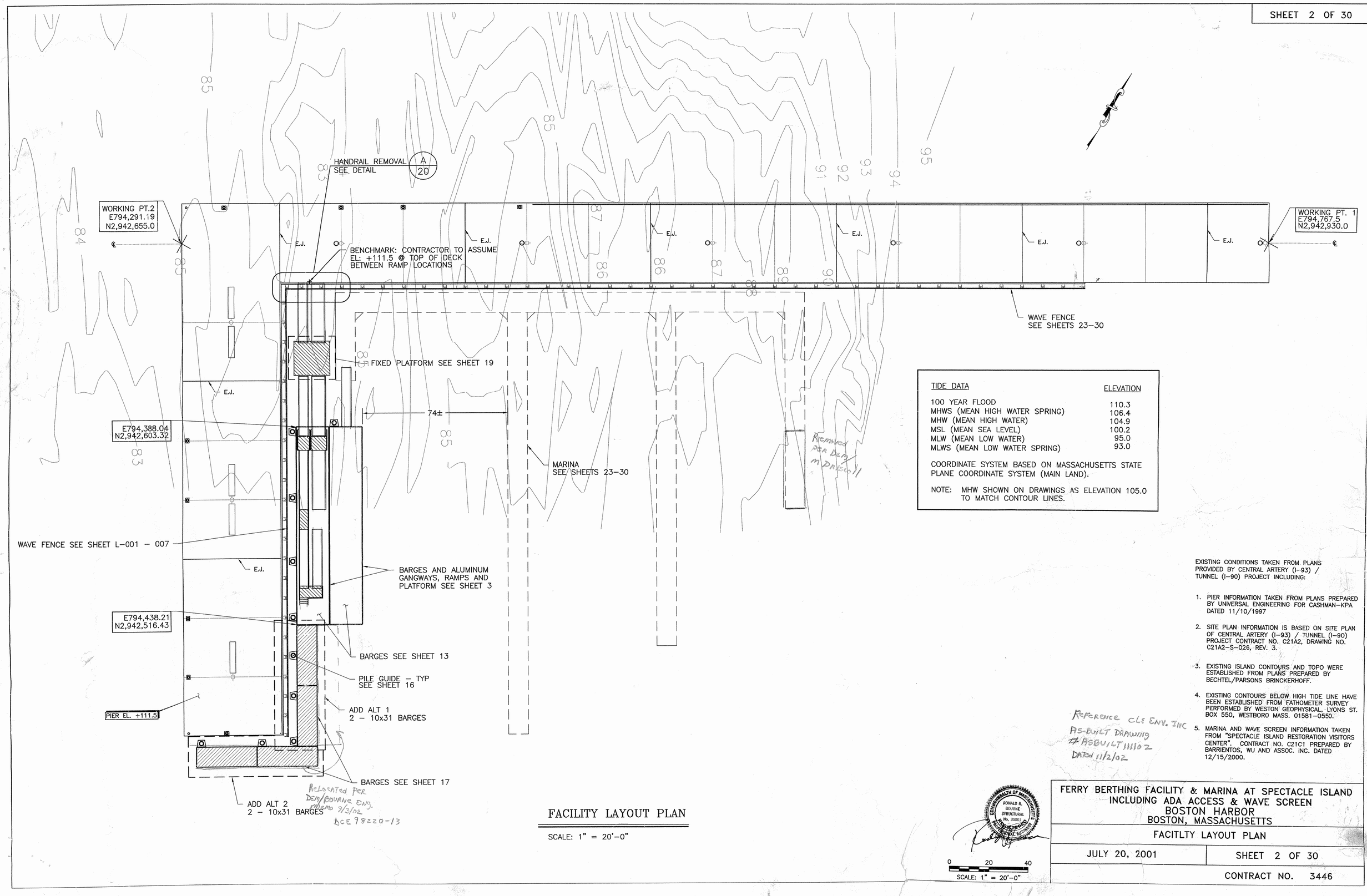
JULY 20, 2001

DESIGNED BY: BAP
DRAFTED BY: JSK
CHECKED BY: PRB

W/W REVIEW BY KBM DATE 7/27/01

DIRECTOR OF WATERWAYS

CONTRACT NO. 3446



FACILITY LAYOUT PLAN

SCALE: 1" = 20'–0"

TIDE DATA	ELEVATION
100 YEAR FLOOD	110.3
MHWS (MEAN HIGH WATER SPRING)	106.4
MHW (MEAN HIGH WATER)	104.9
MSL (MEAN SEA LEVEL)	100.2
MLW (MEAN LOW WATER)	95.0
MLWS (MEAN LOW WATER SPRING)	93.0

COORDINATE SYSTEM BASED ON MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (MAIN LAND).

NOTE: MHW SHOWN ON DRAWINGS AS ELEVATION 105.0 TO MATCH CONTOUR LINES.

EXISTING CONDITIONS TAKEN FROM PLANS PROVIDED BY CENTRAL ARTERY (I–93) / TUNNEL (I–90) PROJECT INCLUDING:

1. PIER INFORMATION TAKEN FROM PLANS PREPARED BY UNIVERSAL ENGINEERING FOR CASHMAN–KPA DATED 11/10/1997
2. SITE PLAN INFORMATION IS BASED ON SITE PLAN OF CENTRAL ARTERY (I–93) / TUNNEL (I–90) PROJECT CONTRACT NO. C21A2, DRAWING NO. C21A2–S–026, REV. 3.
3. EXISTING ISLAND CONTOURS AND TOPO WERE ESTABLISHED FROM PLANS PREPARED BY BECHTEL/PARSONS BRINCKERHOFF.
4. EXISTING CONTOURS BELOW HIGH TIDE LINE HAVE BEEN ESTABLISHED FROM FATHOMETER SURVEY PERFORMED BY WESTON GEOPHYSICAL, LYONS ST. BOX 550, WESTBORO MASS. 01581–0550.
5. MARINA AND WAVE SCREEN INFORMATION TAKEN FROM "SPECTACLE ISLAND RESTORATION VISITORS CENTER". CONTRACT NO. C21C1 PREPARED BY BARRIENTOS, WU AND ASSOC. INC. DATED 12/15/2000.

Reference CLE Env. Inc
As-Built Drawing
#AsBuilt111102
Dated 11/2/02

COMMONWEALTH OF MASSACHUSETTS RONALD R. BOURNE STRUCTURAL No. 35061 REGISTERED PROFESSIONAL ENGINEER

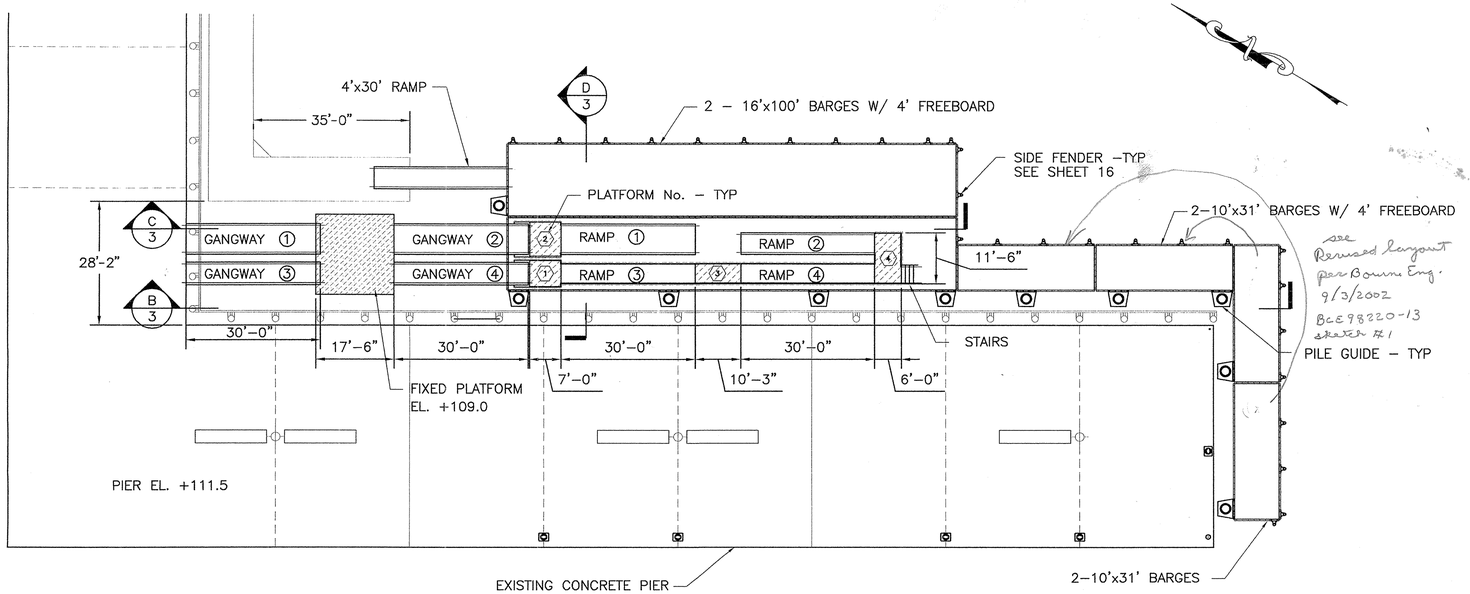
0 20 40
SCALE: 1" = 20'–0"

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

FACITLTY LAYOUT PLAN

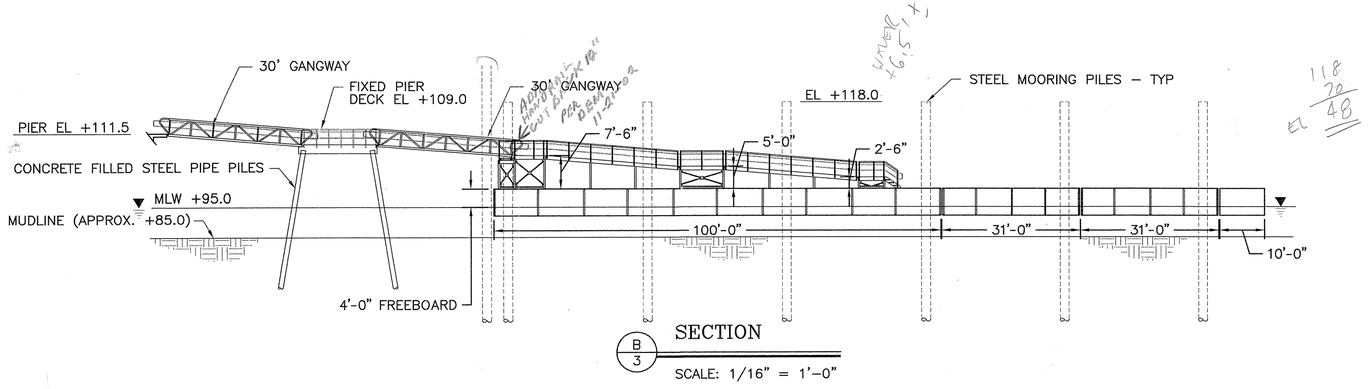
JULY 20, 2001 | SHEET 2 OF 30

CONTRACT NO. 3446



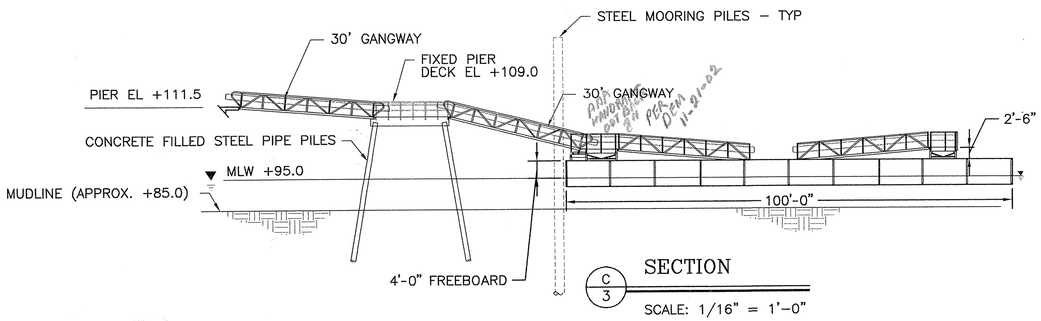
A 3 LAYOUT PLAN

SCALE: 1/16" = 1'–0"



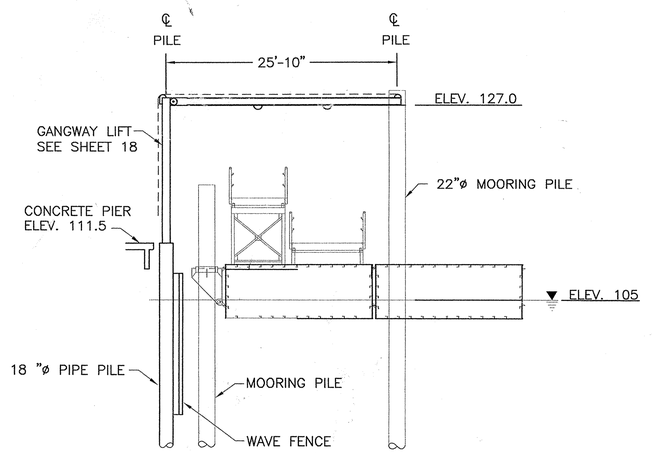
B 3 SECTION

SCALE: 1/16" = 1'–0"



C 3 SECTION

SCALE: 1/16" = 1'–0"



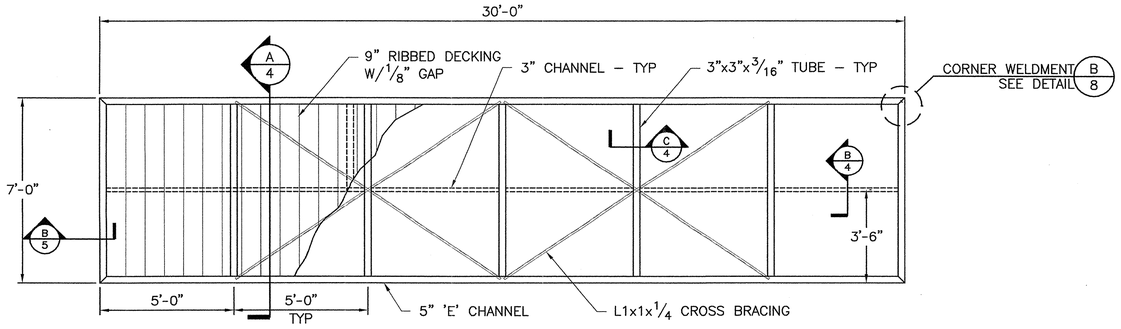
D 3 SECTION

SCALE: 1/8" = 1'–0"

Reference Technomarine approved shop Drawings

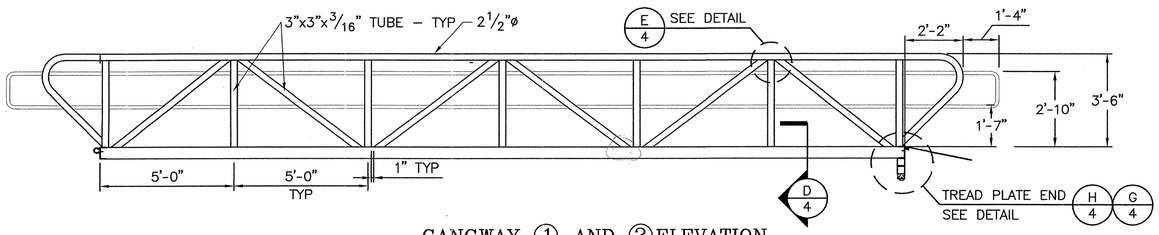
COMMONWEALTH OF MASSACHUSETTS RONALD R. BOURNE STRUCTURAL No. 30861 REGISTERED PROFESSIONAL ENGINEER

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND INCLUDING ADA ACCESS & WAVE SCREEN BOSTON HARBOR BOSTON, MASSACHUSETTS	
ALUMINUM LAYOUT PLAN & SECTIONS	
JULY 20, 2001	SHEET 3 OF 30
	CONTRACT NO. 3446



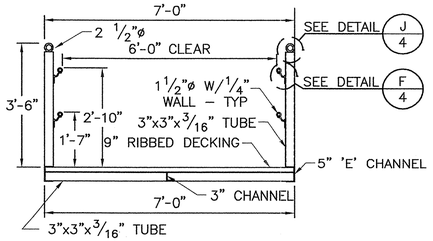
GANGWAY ① AND ② PLAN

SCALE: 3/8" = 1'–0"



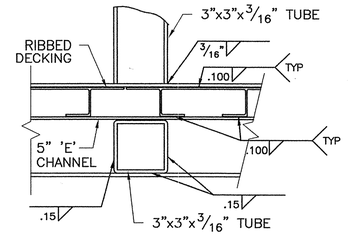
GANGWAY ① AND ②ELEVATION

SCALE: 3/8" = 1'–0"



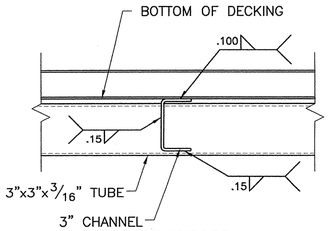
A/4 GANGWAY SECTION

SCALE: 1/2" = 1'–0"



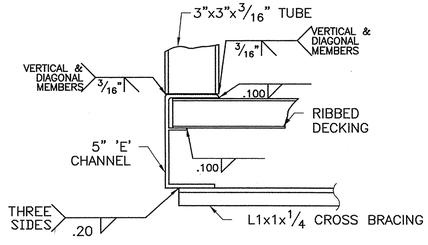
C/4 SECTION

SCALE: 3" = 1'–0"



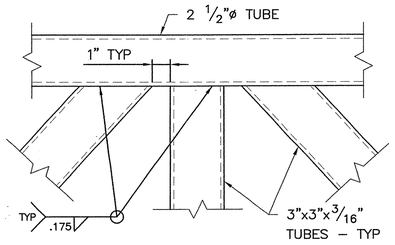
B/4 SECTION

SCALE: 3" = 1'–0"



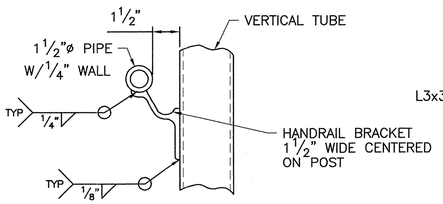
D/4 WELD DETAIL

SCALE: 3" = 1'–0"



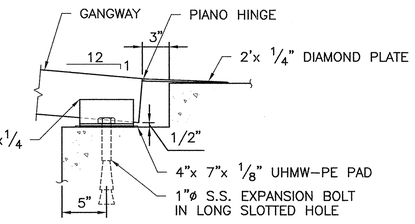
E/4 WELD DETAIL

SCALE: 3" = 1'–0"



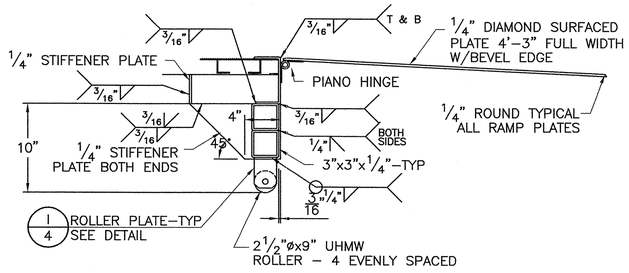
F/4 HANDRAIL CONNECTION

SCALE: 3" = 1'–0"

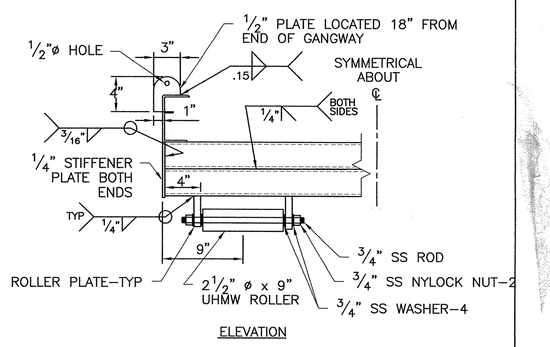


G/4 END OF GANGWAY ① + ③

SCALE: 1 1/2" = 1'–0"



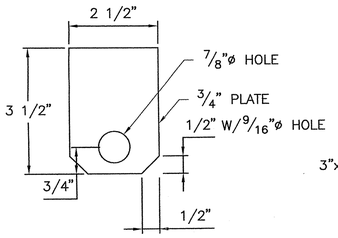
SECTION



ELEVATION

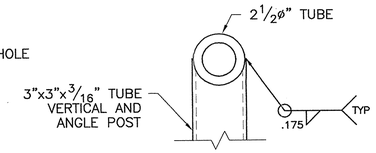
H/4 ROLLER END GANGWAY ② + ④

SCALE: 1 1/2" = 1'–0"



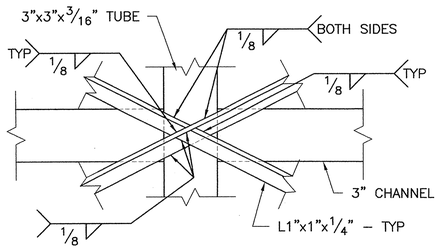
I/4 ROLLER PLATE

NTS



J/4 WELD DETAIL

SCALE: 3" = 1'–0"



K/4 BRACING DETAIL

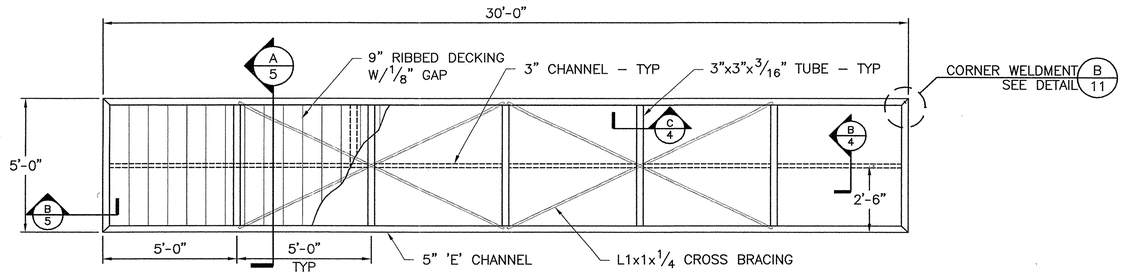
SCALE: 3" = 1'–0"

Reference Technomarine approved shop Drawings

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND INCLUDING ADA ACCESS & WAVE SCREEN BOSTON HARBOR BOSTON, MASSACHUSETTS	
GANGWAYS 1 & 2	
JULY 20, 2001	SHEET 4 OF 30
	CONTRACT NO. 3446

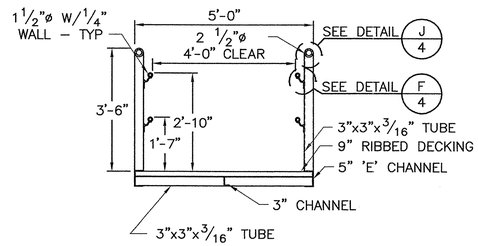
COMMONWEALTH OF MASSACHUSETTS RONALD R. BOURNE STRUCTURAL No. 30861 REGISTERED PROFESSIONAL ENGINEER

Sht-04.dwg 31201 74804



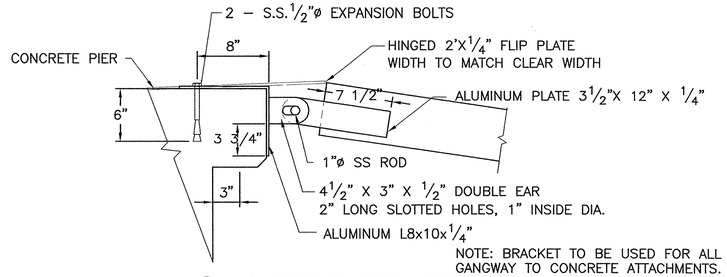
GANGWAY ③ AND ④ PLAN

SCALE: 3/8" = 1'–0"



A 5 GANGWAY ③ & ④ –SECTION

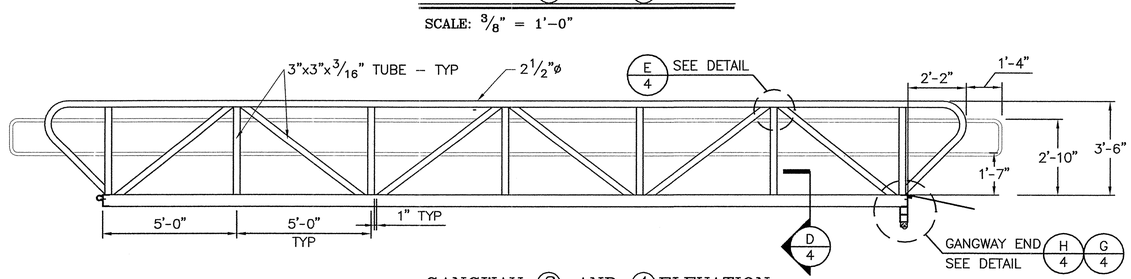
SCALE: 1/2" = 1'–0"



NOTE: BRACKET TO BE USED FOR ALL GANGWAY TO CONCRETE ATTACHMENTS.

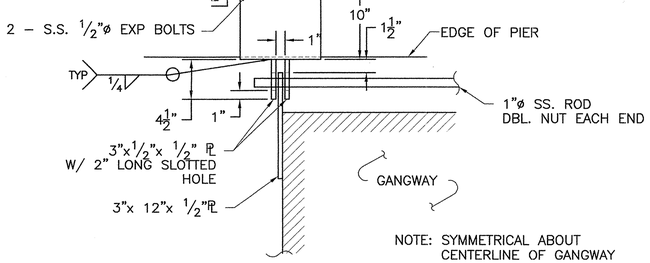
B 5 GANGWAY CONNECTION

SCALE: 1 1/2" = 1'–0"



GANGWAY ③ AND ④ ELEVATION

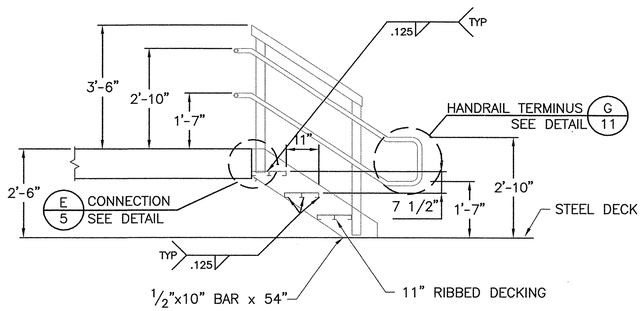
SCALE: 3/8" = 1'–0"



NOTE: SYMMETRICAL ABOUT CENTERLINE OF GANGWAY

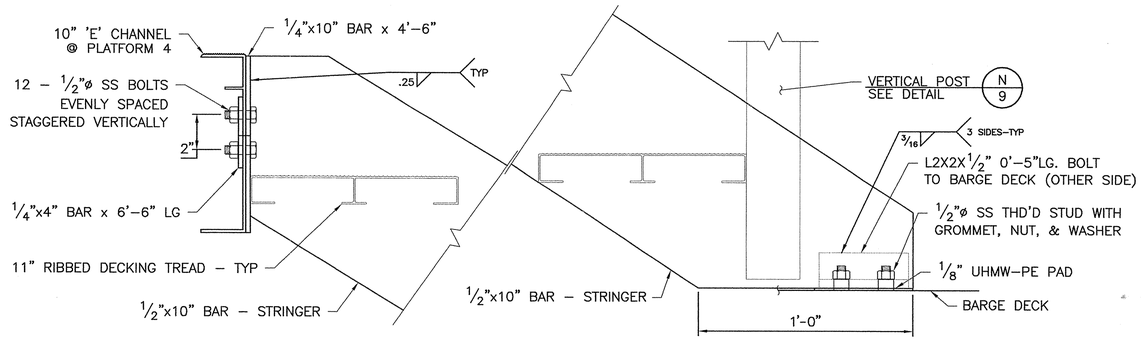
C 5 CONCRETE PIER / GANGWAY CONNECTION – PLAN

SCALE: 1 1/2" = 1'–0"



D 5 STAIRS

SCALE: 1/2" = 1'–0"



E 5 STAIR/PLATFORM 4 CONNECTION

SCALE: 3" = 1'–0"

F 5 STAIR/BARGE CONNECTION

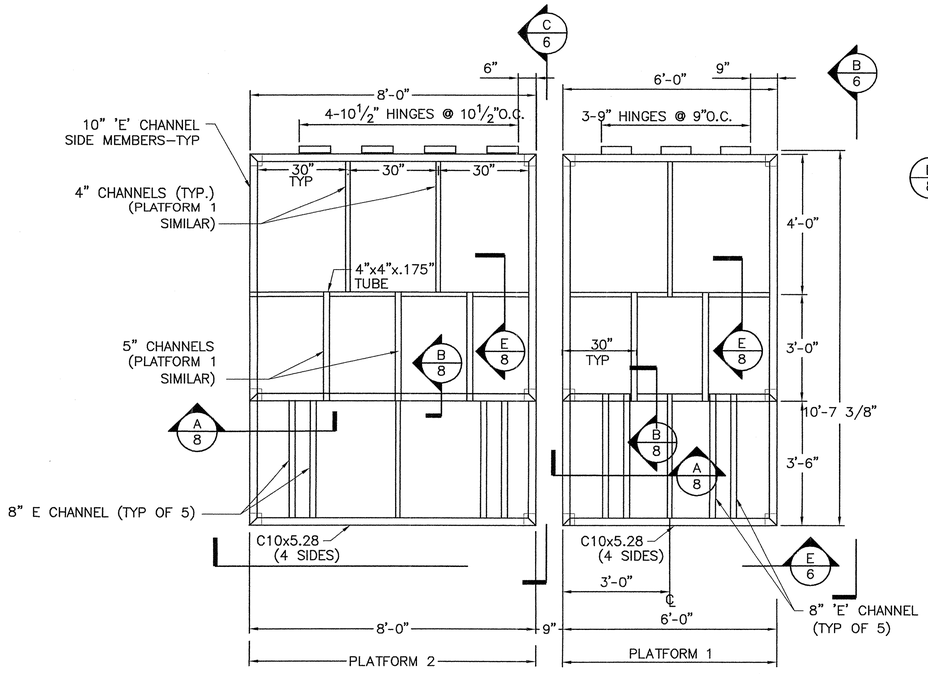
SCALE: 3" = 1'–0"

Reference Technomarine approved shop Drawings

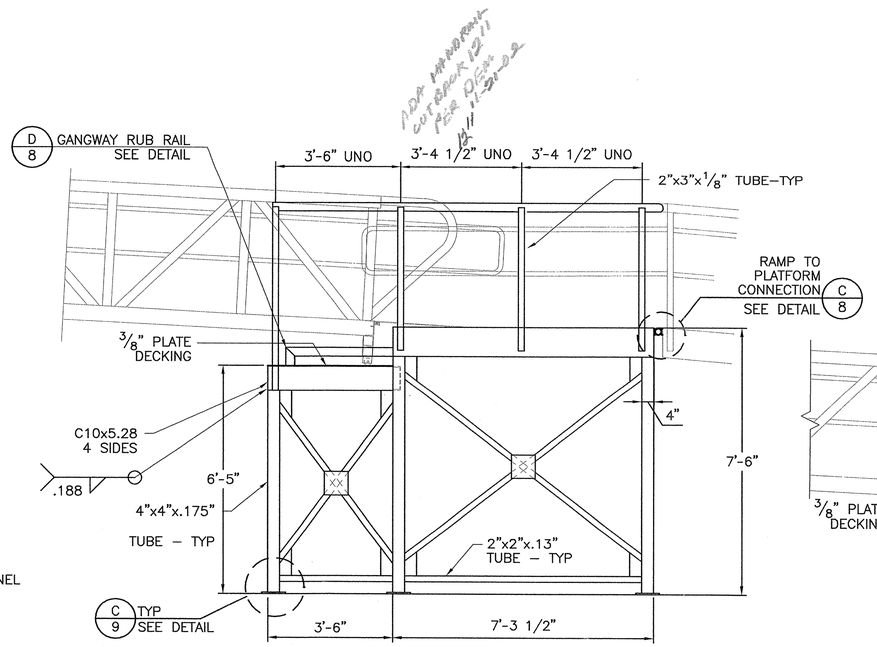
COMMONWEALTH OF MASSACHUSETTS
RONALD R. BORRINE
STRUCTURAL
No. 30861
REGISTERED PROFESSIONAL ENGINEER

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND INCLUDING ADA ACCESS & WAVE SCREEN BOSTON HARBOR BOSTON, MASSACHUSETTS	
GANGWAYS 3 & 4	
JULY 20, 2001	SHEET 5 OF 30
	CONTRACT NO. 3446

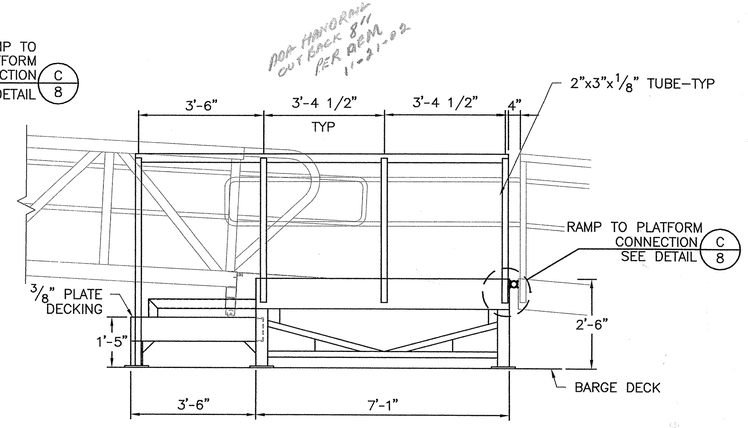
Sht-05.dwg 719201 40100



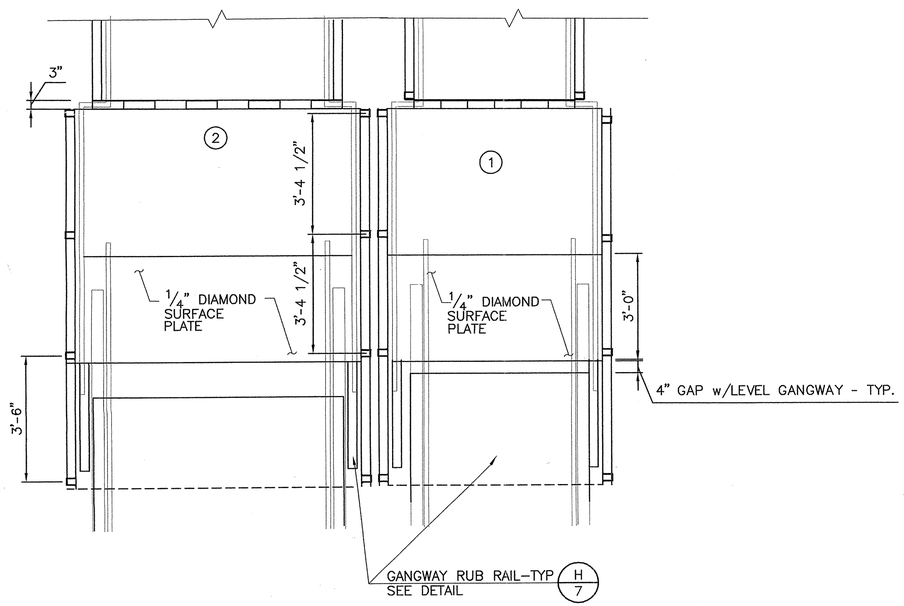
A/6 PLATFORM ① & ② PLAN
SCALE: ½" = 1'–0"



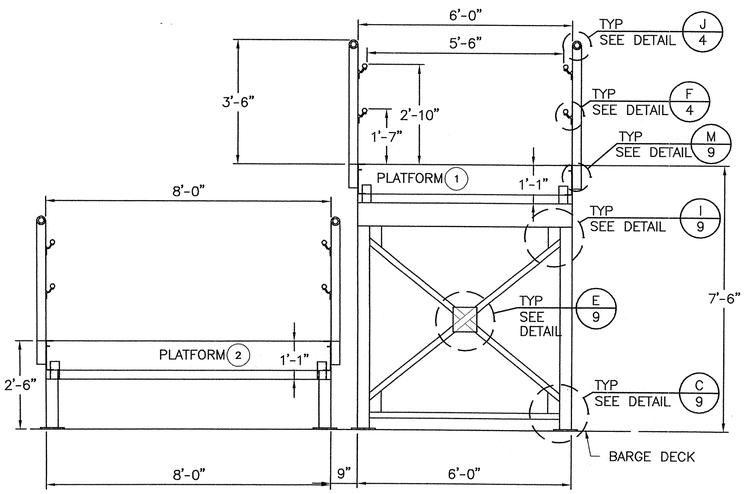
B/6 PLATFORM ① SIDE VIEW
SCALE: ½" = 1'–0"



C/6 PLATFORM ② SIDE VIEW
SCALE: ½" = 1'–0"



D/6 PLATFORM ① & ② HANDRAIL PLAN
SCALE: ½" = 1'–0"



E/6 PLATFORM ① & ② END VIEW
SCALE: ½" = 1'–0"

Reference Technomarine approved Shop Drawings

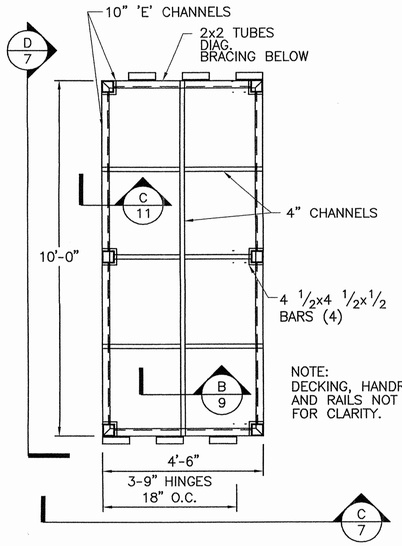
COMMONWEALTH OF MASSACHUSETTS
RONALD R. BOURNE
STRUCTURAL
No. 30861
REGISTERED PROFESSIONAL ENGINEER

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

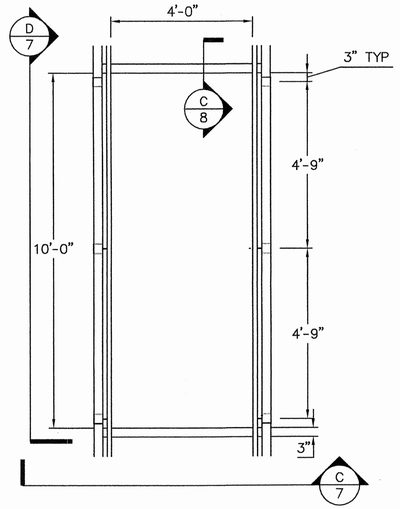
PLATFORMS 1 & 2

JULY 20, 2001 | SHEET 6 OF 30

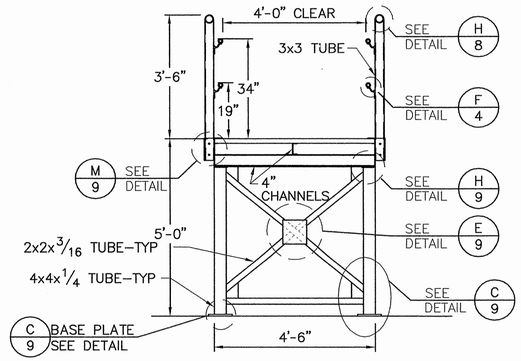
CONTRACT NO. 3446



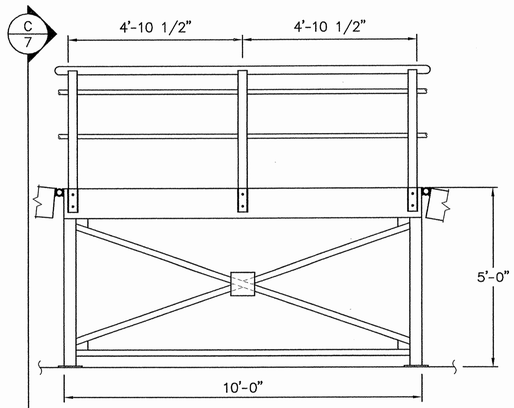
A 7 PLATFORM ③ – PLAN VIEW
SCALE: 1/2" = 1'–0"



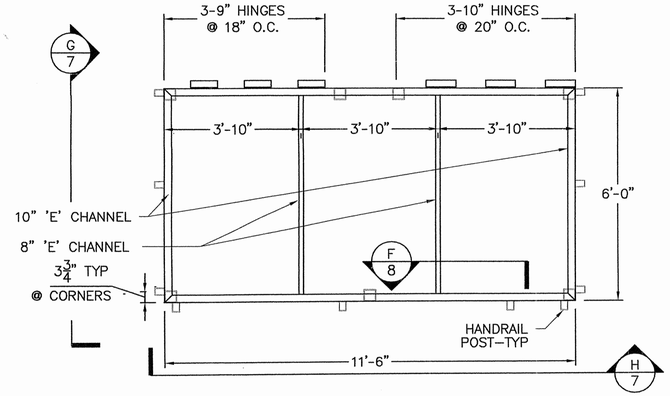
B 7 PLATFORM ③ – HANDRAIL PLAN
SCALE: 1/2" = 1'–0"



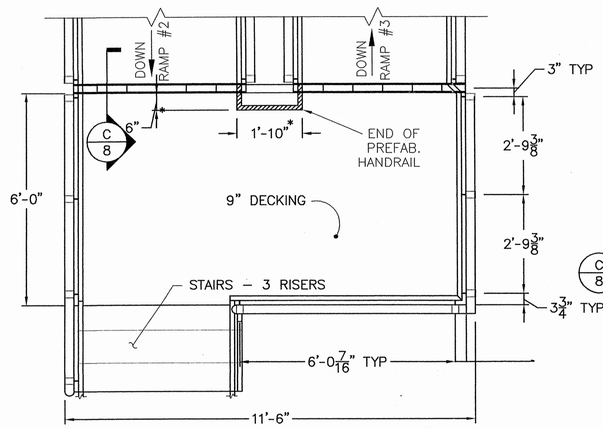
C 7 PLATFORM ③ – SECTION
SCALE: 1/2 = 1'–0"



D 7 PLATFORM ③ ELEVATION
SCALE: 1/2" = 1'–0"



E 7 PLATFORM ④ PLAN
SCALE: 1/2" = 1'–0"



F 7 PLATFORM ④ HANDRAIL PLAN
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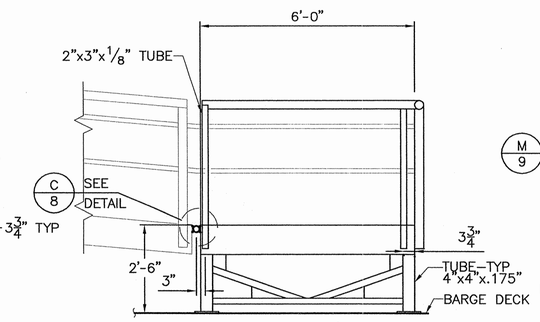
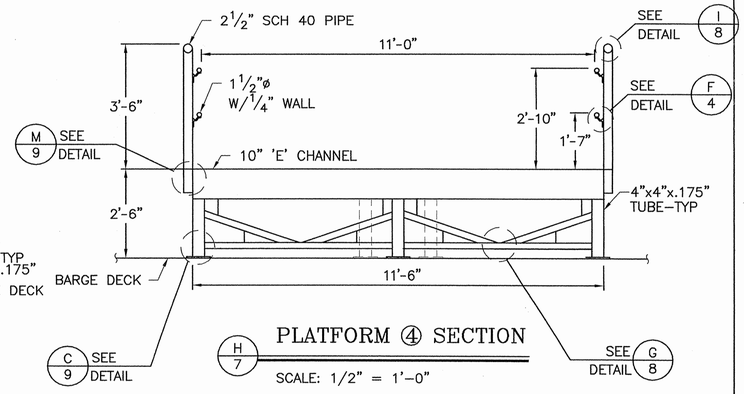


G 7 PLATFORM ④ SIDE VIEW
SCALE: 1/2" = 1'–0"



H 7 PLATFORM ④ SECTION
SCALE: 1/2" = 1'–0"

see Technomarine shop Drawings - approved

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

PLATFORMS 3 AND 4

JULY 20, 2001 | SHEET 7 OF 30

CONTRACT NO. 3446

COMMONWEALTH OF MASSACHUSETTS
RONALD R. BOURNE
STRUCTURAL
No. 30861
REGISTERED PROFESSIONAL ENGINEER

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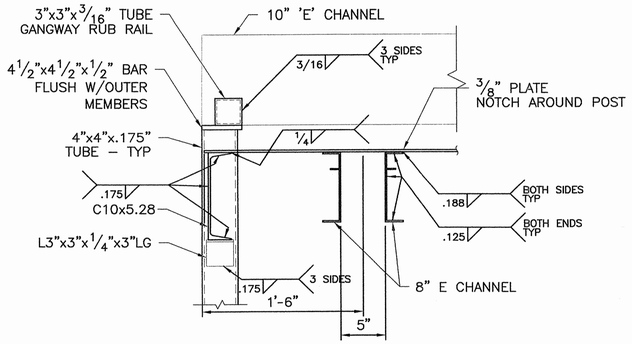

A/8 SECTION
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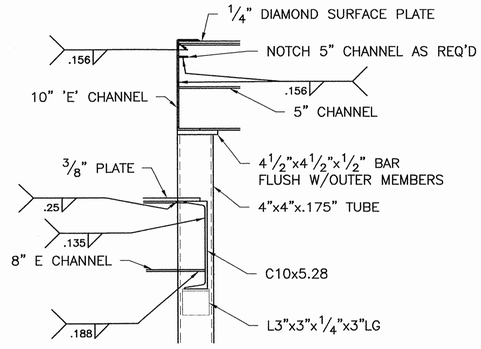

B/8 SECTION
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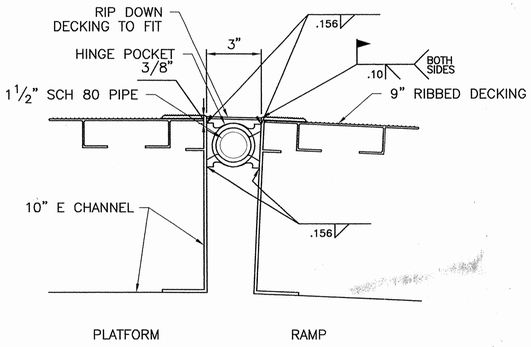
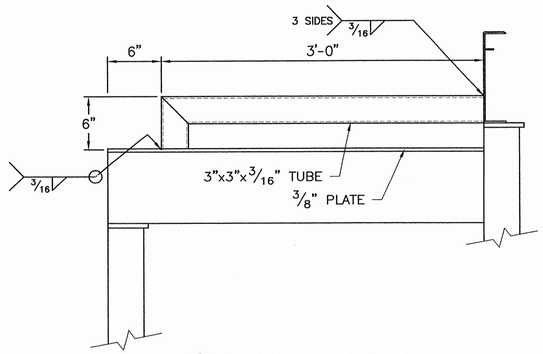
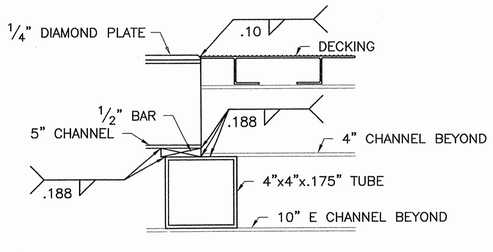


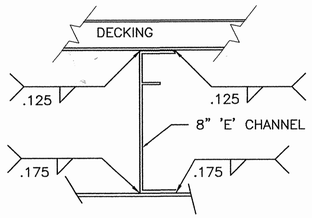
C/8 RAMP TO PLATFORM CONNECTION
SCALE: 3" = 1'-0"



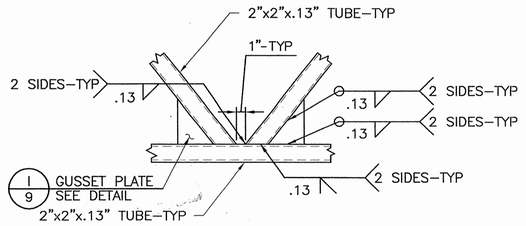
D/8 GANGWAY RUB RAIL
SCALE: 1 1/2" = 1'-0"



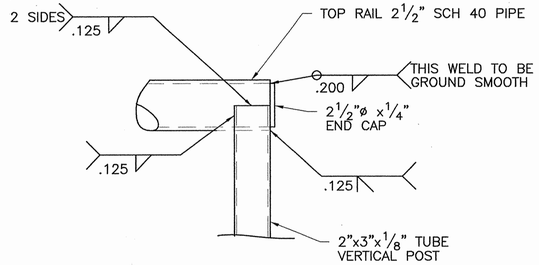
E/8 SECTION
SCALE: 3" = 1'-0"



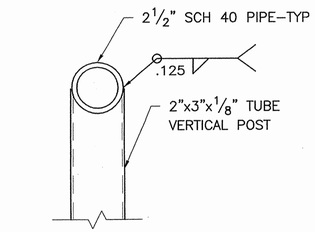
F/8 DETAIL
SCALE: 3" = 1'-0"



G/8 K-BRACE
SCALE: 1 1/2" = 1'-0"



F/8 DETAIL
SCALE: 3" = 1'-0"



I/8 DETAIL
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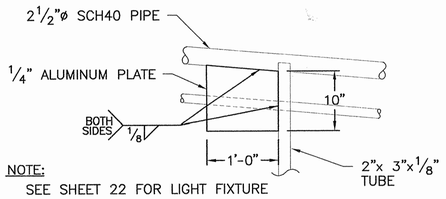
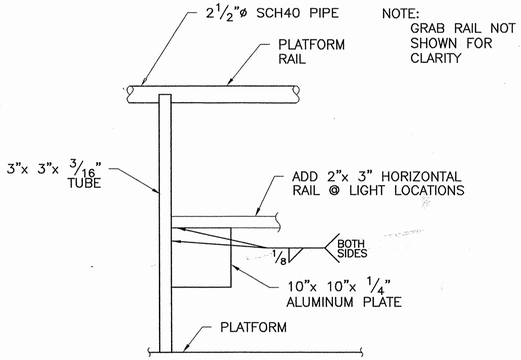


NOTE:
SEE SHEET 22 FOR LIGHT FIXTURE

J/8 FLOOD LIGHT PLATE @ RAMP 1 + 2
SCALE: 1" = 1'-0"



NOTE:
SEE SHEET 22 FOR LIGHT FIXTURES.

K/8 FLOOD LIGHT PLATE @ PLATFORM
SCALE: 1" = 1'-0"

see Technomarine Shop Drawings approved

COMMONWEALTH OF MASSACHUSETTS
RONALD R. BOURNE
STRUCTURAL
No. 30861
REGISTERED
PROFESSIONAL ENGINEER

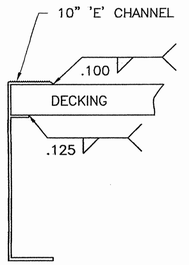
FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

PLATFORM DETAILS

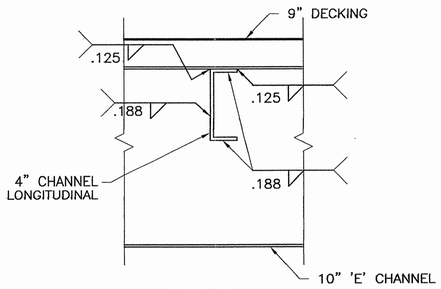
JULY 20, 2001 | SHEET 8 OF 30

CONTRACT NO. 3446

Sht-08.dwg 7-23-2001 8:05:07 am EST



A/9 DETAIL
SCALE: 3" = 1'-0"



B/9 DETAIL
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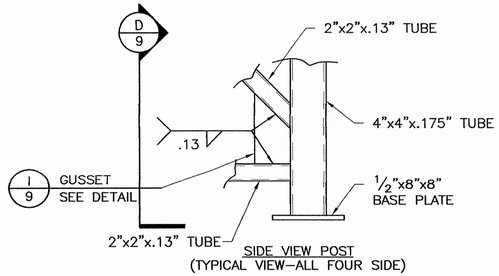
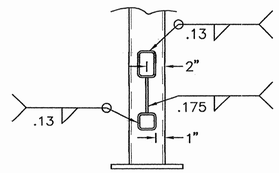
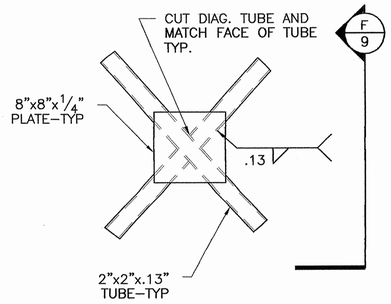


C/9 DETAIL
SCALE: 1 1/2 = 1'-0"



D/9 SECTION
SCALE: 1 1/2 = 1'-0"



E/9 DETAIL
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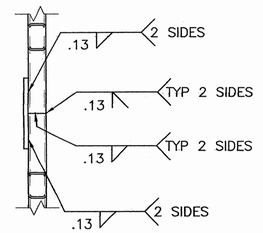

F/9 SECTION
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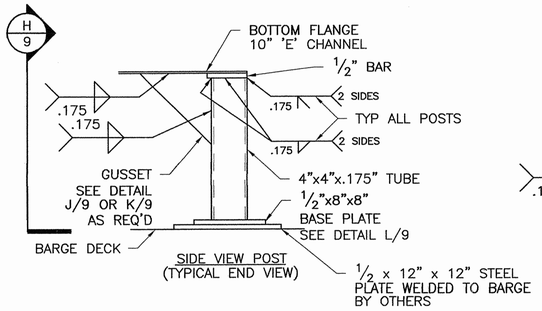
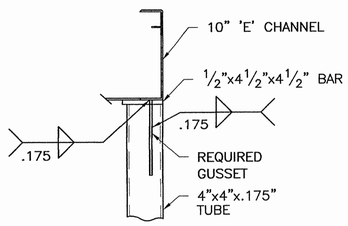
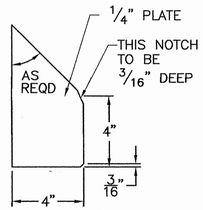


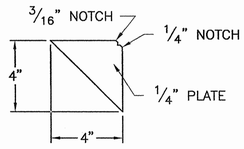
G/9 DETAIL
SCALE: 1 1/2 = 1'-0"



H/9 DETAIL
SCALE: 1 1/2 = 1'-0"



I/9 DIAGONAL GUSSET-TYP
SCALE: 3" = 1'-0"



J/9 COLUMN GUSSET-TYP
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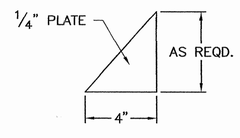

K/9 K-BRACE GUSSET-TYP
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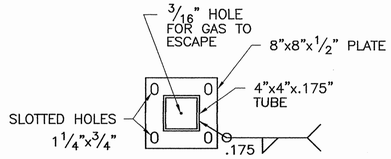
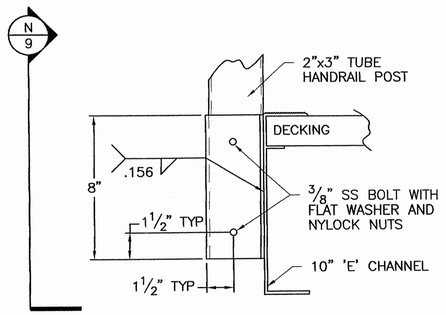
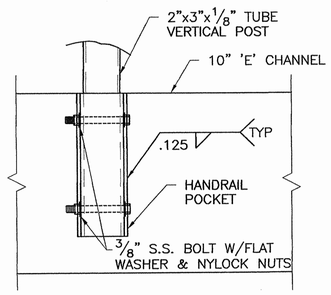


NOTE:
CONNECTION SHALL BE 4-1/2ø SS THD' STUDS W/GROMMET, NUT & WASHER WITH 1/8"x9"x9" UHMW-PE BELOW BASE PLATE

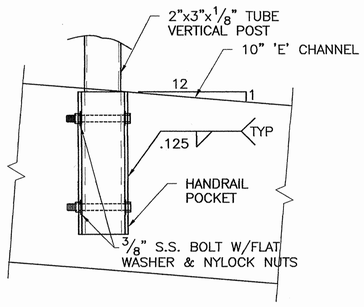
L/9 BASE PLATE DETAIL
SCALE: 1 1/2 = 1'-0"



M/9 DETAIL
SCALE: 3" = 1'-0"



PLATFORM



RAMP

N/9 DETAIL
SCALE: 3" = 1'-0"

Reference Technomarine shop Drawings approved

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

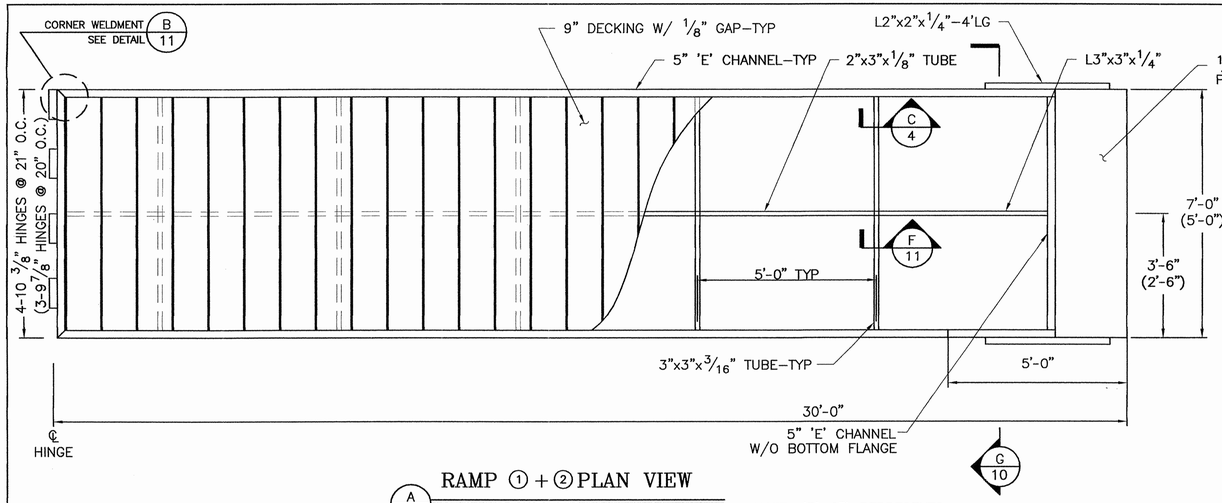
PLATFORM DETAILS

JULY 20, 2001 | SHEET 9 OF 30

CONTRACT NO. 3446

COMMONWEALTH OF MASSACHUSETTS
RONALD R. BOURNE
STRUCTURAL
No. 30661
REGISTERED
PROFESSIONAL ENGINEER

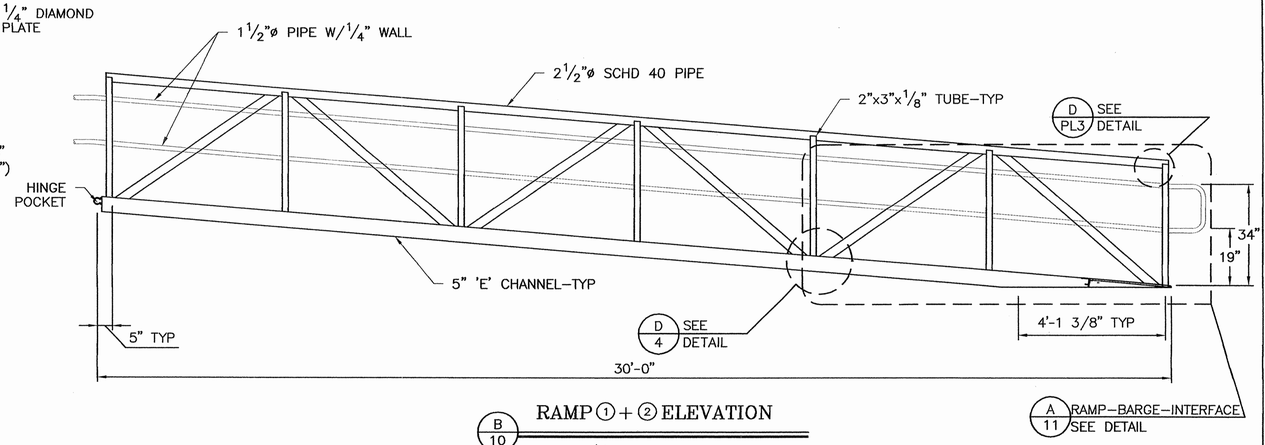
4012963 10029617 dwg 9-14



A 10 RAMP ① + ② PLAN VIEW

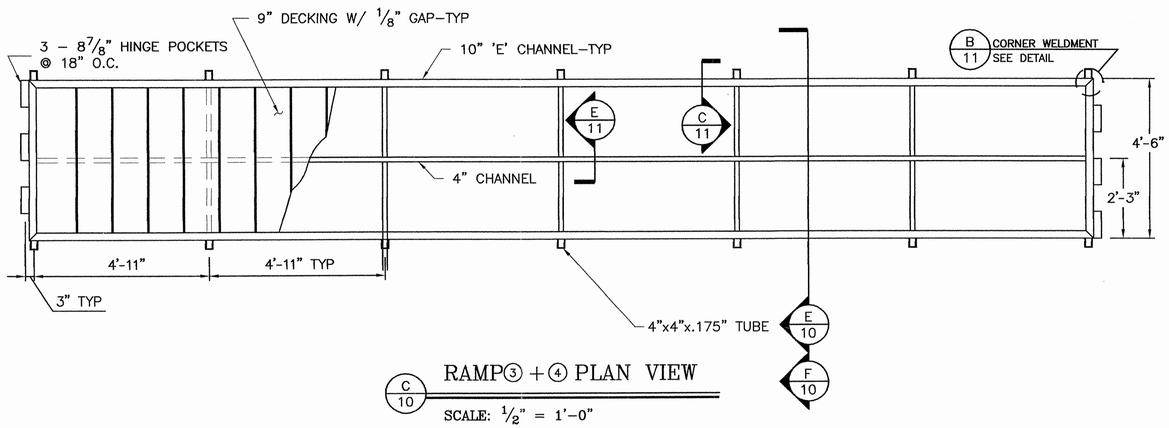
SCALE: 1/2" = 1'-0"

NOTE: (3'-0") REPRESENTS RAMP ②



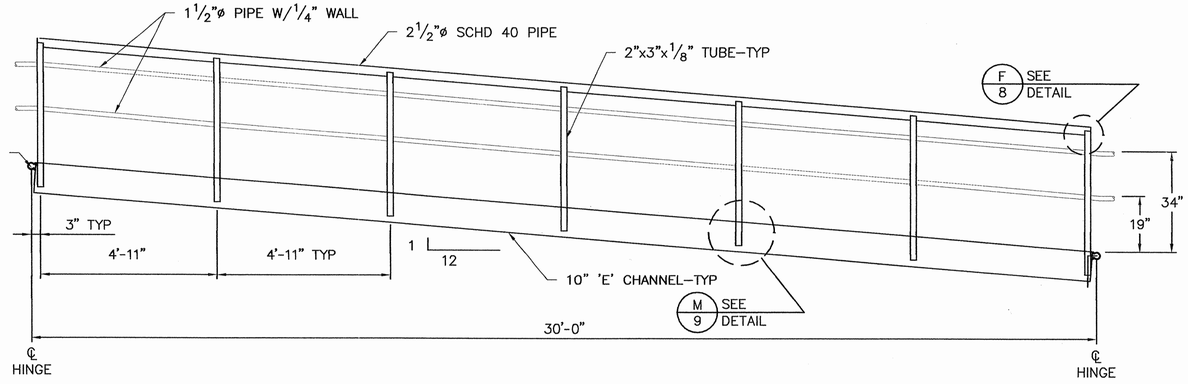
B 10 RAMP ① + ② ELEVATION

SCALE: 1/2" = 1'-0"



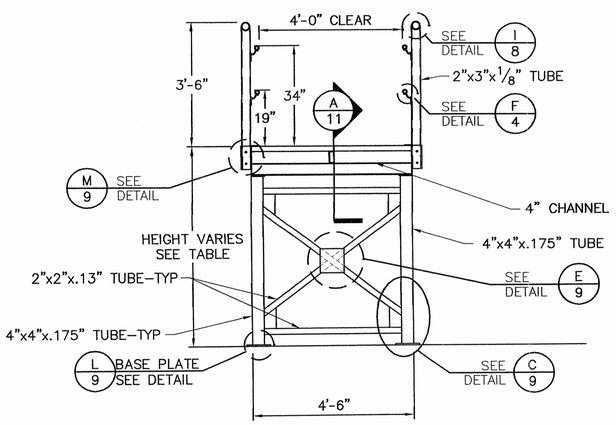
C 10 RAMP ③ + ④ PLAN VIEW

SCALE: 1/2" = 1'-0"



D 10 RAMP ③ + ④ ELEVATION

SCALE: 1/2" = 1'-0"



INTERMEDIATE RAMP ③ SUPPORT

E 10

SCALE: 1/2" = 1'-0"

INTERMEDIATE RAMP SUPPORT

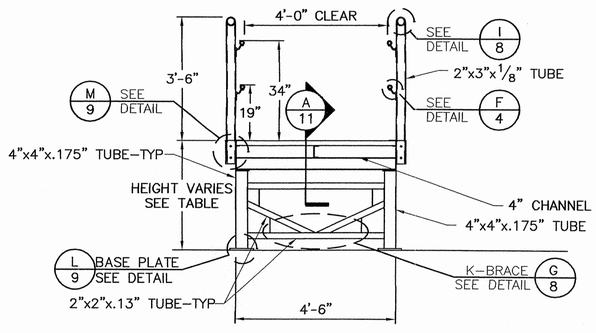
LOCATION *	HEIGHT
RAMP 3	5'-10"
RAMP 3	5

*LOCATION @ 10' O.C. OF RAMPS

INTERMEDIATE RAMP SUPPORT

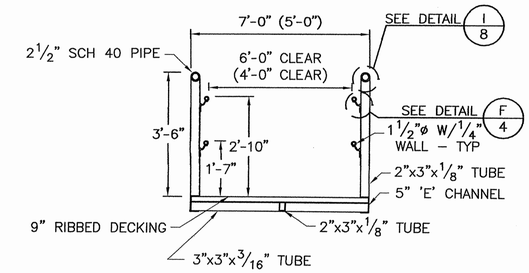
LOCATION *	HEIGHT
RAMP 4	3'-4"
RAMP 4	2'-6"

*LOCATION @ 10' O.C. OF RAMPS



F 10 INTERMEDIATE RAMP ④ SUPPORT

SCALE: 1/2" = 1'-0"



9 10 RAMP ① + ② SECTION

SCALE: 1/2" = 1'-0"

reference Technomarine Approved shop drawings

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

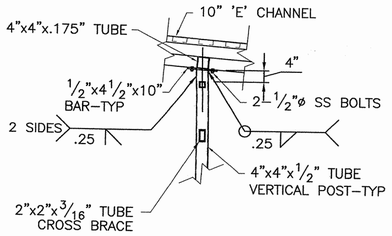
RAMPS 1, 2, 3 & 4

JULY 20, 2001 | SHEET 10 OF 30

CONTRACT NO. 3446

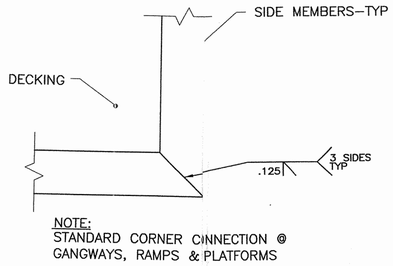
COMMONWEALTH OF MASSACHUSETTS
RONALD R. BOURNE
STRUCTURAL
No. 30863
REGISTERED
PROFESSIONAL ENGINEER

Sht-10.dwg 22001 103923



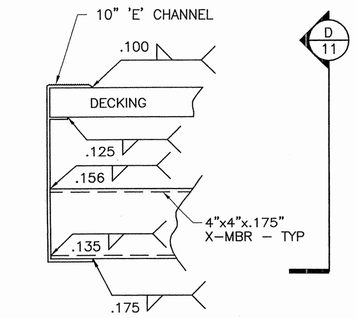
A/11 DETAIL

SCALE: 1/2" = 1'–0"



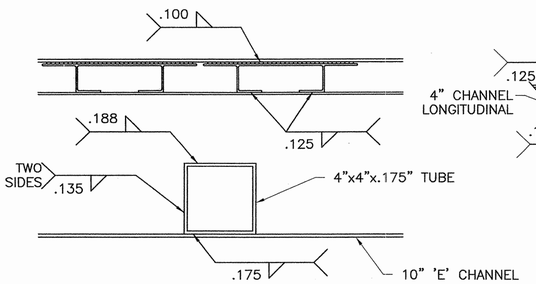
B/11 CORNER WELDMENT – TYP

SCALE: 3" = 1'–0"



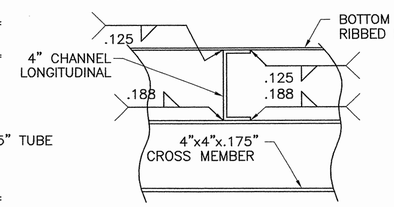
C/11 DETAIL

SCALE: 3" = 1'–0"



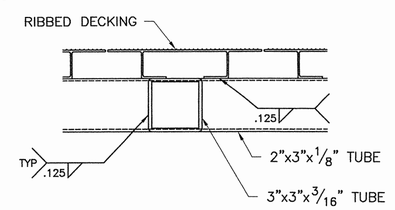
D/11 DETAIL

SCALE: 3" = 1'–0"



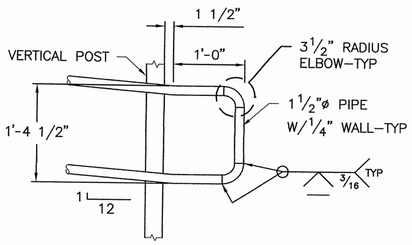
E/11 DETAIL

SCALE: 3" = 1'–0"



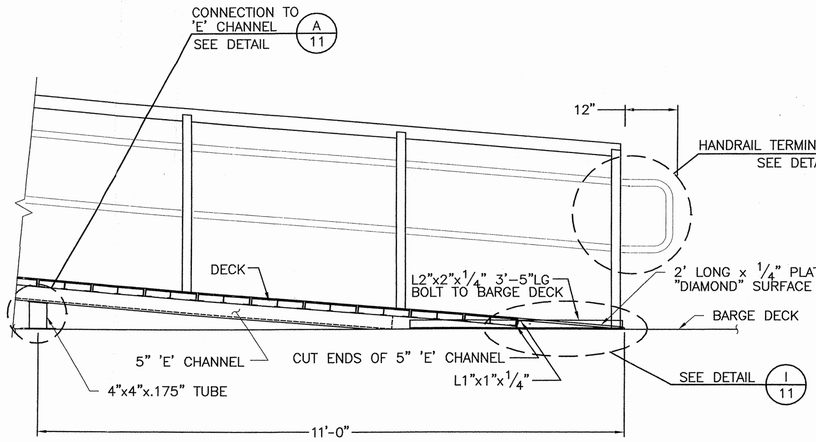
F/11 DETAIL

SCALE: 3" = 1'–0"



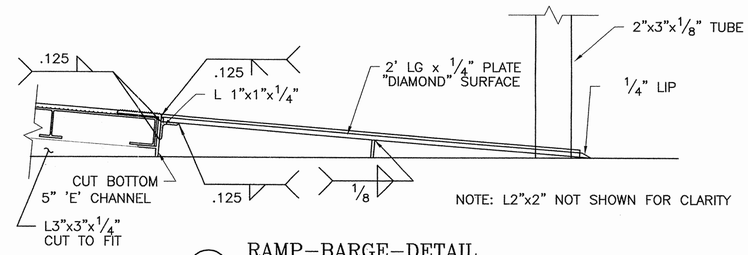
G/11 HANDRAIL TERMINUS – TYP

SCALE: 1" = 1'–0"



H/11 RAMP–BARGE–INTERFACE

SCALE: 3/4" = 1'–0"



I/11 RAMP–BARGE–DETAIL

SALE: 3" = 1'–0"

reference Technomarine approved shop drawings

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

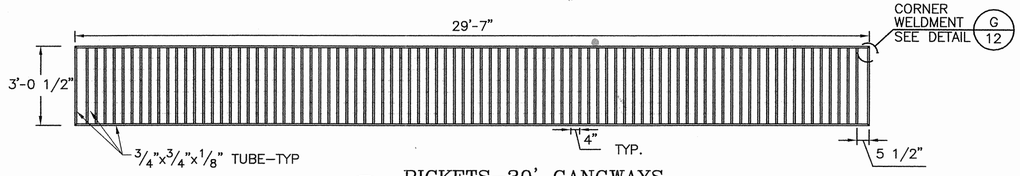
RAMP DETAILS

JULY 20, 2001 | SHEET 11 OF 30

CONTRACT NO. 3446

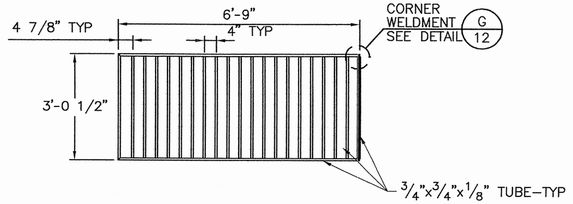
COMMONWEALTH OF MASSACHUSETTS
RONALD R. BOURNE
STRUCTURAL
No. 30861
REGISTERED PROFESSIONAL ENGINEER

ht-11.dwg 7-19-2001 4:13:53 pm EST



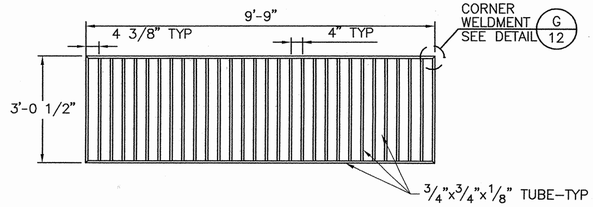
A 12 PICKETS–30' GANGWAYS

SCALE: 3/8" = 1'–0" 8 REQUIRED



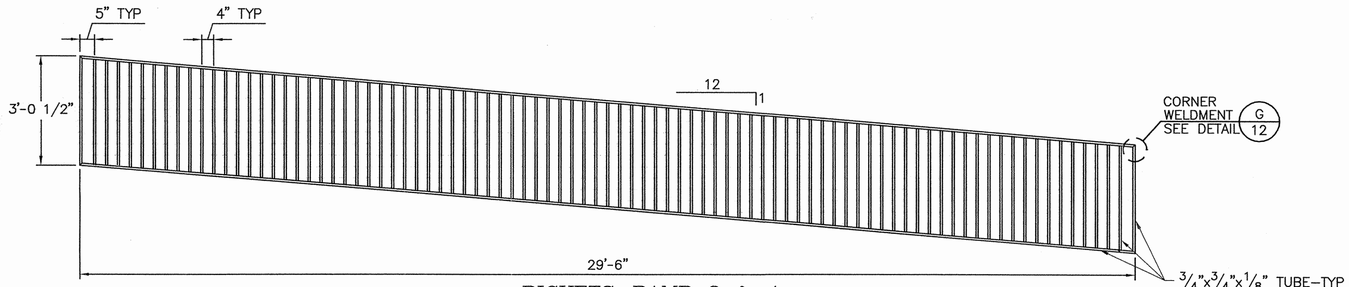
B 12 SIDE PICKETS–PLATFORM 1

SCALE: 1/2" = 1'–0" 2 REQ'D



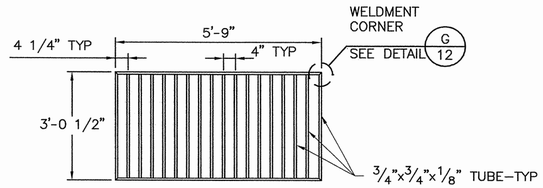
C 12 SIDE PICKETS–PLATFORM 3

SCALE: 1/2" = 1'–0" 2 REQ'D



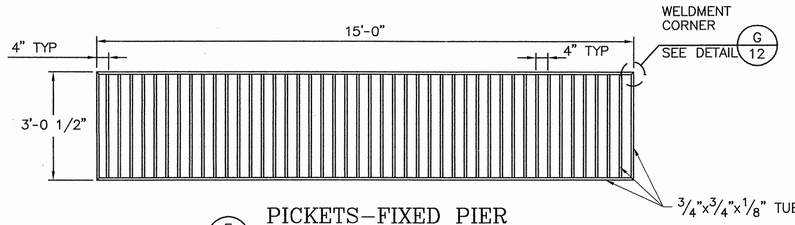
D FC1 PICKETS–RAMP 3 & 4

SCALE: 1/2" = 1'–0" 4 REQUIRED



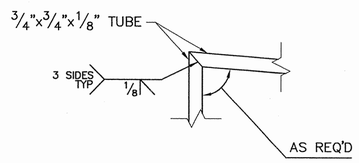
E 12 PICKETS–PLATFORM 4

SCALE: 1/2" = 1'–0" 1 REQ'D



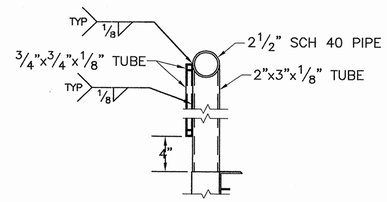
F 12 PICKETS–FIXED PIER

SCALE: 1/2" = 1'–0" 2 REQ'D



G 12 CORNER WELDMENT

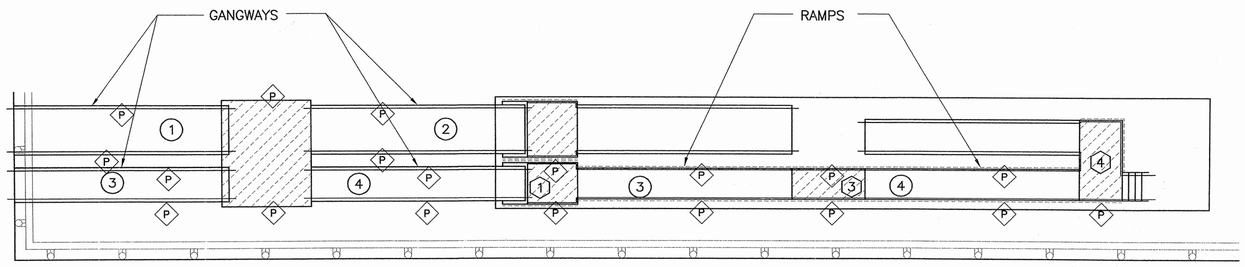
SCALE: 3" = 1'–0"



RAMPS & PLATFORMS

H 12 WELDMENT–PICKETS

SCALE: 1 1/2" = 1'–0"



PLAN–PICKETS

SCALE: 1" = 10'–0"

P PICKET LOCATION

Reference approved Technomare Shop Drawings

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

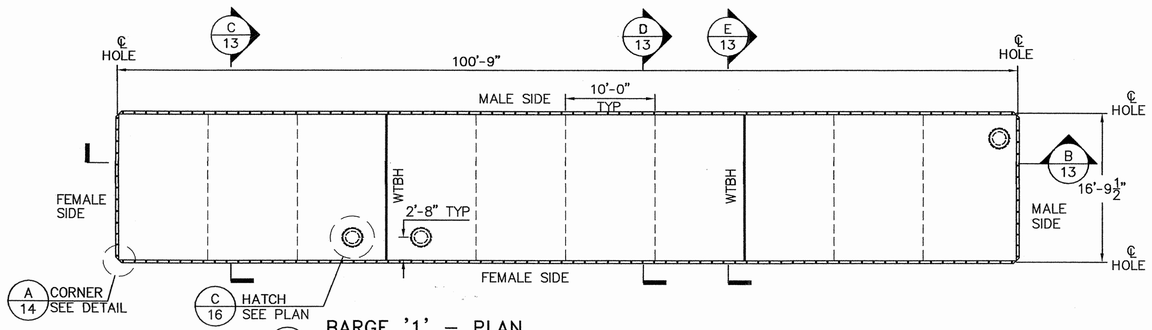
PICKET DETAILS

JULY 20, 2001 | SHEET 12 OF 30

CONTRACT NO. 3446

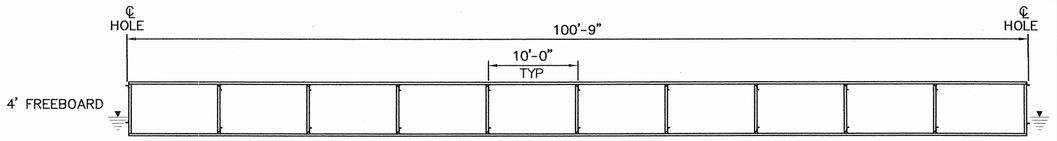
COMMONWEALTH OF MASSACHUSETTS
RONALD R. BOURNE
STRUCTURAL
No. 30861
REGISTERED PROFESSIONAL ENGINEER

Sht-12.dwg 7232001 91740



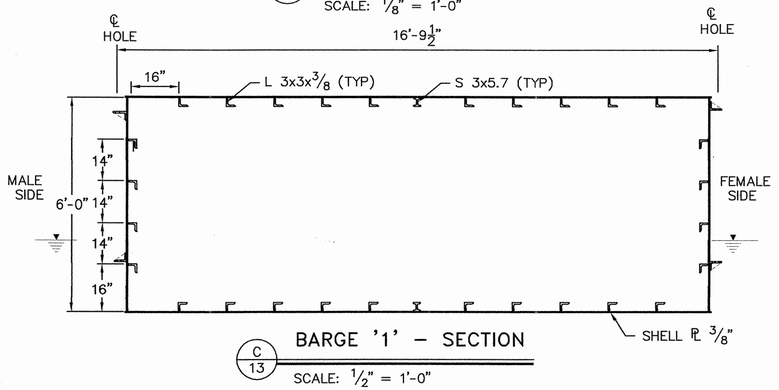
A 13 BARGE '1' – PLAN

SCALE: 1/8" = 1'-0"



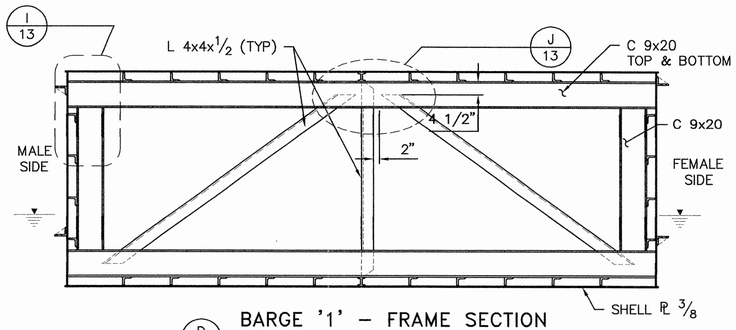
B 13 BARGE '1' – LONGITUDINAL SECTION

SCALE: 1/8" = 1'-0"



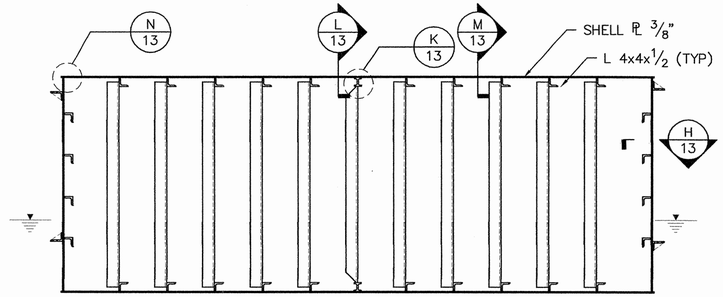
C 13 BARGE '1' – SECTION

SCALE: 1/2" = 1'-0"



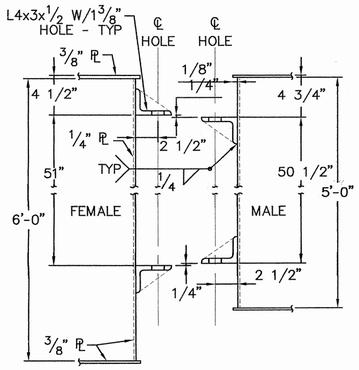
D 13 BARGE '1' – FRAME SECTION

SCALE: 1/2" = 1'-0"



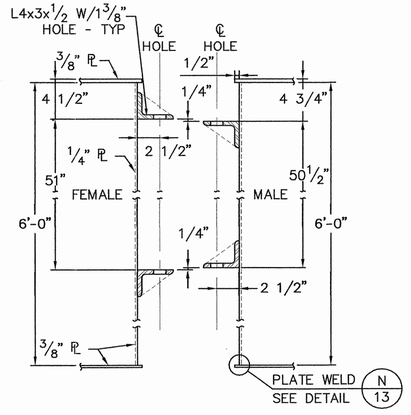
E 13 BARGE '1' – BULKHEAD & ENDS SECTIONS

SCALE: 1/2" = 1'-0"



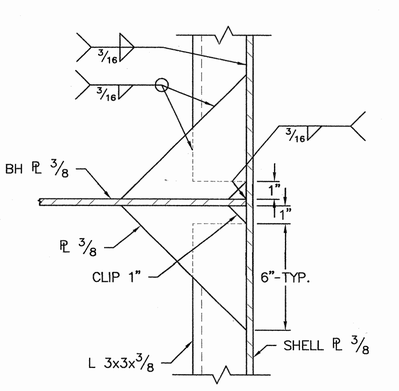
F 13 BARGE CONNECTION – DETAIL

SCALE: 3" = 1'- 0"



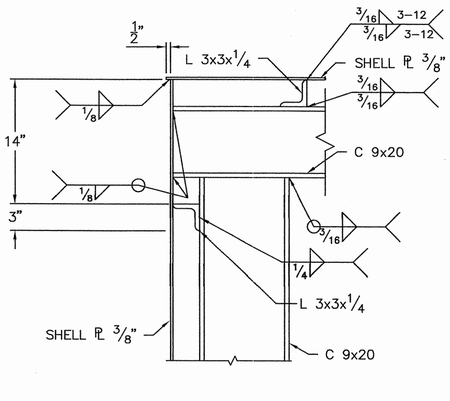
G 13 BARGE CONNECTION – DETAIL

SCALE: 1 1/2" = 1'- 0"



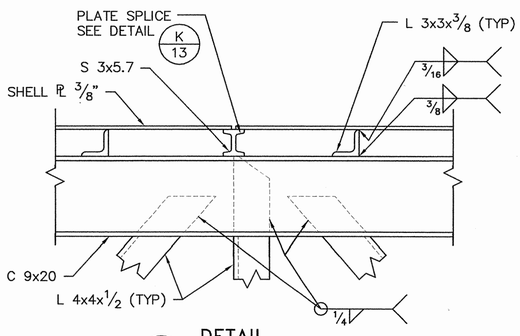
H 13 SECTION

SCALE: 3" = 1'-0"



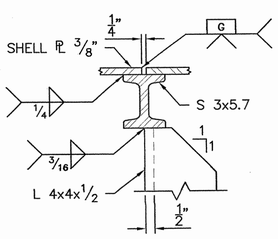
I 13 SECTION

SCALE: 1½" = 1'-0"



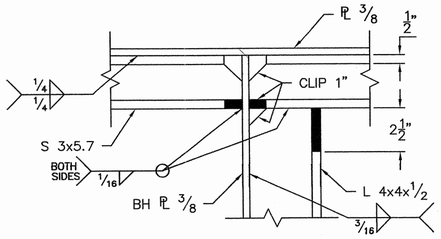
J 13 DETAIL

SCALE: 1½" = 1'-0"



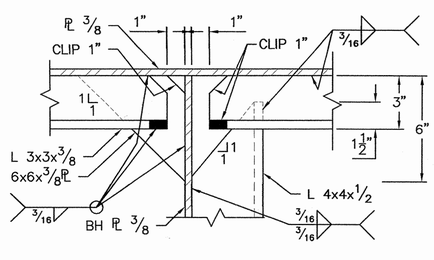
K 13 DETAIL

SCALE: 3" = 1'-0"



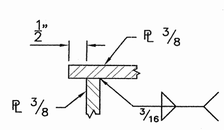
L 13 SECTION

3" = 1'-0"



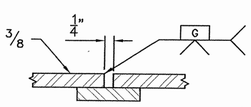
M 13 SECTION

SCALE: 3" = 1'-0"



N 13 TYPICAL CORNER DETAIL

SCALE: 6" = 1'-0"



P 13 DETAIL

SCALE: 6" = 1'-0"

reference approved Fabrication Shop Drawings

COMMONWEALTH OF MASSACHUSETTS
RONALD R. BOURNE
STRUCTURAL
No. 30681
REGISTERED PROFESSIONAL ENGINEER

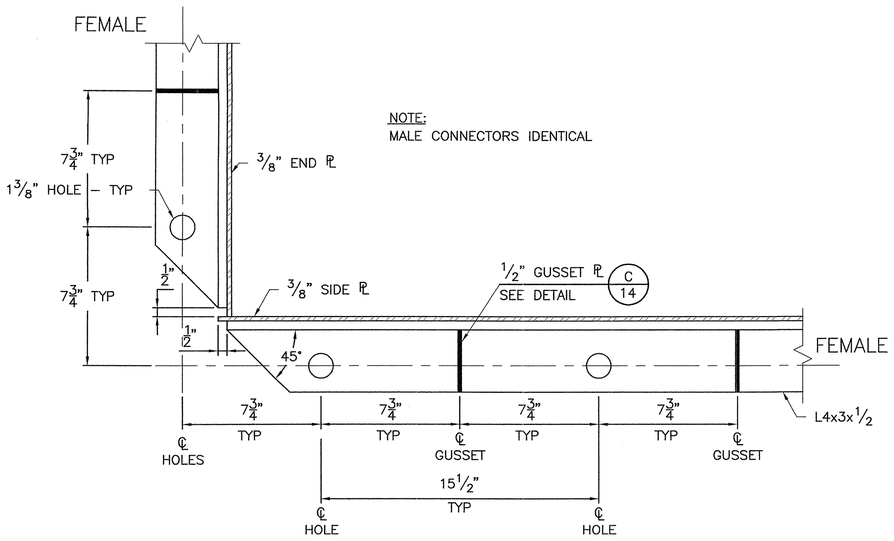
FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

16 x 100 BARGE–PLAN & SECTIONS

JULY 20, 2001 | SHEET 13 OF 30

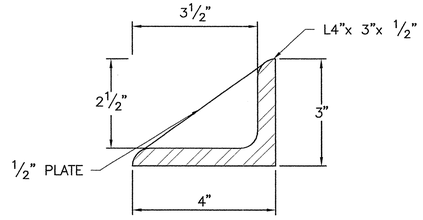
CONTRACT NO. 3446

Sht-13.dwg 7-23-2001 9:23:51 am EST



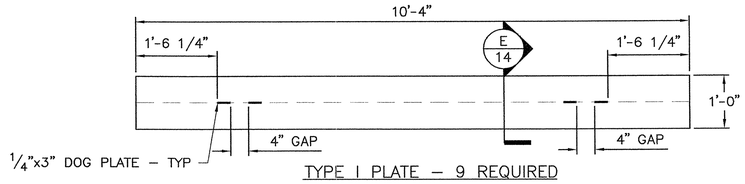
A 14 OUTSIDE ANGLE – CORNER DETAIL

SCALE: 3" = 1' – 0"

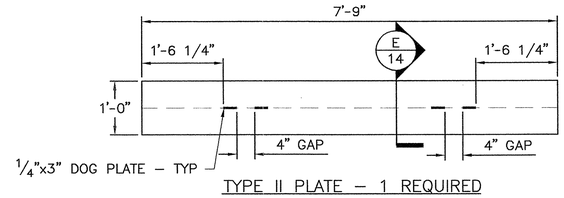


C 14 GUSSET DETAIL

SCALE: NTS



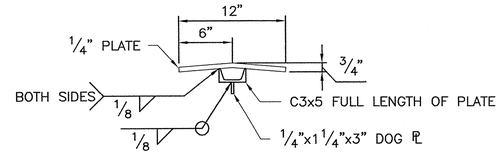
TYPE I PLATE – 9 REQUIRED



TYPE II PLATE – 1 REQUIRED

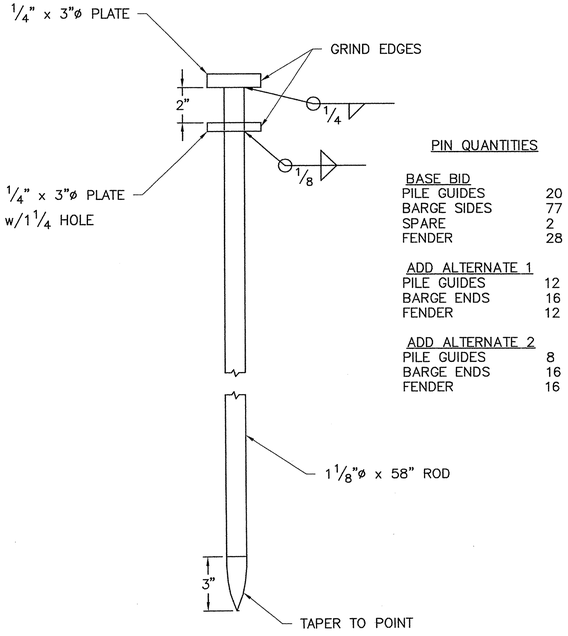
D 14 COVER PLATES – LONGITUDINAL JOINT

SCALE: ¾" = 1'–0"



E 14 COVER PLATE DETAIL

SCALE: 1 ½" = 1'–0"



PIN QUANTITIES

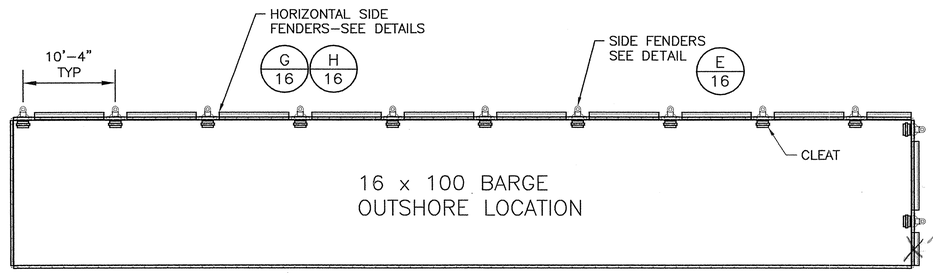
BASE BID	
PILE GUIDES	20
BARGE SIDES	77
SPARE	2
FENDER	28
ADD ALTERNATE 1	
PILE GUIDES	12
BARGE ENDS	16
FENDER	12
ADD ALTERNATE 2	
PILE GUIDES	8
BARGE ENDS	16
FENDER	16

B 14 PIN DETAIL

SCALE: 3" = 1'–0"

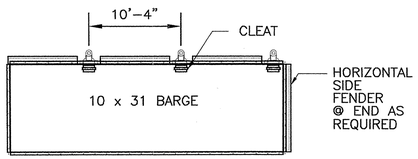
NOTE:

A TYPE I COVER PLATE SHALL BE SUPPLIED WITH EACH 10'x31' BARGE.



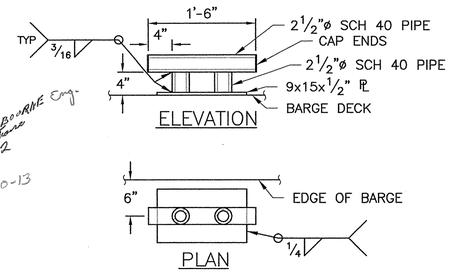
F 14 BARGE–PLAN

SCALE: 1/8" = 1'–0"



G 14 BARGE–PLAN

SCALE: 1/8" = 1'–0"



H 14 CLEAT – DETAIL

SCALE: 1" = 1'–0"

NOTE:
INSTALL TACTILE WARNING STRIP AROUND CLEATS

Reference approved shop drawings for Mass Fabricating and Welding

NOTE:
COST OF CLEATS AND FENDERS SHALL BE INCLUDED WITH BARGE UNIT COST.

COMMONWEALTH OF MASSACHUSETTS
RONALD R BOURNE
No. 30362
REGISTERED PROFESSIONAL ENGINEER

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

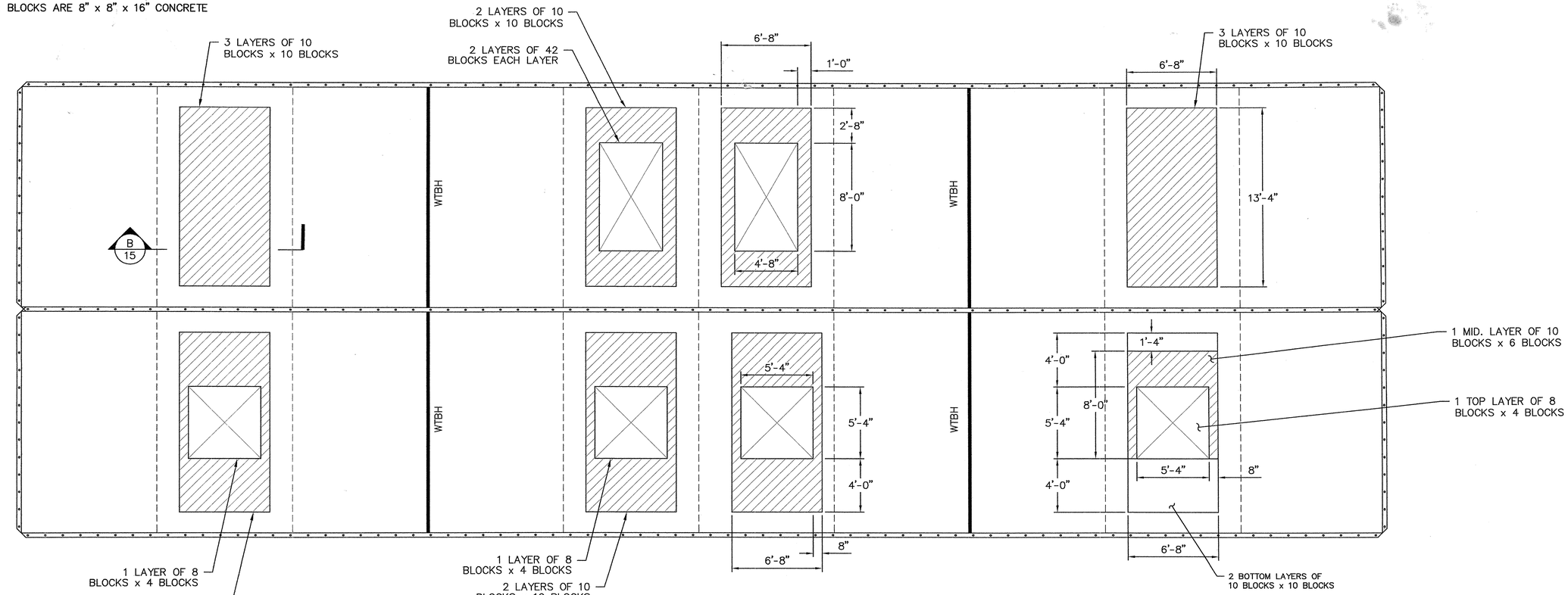
BARGE DETAILS

JULY 20, 2001 | SHEET 14 OF 30

CONTRACT NO. 3446

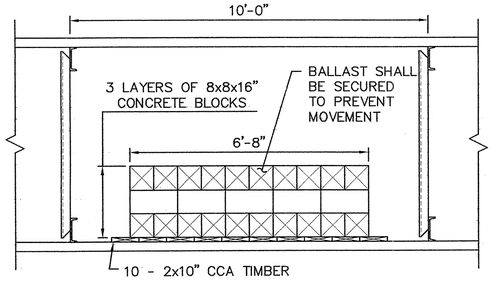
Sht-14.dwg 7-23-2001 9:25:49 am EST

NOTE: BLOCKS ARE 8" x 8" x 16" CONCRETE



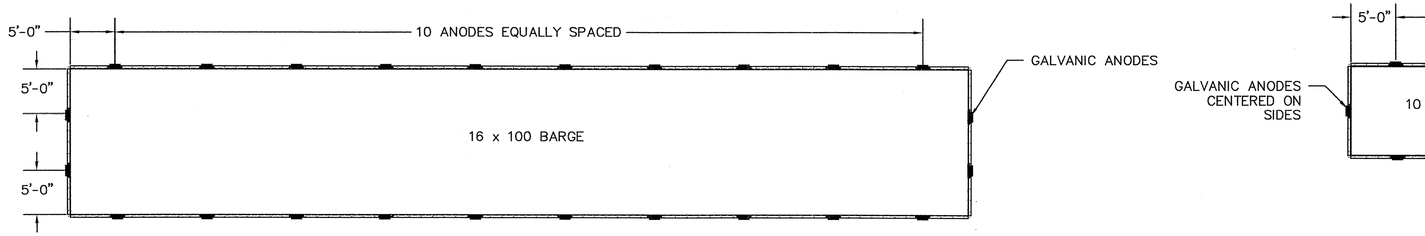
A 15 BALLAST PLAN

SCALE: 1/4" = 1'-0"



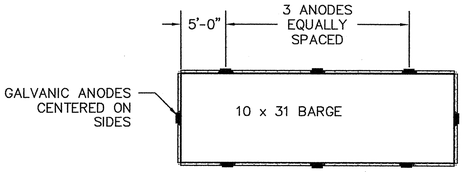
B 15 TYPICAL SECTION

SCALE: 1/2" = 1'-0"



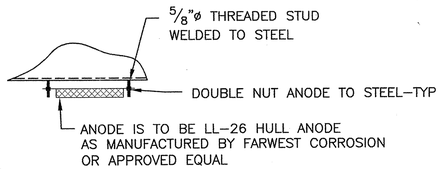
C 15 BARGE—PLAN

SCALE: 1/8" = 1'-0"



D 15 BARGE—PLAN

SCALE: 1/8" = 1'-0"



NOTE: ANODE TO BE INSTALLED HORIZONTALLY 6" ABOVE BOTTOM OF BARGE

E 15 PLAN—CATHODIC PROTECTION—ANODE

SCALE: 3/4" = 1'-0"

Ballast plan revised per Bonnyman Dept. 5 2002 BLF 98220-13

COMMONWEALTH OF MASSACHUSETTS RONALD R. BONNYMAN STRUCTURAL No. 30861 REGISTERED PROFESSIONAL ENGINEER

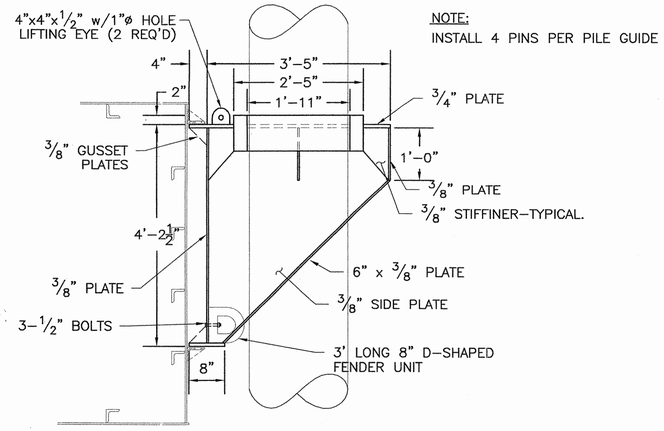
FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

BALLAST — PLAN & DETAILS

JULY 20, 2001 | SHEET 15 OF 30

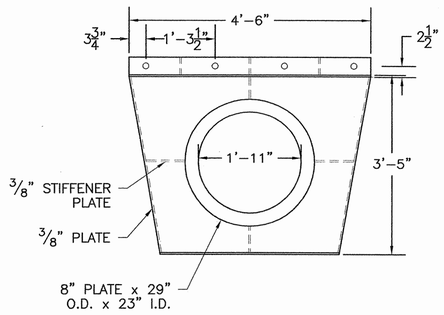
CONTRACT NO. 3446

Sht-15.dwg 7-23-2001 9:41:41 am EST



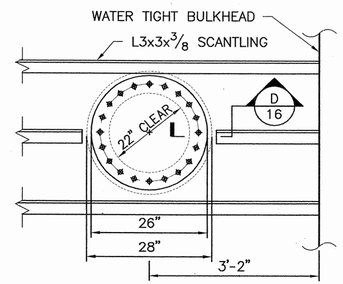
A/16 MALE PILE GUIDE–SECTION

SCALE : 3/4" = 1'–0"



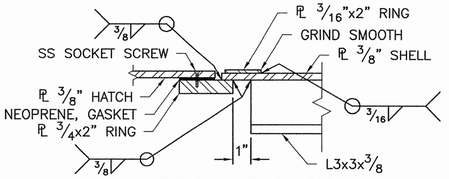
B/16 MALE PILE GUIDE–PLAN

SCALE : 3/4" = 1'–0"



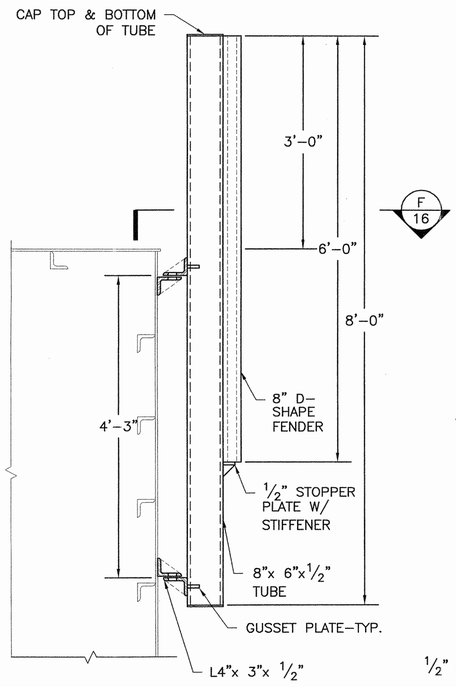
C/16 HATCH – PLAN

SCALE: 3/4" = 1'–0"



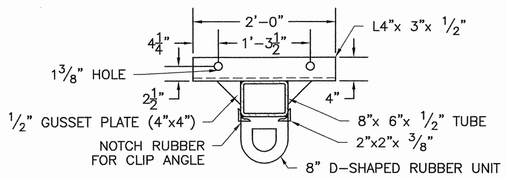
D/16 HATCH – SECTION

SCALE: 3" = 1'–0"



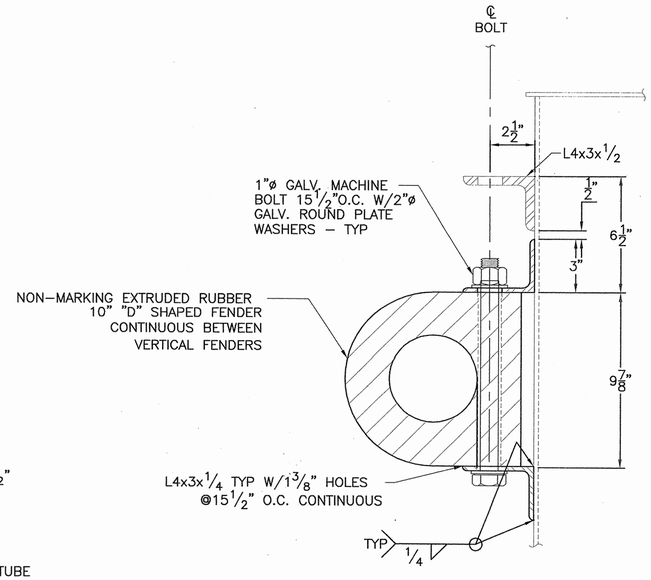
E/16 SIDE FENDER

SCALE: 1" = 1'–0"



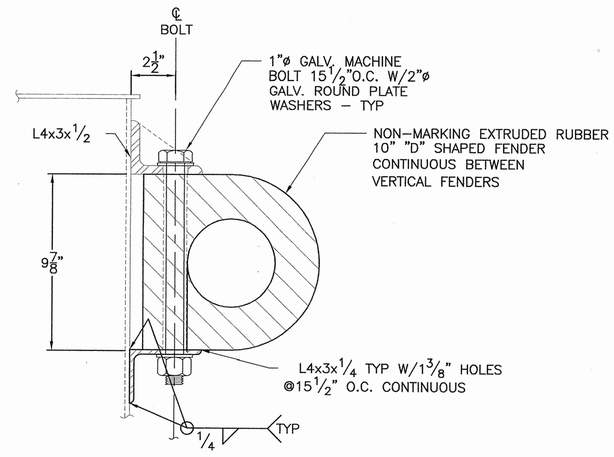
F/16 SIDE FENDER – PLAN

SCALE: 1" = 1'–0"



G/16 HORIZONTAL FENDER – MALE SIDE

SCALE: 3" = 1'– 0"



H/16 HORIZONTAL FENDER – FEMALE SIDE

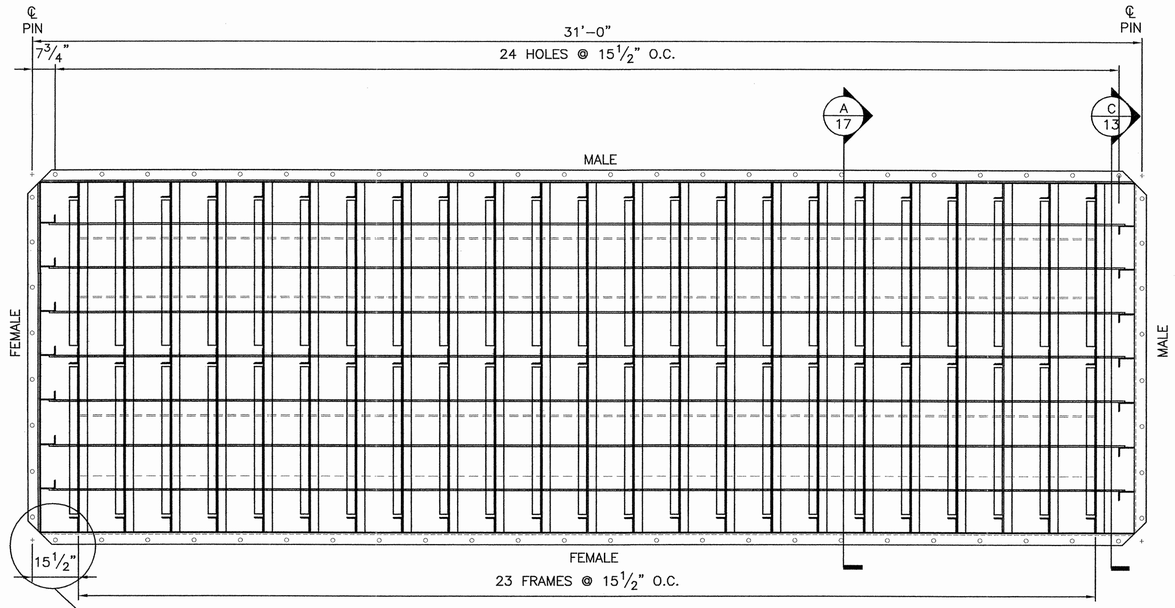
SCALE: 3" = 1'– 0"

NOTES:
- HOLES FOR BOLTS SHALL MATCH BARGE CONNECTION ANGLE HOLES
- HORIZONTAL FENDER SHALL BE INSTALLED ON ALL EXTERIOR FACES
- FENDER SHALL BE CONTINUOUS BETWEEN VERTICAL FENDERS

Reference Mass Fabricating and Welding Shop Drawings

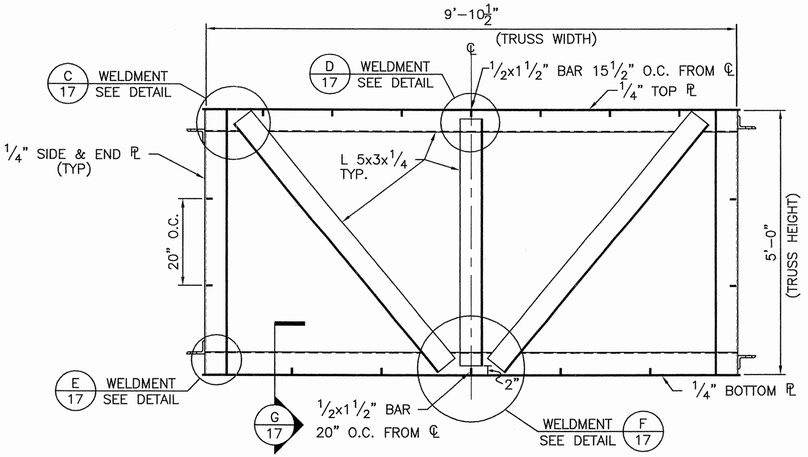
COMMONWEALTH OF MASSACHUSETTS
DONALD R. BOURNE
STRUCTURAL
No. 30561
REGISTERED
11-7-01

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND INCLUDING ADA ACCESS & WAVE SCREEN BOSTON HARBOR BOSTON, MASSACHUSETTS	
PILE GUIDES & PILES	
JULY 20, 2001	SHEET 16 OF 30
	CONTRACT NO. 3446



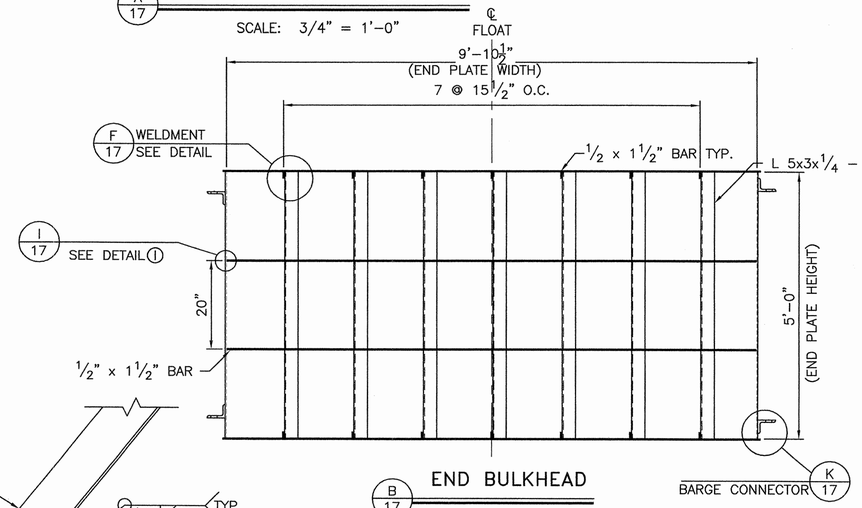
BARGE – PLAN

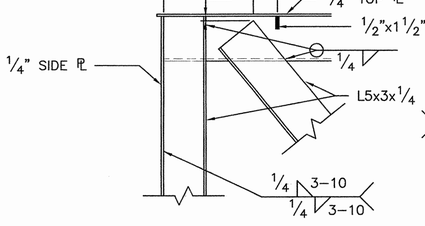
SCALE: 1/2 = 1'-0"



A 17 INTERIOR TRUSS – SECTION

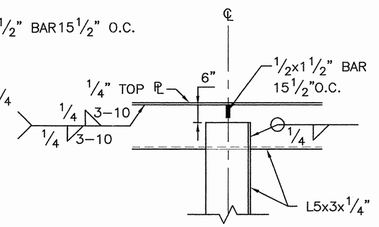
SCALE: 3/4" = 1'-0"





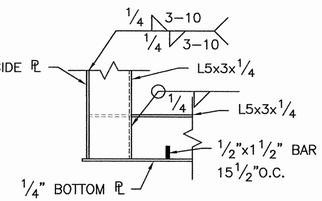
C 17 WELD DETAIL

SCALE: 1 1/2" = 1'



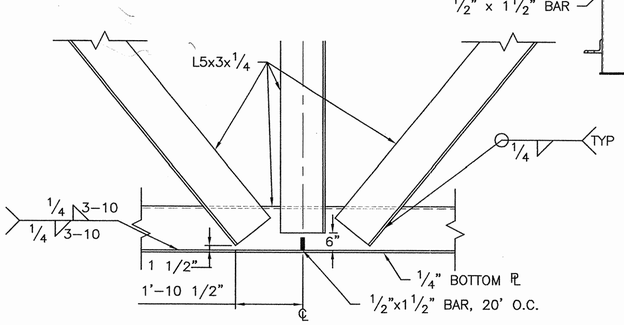
D 17 WELD DETAIL

SCALE: 1 1/2"= 1'-0"



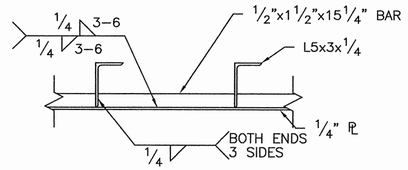
E 17 WELD DETAIL

SCALE: 1 1/2" = 1'



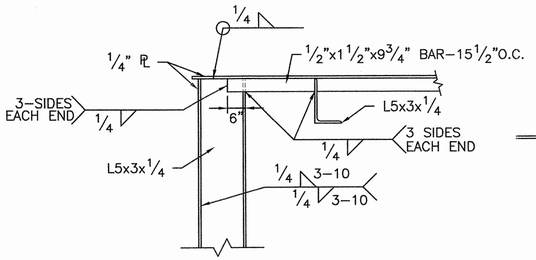
F 17 WELD DETAIL

SCALE: 1 1/2" = 1'



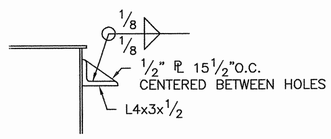
G 17 WELD DETAIL

SCALE: 1 1/2" = 1'



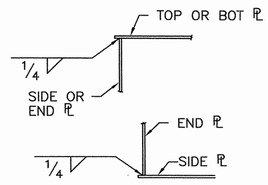
H 17 WELD DETAIL

SCALE: 1 1/2" = 1'



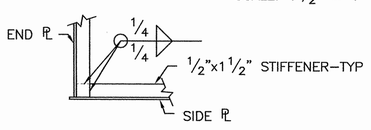
I 17 GUSSET

SCALE: 1 1/2" = 1'



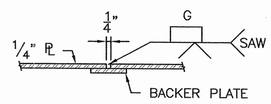
J 17 PLATE WELD

SCALE: 1 1/2" = 1'



K 17 WELD DETAIL

SCALE: 1 1/2" = 1'



J 17 PLATE – BUTT WELD

SCALE: 3" = 1'-0"

Reference Mass Fabricating and Welding shop Drawings

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

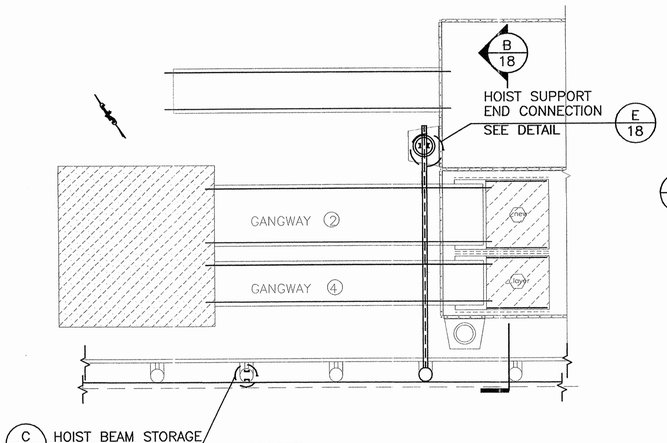
10 x 31 BARGES–PLAN, SECTIONS & DETAILS

JULY 20, 2001 | SHEET 17 OF 30

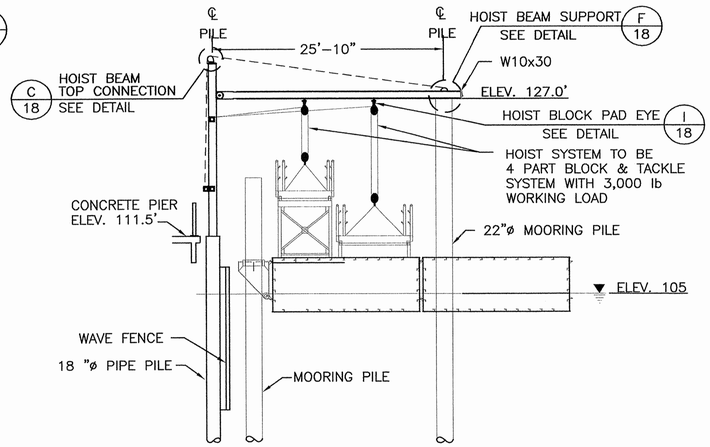
CONTRACT NO. 3446

COMMONWEALTH OF MASSACHUSETTS
RONALD R. ROHRBE
STRUCTURAL
No. 30361
REGISTERED PROFESSIONAL ENGINEER

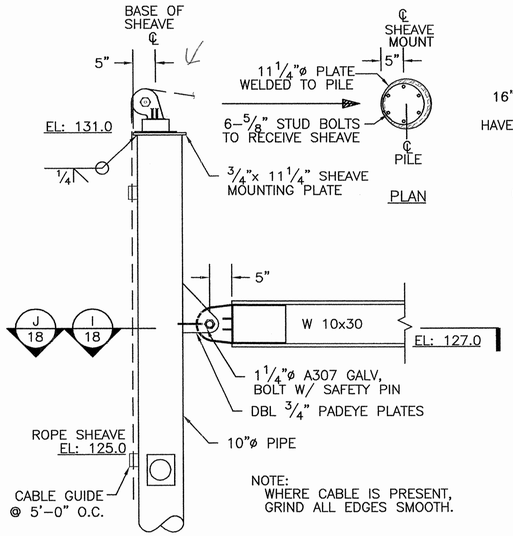
Sht-17.dwg 7-23-2001 10:18:52 am EST



LAYOUT
A 18
1/8" = 1'-0"

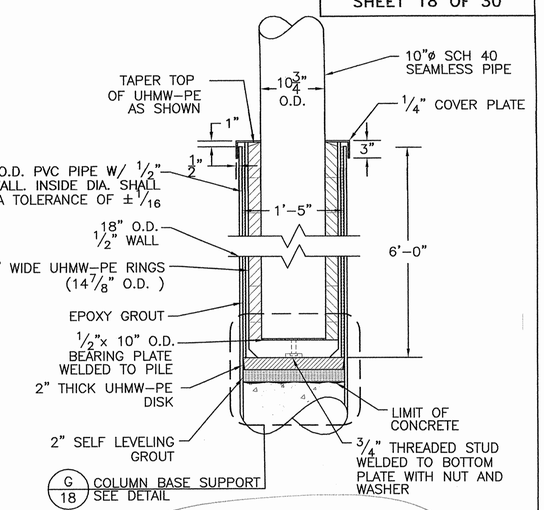


SECTION
B 18
SCALE: 1/8" = 1'-0"

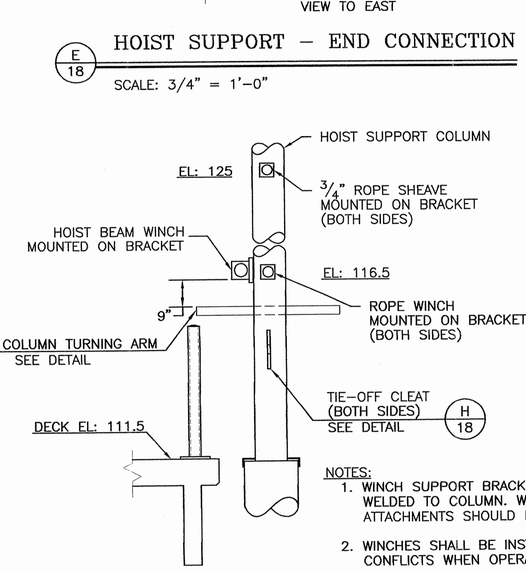


NOTE:
WHERE CABLE IS PRESENT, GRIND ALL EDGES SMOOTH.

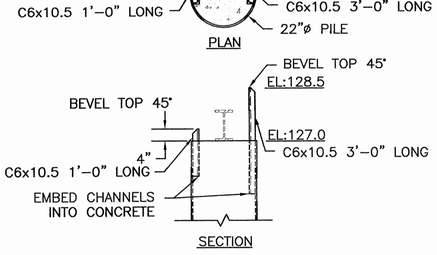
HOIST BEAM TOP CONNECTION
C 18
SCALE: 3/4" = 1'-0"



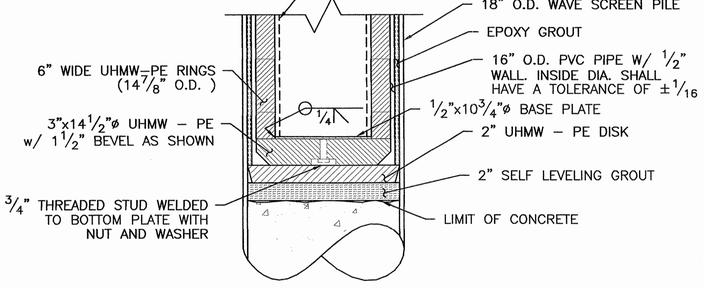
SUPPORT SLEEVE DETAIL
D 18
SCALE: 3/4" = 1'-0"



HOIST SUPPORT – END CONNECTION
E 18
SCALE: 3/4" = 1'-0"



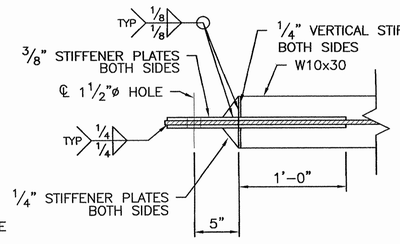
HOIST BEAM SUPPORT
F 18
SCALE: 1/2" = 1'-0"



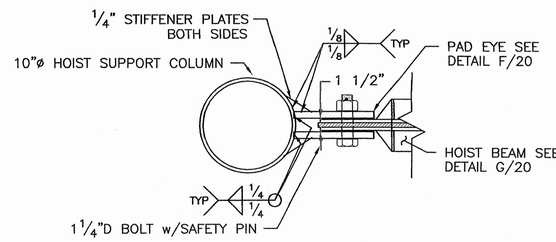
COLUMN BASE SUPPORT
G 18
SCALE: 1 1/2" = 1'-0"

NOTES:
1. WINCH SUPPORT BRACKET SHALL BE 1/4" PLATE WELDED TO COLUMN. WINCH AND SHEAVE ATTACHMENTS SHOULD BE REMOVABLE
2. WINCHES SHALL BE INSTALLED TO PREVENT CONFLICTS WHEN OPERATING.

SUPPORT SLEEVE DETAIL
H 18
SCALE: 1/2" = 1'-0"



HOIST BEAM END DETAIL
I 18
SCALE: 1 1/2" = 1'-0"



PAD EYE/HOIST BEAM CONNECTION
J 18
SCALE: 1 1/2" = 1'-0"

Material Notes

Pipe shall be Schedule 40 steel pipe conforming to ASTM A-53 Grade B or ASTM A-501.

Structural shapes and plate shall conform to ASTM A-36.

Bolts shall conform to ASTM A-307.

UHMW-PE shall be shall be made of 2-1/2% UV-stabilized, UHMW polyethylene, having UV-stabilized dyes, conforming to the following specifications:

Property	Test	Acceptance Requirement
Tensile Strength	ASTM D638	Yield 3000 psi min. Ultimate 5000 psi min.
Izod Impact (double notch)	ASTM D256A	18 ft-lbs./in. min.
Abrasion Resistance	Tabor weight loss	18 max.
Coeff. of Friction	ASTM D1894	0.20 max.

Shackles shall be safety bolt type and meet the following safe working load requirements:
1/2" 2 tons
3/4" 4.75 tons
1" 8.5 tons

Hoist beam winch shall have a working load capacity of 4,000 pounds with self locking feature. Cable winch shall be designed for the marine environment and have a removable or independent locking feature to prevent unauthorized use. Winch shall be attached to a bracket on the hoist support column to allow for removal for repair or replacement.

Cable for beam winch shall be 3/8" Stainless Steel with an ultimate capacity of 17,500 pounds.

Hoist Support column sheave shall be a flange mounted, single sheave unbalanced head fairlead Model No. UF 50-6 as manufactured by Skookum or equivalent. Sheave base shall be secured from pivoting.

Gangway lifting straps shall be woven nylon with a safe lifting capacity of 3,000 pounds with hook ring for Blocking hook.

Blocking for gangway lifts shall be as required for a 5 part reeving and have a safe working capacity of 3000 pounds and designed for the marine environment. Blocking shall have swivel hook with latch.

Blocking line shall be a minimum 3/4 inch line with a safe working capacity of 1000 pounds and be UV stabilized polypropylene rope.

Connecting links shall have a capacity equivalent or greater than the chain/shackle they are attaching.

Rope winch shall be a two speed marine grade winch with a safe working capacity of 1000 pounds and have a power ratio of 40:1. Winches shall be removable and independently attached to brackets welded the hoist support column. Winch handles shall removable 10" anodized aluminum with free-running nylon handles and drums shall be constructed of black anodized aluminum.

Wave fence column support pile shall be driven to a working load capacity of 20 tons.

Hoist beam column shall be installed to rotate without binding.

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
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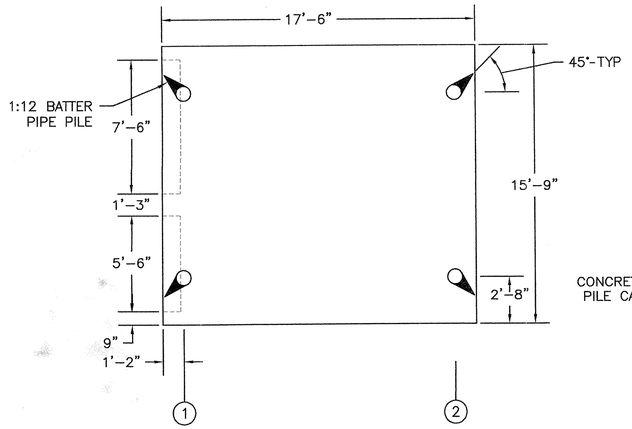
BOSTON HARBOR
BOSTON, MASSACHUSETTS

GANGWAY LIFTS

JULY 20, 2001 | SHEET 18 OF 30

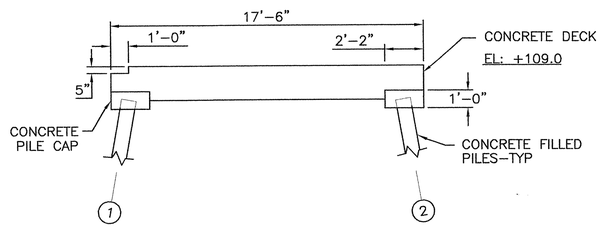
CONTRACT NO. 3446

Snt-18.dwg 7202001 93408



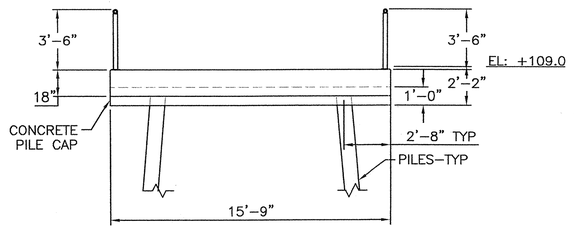
A/19 PILE PLAN @ EL: 107.3

SCALE: 1/4" = 1'-0"



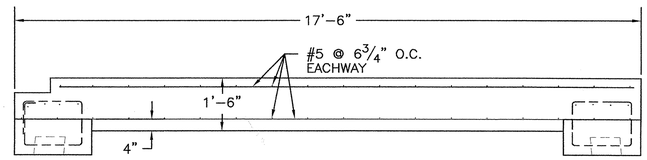
B/19 PIER - CROSS SECTION

SCALE: 1/4" = 1'-0"



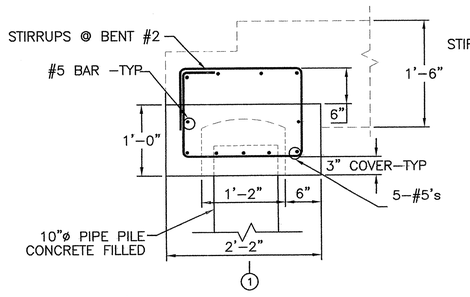
C/19 PIER - CROSS SECTION

SCALE: 1/4" = 1'-0"



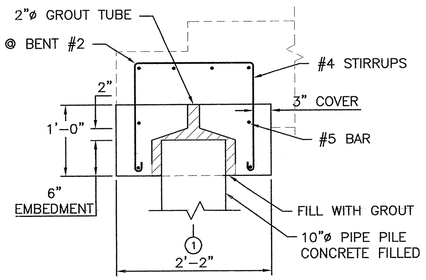
D/19 SLAB REINFORCING

1/2" = 1'-0"



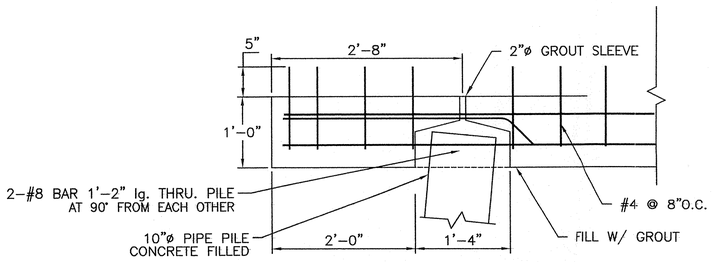
E/19 PILE CAP-DETAIL

SCALE: 1" = 1'-0"



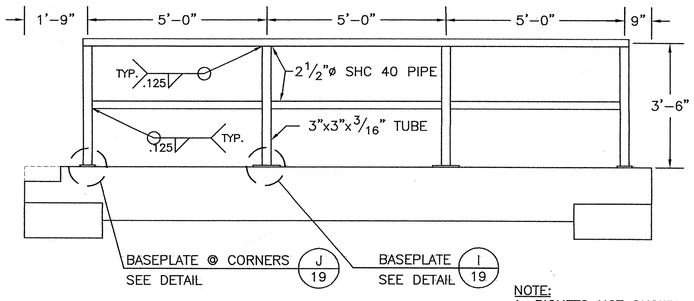
F/19 PILE CAP @ PILE

SCALE: 1" = 1'-0"



G/19 PILE CAP-ELEVATION

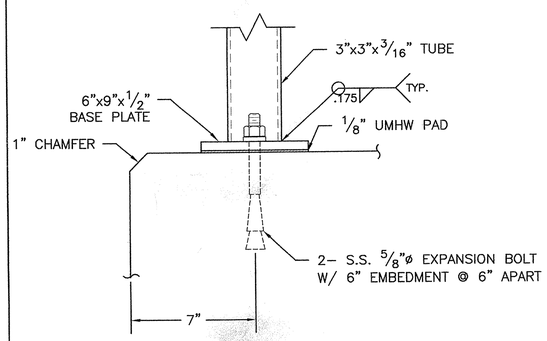
SCALE: 1" = 1'-0"
PRECAST OPTION



H/19 PIER GUARDRAIL

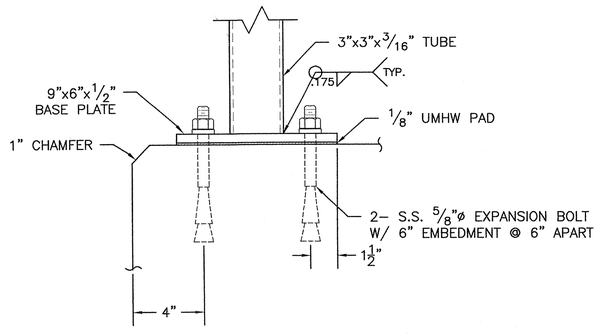
SCALE: 1/2" = 1'-0"

NOTE:
1. PICKETS NOT SHOWN FOR CLARITY SEE SHEET 12
2. GUARDRAIL IS MADE OF ALUMINUM



I/19 BASEPLATE DETAIL

SCALE: 3" = 1'-0"



J/19 BASEPLATE @ CORNERS - DETAIL

SCALE: 3" = 1'-0"

NOTES:
1. " CHAMFER ON ALL EXPOSED EDGES.
2. CONTRACTOR SHALL SUPPORT PILES W/FALSEWORK AS NECESSARY FOR PLACEMENT OF PILE CAPS & SLAB.
3. PILES SHALL BE DRIVEN TO A WORKING LOAD CAPACITY OF 20 TONS.
4. PILES SHALL HAVE 1:12 BATTER AS SHOWN.

COMMONWEALTH OF MASSACHUSETTS — DONALD W. SOURIN — REGISTERED PROFESSIONAL ENGINEER

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
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BOSTON HARBOR
BOSTON, MASSACHUSETTS

FIXED PIER-PLAN, SECTIONS & DETAILS

JULY 20, 2001 | SHEET 19 OF 30

CONTRACT NO. 3446

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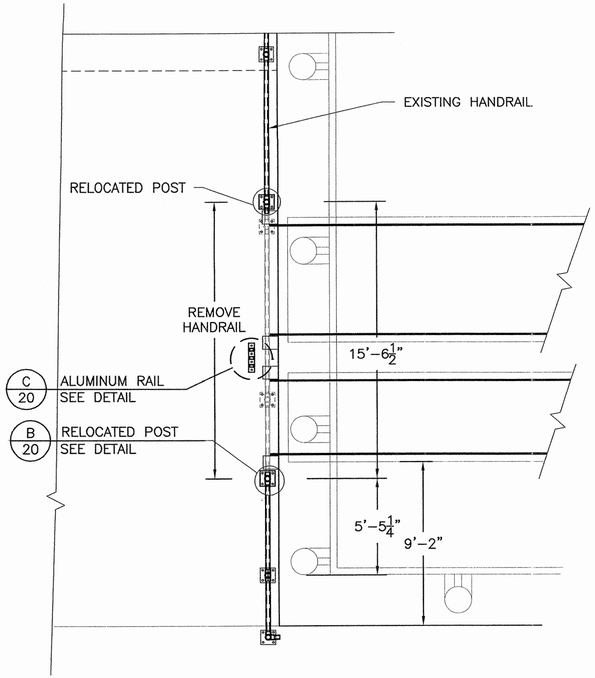
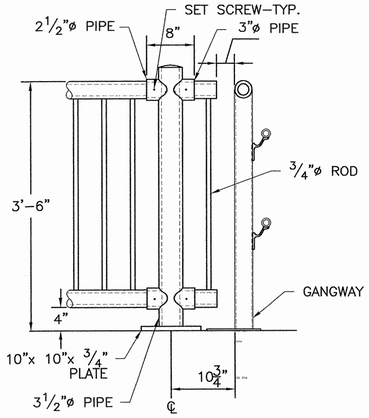


A 20 GUARDRAIL LAYOUT

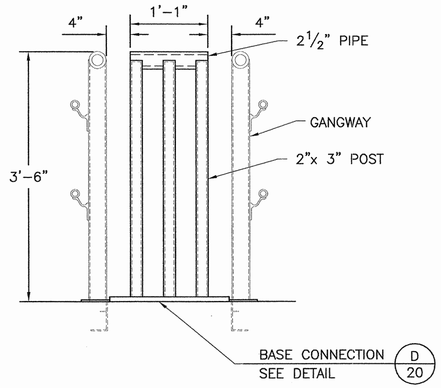
SCALE: 1/4" = 1'–0"

NOTE:
CONTRACTOR TO MODIFY EXISTING HANDRAIL AND FABRICATE COAT END EXTENSIONS AS NECESSARY TO MATCH EXISTING



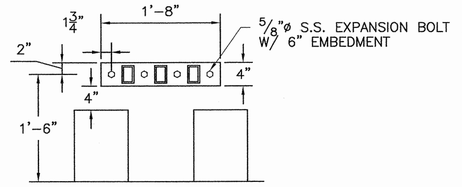
B 20 RELOCATED POST–DETAIL

SCALE: 1" = 1'–0"



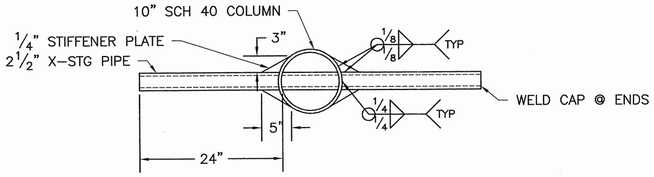
C 20 ALUMINUM RAIL

SCALE: 1" = 1'–0"



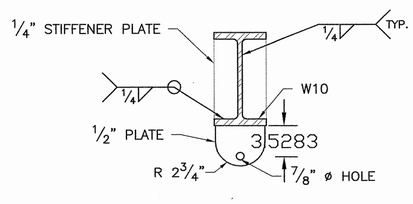
D 20 BASE CONNECTION

SCALE: 1" = 1'–0"



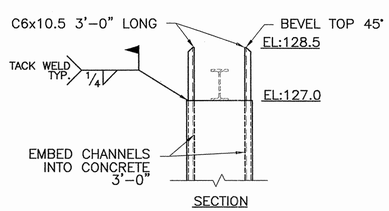
E 20 COLUMN TURNING ARM

SCALE: 1" = 1'–0"



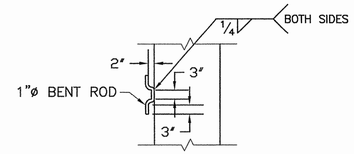
F 20 HOIST BLOCK PAD EYE

SCALE: 1 1/2" = 1'–0"



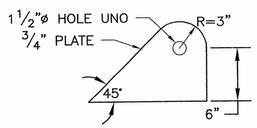
G 20 HOIST BEAM STORAGE SUPPORT

SCALE: 1/2" = 1'–0"



H 20 HOIST LINE CLEAT

SCALE: 1/2" = 1'–0"



I 20 PAD EYE DETAIL

SCALE: 1 1/2" = 1'–0"

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

MISCELLANEOUS DETAILS

JULY 20, 2001 | SHEET 20 OF 30

CONTRACT NO. 3446

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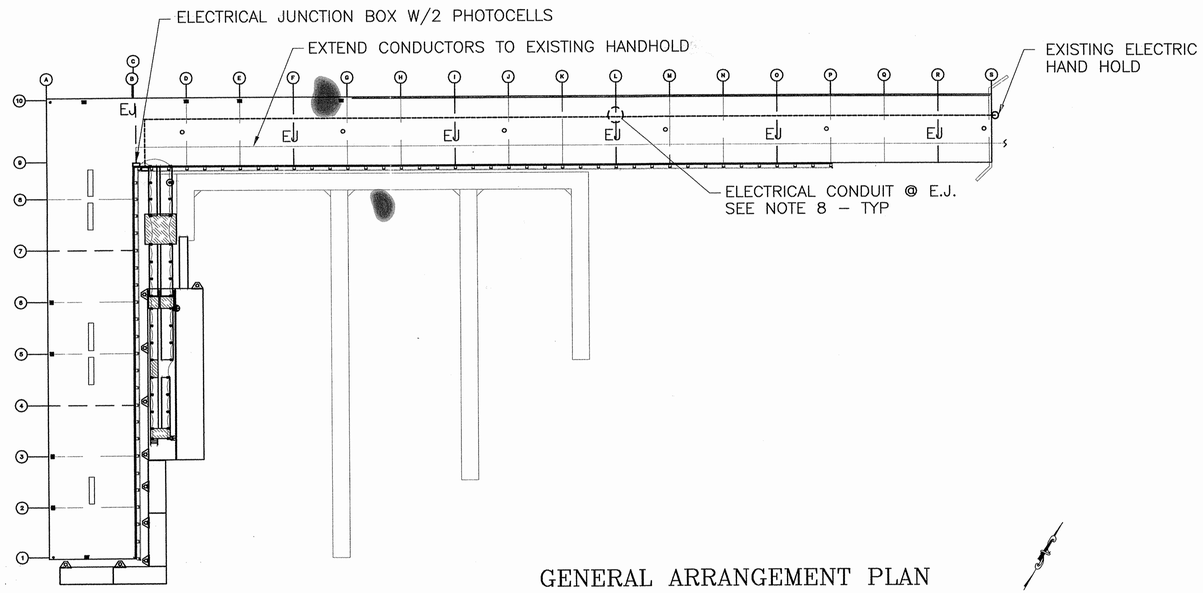
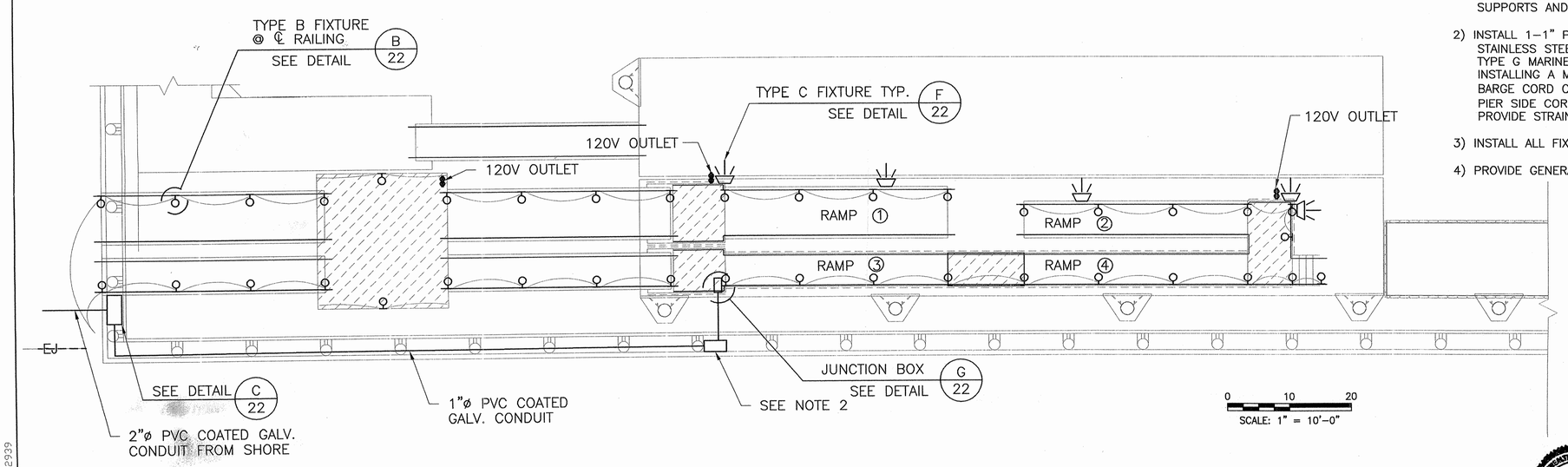


GENERAL ARRANGEMENT PLAN

SCALE: 1" = 50'–0"



LAYOUT PLAN

SCALE: 1" = 50'–0"

GENERAL ELECTRICAL NOTES

1) PROVIDE HOFFMAN BOX # A1614CHNFSS OR EQUAL AT END OF 2" PVC COATED CONDUIT RUN. PROVIDE MYERS HUBS FOR CONDUITS.

2) PROVIDE HOFFMAN BOX # A12106CHNFSS OR EQUAL WITH STAINLESS STEEL STRAIN RELIEF CABLE CONNECTORS AT END OF 1" PVC COATED CONDUIT RUN.

3) ALL CONDUIT, CLIP AND FIXTURE FASTENERS ARE TO BE STAINLESS STEEL.

4) PROVIDE STAINLESS STEEL STRAIN RELIEFS FOR CABLE AT BOTH THE BARGE SIDE AND PIER SIDE. DANIEL WOODHEAD CAT #36818 OR EQUAL.

5) PROVIDE 3 – 120 VOLT, 20 AMP CIRCUITS FROM EXISTING HAND HOLD TO BARGE.

   6 – #8 AND 1– #8 GROUND. REDUCE WIRE SIZE TO #12 ON BARGE.

   1 – 120 VOLT CIRCUIT FOR BARGE AND WALKWAY LIGHTS
   1 – 120 VOLT CIRCUIT FOR GANGWAY LIGHTS
   1 – 120 VOLT CIRCUIT FOR OUTLETS

6) PROVIDE 2 PHOTO CELLS FOR THE 2 LIGHTING CIRCUITS. PHOTO CELLS ARE TO BE MOUNTED IN THE STAINLESS BOX AT THE HEAD OF THE GANGWAYS INTERMATIC CAT #K4021 OR EQUAL.

7) ALL OUTLETS SHALL BE MARINE GRADE GROUND FAULT TYPE HUBBELL CAT # GF5252M WITH HUBBELL PLATE #CWP26CR

8) EXPANSION FITTINGS SHALL BE INSTALLED IN PVC COATED CONDUIT SYSTEM AT ALL EXPANSION JOINT LOCATIONS PERMA–CATE CAT# AX100, AX200
   BONDING JUMPERS SHALL BE INSTALLED AT EACH EXPANSION FITTING
   02–GEDNEY CAT# BJ–1012–24, BJ–1520–24

9) LIGHT FIXTURE SCHEDULE:

TYPE A (TOP MOUNTED)	HUBBELL CAT#	NVX BOX
	NVQFC	FIXTURE BODY
	VPLCG–	100L GLOBE
	NVG	GUARD
	NVQ–18	FLUORESCENT LAMP
TYPE B (SIDE MOUNTED)	HUBBELL CAT#	NVX BOX
	NVQFC	FIXTURE BODY
	NVB	ADAPTER
	VPLCG–	100L GLOBE
	NVG	GUARD
	NVQ–18	FLUORESCENT LAMP
TYPE C	HUBBELL CAT#	NRG 315

SCOPE OF WORK

1) INSTALL 1–2" PVC COATED GALVANIZED CONDUIT FROM EXISTING HANDHOLD TO A STAINLESS STEEL BOX LOCATED AT THE END OF ALUM. GANGWAY. CONDUIT IS TO BE INSTALLED UNDER PIER ON EXISTING SUPPORTS AND THROUGH EXISTING SLEAVES. PROVIDE STAINLESS STEEL CONDUIT HANGERS.

2) INSTALL 1–1" PVC COATED GALVANIZED CONDUIT FROM BOX LOCATED AT END OF GANGWAY TO A SECOND STAINLESS STEEL BOX LOCATED AT THE EDGE OF THE LANDING BARGE. INSTALL 2 – #10 –3 CONDUCTOR TYPE G MARINE CABLES FROM THIS BOX TO BARGE. PROVIDE DISCONNECTING MEANS FOR THESE CABLES BY INSTALLING A MALE AND FEMALE CORD CAP IN EACH CABLE.
   BARGE CORD CAP & COVER HUBBELL CAT# 26CM11 + 60 CM 31
   PIER SIDE CORD CAP & COVER HUBBELL CAT# 26CM13 + 60 CM32
   PROVIDE STRAIN RELIEF FOR THESE CABLES.

3) INSTALL ALL FIXTURES WHERE SHOWN.

4) PROVIDE GENERATOR POWER TO TEST ENTIRE ELECTRICAL SYSTEM AND PROVIDE TEST REPORT.

COMMONWEALTH OF MASSACHUSETTS
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FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

ELECTRICAL

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CONTRACT NO. 3446

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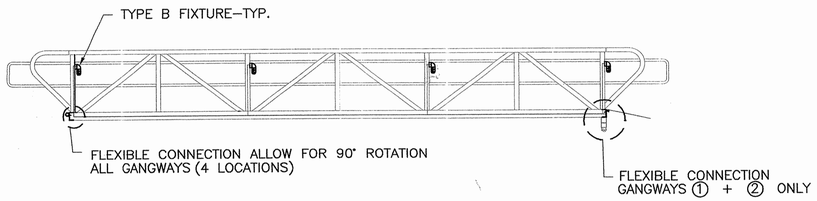
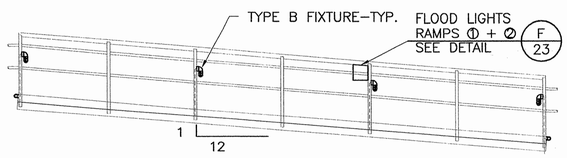


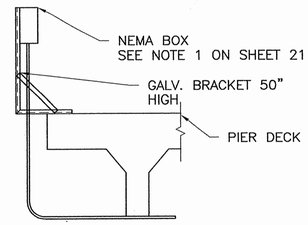
A/22 GANGWAYS ①, ②, ③ AND ④

SCALE: 1/2" = 1'–0"



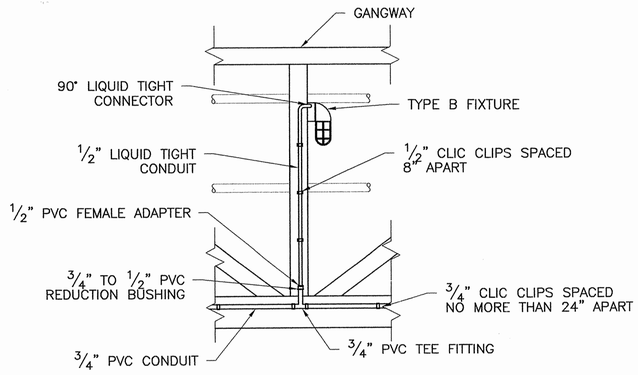
B/22 RAMP ①, ②, ③ AND ④

SCALE: 1/4" = 1'–0"



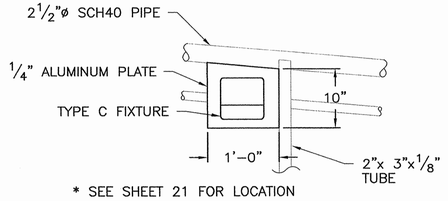
C/22 NEMA BOX PLACEMENT–DETAIL

NTS



D/22 TYP. GANGWAY FIXTURE LAYOUT

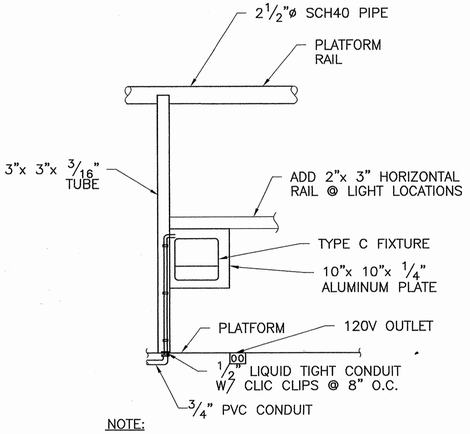
SCALE: 1" = 1'–0"



* SEE SHEET 21 FOR LOCATION

F/22 FLOOD LIGHT @ RAMP 1 + 2

SCALE: 1" = 1'–0"

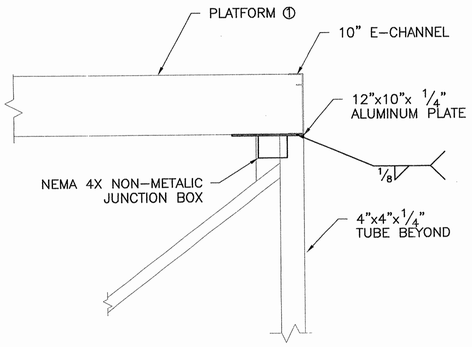


NOTE:

1. GRAB RAIL NOT SHOWN FOR CLARITY
2. SEE SHEET 21 FOR LOCATION

F/22 PLATFORM FLOOD LIGHT @ PLATFORM

SCALE: 1" = 1'–0"



G/22 JUNCTION BOX LOCATION

SCALE: 1" = 1'–0"

COMMONWEALTH OF MASSACHUSETTS
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FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

ELECTRICAL DETAILS

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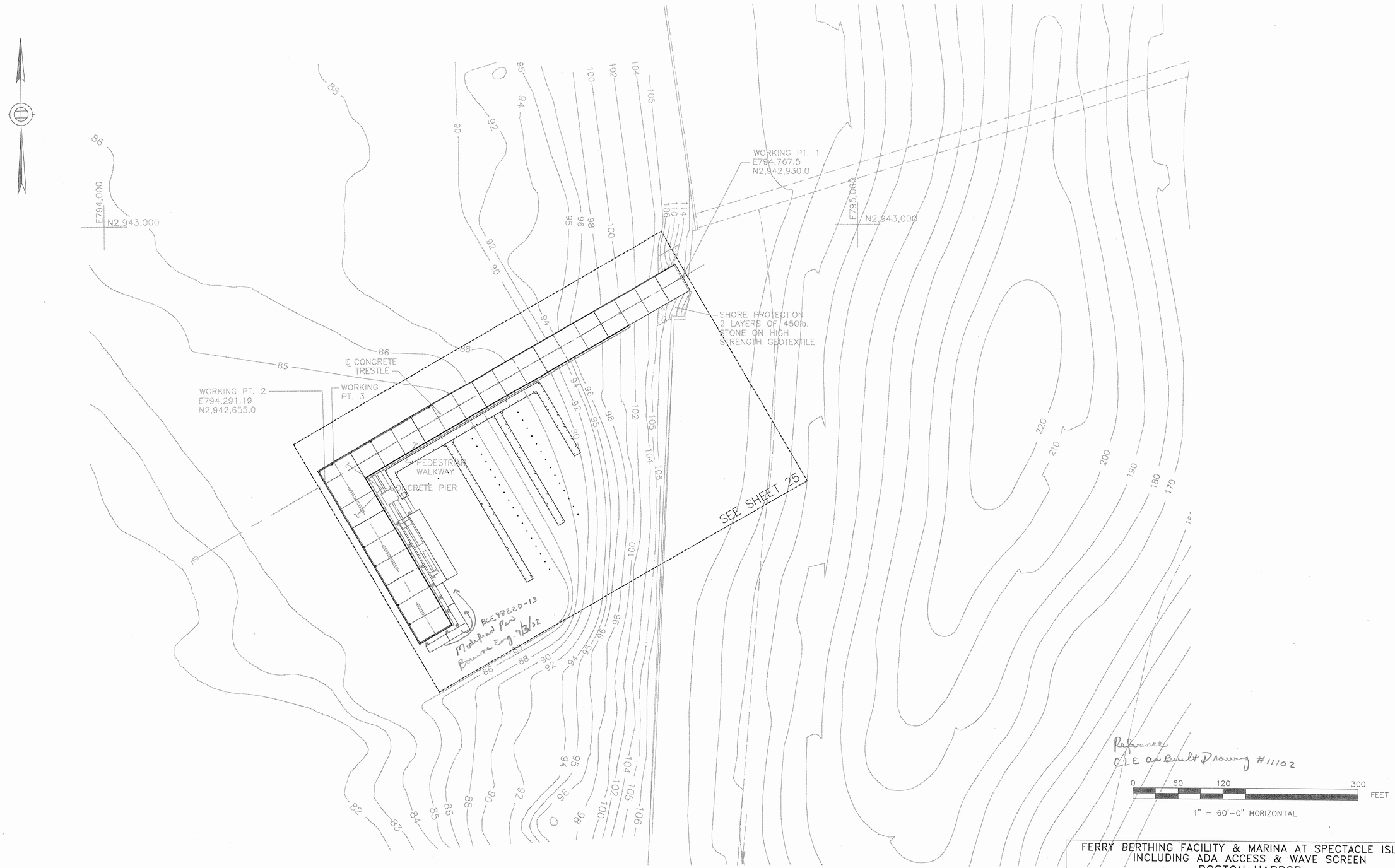
CONTRACT NO. 3446

Sht-22.dwg 2-2-01 12:55:19 pm EST

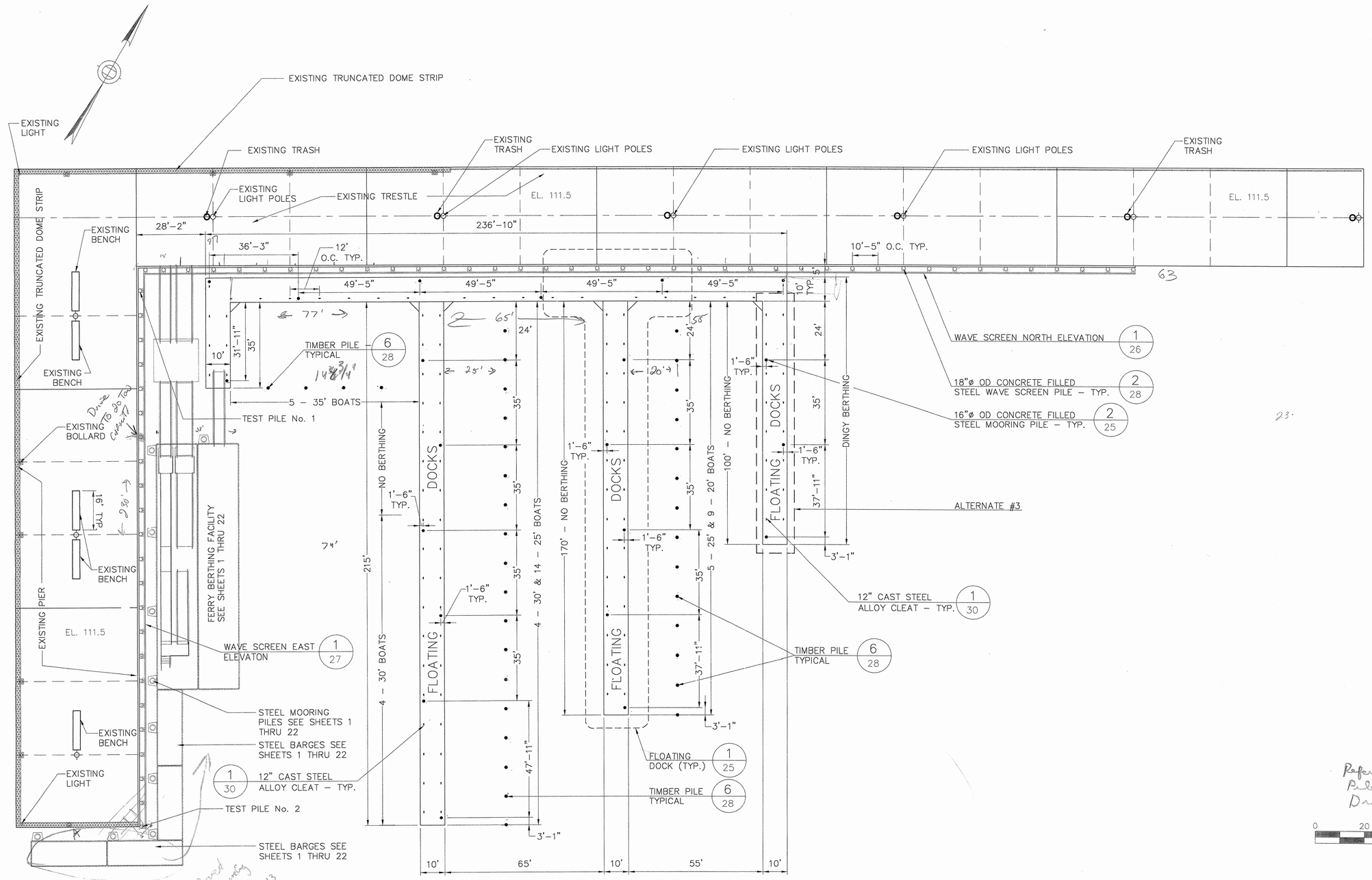


COMMONWEALTH OF MASSACHUSETTS
VAROUJAN Y. HAGOPIAN
CIVIL
40230
REGISTERED PROFESSIONAL ENGINEER

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

EXISTING CONDITIONS PLAN – OVERALL SITE PLAN

JULY 25, 2001	SHEET 23 OF 30
	CONTRACT NO. 3446



Reference CLE As-Built Pile + Float Plan Drawing # ASBUILT11102

0 20 50 100 FEET

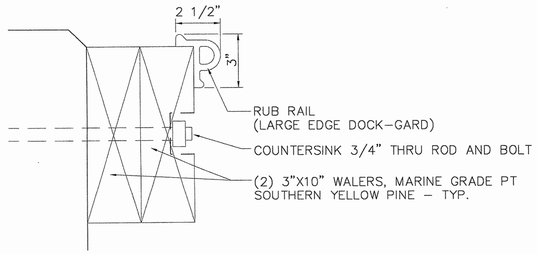
1" = 20'-0" HORIZONTAL

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

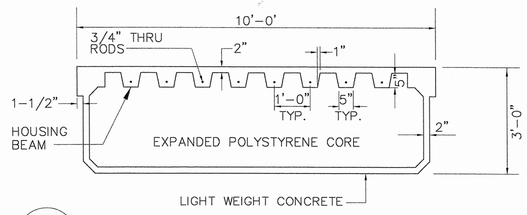
LAYOUT AND MATERIALS PLAN

JULY 25, 2001 | SHEET 24 OF 30

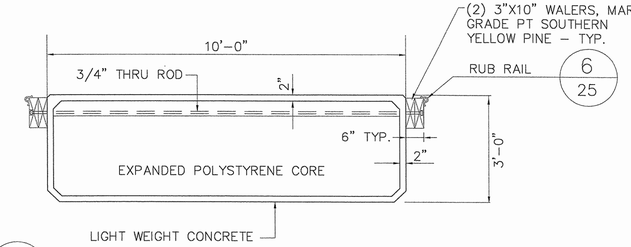
CONTRACT NO. 3446



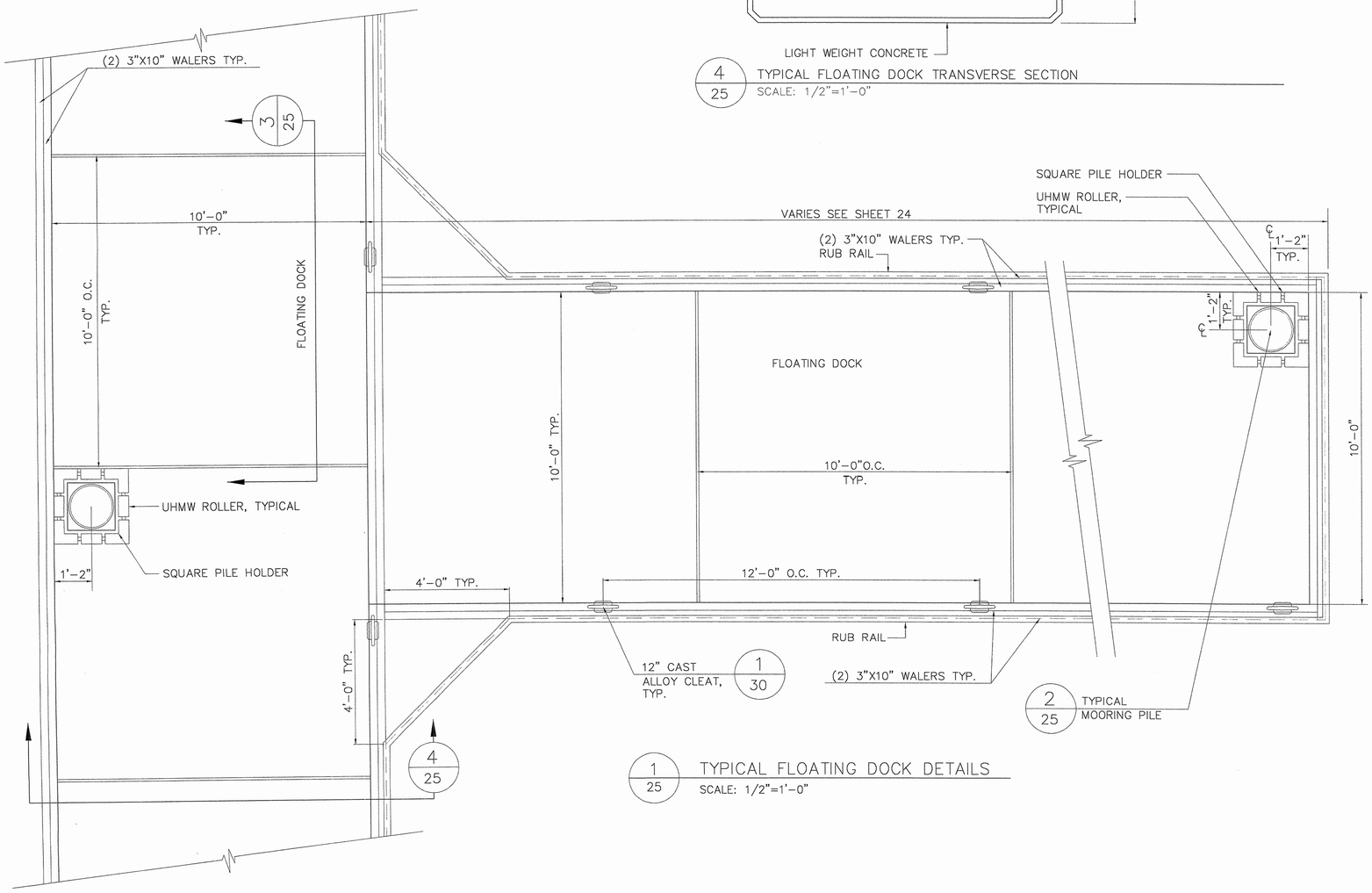
6/25 RUB RAIL - TYPICAL
SCALE: 3"=1'-0"



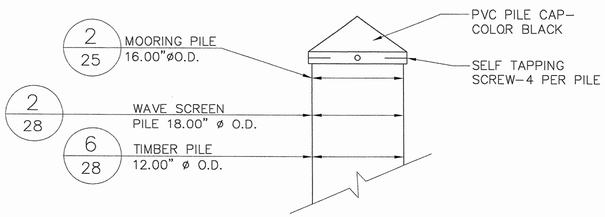
3/25 TYPICAL FLOATING DOCK LONGITUDINAL SECTION
SCALE: 1/2"=1'-0"



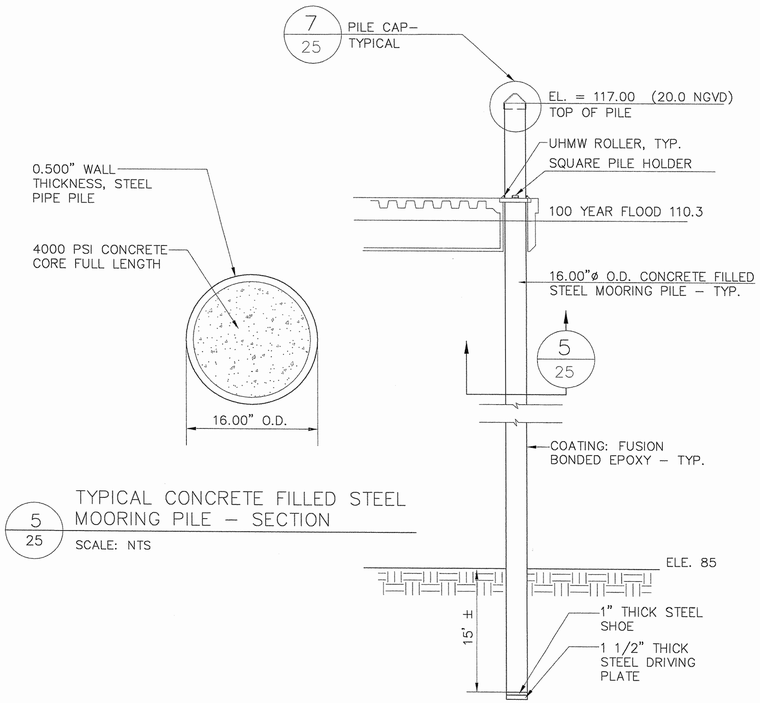
4/25 TYPICAL FLOATING DOCK TRANSVERSE SECTION
SCALE: 1/2"=1'-0"



1/25 TYPICAL FLOATING DOCK DETAILS
SCALE: 1/2"=1'-0"



7/25 PILE CAP - TYPICAL
SCALE: N.T.S.



5/25 TYPICAL CONCRETE FILLED STEEL MOORING PILE - SECTION
SCALE: NTS

2/25 TYPICAL CONCRETE FILLED STEEL MOORING PILE
SCALE: NTS

0 2 4 6 12
1/2" = 1'-0" HORIZONTAL
0 1 2
3" = 1'-0" HORIZONTAL

Reference Bellingham approved Shop Drawings

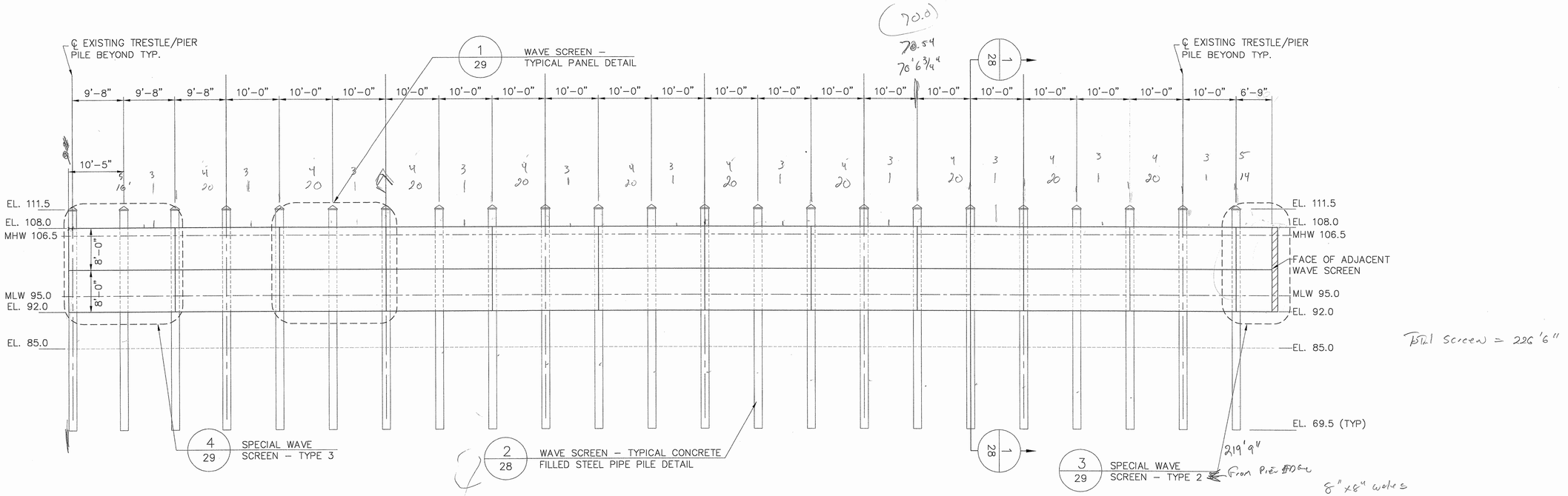
COMMONWEALTH OF MASSACHUSETTS
VAROUJAN Y. HAGOPIAN
CIVIL
40250
REGISTERED
PROFESSIONAL ENGINEER

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

MARINA DETAILS

JULY 25, 2001 | SHEET 25 OF 30

CONTRACT NO. 3446

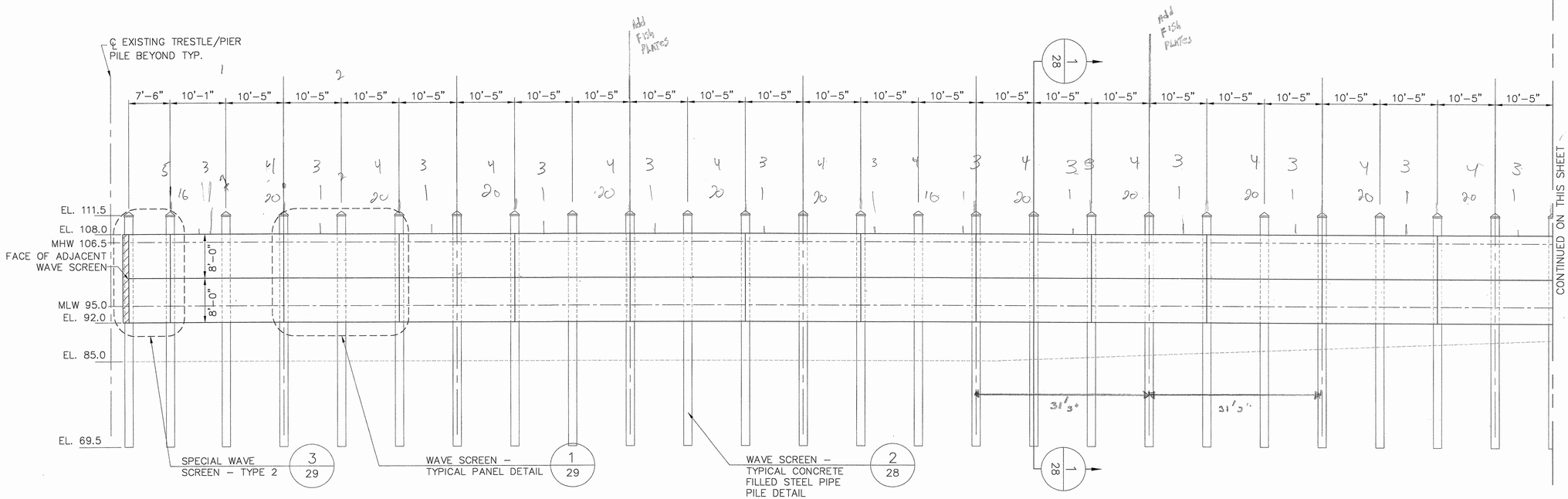


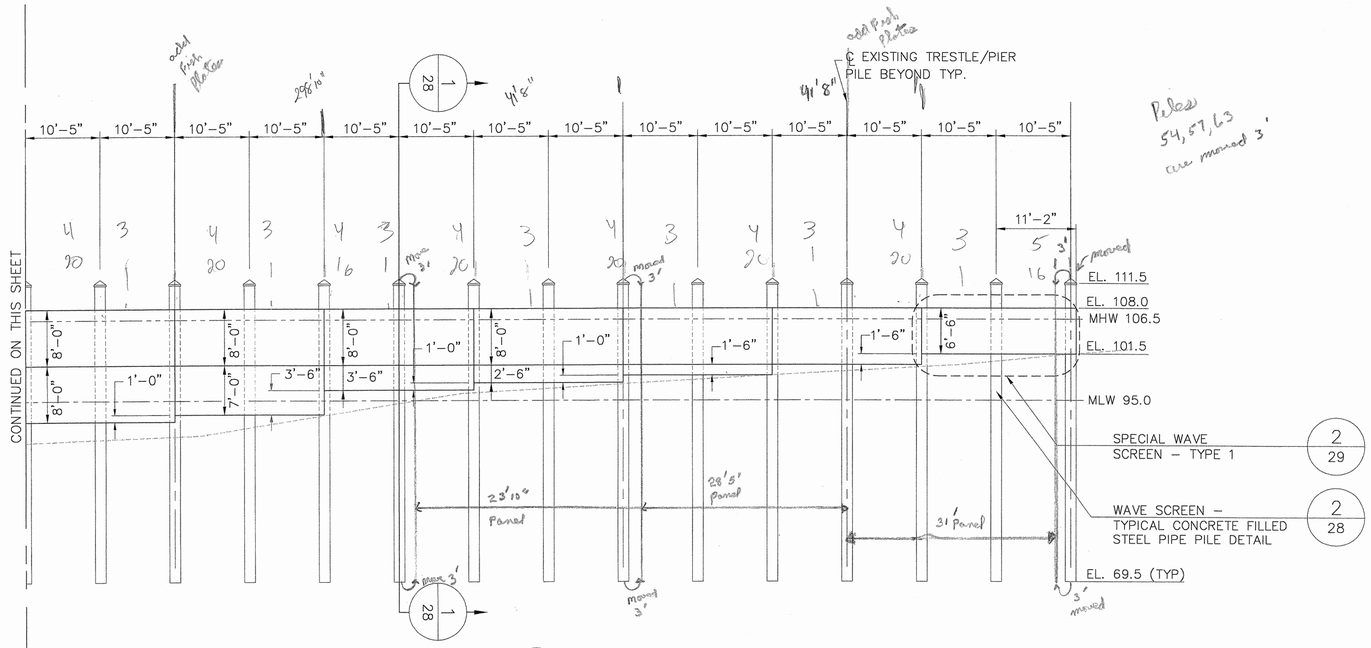
1/26 WAVE SCREEN NORTH ELEVATION
SCALE: 1" = 10'–0"

0 10 25 50 FEET

1" = 10'–0" HORIZONTAL

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND INCLUDING ADA ACCESS & WAVE SCREEN BOSTON HARBOR BOSTON, MASSACHUSETTS	
WAVE SCREEN SOUTH ELEVATION	
JULY 25, 2001	SHEET 26 OF 30
	CONTRACT NO. 3446





1/27 WAVE SCREEN EAST ELEVATION

SCALE: 1" = 10'-0"

0 10 25 50 FEET

1" = 10'-0" HORIZONTAL

Reference Superseded Steel Fabrication approved shop Drawings

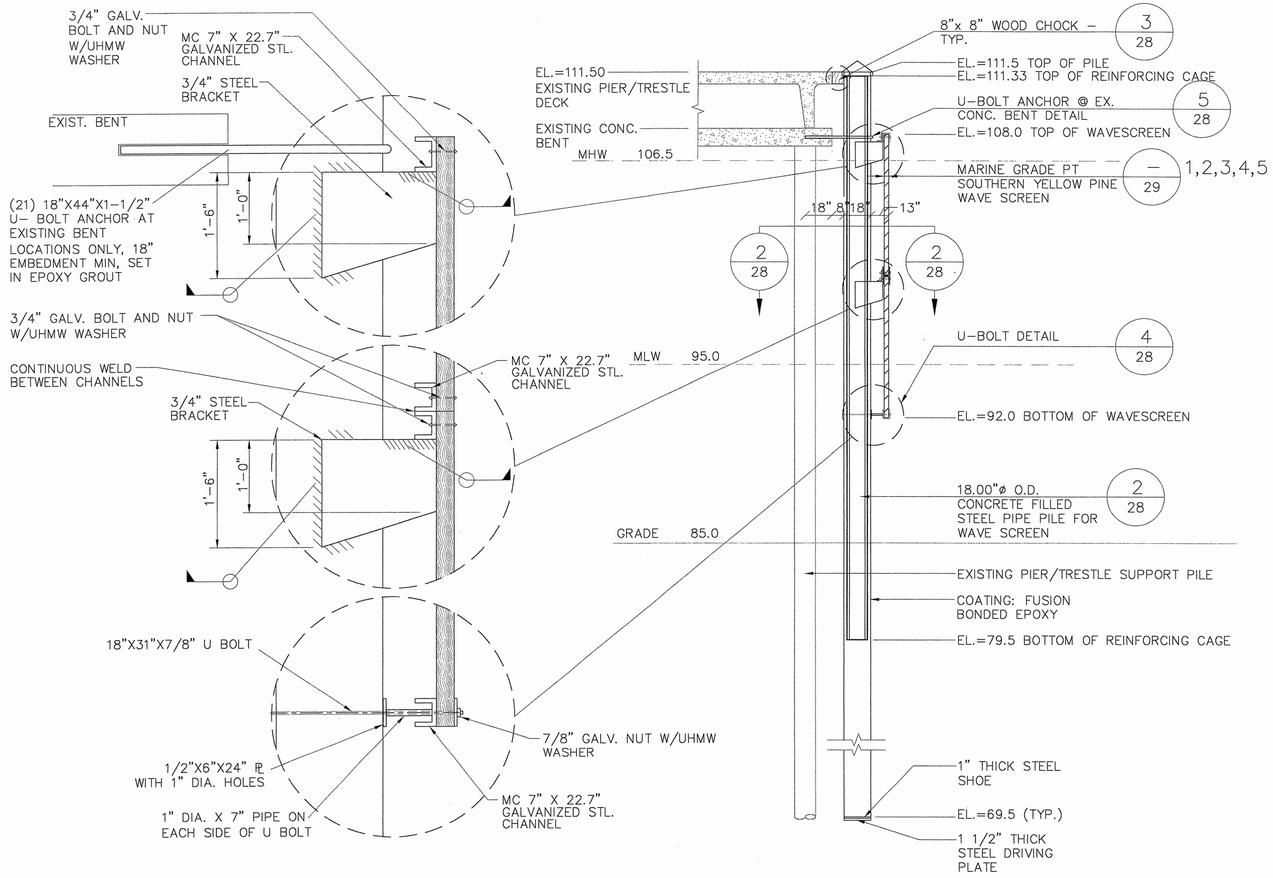
COMMONWEALTH OF MASSACHUSETTS
VAROUJAN Y. HAGOPIAN
CIVIL
40230
REGISTERED PROFESSIONAL ENGINEER

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

WAVE SCREEN WEST ELEVATION

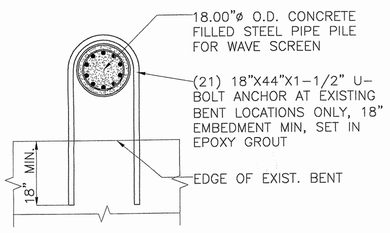
JULY 25, 2001 | SHEET 27 OF 30

CONTRACT NO. 3446



1/28 TYPICAL WAVE SCREEN DETAILS

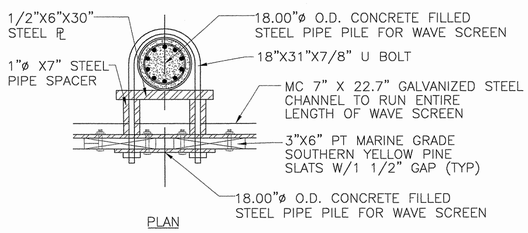
SCALE: 1/4"=1'-0



PLAN

5/28 PLAN OF U-BOLT ANCHOR @ EXIST BENT - TYP.

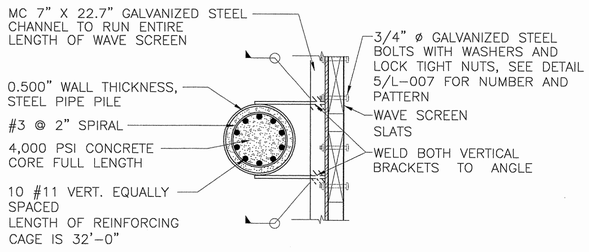
SCALE: 1/2"=1'-0"



PLAN

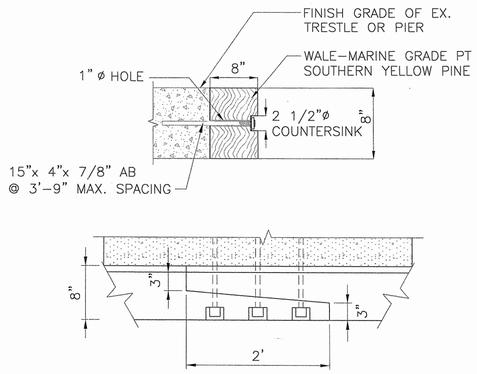
4/28 PLAN OF U-BOLT - TYP.

SCALE: 1/2"=1'-0"



2/28 STEEL PIPE PILE FOR WAVE SCREEN - TYP.

SCALE: 1/2"=1'-0"



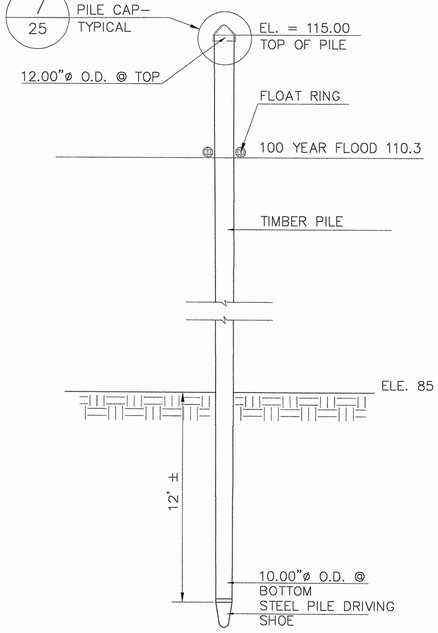
PLAN @ SPLICE

3/28 8"x8" WOOD CHOCK - TYP.

SCALE: N.T.S.

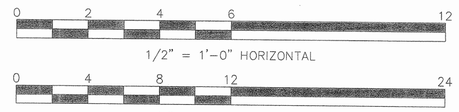
NOTE:

ALL WAVESCREEN HARDWARE, CHANNELS ANGLE IRON NUTS & BOLTS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION



6/28 TIMBER PILE - TYP.

SCALE: N.T.S.



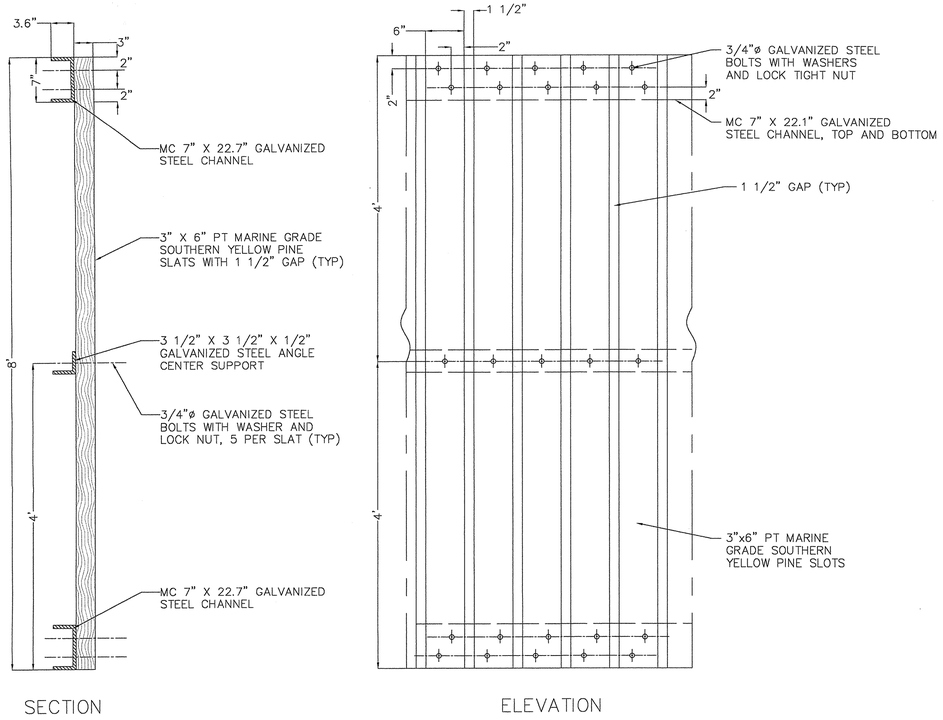
Reference Superior Steel Fabricating approved Shop Drawings

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

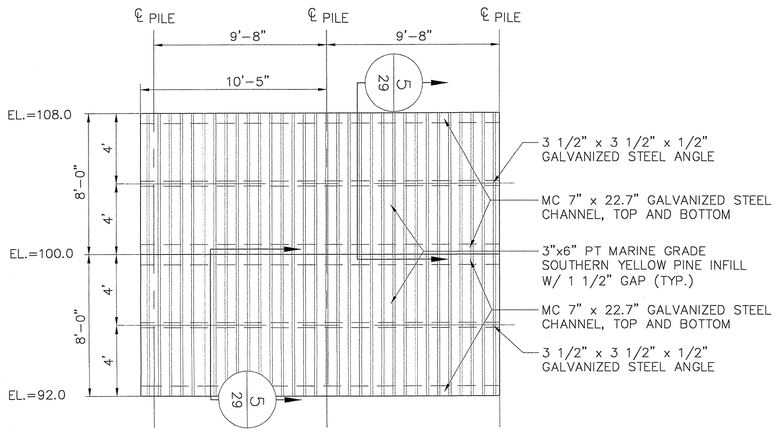
WAVE SCREEN DETAILS

JULY 25, 2001	SHEET 28 OF 30
	CONTRACT NO. 3446

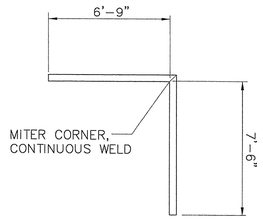
COMMONWEALTH OF MASSACHUSETTS
VAROUJAN Y. HAGOPIAN
CIVIL
40230
REGISTERED PROFESSIONAL ENGINEER

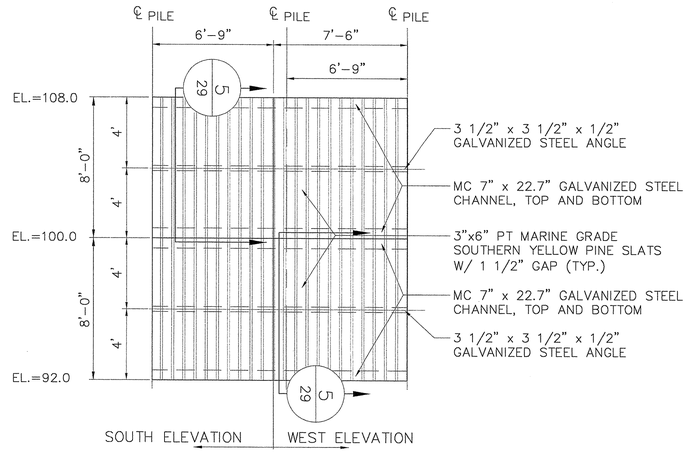


5/29 TYPICAL WAVE SCREEN – SECTION & ELEVATION
SCALE 1/4"=1'-0"

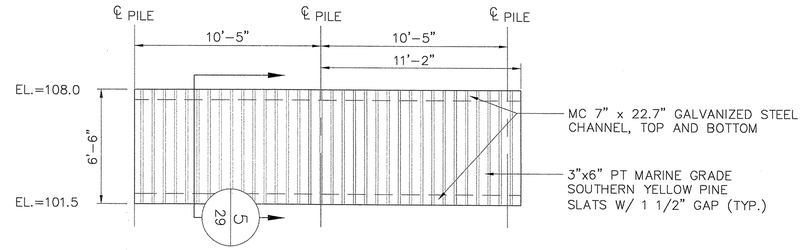


4/29 SPECIAL WAVE SCREEN PANEL TYPE 3
SCALE 1/4"=1'-0"

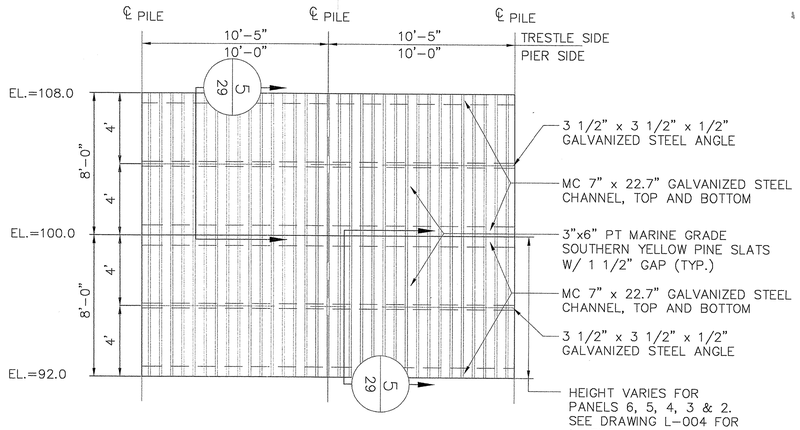




3/29 SPECIAL WAVE SCREEN PANEL TYPE 2
SCALE 1/4"=1'-0"

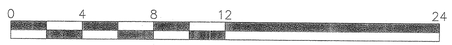


2/29 SPECIAL WAVE SCREEN PANEL TYPE 1
SCALE 1/4"=1'-0"



1/29 TYPICAL WAVE SCREEN PANEL TYPE 0
SCALE 1/4"=1'-0"

reference Superior Steel Fabrication approved Drawings



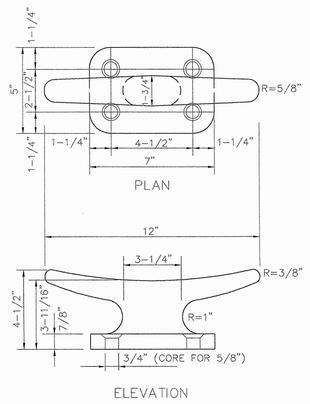
KAROLWAY Y. NAGORNIAK CIVIL 40220 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

WAVE SCREEN DETAILS

JULY 25, 2001 | SHEET 29 OF 30

CONTRACT NO. 3446



1/30 12" CAST STEEL ALLOY CLEAT – TYP.
SCALE 1"=1'-0"

Reference Mass Fabricators + Welding approved shop Drawings

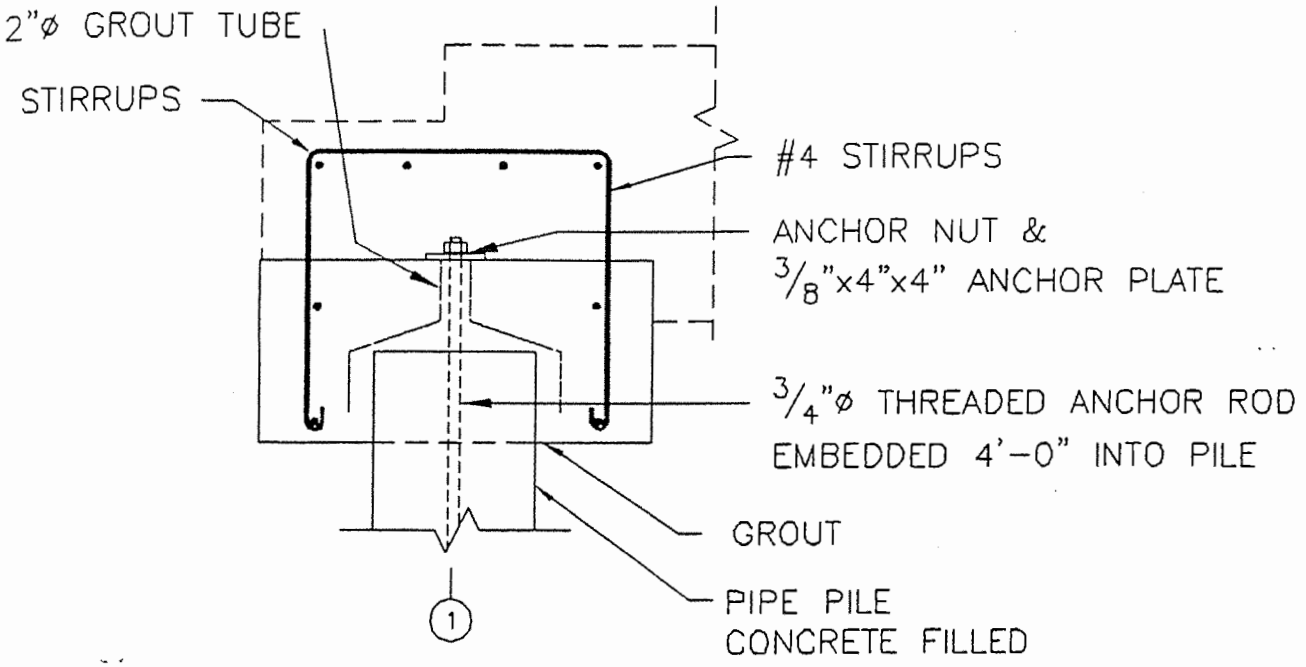
0 1 2 3 6
1" = 1'-0" HORIZONTAL

COMMONWEALTH OF MASSACHUSETTS
VAROUJAN Y. HAGOPIAN
CIVIL
40220
REGISTERED
PROFESSIONAL ENGINEER

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

WAVE SCREEN DETAILS

JULY 25, 2001	SHEET 30 OF 30
	CONTRACT NO. 3446



K/19

PILE ANCHOR DETAIL

SCALE: 1" = 1'-0"

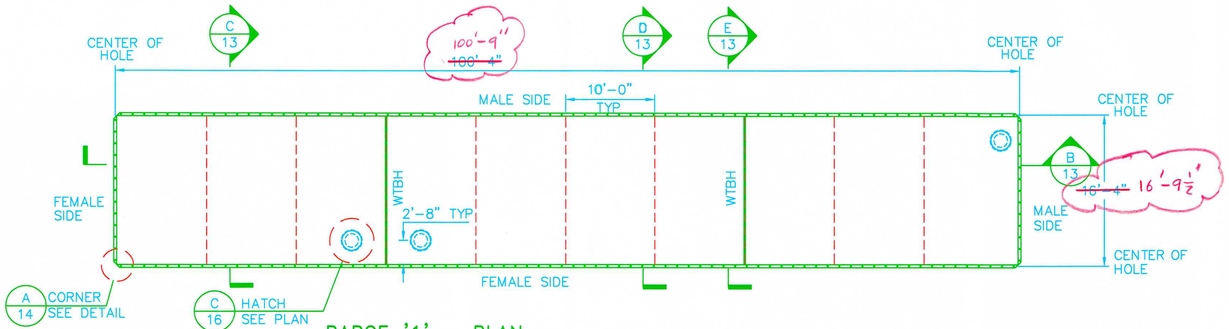
ADDENDUM 1

FERRY BERTHING FACILITY & MARINA
AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON, HARBOR
BOSTON, MASSACHUSETTS

REVISIONS	Bourne Consulting Engineering	
	DRAWN: DJK CHECKED: DRG APPROVED: DRG DATE: 8/7/01	998220-10 SK- 2

APPENDIX D

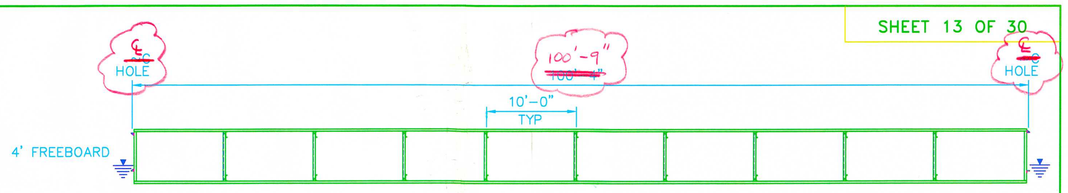
Spectacle Island 2001
Shop Drawings 3346



BARGE '1' – PLAN

A 13

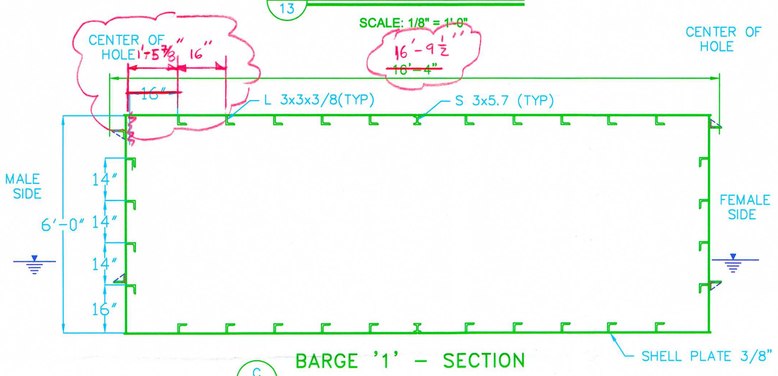
SCALE: 1/8" = 1'-0"



BARGE '1' – LONGITUDINAL SECTION

B 13

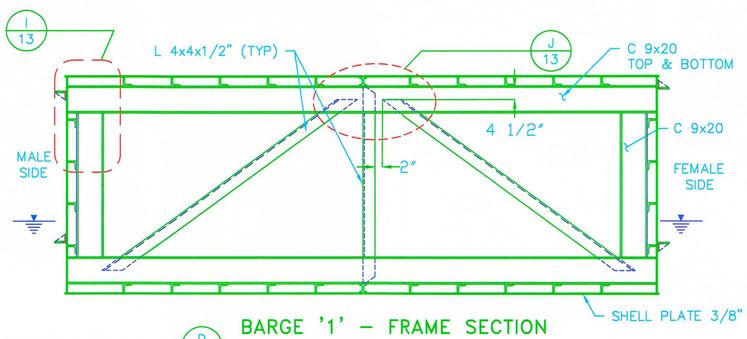
SCALE: 1/8" = 1'-0"



BARGE '1' – SECTION

C 13

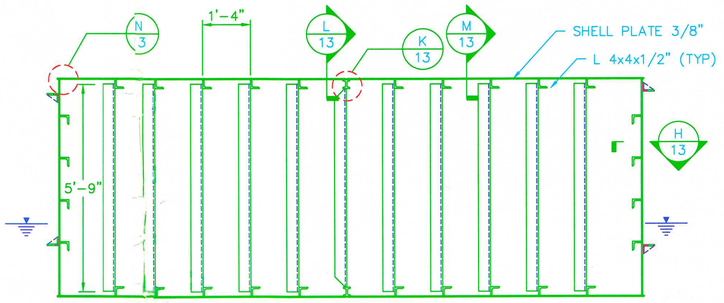
SCALE: 1/2" = 1'-0"



BARGE '1' – FRAME SECTION

D 13

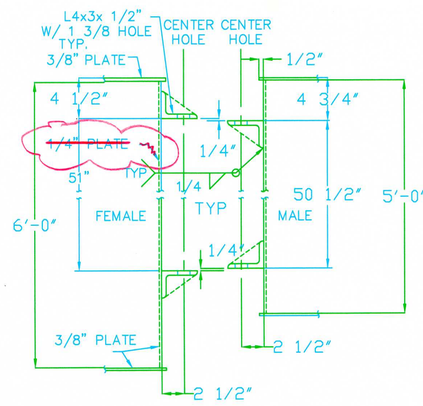
SCALE: 1/2" = 1'-0"

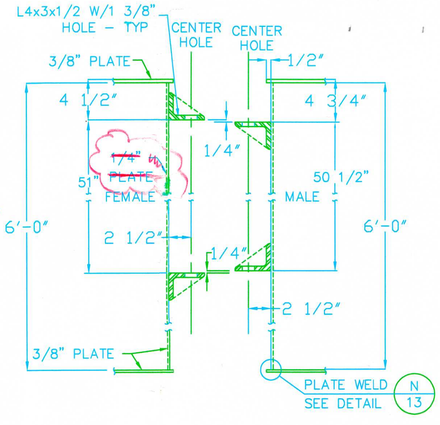


BARGE '1' – BULKHEAD & ENDS SECTIONS

13

SCALE: 1/2" = 1'-0"





BARGE CONNECTION – DETAIL

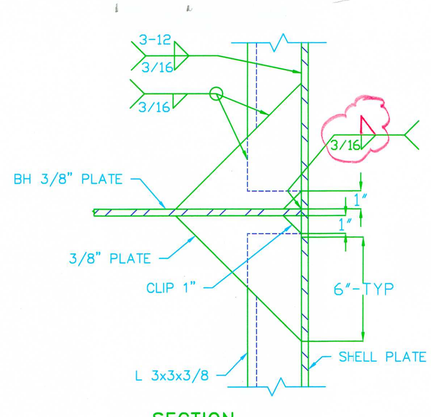
F 13

SCALE: 3" = 1'-0"

BARGE CONNECTION – DETAIL

G 13

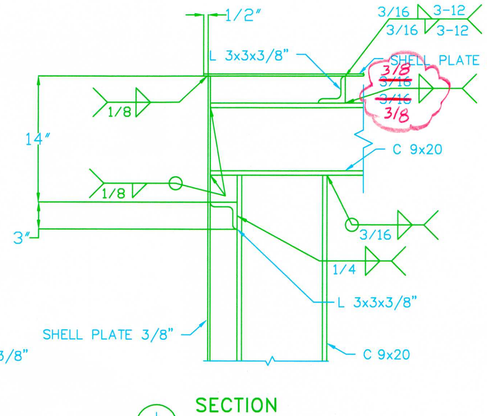
SCALE: 1 1/2" = 1'-0"



SECTION

H 13

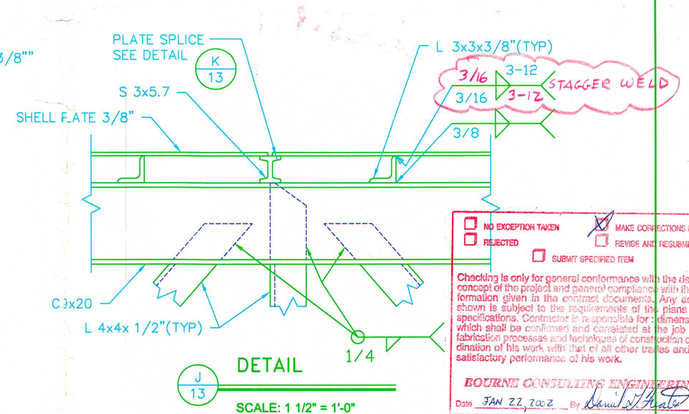
SCALE: 3" = 1'-0"



SECTION

I 13

SCALE: 1 1/2" = 1'-0"



DETAIL

J 13

SCALE: 1 1/2" = 1'-0"

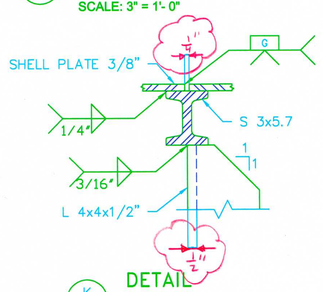
NO EXCEPTION TAKEN — MAKE CORRECTIONS NOTED
REJECTED — REVISE AND RESUBMIT — SUBMIT SPECIFIED ITEM

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for dimensions which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction coordination of his work with that of all other trades and the satisfactory performance of his work.

BOURNE CONSULTING ENGINEERING
Date JAN 22, 2002 By David S. Thate

C. WHITE MARINE INCORPORATED
Reviewed by: Gustafson
Date: 12-21-01

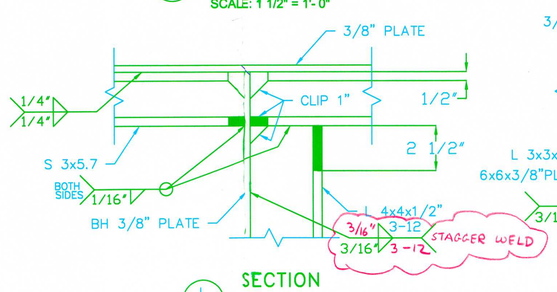
C. White Marine, Inc.
Project: DEM- Contract # 3446, Spectacle Island Ferry Berthing Facility
Submittal # 30



DETAIL

K 13

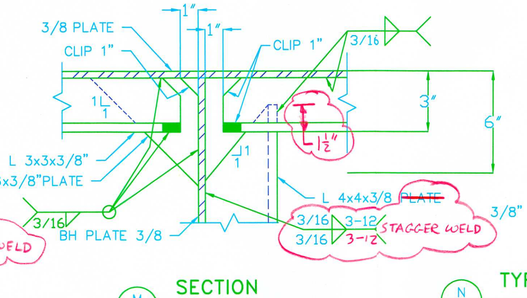
SCALE: 3" = 1'-0"



SECTION

L 13

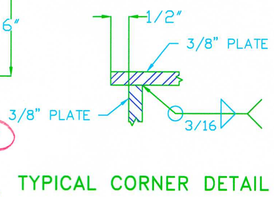
3" = 1'-0"



SECTION

M 13

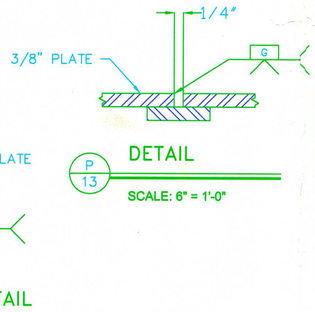
SCALE: 3" = 1'-0"



TYPICAL CORNER DETAIL

N 13

SCALE: 6" = 1'-0"



DETAIL

P 13

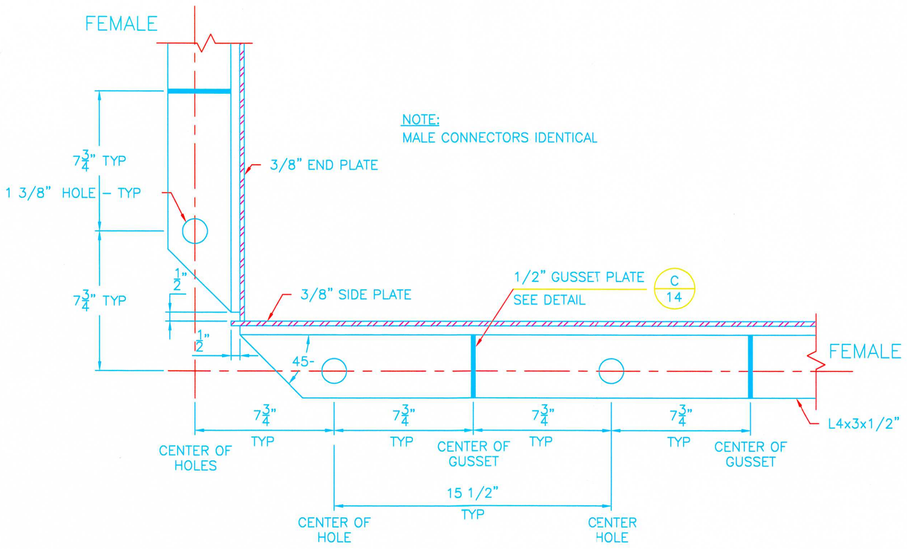
SCALE: 6" = 1'-0"

Mass Fabricating & Welding, Inc.
1-5 Cape Street New Bedford, Ma. 02740
Phone 508-993-9505 - Fax 508-993-1910

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

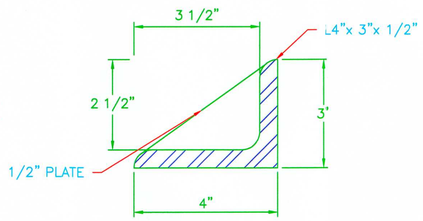
TITLE

DEC. 2, 2001	SHEET 13 OF 30
	CONTRACT NO. 3446



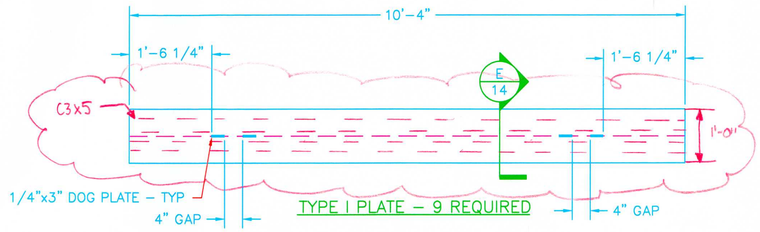
A 14 **OUTSIDE ANGLE – CORNER DETAIL**

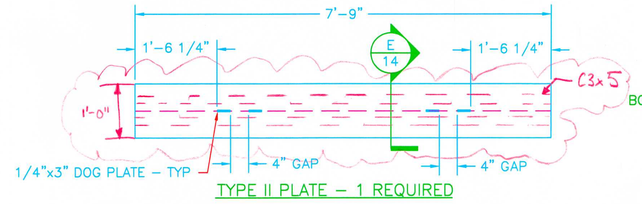
SCALE: 3" = 1' – 0"



C 14 **GUSSET DETAIL**

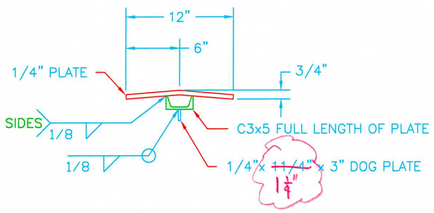
SCALE: NTS





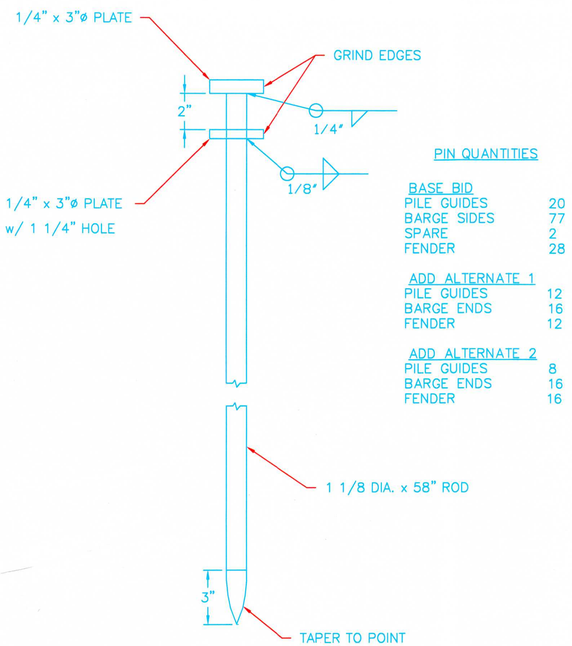
D 14 **COVER PLATES – LONGITUDINAL JOINT**

SCALE: 3/4" = 1'–0"



E 14 **COVER PLATE DETAIL**

SCALE: 1 1/2" = 1'–0"



PIN QUANTITIES

BASE BID	
PILE GUIDES	20
BARGE SIDES	77
SPARE	2
FENDER	28

ADD ALTERNATE 1	
PILE GUIDES	12
BARGE ENDS	16
FENDER	12

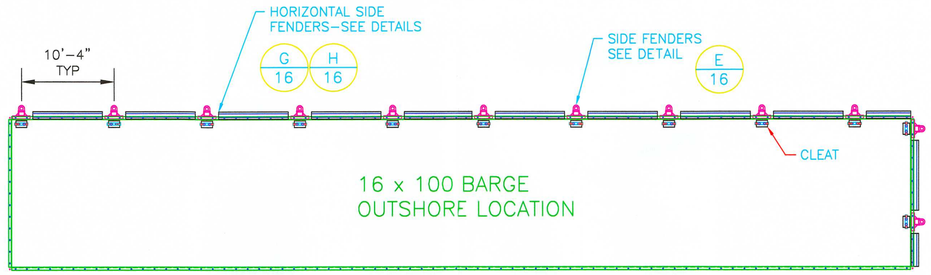
ADD ALTERNATE 2	
PILE GUIDES	8
BARGE ENDS	16
FENDER	16

B 14 **PIN DETAIL**

SCALE: 3" = 1'–0"

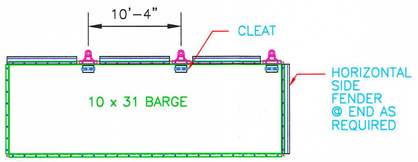
NOTE:

A TYPE I COVER PLATE SHALL BE SUPPLIED WITH EACH 10'x31' BARGE.



F 14 **BARGE–PLAN**

SCALE: 1/8" = 1'–0"

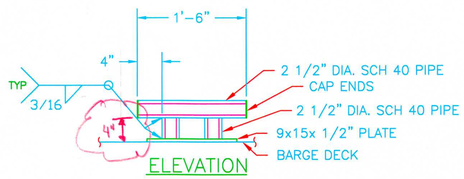


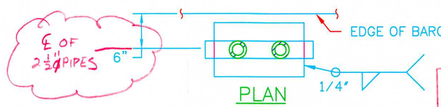
G 14 **BARGE–PLAN**

SCALE: 1/8" = 1'–0"

NOTE:

COST OF CLEATS AND FENDERS SHALL BE INCLUDED WITH BARGE UNIT COST.





H 14 **CLEAT – DETAIL**

SCALE: 1" = 1'–0"

NOTE:

INSTALL TACTILE WARNING STRIP AROUND CLEATS

NO EXCEPTION TAKEN ☒ MAKE CORRECTIONS NOTED
☐ REJECTED ☐ REVISE AND RESUBMIT
☐ SUBMIT SPECIFIED ITEM

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BOURNE CONSULTING ENGINEERING
Date Jan 22, 2002 By

C. WHITE MARINE INCORPORATED
Reviewed by:
Date: 12-21-01

C. White Marine, Inc.

Project: DEM- Contract # 3446, Spectacle Island Ferry Berthing Facility

Submittal # 30

Mass Fabricating & Welding, Inc.

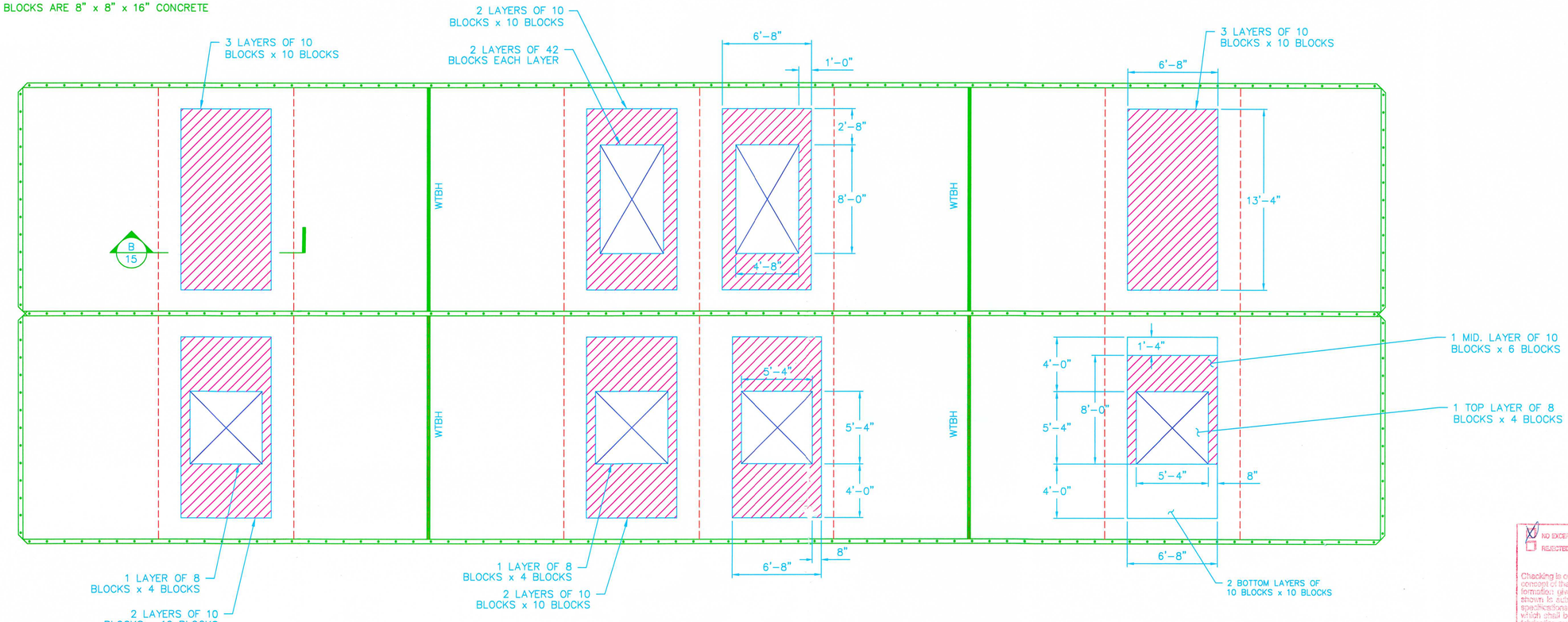
1-5 Cape Street New Bedford, Ma. 02740
Phone 508-993-9505 Fax 508-993-1910

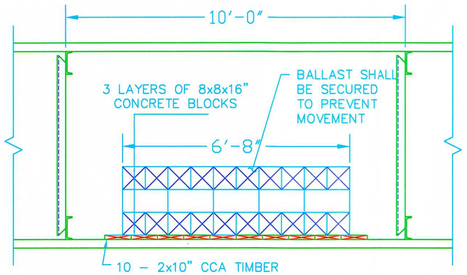
FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

TITLE

DEC. 2 ,2001	SHEET 14 OF 30
	CONTRACT NO. 3446

NOTE: BLOCKS ARE 8" x 8" x 16" CONCRETE



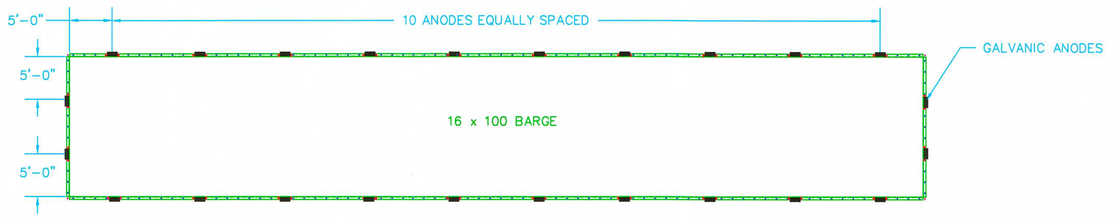


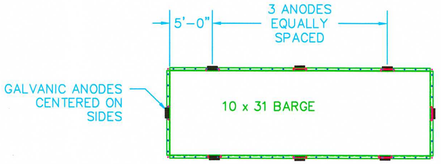
B 15 **TYPICAL SECTION**

SCALE: 1/2" = 1'-0"

A 15 **BALLAST PLAN**

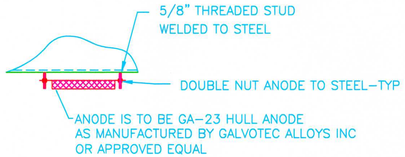
SCALE: 1/4" = 1'-0"





D 15 **BARGE–PLAN**

SCALE: 1/8" = 1'-0"



NOTE: ANODE TO BE INSTALLED HORIZONTALLY 6" ABOVE BOTTOM OF BARGE

E 15 **PLAN–CATHODIC PROTECTION–ANODE**

SCALE: 3/4"= 1'-0"

C 15 **BARGE–PLAN**

SCALE: 1/8" = 1'-0"

NO EXCEPTION TAKEN
MAKE CORRECTIONS NOTED
REJECTED
REVISE AND RESUBMIT
SUBMIT SPECIFIED ITEM

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BOURNE ENGINEERING
Date JAN 22, 2002 By

C. WHITE MARINE ENGINEERS
Reviewed by:
Date: 12-31-01

C. White Marine, Inc.

Project: DEM- Contract # 3446.
Spectacle Island
Ferry Berthing Facility

Submittal # 30

Mass Fabricating & Welding, Inc.
1-5 Cape Street New Bedford, Ma. 02740
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FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
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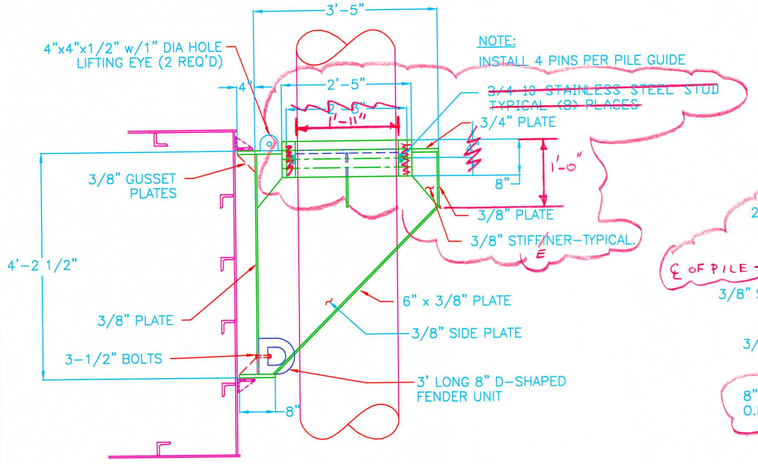
BOSTON HARBOR
BOSTON, MASSACHUSETTS

TITLE

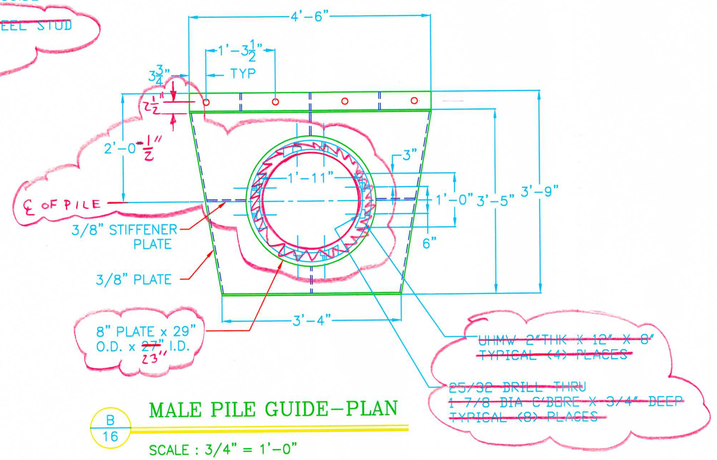
DEC 8, 2001 | SHEET 15 OF 30

CONTRACT NO. 3446



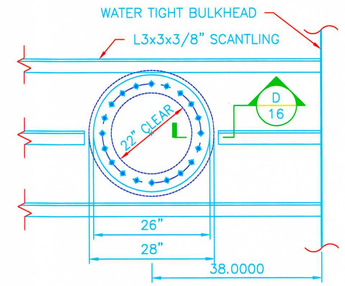
A 16 MALE PILE GUIDE–SECTION

SCALE : 3/4" = 1'-0"



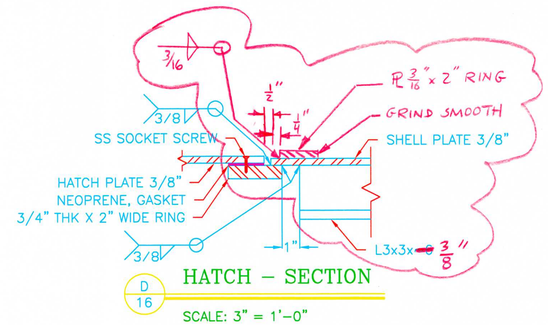
B 16 MALE PILE GUIDE–PLAN

SCALE : 3/4" = 1'-0"



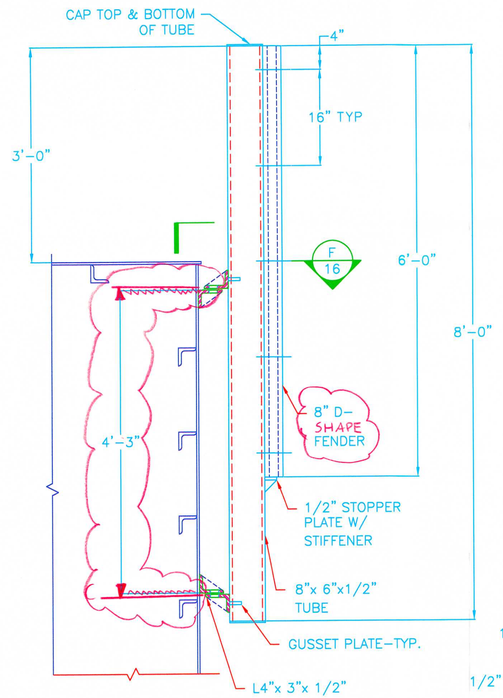
C 16 HATCH – PLAN

SCALE: 3/4" = 1'-0"



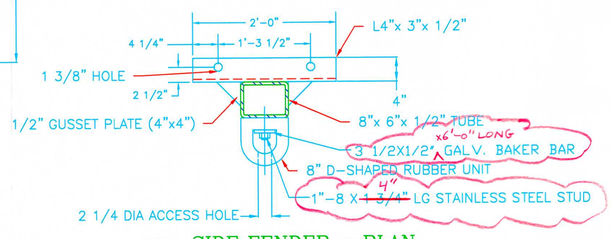
D 16 HATCH – SECTION

SCALE: 3" = 1'-0"



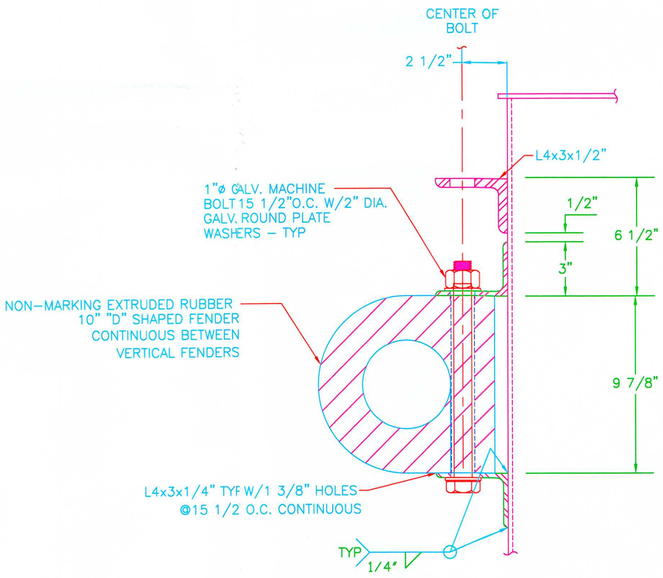
E 16 SIDE FENDER

SCALE: 1" = 1'-0"



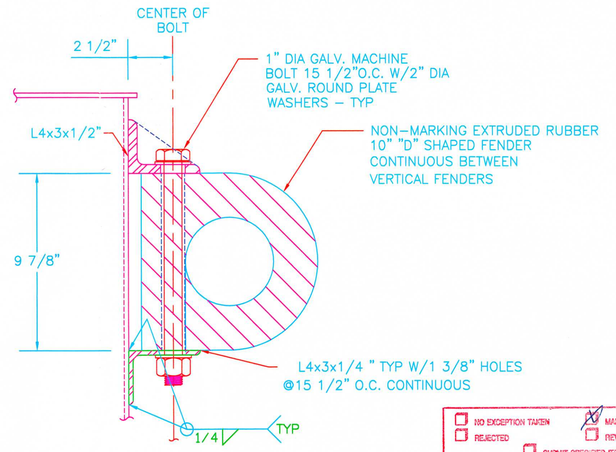
F 16 SIDE FENDER – PLAN

SCALE: 1" = 1'-0"



G 13 HORIZONTAL FENDER – MALE SIDE

SCALE: 3" = 1'- 0"



H 16 HORIZONTAL FENDER – FEMALE SIDE

SCALE: 3" = 1'- 0"

NOTES:
- HOLES FOR BOLTS SHALL MATCH BARGE CONNECTION ANGLE HOLES
- HORIZONTAL FENDER SHALL BE INSTALLED ON ALL EXTERIOR FACES
- FENDER SHALL BE CONTINUOUS BETWEEN VERTICAL FENDERS

C. WHITE MARINE INCORPORATED Reviewed by: Date: 12-21-01

C. White Marine, Inc.

Project: DEM- Contract # 3446. Spectacle Island Ferry Berthing Facility

Submittal # 30

NO EXCEPTION TAKEN / MAKE CORRECTIONS NOTED / REJECTED / REVISE AND RESUBMIT / SUBMIT SPECIFIED ITEM

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BOURNE C. A. TUTTLE ENGINEERING

Date JAN 22, 2002 By

Mass Fabricating & Welding, Inc.

1-5 Cape Street New Bedford, Ma 02740

Phone 508-993-9505 Fax 508-993-1910

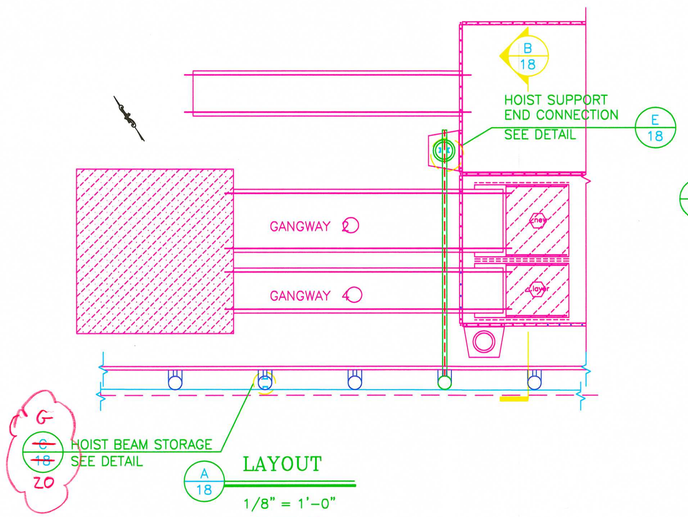
FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

TITLE

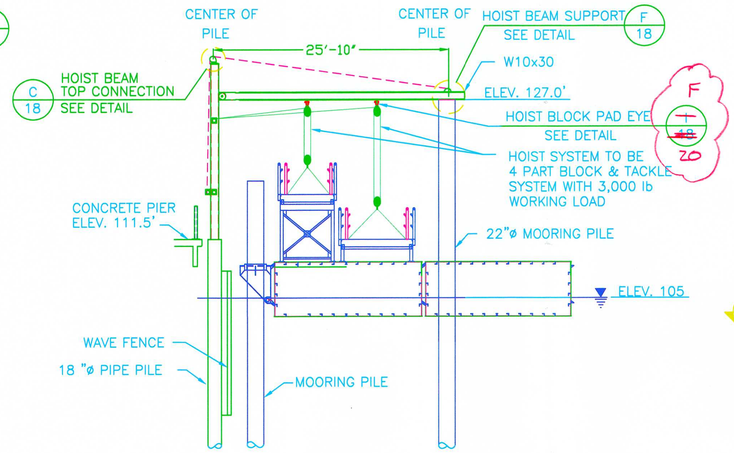
JULY 20, 2001 | SHEET 16 OF 30

CONTRACT NO. 3446

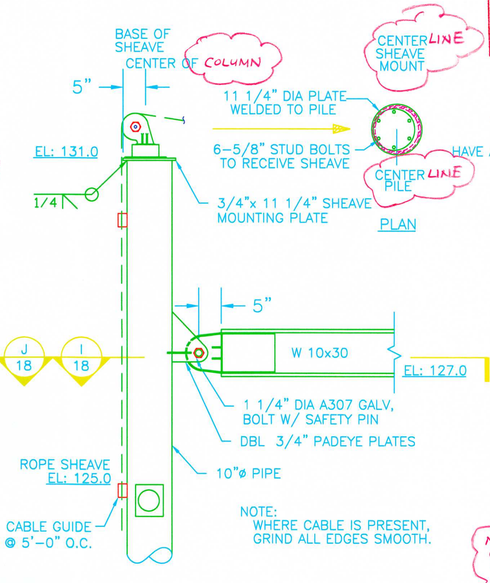
NO EXCEPTION TAKEN
MAKE CORRECTIONS NOTED
REJECTED
REVISE AND RESUBMIT
SUBMIT SPECIFIED ITEM
Checking is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the requirements of the plans and specifications. Contractor is responsible for: dimensions which shall be confirmed and correlated at the job site; fabrication processes and techniques of construction coordination of his work with that of all other trades and the satisfactory performance of his work.
BOURNE CONSULTING ENGINEERING
Date JAN 22, 2002 By OF UHMW-PE AS SHOWN



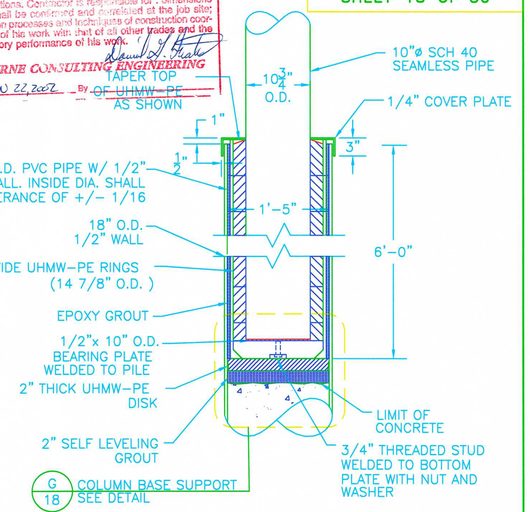
LAYOUT
A 18
1/8" = 1'-0"



SECTION
B 18
SCALE: 1/8" = 1'-0"

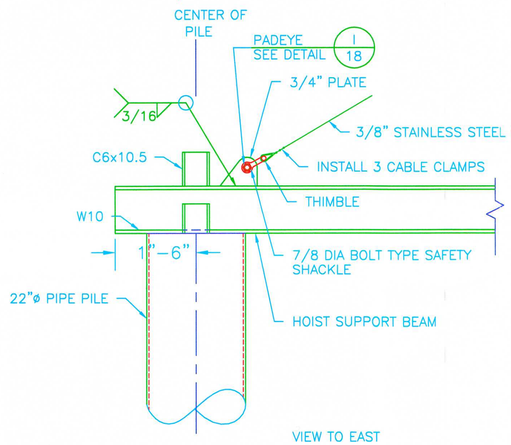


HOIST BEAM TOP CONNECTION
C 18
SCALE: 3/4" = 1'-0"

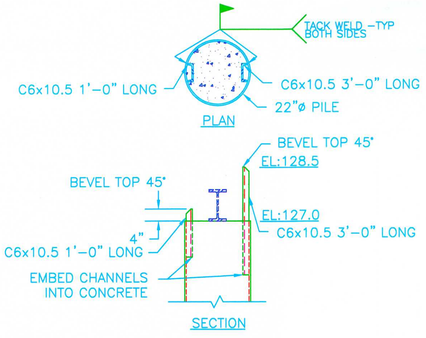


SUPPORT SLEEVE DETAIL
D 18
SCALE: 3/4" = 1'-0"

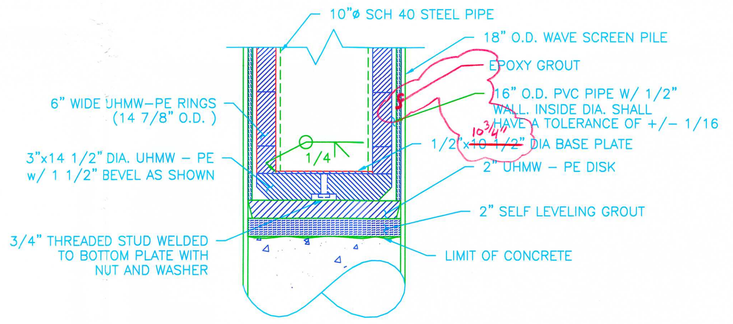
NOTE: CONTRACTOR TO SUBMIT ALL HARDWARE AND OTHER ITEMS RELATED TO GANGWAY HOIST LIFT SYSTEM. DRAWING APPROVED AS NOTED PENDING THESE SUBMISSIONS.



HOIST SUPPORT – END CONNECTION
E 18
SCALE: 3/4" = 1'-0"



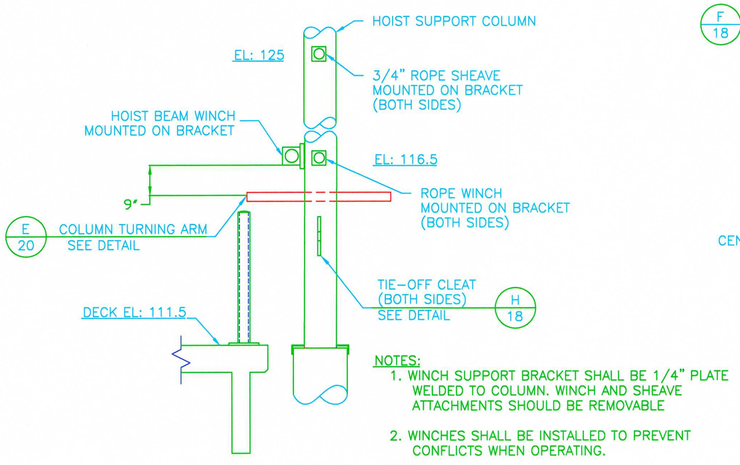
HOIST BEAM SUPPORT
F 18
SCALE: 1/2" = 1'-0"



COLUMN BASE SUPPORT
G 18
SCALE: 1 1/2" = 1'-0"

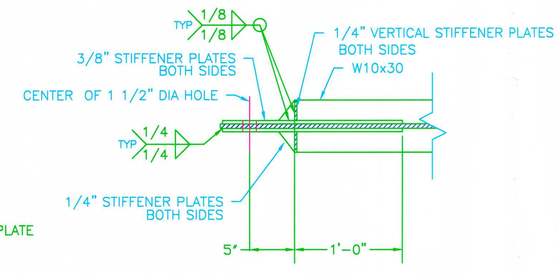
C. WHITE MARINE INCORPORATED
Reviewed by:
Date: 12-7-01

C. White Marine, Inc.
Project: DEM- Contract # 3446.
Spectacle Island
Ferry Berthing Facility
Submittal # 62B shop drawings

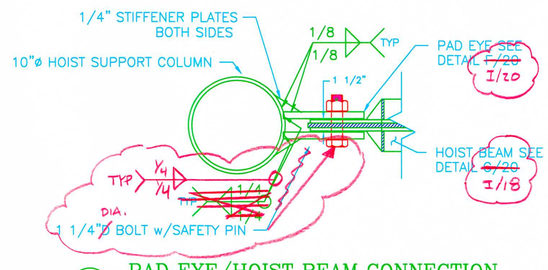


NOTES:
1. WINCH SUPPORT BRACKET SHALL BE 1/4" PLATE WELDED TO COLUMN. WINCH AND SHEAVE ATTACHMENTS SHOULD BE REMOVABLE
2. WINCHES SHALL BE INSTALLED TO PREVENT CONFLICTS WHEN OPERATING.

SUPPORT SLEEVE DETAIL
H 18
SCALE: 1/2" = 1'-0"



HOIST BEAM END DETAIL
I 18
SCALE: 1 1/2" = 1'-0"



PAD EYE/HOIST BEAM CONNECTION
J 18
SCALE: 1 1/2" = 1'-0"

Material Notes

Pipe shall be Schedule 40 steel pipe conforming to ASTM A-53 Grade B or ASTM A-501.

Structural shapes and plate shall conform to ASTM A-36.

Bolts shall conform to ASTM A-307.

UHMW-PE shall be shall be made of 2-1/2% UV-stabilized, UHMW polyethylene, having UV-stabilized dyes, conforming to the following specifications:

Property	Test	Acceptance Requirement
Tensile Strength	ASTM D638	Yield 3000 psi min. Ultimate 5000 psi min.
Izod Impact (double notch)	ASTM D256A	18 ft-lbs./in. min.
Abrasion Resistance	Tabor weight loss	18 max.
Coeff. of Friction	ASTM D1894	0.20 max.

Shackles shall be safety bolt type and meet the following safe working load requirements:
1/2" 2 tons
3/4" 4.75 tons
1" 8.5 tons

Hoist beam winch shall have a working load capacity of 4,000 pounds with self locking feature. Cable winch shall be designed for the marine environment and have a removable or independent locking feature to prevent unauthorized use. Winch shall be attached to a bracket on the hoist support column to allow for removal for repair or replacement.

Cable for beam winch shall be 3/8" Stainless Steel with an ultimate capacity of 17,500 pounds.

Hoist Support column sheave shall be a flange mounted, single sheave unbalanced head fairlead Model No. UF 50-6 as manufactured by Skookum or equivalent. Sheave base shall be secured from pivoting.

Gangway lifting straps shall be woven nylon with a safe lifting capacity of 3,000 pounds with hook ring for Blocking hook.

Blocking for gangway lifts shall be as required for a 5 part reeving and have a safe working capacity of 3000 pounds and designed for the marine environment. Blocking shall have swivel hook with latch.

Blocking line shall be a minimum 3/4 inch line with a safe working capacity of 1000 pounds and be UV stabilized polypropylene rope.

Connecting links shall have a capacity equivalent or greater than the chain/shackle they are attaching.

Rope winch shall be a two speed marine grade winch with a safe working capacity of 1000 pounds and have a power ratio of 40:1. Winches shall be removable and independently attached to brackets welded to the hoist support column. Winch handles shall be removable 10" anodized aluminum with free-running nylon handles and drums shall be constructed of black anodized aluminum.

Wave fence column support pile shall be driven to a working load capacity of 20 tons.

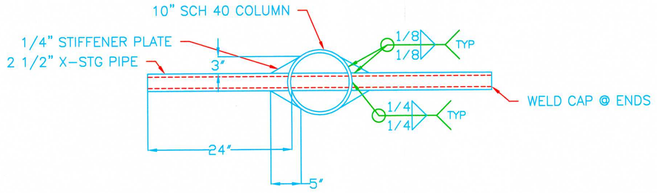
Hoist beam column shall be installed to rotate without binding.

Mass Fabricating & Welding, Inc
1-5 Cape Street New Bedford, Ma 02740
Phone 508-993-9505 Fax 508-993-1910

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
INCLUDING ADA ACCESS & WAVE SCREEN
BOSTON HARBOR
BOSTON, MASSACHUSETTS

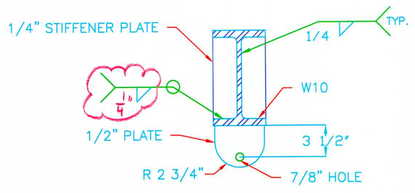
TITLE

DEC 3, 2001	SHEET 18 OF 30
	CONTRACT NO. 3446



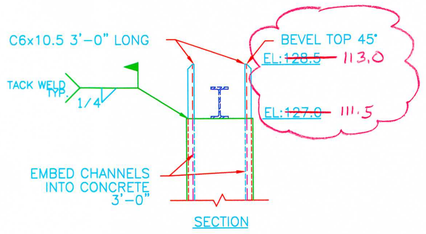
E/20 COLUMN TURNING ARM

SCALE: 1" = 1'-0"



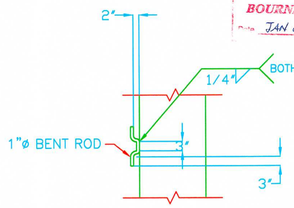
F/20 HOIST BLOCK PAD EYE

SCALE: 1 1/2" = 1'-0"



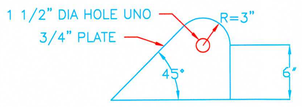
G/20 HOIST BEAM STORAGE SUPPORT

SCALE: 1/2" = 1'-0"



H/20 HOIST LINE CLEAT

SCALE: 1/2" = 1'-0"



I/20 PAD EYE DETAIL

SCALE: 1 1/2" = 1'-0"

NO EXCEPTION TAKEN
MAKE CORRECTIONS NOTED
REJECTED
REVISE AND RESUBMIT
SUBMIT SPECIFIED ITEM

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BOURNE CONSULTING ENGINEERING
Date JAN 22, 2002 By

C. WHITE MARINE INCORPORATED
Reviewed by:
Date: 12-21-01

C. White Marine, Inc.

Project: DEM- Contract # 3446.
Spectacle Island
Ferry Berthing Facility
Submittal # 62B shop drawings

Mass Fabricating & Welding, Inc
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Phone 508-993-9505 Fax 508-993-1910

FERRY BERTHING FACILITY & MARINA AT SPECTACLE ISLAND
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BOSTON HARBOR
BOSTON, MASSACHUSETTS

TITLE

DEC 3, 2001 | SHEET 20 OF 30

CONTRACT NO. 3446