RM

COMMONWEALTH OF MASSACHUSETTS

CONTRACT DOCUMENTS AND SPECIAL PROVISIONS

PROPOSAL NO.	613163-135786
P.V. =	$4,894,000.00
PLANS	YES

FOR

Federal Aid Project No. STP-0034(033)X
Rail Trail Construction, from Ford Avenue to the Peabody City Line

in the Town of

LYNNFIELD

In accordance with the STANDARD SPECIFICATIONS
for HIGHWAYS and BRIDGES dated 2026

This Proposal to be opened and read: **TUESDAY, AUGUST 25, 2026 at 2:00 P.M.**

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DOCUMENT 00010

TABLE OF CONTENTS

DOCUMENT 00010
TABLE OF CONTENTS ..... 00010-1 through 4

DOCUMENT 00104
NOTICE TO CONTRACTORS ..... 00104- 1 through 4

DOCUMENT 00210
REQUIREMENTS OF MASSACHUSETTS GENERAL
LAWS CHAPTER 30 SECTION 39R; CHAPTER 30, SECTION 39O ..... 00210-1 through 4

DOCUMENT 00331
LOCUS MAP ..... 00331-1 through 2

DOCUMENT 00439
CONTRACTOR PROJECT EVALUATION FORM ..... 00439-1 through 2

DOCUMENT 00440
SUBCONTRACTOR PROJECT EVALUATION FORM ..... 00440-1 through 2

DOCUMENT 00710
GENERAL CONTRACT PROVISIONS ..... 00710-1 through 2

DOCUMENT 00715
SUPPLEMENTAL SPECIFICATIONS ..... 00715-1 through 20

DOCUMENT 00760
REQUIRED CONTRACT PROVISIONS FOR FEDERAL-AID
CONSTRUCTION CONTRACTS ..... 00760-1 through 12

DOCUMENT 00811
MONTHLY PRICE ADJUSTMENT FOR HOT MIX ASPHALT
(HMA) MIXTURES ..... 00811-1 through 2

DOCUMENT 00812
MONTHLY PRICE ADJUSTMENT FOR DIESEL FUEL AND GASOLINE ..... 00812-1 through 2

DOCUMENT 00813
PRICE ADJUSTMENT FOR STRUCTURAL STEEL
AND REINFORCING STEEL ..... 00813-1 through 4

DOCUMENT 00814
PRICE ADJUSTMENT FOR PORTLAND CEMENT CONCRETE MIXES ..... 00814-1 through 2

DOCUMENT 00820
THE COMMONWEALTH OF MASSACHUSETTS
SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY,
NON-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM ..... 00820-1 through 6

DOCUMENT 00821
ELECTRONIC REPORTING REQUIREMENTS
CIVIL RIGHTS PROGRAM AND CERTIFIED PAYROLL ..... 00821-1 through 2

DOCUMENT 00859
CONTRACTOR/SUBCONTRACTOR CERTIFICATION FORM ..... 00859-1 through 2

TABLE OF CONTENTS (Continued)

DOCUMENT 00860
COMMONWEALTH OF MASSACHUSETTS PUBLIC EMPLOYMENT LAWS ..... 00860-1 through 2

DOCUMENT 00861
STATE PREVAILING WAGE RATES ..... 00861-1 through 34

DOCUMENT 00870
STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY
CONSTRUCTION CONTRACT SPECIFICATIONS ..... 00870-1 through 8

DOCUMENT 00880
MINIMUM WAGES FOR FEDERAL AND FEDERALLY
ASSISTED CONTRACTS ..... 00880-1 through 8

DOCUMENT A00801
SPECIAL PROVISIONS ..... A00801-1 through 116

DOCUMENT A00802
DETAIL SHEETS ..... A00802-1 through 10

DOCUMENT A00805
MBTA RAILROAD OPERATIONS DIRECTORATE ..... A00805-1 through 134

DOCUMENT A00806
MBTA SAFETY SPECIFICATIONS ..... A00806-1 through 14

DOCUMENT A00807
MBTA SPECIAL INSTRUCTIONS ..... A00807-1 through 16

DOCUMENT A00812
MBTA FLAGGING REQUEST FORM ..... A00812-1 through 4

DOCUMENT A00813
LEASE AGREEMENT BETWEEN MBTA AND TOWN OF LYNNFIELD ..... A00813-1 through 44

DOCUMENT A00820
REQUEST FOR RELEASE OF MASSDOT AUTOCAD FILES FORM ..... A00820-1 through 2

DOCUMENT A00830
ARMY CORPS OF ENGINEERS
SELF-VERIFICATION NOTIFICATION ..... A00830-1 through 82

DOCUMENT A00831
ARMY CORPS OF ENGINEERS
GENERAL PERMIT ..... A00831-1 through 134

DOCUMENT A00855
UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
CONCURRENCE VERIFICATION LETTER ..... A00855-1 through 18

DOCUMENT A00856
NORTHERN LONG-EARED BAT (NLEB)
PRESENCE/ABSENCE SURVEY ..... A00856-1 through 44

TABLE OF CONTENTS (Continued)

DOCUMENT A00860
MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
NOTICE OF INTENT ..... A00860-1 through 126

DOCUMENT A00861
MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
ORDER OF CONDITIONS ..... A00861-1 through 24

DOCUMENT A00870
TOWN OF LYNNFIELD
LANDSCAPE MAINTENANCE AGREEMENT ..... A00870-1 through 8

DOCUMENT A00875
POLICY DIRECTIVE P-22-001 AND POLICY DIRECTIVE P-22-002 ..... A00875-1 through 8

DOCUMENT B00420
PROPOSAL.....B00420-1 through 16

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DOCUMENT 00104

NOTICE TO CONTRACTORS

Electronic proposals for the following project will be received through the internet using www.bidx.com until the date and time stated below and will be posted on www.bidx.com forthwith after the bid submission deadline. No paper copies of bids will be accepted. All Bidders must have a valid vendor code issued by MassDOT in order to bid on projects. Bidders need to apply for a Digital ID at least 14 days prior to a scheduled bid opening date with www.bidx.com.

TUESDAY, AUGUST 25, 2026 at 2:00 P.M. **
LYNNFIELD
Federal Aid Project No. STP-0034(033)X
Rail Trail Construction, from Ford Avenue to the Peabody City Line
****Date Subject to Change**

PROJECT VALUE = $4,894,000.00

Bidders must be pre-qualified by the Department in the HIGHWAY - BIKE PATHS category to bid on the above project. An award will not be made to a Contractor who is not pre-qualified by the Department prior to the opening of Proposals.

All prospective Bidders who intend to bid on this project must obtain "Request Proposal Form (R109)". The blank "Request Proposal Form (R109)" can be obtained at: https://www.mass.gov/prequalification-of-horizontal-construction-firms.

All prospective Bidders must complete and e-mail an electronic copy of "Request Proposal Form (R109)" to the MassDOT Director of Prequalification for approval: prequal.r109@dot.state.ma.us.

Proposal documents for official bidders are posted on www.bidx.com. Other interested parties may receive informational Contract Documents containing the Plans and Special Provisions, free of charge.

Bids will be considered, and the contract awarded in accordance with statutes governing such contracts in accordance with Massachusetts General Laws Chapter 30 § 39M.

The Project Bids File Attachments folder for proposals at www.bidx.com shall be used for submitting at the time of bid required information such as the Bid Bond required document, and other documents that may be requested in the proposal.

NOTICE TO CONTRACTORS (Continued)

All parties who wish to have access to information plans and specification must send a "Request for Informational Documents" to MassDOTBidDocuments@dot.state.ma.us.

A Proposal Guaranty in the amount of 5% of the value of the bid is required.

This project is subject to the schedule of prevailing wage rates as determined by the Commissioner of the Massachusetts Department of Labor and Workforce Development, and the Division of Occupational Safety, and the United States Department of Labor.

The Massachusetts Department of Transportation, in accordance with Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby affirmatively ensures that for any contract entered into pursuant to this advertisement, all bidders, including disadvantaged business enterprises, will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin in consideration for an Award.

This Proposal contains the "STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)". The goals and timetables applicable to this proposal for minority and female participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all work, are contained in Appendices A and B-80 of the above specifications.

The Contractor (hereinafter includes consultants) will comply with the Acts and Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this Contract as contained in Appendices C and D of the above specifications.

NOTICE TO CONTRACTORS (Continued)

PRICE ADJUSTMENTS

This Contract contains price adjustments for hot mix asphalt and Portland cement mixtures, diesel fuel, and gasoline. For reference the base prices are as follows: liquid asphalt $712.50 per ton, Portland cement $452.13 per ton, diesel fuel $3.911 per gallon, and gasoline $3.136 per gallon, and Steel Base Price Index 370.1. MassDOT posts the **Price Adjustments** on their Highway Division's website at
https://www.mass.gov/massdot-contract-price-adjustments

This Contract contains Price Adjustments for steel. See Document 00813 - PRICE ADJUSTMENT FOR STRUCTURAL STEEL AND REINFORCING STEEL for their application and base prices.

MassDOT projects are subject to the rules and regulations of the Architectural Access Board (521 CMR 1.00 et seq.)

Prospective bidders and interested parties can access this information and more via the internet at WWW.COMMBUYS.COM.

BY: Phillip Eng, Interim MassDOT Secretary
Jonathan L. Gulliver, Undersecretary and Highway Administrator
SATURDAY, JULY 25, 2026

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DOCUMENT 00210

REQUIREMENTS OF MASSACHUSETTS GENERAL LAWS
CHAPTER 30, SECTION 39R;
CHAPTER 30, SECTION 39O

July 1, 1981, updated October 2016

M.G.L. c. 30, § 39R. Award of Contracts; Accounting Statements; Annual Financial Statements; Definitions.

(a) The words defined herein shall have the meaning stated below whenever they appear in this section:

(1) “Contractor" means any person, corporation, partnership, joint venture, sole proprietorship, or other entity awarded a contract pursuant to sections thirty-eight A1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A to forty-four H, inclusive, of chapter one hundred and forty-nine, which is for an amount or estimated amount greater than one hundred thousand dollars.

(2) "Contract" means any contract awarded or executed pursuant to sections thirty-eight A1/2 to thirty-eight O, inclusive, of chapter seven and any contract awarded or executed pursuant to section eleven C of chapter twenty-five A, section thirty-nine M of chapter thirty, or sections forty-four A through forty-four H, inclusive, of chapter one hundred and forty-nine, which is for amount or estimated amount greater than one hundred thousand dollars.

(3) “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.

(4) “Independent Certified Public Accountant" 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 residence or principal office and who is in fact independent. In determining whether an accountant is independent with respect 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.

(5) “Audit", when used in regard to 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.

(6) "Accountant's Report", when used in regard to financial statements, means a document in which an independent certified public accountant indicates the scope of the audit which he has made and sets forth his opinion regarding the financial statements taken as a whole with a listing of noted exceptions and qualifications, or an assertion to the effect that an overall opinion cannot be expressed. When an overall opinion cannot be expressed the reason therefor shall be stated. An accountant's report shall include as a part thereof a signed statement by the responsible corporate officer attesting that management has fully disclosed all material facts to the independent certified public accountant, and that the audited financial statement is a true and complete statement of the financial condition of the contractor.

(7) “Management", when used herein, means the chief executive officers, partners, principals or other person or persons primarily responsible for the financial and operational policies and practices of the contractor.

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

(b) Subsection (a)(2) hereof notwithstanding, every agreement or contract awarded or executed pursuant to sections thirty-eight A 1/2 to thirty-eight O, inclusive, of chapter seven, or eleven C of chapter twenty-five A, and pursuant to section thirty-nine M of chapter thirty or to section forty-four A through H, inclusive, of chapter one hundred and forty-nine, shall provide that:

(1) The contractor shall make, and keep for at least six years after final payment, books, records, and accounts which in reasonable detail accurately and fairly reflect the transactions and dispositions of the contractor, and

(2) Until the expiration of six years after final payment, the office of inspector general, and the commissioner of capital asset management and maintenance shall have the right to examine any books, documents, papers or records of the contractor or of his subcontractors that directly pertain to, and involve transactions relating to, the contractor or his subcontractors, and

(3) If the agreement is a contract as defined herein, the contractor shall describe any change in the method of maintaining records or recording transactions which materially affect any statements filed with the awarding authority, including in his description 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, and

(4) If the agreement is a contract as defined herein, the contractor has filed a statement of management on internal accounting controls as set forth in paragraph (c) below prior to the execution of the contract, and

(5) If the agreement is a contract as defined herein, the contractor has filed prior to the execution of the contracts and will continue to file annually, an audited financial statement for the most recent completed fiscal year as set forth in paragraph (d) below.

(c) Every contractor awarded a contract shall file with the awarding authority 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

i. to permit preparation of financial statements in conformity with generally accepted accounting principles, and

ii. 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.

Every contractor awarded a contract shall also file with the awarding authority a statement prepared and signed by an independent certified public accountant, stating that he 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 this paragraph and paragraph (b) above are consistent with the result of management's evaluation of the system of internal accounting controls; and

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

(d) Every contractor awarded a contract by the commonwealth or by any political subdivision thereof shall annually file with the commissioner of capital asset management and maintenance during the term of the contract a financial statement prepared by an independent certified public accountant on the basis of 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 awarding authority upon request.

(e) The office of inspector general, the commissioner of capital asset management and maintenance and any other awarding authority shall enforce the provisions of this section. The commissioner of capital asset management and maintenance may after providing an opportunity for the inspector general and other interested parties to comment, promulgate pursuant to the provisions of chapter thirty A such rules, regulations and guidelines as are necessary to effectuate the purposes of this section. Such rules, regulations and guidelines may be applicable to all awarding authorities. A contractor's failure to satisfy any of the requirements of this section may be grounds for debarment pursuant to section forty-four C of chapter one hundred and forty-nine.

(f) Records and statements required to be made, kept or filed under the provisions of this section shall not be public records as defined in section seven of chapter four and shall not be open to public inspection; provided, however, that such records and statements shall be made available pursuant to the provisions of clause (2) of paragraph (b).

M.G.L. c. 30, § 39O: Suspension, Delay, or Interruption or Failure to Act by Awarding Authority; Adjustment in Contract Price; Submission of Claims.

Section 39O. Every contract subject to the provisions of section thirty-nine M of this chapter or subject to section forty-four A of chapter one hundred forty-nine shall contain the following provisions (a) and (b) in their entirety and, in the event a suspension, delay, interruption or failure to act of the awarding authority increases the cost of performance to any subcontractor, that subcontractor shall have the same rights against the general contractor for payment for an increase in the cost of his performance as provisions (a) and (b) give the general contractor against the awarding authority, but nothing in provisions (a) and (b) shall in any way change, modify or alter any other rights which the general contractor or the subcontractor may have against each other.

(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.

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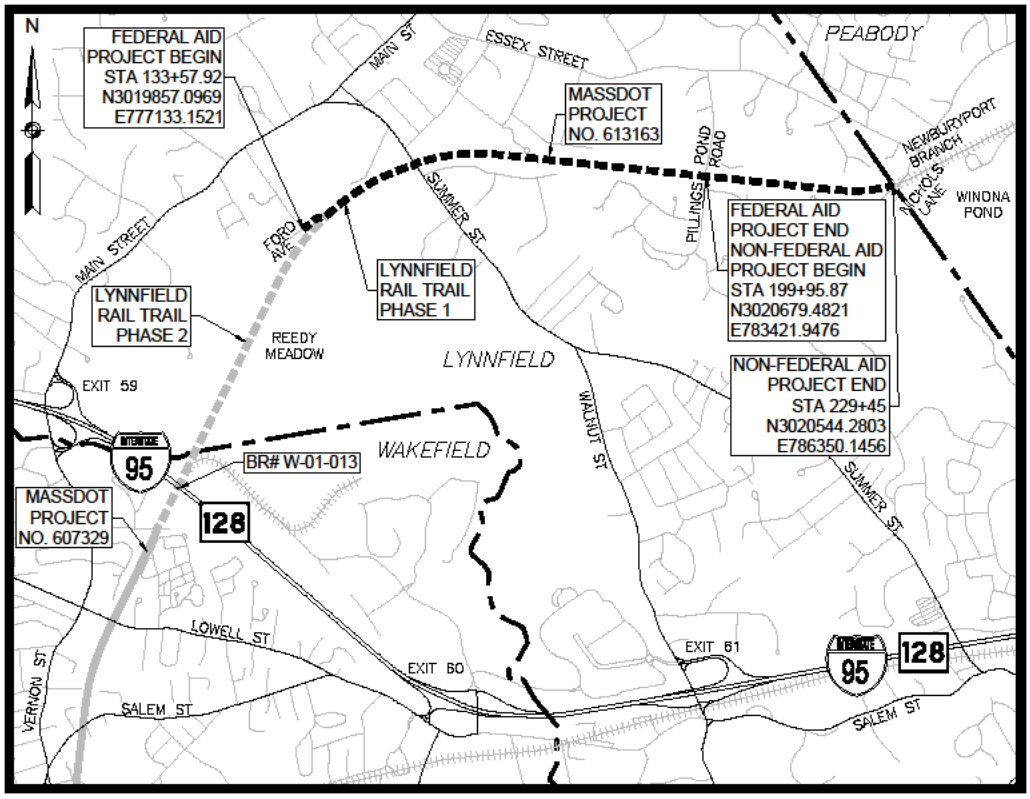
DOCUMENT 00331

LOCUS MAP

LYNNFIELD
Federal Aid Project No. STP-0034(033)X
Rail Trail Construction, from Ford Avenue to the Peabody City Line



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DOCUMENT 00439

Final Report ☐

Interim Report ☐

CONTRACTOR PROJECT EVALUATION FORM

For instructions on using this form, see Engineering Directive E-10-002, Dated 4/20/2010

Date: _____

City/Town: _____ Contractor: _____

Project: _____ Address: _____

F.A. No. _____ Contract Number: _____

Bid Price: _____ Notice to Proceed: _____

Funds: State: _____ Fed Aid: _____ Current Contract Completion Date: _____

Date Work Started: _____ Date Work Completed*: _____

Contractor's Superintendent: _____

Division: (indicates class of work) Highway: _____ Bridge: _____ Maintenance: _____

*If work was NOT completed within specified time (including extensions) give reasons on following page.

	Excellent 10	Very Good 9	Average 8	7	Fair 6	5	Poor 4	% Rating
1. Workmanship								x 2=
2. Safety								x 2=
3. Schedule								x 1.5=
4. Home Office Support								x 1=
5. Subcontractors Performance								x 1=
6. Field Supervision/ Superintendent								x 1=
7. Contract Compliance								x 0.5=
8. Equipment								x 0.5=
9. Payment of Accounts								x 0.5=
(use back for additional comments)						**Overall Rating:**		

(Give explanation of items 1 through 9 on the following page in numerical order if overall rating is below 80%. Use additional sheets if necessary.)

_____ _____

District Construction Engineer's Signature/Date Resident Engineer's Signature/Date

_____

Contractor's Signature Acknowledging Report/Date

Contractor Requests Meeting with the District: No ☐ Yes ☐ Date Meeting Held: _____

Contractor's Comments/Meeting Notes (extra sheets may be added to this form and noted here if needed): _____

_____

_____

CONTRACTOR PROJECT EVALUATION FORM (Continued)

Date: _____ Contract Number: _____

INFORMATION FOR DISTRICT HIGHWAY DIRECTORS RELATING TO PREQUALIFICATION

A deduction shall be recommended for unsatisfactory performance if computed overall rating is under 80%.
A deduction may be recommended for this project being completed late due to the Contractor's fault.

RECOMMENDATIONS FOR DEDUCTIONS FROM CONTRACTORS' ASSIGNED FACTOR
(*Write Yes or No in space provided*)

I recommend a deduction for Contractor's unsatisfactory performance: _____

I recommend a deduction for project completed late: _____

Signed: _____
District Highway Director

EXPLANATION OF RATINGS 1 – 9: _____

WORK NOT COMPLETED WITHIN SPECIFIED TIME: _____

Revised: 04/28/17

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DOCUMENT 00440

Final Report ☐

Interim Report ☐

SUBCONTRACTOR PROJECT EVALUATION FORM

For instructions on using this form, see Engineering Directive E-10-002, Dated 4/20/2010

Date: _____

City/Town: _____ Subcontractor: _____

Project: _____ Address: _____

F.A. No.: _____ Contract Number: _____

Prime Contractor _____ Current Contract Completion Date: _____

Date Work Started: _____ Date Work Completed*: _____

Subcontractor's Superintendent: _____

Type of Work Performed by Subcontractor: _____

*If work was NOT completed within specified time (including extensions) give reasons on following page.

	Excellent 10	Very Good 9	Average 8	7	Fair 6	5	Poor 4	% Rating
1. Workmanship								x 2=
2. Safety								x 2=
3. Schedule								x 1.5=
4. Home Office Support								x 1.5=
5. Field Supervision/ Superintendent								x 1=
6. Contract Compliance								x 1=
7. Equipment								x 0.5=
8. Payment of Accounts								x 0.5=
(use back for additional comments)							**Overall Rating:**	

(Give explanation of items 1 through 8 on the following page in numerical order if overall rating is below 80%. Use additional sheets if necessary.)

_____ _____

District Construction Engineer's Signature/Date Resident Engineer's Signature/Date

_____ _____

Contractor Signature Acknowledging Report/Date Subcontractor Signature Acknowledging Report/Date

Subcontractor Requests Meeting with the District: No ☐ Yes ☐ Date Meeting Held: _____

Subcontractor's Comments / Meeting Notes (extra sheets may be added to this form and noted here if needed):

_____

_____

Contractor's Comments: _____

_____

SUBCONTRACTOR PROJECT EVALUATION FORM (Continued)

Date: _____ Contract Number:_____

INFORMATION FOR DISTRICT HIGHWAY DIRECTORS RELATING TO PREQUALIFICATION

A deduction shall be recommended for unsatisfactory performance if computed overall rating is under 80%.
A deduction may be recommended for this project being completed late due to the Contractor's fault.

RECOMMENDATIONS FOR DEDUCTIONS FROM CONTRACTORS' ASSIGNED FACTOR
(*Write Yes or No in space provided*)

I recommend a deduction for Contractor's unsatisfactory performance: _____

I recommend a deduction for project completed late:_____

Signed: _____
District Highway Director

EXPLANATION OF RATINGS 1 – 8: _____

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WORK NOT COMPLETED WITHIN SPECIFIED TIME: _____

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Revised: 04/28/17

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DOCUMENT 00710
GENERAL CONTRACT PROVISIONS
Revised: 03-31-26

NOTICE OF AVAILABILITY

The STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES dated 2026, the SUPPLEMENTAL SPECIFICATIONS , the 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS; the 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING and the CONSTRUCTION STANDARD DETAILS are available online at https://www.mass.gov/massdot-highway-division-manuals-and-publications

SPECIAL PROVISIONS FOR RIGHT-TO-KNOW ACT REQUIREMENTS

The Contractor's attention is directed to Massachusetts General Laws, Chapter 111F, commonly known as the Right-To-Know Act, and to the regulations promulgated pursuant thereto. Among the provisions of the Right-To-Know Act is a requirement that employers make available to employees Materials Safety Data Sheets (MSDS) for any substance on the Massachusetts Substance List (MSL) to which employees are, have been, or may be exposed.

To ensure prompt compliance with these regulations and legislation, the Contractor shall:

1. Deliver to the Department, prior to the start of any work under this contract, copies of MSDS for all MSL substances to be used, stored, processed or manufactured at the worksite by the Contractor.

2. Train employees of the Department, who may be exposed to MSL substances as a result of the Contractor's work under this contract, with regard to those specific substances in accordance with requirements of the Right-To-Know Act.

3. Observe all safety precautions recommended on the MSDS for any MSL substance to be used, stored, processed, or manufactured at the worksite by the Contractor.

4. Inform the Department in writing regarding specific protective equipment recommended in the MSDS for MSL substances to which employees of the Department may be exposed as a result of the Contractor's work under this contract.

The Department shall not be liable for any delay or suspension of work caused by the refusal of its employees to perform any work due to the Contractor's failure to comply with the Right-To-Know Act. The Contractor agrees to hold the Department or the Commissioner of the Department harmless and fully indemnified for any and all claims, demands, fines, actions, complaints, and causes of action resulting from or arising out of the Contractor's failure to comply with the requirements of the Right-To-Know Act.

ALTERNATIVE DISPUTE RESOLUTION
Forum, Choice of Law and Mediations:

Any actions arising out of a contract shall be governed by the laws of Massachusetts and shall be brought and maintained in a State or federal court in Massachusetts which shall have exclusive jurisdiction thereof. MassDOT and the Contractor may both agree to mediation of any claim and will share the costs of such mediation pro rata based on the number of parties involved.

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DOCUMENT 00715

SUPPLEMENTAL SPECIFICATIONS

JUNE 30, 2026

The 2026 *Standard Specifications for Highways and Bridges* are amended by the following modifications, additions and deletions. These Supplemental Specifications prevail over those published in the Standard Specifications.

The Specifications Committee has issued these Supplemental Specifications for inclusion into each proposal until such time as they are updated or incorporated into the next Standard Specifications.

Contractors are cautioned that these Supplemental Specifications are dated and will change as they are updated.

DIVISION I

GENERAL REQUIREMENTS AND COVENANTS

SECTION 5.00: CONTROL OF WORK

Subsection 5.03: Conformity with Plans and Specifications
Change the MGL reference in the first sentence to Chapter 30, Section 39I (from Section 39L).

DIVISION II

CONSTRUCTION DETAILS

SECTION 200: DRAINAGE

SUBSECTION 227: DRAINAGE SYSTEM SEDIMENT

Subsection 227.30, Method of Measurement
Change the subsection number to 227.80

Subsection 227.31, Basis of Payment
Change the subsection number to 227.81

Subsection 227.31, Payment Items
Change the subsection number to 227.82

SECTION 400: SUB-BASE, BASE COURSE, SHOULDERS, PAVEMENT AND BERMS

SUBSECTION 430: CEMENT CONCRETE BASE COURSE

Subsection 430.40: General
Change Applied Crack Sealer to Hot Applied Crack Sealer.

SUBSECTION 476: CEMENT CONCRETE PAVEMENT

Subsection 476.20: Materials
Delete Preformed Bituminous Joint Filler for Concrete - M3.05.5 and add the following in M number sequence:

Preformed Expansion Joint Filler	M9.14.0

SUBSECTION 477: MILLED RUMBLE STRIPS

Subsection 477: Milled Rumble Strips
Replace this subsection with the following:

DESCRIPTION

477.20: General

The work consists of constructing rumble strips on roadways by milling grooves into finished surfaces. Milled Rumble Strips are categorized as Type A, Type B, Type C, or Type D. Type A are rectangular milled grooves at regular intervals in the paved surface, Type B rumble strips are rectangular grooves at regular intervals with designed gaps between intervals to accommodate bicyclists, and Type C and Type D rumble strips form continuous grooves in the paved surface in the form of a vertical sinusoidal wave pattern.

CONSTRUCTION METHODS

477.61: Equipment

The equipment shall self-align with the slope of the roadway surface and/or any irregularities in the roadway surface.

The Contractor shall demonstrate to the Engineer the ability to achieve the desired groove without tearing or snagging the roadway surface prior to beginning the work.

477.62: Installation of Rumble Strips

Rumble strips shall be installed in accordance with the locations, dimensions, and Type shown on the plans.

Type A and Type B rumble strips shall be installed after the longitudinal pavement markings they supplement (typically edge lines or channelizing lines) are in place. Installation of any diagonal or chevron pavement markings that cross the Type A or Type B rumble strips shall only occur after the rumble strips are in place.

Type C rumble strips shall be installed after the location of the longitudinal pavement markings they supplement (typically center lines) has been laid out, but before the pavement markings are installed. The pavement markings shall only be installed after the Type C rumble strips are in place.

Type D rumble strips shall be installed after the longitudinal pavement markings they supplement (typically center lines) are in place.

477.63: Control of the Work Area

At the end of each working day, all equipment shall be moved to a location where it does not present a hazard to traffic. The pavement shall be cleaned by sweeping and the work area shall be reopened to traffic.

Pavement millings shall become the property of the Contractor and shall be removed and disposed of off-site.

COMPENSATION

477.80: Method of Measurement

Milled Rumble Strip (Type A), Milled Rumble Strip (Type C), and Milled Rumble Strip (Type D) will be measured by the total length of installed rumble strip. Milled Rumble Strip (Type B) will be measured by the total length of installed rumble strip excluding the designed gaps. Breaks at castings, bridge decks, intersections or other breaks will not be measured for payment for all types.

477.81: Basis of Payment

Payment for Milled Rumble Strip (Type A), Milled Rumble Strip (Type B), Milled Rumble Strip (Type C), and Milled Rumble Strip (Type D) will be made at the contract unit price per foot of rumble strips, complete in place. Such payment will be full compensation for furnishing all equipment and labor for satisfactorily performing the work including cleanup and disposal of excess materials.

477.82: Payment Items

Item number	Description	Unit
477.	Milled Rumble Strip (Type A)	Foot
477.1	Milled Rumble Strip (Type B)	Foot
477.2	Milled Rumble Strip (Type C)	Foot
477.3	Milled Rumble Strip (Type D)	Foot

SUBSECTION 482: SAWCUTTING

Subsection 482.80: Method of Measurement
Replace this subsection with the following:

Sawcutting, when included in the Contract as its own bid item, will be measured for payment by the foot along the cut line, regardless of depth.

SECTION 600: HIGHWAY GUARD, FENCES AND WALLS

SUBSECTION 628: IMPACT ATTENUATORS

Subsection 628.82: Payment Items
Replace this subsection with the following:

Item number	Description	Unit
628.302	Permanent Impact Attenuator, Non-Redirective, TL-2	Each
628.303	Permanent Impact Attenuator, Non-Redirective, TL-3	Each
628.304	Temporary Impact Attenuator, Non-Redirective, TL-2	Each
628.305	Temporary Impact Attenuator, Non-Redirective, TL-3	Each
628.312	Permanent Impact Attenuator, Redirective, TL-2	Each
628.313	Permanent Impact Attenuator, Redirective, TL-3	Each
628.314	Temporary Impact Attenuator, Redirective, TL-2	Each
628.315	Temporary Impact Attenuator, Redirective, TL-3	Each
628.322	Permanent Impact Attenuator, Low-Maintenance, TL-2	Each
628.323	Permanent Impact Attenuator, Low-Maintenance, TL-3	Each

SECTION 800: TRAFFIC CONTROL DEVICES

SUBSECTION 813: WIRING, GROUNDING AND SERVICE CONNECTIONS

Subsection 813.20: General
Replace this subsection with the following:

This work shall consist of furnishing and installing wire and cable of the type and size indicated for traffic signals and other traffic control devices, ITS systems, highway lighting and related electrical systems, equipment grounding systems, new ground electrodes or connections to existing ground electrodes, power pedestals, and all materials and equipment necessary to deliver power to such systems.

Service points shown on the plans are approximate only. The Contractor shall determine exact locations for both overhead and underground service access points. The Contractor shall determine riser elevations or connections/routing to manhole facilities from the serving utility, and arrange to complete the service connections.

All work under this Subsection shall comply with the MEC and the National Electrical Safety Code.

Subsection 813.41: Grounding and Bonding Conductions
Replace this subsection with the following:

Grounding and bonding conductors shall conform to M8.16.10: Type 10 Grounding and Bonding Conductors (Solid or Stranded, Insulated or Bare).

Subsection 813.42: Ground Rods
Replace this subsection with the following:

Ground rods shall consist of driven rod(s) conforming to M8.17.0: Ground Rod or other devices approved for the purpose.

Subsection 813.44: Power Pedestal
Add this subsection in numerical order:

A Power Pedestals shall consist of a side-of-post mounted lockable load center enclosure, a load center with circuit breakers, an exterior-mounted electrical meter, signal post and base, equipment bonding, ground rod(s) conforming to 813.42: Ground Rods, and a cement concrete foundation. The enclosure, lock, circuit breakers, signal post and base, and foundation shall all be included in the Shop Drawing submission.

The enclosure shall be rated to meet or exceed NEMA 3R and be suitable for post-mounting and shall be sized appropriately to house the load center. The enclosure shall be capable of being secured with an integrated locking mechanism or by a Contractor-supplied padlock; regardless of locking mechanism, it shall be operated with a #2 key.

The circuit breakers shall be designed for single-phase, 3-wire, 120/240 VAC. Circuit breakers shall provide a means to manually operate a circuit and/or automatically open a circuit that is in overload or short circuit conditions. All circuit breakers shall be UL listed and have CSA certification.

The enclosure shall be furnished with a meter socket installed. The meter socket shall be approved by the servicing electrical utility.

The signal post and base shall conform to M10.05.1: Signal Posts and Bases and the Plans. The Contractor shall supply a square aluminum base with a natural or anodized finish and a Schedule 80 aluminum post with a brushed or spun finish, unless otherwise indicated in the Plans.

The Contractor shall supply mounting equipment recommended by the enclosure manufacturer to side-mount the cabinet to the post.

Bonding for the Power Pedestal shall utilize a #8 AWG or larger ASTM-B3 wire.

The cement concrete foundation shall conform to the Plans and M4.02.0: Concrete Produced by Stationary and Truck Mixers, M4.03.0: Concrete Produced by Volumetric Mixers, M4.06.1: Conventional Concrete, M4.09.0: Precast, Prestressed, and Prefabricated Concrete Products, M4.11.0: Evaporation Reducing Materials, and M4.12.0: Curing Materials, as applicable.

Subsection 813.64: Power Pedestal
Add this subsection in numerical order:

No work shall commence until Shop Drawings have been approved.

The Power Pedestal Cabinet shall be mounted side-of-post to the Signal Post, per the manufacturer's recommendations. The Power Pedestal Cabinet should be installed directly below the meter socket, per the Plans. If dissimilar metals are present, they shall be electrically insulated to prevent galvanic corrosion.

The Contractor shall supply the appropriate type (single pole or double pole) and number of circuit breakers included within the Power Pedestal Cabinet to provide the recommended AC power to each device receiving power from the Cabinet. The circuit breakers shall be clearly labeled as to which device they are powering (e.g. RRFB-1, RRFB-2, Warning Beacon, Speed Feedback Sign, etc.).

The Power Pedestal shall be grounded and bonded per 813.61: Equipment Grounding and Bonding and 813.62: Grounding Electrodes.

Subsection 813.80.E: Power Pedestal
Add this subsection in numerical order:

Power Pedestals will be measured by the number of Power Pedestals each furnished and installed.

Subsection 813.81.E: Power Pedestal
Add this subsection in numerical order:

Power Pedestals will be paid for at the contract unit price for each installed in place. This includes all labor and materials required for a working system.

All costs associated with grounding and bonding of Power Pedestals shall be considered incidental to the item.

All costs associated with providing service connections to Power Pedestals shall be paid for under their respective pay items.

Subsection 813.82: Payment Items
Change the unit of measure for items 813.80 and 813.81 to Each and add the following pay item:

Subsection 815.82: Payment Items
Delete payment items 818.90 to 818.94, 819.39, 819.832, 819.52, 819.53, 819.60 to 819.64, 819.70, 819.71, 819.72, 819.800, 819.801, 819.802, 819.803,:819.810, 819.811, 819.820, 819.821, 819.850, 819.851, 819.852.

Add the following payment item:

813.90	Power Pedestal	Each

SUBSECTION 819: TRAFFIC SIGNAL DETECTION

Subsection 819: Traffic Signal Detection
Add this subsection:

DESCRIPTION

819.20: General

Work under this Subsection consists of furnishing and installing detection devices for vehicles, bicycles, pedestrians, and other road users.

MATERIALS

819.40: General

Materials shall meet the requirements specified in the following Subsections of Division III, Materials:

Material	Section
Vehicle Detection Systems	M10.08.0
Passive Stop Line Detectors	M10.08.1
Passive Advanced Detectors	M10.08.2
Pedestrian Detectors	M10.09.0
Pedestrian Pushbutton Assembly	M10.09.1
APS Pushbutton Assembly	M10.09.2

The Contractor shall furnish Vehicle Detection Systems (VDS) and Pedestrian Detectors that are listed on the QTCE.

Any software, firmware, cables, or adapters required to program, adjust, fine-tune, or monitor VDS or Pedestrian Detectors shall be provided by the Contractor. VDS and Pedestrian Detectors shall have the latest versions of software and/or firmware installed prior to inspection. Manufacturer updates to software and/or firmware shall be included at no cost for the life of the products.

819.40.A: Vehicle Detection Systems

A VDS shall consist of one or more Internet Protocol (IP) -based detector/sensor assemblies and a cabinet interface device that is installed in a Traffic Signal Controller Cabinet or similar device.

Stop Line VDS shall be capable of providing motor vehicle and bicycle detection at all locations shown on the Plans. The Contractor may furnish a VDS that utilizes a single detector/sensor or multiple, as long as all stop line motor vehicle and bicycle detection zones are encompassed and the traffic signal or other device utilizing the detection can operate per the Plans. All Passive Stop Line Detectors required to provide stop line detection at an intersection shall be included in the cost of a single Stop Line Vehicle Detection System.

If the Contractor furnishes a Stop Line VDS that does not utilize an integrated video monitoring system, a separate video monitoring system per 819.41: Video Monitoring System shall be furnished and installed at no additional cost.

Advanced VDS shall be capable of providing motor vehicle detection on a single approach, at the location shown on the Plans. The Contractor Shall furnish Passive Advanced Detectors that utilize, and are compatible with, the same interface device installed in the Traffic Signal Controller Cabinet, or similar device, as the Stop Line VDS.

All VDSs shall be furnished with manufacturer-supplied mounting hardware.

If multiple VDSs over multiple locations are supplied under a single contract, all components furnished by the Contractor shall be of the same make and model.

819.40.B: Pedestrian Detectors

Pedestrian Pushbutton Assembly and Accessible Pedestrian Signal (APS) Pushbutton Assembly shall both include a pushbutton, sign, housing, manufacturer-specified mounting hardware, and wiring. The Contractor shall review the Contract Documents to determine if one or more in-cabinet control units are required to meet the pedestrian detector type and operational requirements. In-cabinet control units shall be considered incidental to the cost of the item.

The Contractor shall provide a pushbutton housing that conforms to the shape of the pole it is mounted to or shall furnish and install a manufacturer-supplied saddle to provide a flush, secure fit, at no additional cost.

An APS Pushbutton Assembly shall include a pedestrian pushbutton sign that conforms to the Plans. If the sign is not integral to the housing, separate mounting equipment shall be furnished and installed by the Contractor. All costs associated with the sign and mounting equipment shall be considered incidental to the cost of the item.

819.41: Video Monitoring System

When required by 819.40.A: Vehicle Detection Systems, the Contractor shall furnish and install a Video Monitoring System. The Video Monitoring System shall consist of one or more IP-based 4K, 1080p, H.264 dome-type CCTV cameras; mounting hardware, including but not limited to: brackets, bands, straps, posts, plates, and pole mount adapters; power distribution and conditioning equipment including surge suppression; and all necessary cabling and wiring.

All equipment provided for the Video Monitoring System shall be commercial, off-the-shelf products. Custom equipment designed specifically for the Contract will not be accepted. All cabling and wiring shall be recommended by the manufacturer and rated for outdoor use. Any special wiring or connectors required by the manufacturer shall be identified in the Shop Drawings.

The Video Monitoring System shall conform to National Electrical Manufactures Association (NEMA) standards, Underwriters' Laboratory (UL), and Military Standards (MIL), as applicable. All components of the Video Monitoring System shall be new and still under production by the manufacturer. Obsolete, no longer produced, and/or no longer supported components will not be accepted.

The Video Monitoring System shall be capable of operating in temperatures ranging from -29°F to +165°F.

The camera shall meet or exceed the requirements found in Table 819.41-1:

Table 819.41-1: Minimum Camera Requirements

Feature	Requirement
Zoom Ratio	The minimum zoom ratio shall be 30x Optical and 12x Digital
Camera Type	The camera shall be an IP-type CCTV camera.
Auto Focus	The camera shall include auto focus with a selection for manual override of auto focus.
Lens Aperture Ratio	Typical: F/1.6 to F/4.7 (wide to telephoto)
On-Screen Direction	The CCTV camera shall display on-screen azimuth indications.
Privacy Zones	The CCTV camera shall be programmable to blank out up to 8, four-sided areas to electronically block portions of the camera's field of view from being

Feature	Requirement
	displayed. These privacy zones shall move and adjust sizing synchronously with camera movements and degree of lens zooming.
On-Screen Labels, Text and Titles	The CCTV camera shall display a minimum of 20 programmable characters for on-screen camera ID, preset position, sector, and alarm titles.
On-Screen Labels, Text and Title Positioning	The position of the on-screen text shall be adjustable to appear at selectable positions on the CCTV camera screen image.
Number of Pixels	The camera shall provide a minimum of 1280H x 720V effective pixels. The camera shall be capable of being configured to operate at all standard lower resolutions down to 320H x 180V effective pixels.
Image Sensor Size	The camera shall include an image sensor of 1/1.8 in., nominal.
Lens Focal Length	The camera shall include a zoom lens of 4.3 mm to 129 mm, minimum focal length.
Color and Black & White Image Selection	The camera shall have Color and Black & White video image display modes incorporating both automatic and manual override image mode selection. The camera shall transition automatically to a Black & White mode (when in automatic mode) when the luminance level reaches a user predefined threshold. At all times the camera shall provide a full motion video output at 30 frames per second.
Image Stabilization	The CCTV camera shall incorporate electronic image stabilization to reduce the effects of vibration and wind gusts on the displayed video image.
Automatic Iris	The camera shall include both automatic iris control and an override for manual iris adjustments.
Wide Dynamic Range	The CCTV camera's wide dynamic range shall be 120 dB.
CCTV Camera Optical Sensitivity	The camera's sensitivity shall be sufficient to provide a clear, usable color video image display with a scene illumination of ≤ 0.1 lux at an aperture of F1.6, nominal.
Power Input	The power input for the CCTV camera and dome shall be PoE+.
Alarms	No alarm contacts shall be wired.

The Contractor shall mount the camera at a location that optimizes line-of-sight for all approaches. The view of each approach shall have a clear line of sight, free from obstructions from trees, overhead wires, buildings, and/or other obstructions. If the Contractor is unable to provide a clear line of sight for all approaches to the satisfaction of the Engineer, a second camera, including mounting hardware, cabling, and wiring, shall be furnished and installed on a different traffic signal structure at no additional cost.

The Contractor shall be responsible for the following items prior to installation:

- Ensure that all components are assembled and factory-tested prior to delivery to the project site.
- Fully configure the camera settings, including but not limited to: camera resolution, camera address, default settings, and pre-set and home positions, per the direction of the Engineer.
- Coordinate with the Engineer to set the camera address number to provide unique identification that is compatible with the CCTV camera addressing schema utilized by the Department.

The Contractor shall deliver the camera(s) fully assembled to the project site.

The Contractor shall provide up to 3 hard copy sets of operating manuals, service manuals, and maintenance instructions for all components of the system. At the request of the Engineer, the number of copies may be reduced if the manuals are provided in .pdf file format.

819.42: Material Warranties

All components of Vehicle Detection Systems, including Video Monitoring Systems, and Pedestrian Detectors shall include a minimum two-year manufacturer's replacement warranty that will commence upon acceptance by the Engineer. The warranty shall cover any manufacturing defects of the products.

Construction Methods

819.60: General

The Contractor shall use discretion in installing the detectors/sensors at locations that optimize the performance of the VDS and to eliminate false calls. The Contractor shall notify the Engineer if the size or location of the detection zones differs from what is shown in the Plans. At the direction of the Engineer, the Contractor will be required to readjust the location of the detection zones and/or modify the detection channels if false calls are observed or the traffic signal system is not operating per the Plans due to the performance of the VDS; this work shall be considered incidental to the cost of the item.

The Contractor shall use manufacturer-specified mounting hardware for all detectors/sensors. If mounted to mast arms or strain poles, any addition weight or wind loading from the detector/sensor shall be accounted for in the structural calculations.

The Contractor shall install the cabinet interface device in the traffic signal controller cabinet. The cabinet interface device shall be connected to the Field Monitoring Unit (FMU) or an ethernet switch in the traffic signal controller cabinet. All communication between devices shall be IP-based. Use of external communications that are not routed through the FMU is prohibited.

The Contractor shall furnish and install low voltage power cabling surge protection equipment required for all data and power lines associated with VDS, Video Monitoring Systems, and/or Pedestrian Detection Systems entering the traffic signal controller cabinet.

The Contractor shall install the manufacturer-specified cable between the detectors/sensors to the cabinet interface device in the traffic signal controller cabinet via traffic signal structures, conduit, and/or pullboxes. This shall include all connectors, sealing tape, and incidental work to complete the connection(s). All equipment installation and wiring shall be installed in a neat and orderly manner and per the manufacturer's specifications.

The VDS shall be powered through one of the power outlets available on the FMU. The VDS shall be capable of being powered down and remotely restarted through remote control of the power outlet on the FMU.

Under the supervision of the Engineer, the Contractor shall install the VDS software that allows visual confirmation of the detection zones on Department computers.

The Contractor shall install Pedestrian Detectors at the location(s) and mounting height shown on the Plans.

The Contractor shall mount and orient the APS Pushbutton Assembly in a manner so that the vibrotactile arrow is aligned parallel to the crosswalk.

Prior to acceptance, the Contractor shall furnish all passwords for Vehicle Detection Systems and Pedestrian Detectors to the Engineer. The use of default passwords is prohibited.

819.61: Programming APS Pushbuttons

Each APS Pushbutton shall have an audible walk indication during the associated walk interval. The duration of the audible walk indication shall match the duration of the walk interval unless the pedestrian signal is programmed to rest in walk. If programmed to rest in walk, the audible walk indication shall be limited to 7 seconds in length but may be recalled by a subsequent button press during the walk interval.

The APS Pushbutton locator tone and audible walk indication shall be programmed to broadcast at volume 5 dBA louder than ambient sound, except when audible beaconing is provided in response to an extended pushbutton press. The broadcast volume shall be programmed to not exceed 100 dBA at 3 ft. from the emitter, regardless of ambient noise conditions.

The locator tone shall have a duration of 0.15 seconds or less and shall repeat at 1-second intervals.

The locator tone shall be active during all signal intervals, except for the following conditions:

- When the audible walk indication is being broadcast.
- If the signal is programmed to rest in walk, the locator tone shall resume 7 seconds after the start of the walk interval.
- The locator tone shall be disabled if the traffic control signal or pedestrian hybrid beacon is operating in an emergency or fault flashing mode.

The locator tone shall be active during the flashing yellow and alternating flashing red intervals of a pedestrian hybrid beacon phasing sequence.

Upon button press, the locator tone at that pushbutton shall be interrupted and a speech message of “Wait” shall be broadcast.

The normal status of the pilot light shall be dark. The pilot light shall illuminate upon button press and stay illuminated until the start of the walk interval, when it shall return to dark. If the associated pedestrian phase is set to pedestrian recall, the pilot light shall stay illuminated for all intervals except for the walk interval.

The audible walk indication shall an audible tone unless a speech message is called for in the Plans. The audible tone shall repeat at 8 to 10 ticks per second, in multiple frequencies, with the dominant component at 880 Hz.

If a speech message is used, the following shall apply:

- For exclusive pedestrian phases, during the walk interval the speech message shall be: “walk sign is on for all crossings.” This message shall be broadcast a single instance.
- *For concurrent pedestrian phases, during the walk interval the speech message shall be: “[STREET NAME]. Walk sign is on for [STREET NAME].” This message shall be broadcast a single instance.
- If the signal is programmed to rest in walk, the concurrent pedestrian speech message shall be repeated upon each subsequent button press.

*Note: See Plans for Street Name information.

The vibrotactile arrow shall vibrate during the walk interval.

The Contractor shall include a fault relay that will default to placing a constant pedestrian call from any pushbutton assembly that fails to communicate back to the in-cabinet control unit.

The Contractor shall connect the in-cabinet control unit to the Field Monitoring Unit (FMU) via an open ethernet port.

819.62: VDS Testing and Evaluation

After the VDS is installed, but prior to acceptance, the Contractor shall conduct an evaluation of the system in the presence of the Engineer. The purpose of the evaluation is to certify the system is operating per the requirements of M10.08.0: Vehicle Detection Systems, M10.08.1: Passive Stop Line Detectors, and M10.08.2: Passive Advanced Detectors, as applicable. The Contractor shall submit their testing and evaluation plan as a part of the Shop Drawing submittal.

The testing and evaluation shall take place for a minimum of 30 minutes under moderate live traffic conditions. Testing shall not be conducted during inclement weather.

If the Engineer determines that the system does not meet the operational requirements, the Contractor will be required to adjust the location, orientation, and/or number of detector/sensors. The Contractor may also adjust the location of the detection zones at this time. Upon completion of this work, the system shall be reevaluated in the presence of the Engineer. This process shall be repeated until the operational requirements are met.

All costs associated with testing and evaluation of the VDS, including the repositioning or addition of new materials, shall be considered incidental to the item.

Compensation

819.80: Method of Measurement

Stop Line Vehicle Detection Systems will be measured as each system furnished and installed.

Advanced Vehicle Detection Systems will be measured as each system furnished and installed.

Pedestrian Pushbuttons and APS Pushbuttons will be measured as each pushbutton furnished and installed.

819.81: Basis of Payment

Stop Line Vehicle Detection Systems will be paid for each system installed at an intersection. For the purposes of this work, an intersection shall be defined as all roadway, path, and/or trail approaches controlled by a single traffic signal controller. Where a Video Monitoring System is required per 819.40: General, it shall be included in the cost of Item 819.840.

Advanced Vehicle Detection System will be paid for each system installed on an intersection approach.

Pedestrian Pushbutton and APS Pushbutton will be paid for each pushbutton assembly installed. The pedestrian sign mounted directly above the pushbutton shall be considered incidental to the item.

The unit cost of each vehicle detection system or pushbutton item shall include all wiring, cabling, mounting hardware, software, firmware, video monitoring system (if required), testing, calibrating, Department Acceptance, training, and all other labor and materials required for the system(s) to operate per the Plans.

819.82: Payment Items

Item number	Description	Unit
819.840	Stop Line Vehicle Detection System	Each
819.845	Advanced Vehicle Detection System	Each
819.850	Pedestrian Pushbutton	Each
819.855	APS Pushbutton	Each

SUBSECTION 850: TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE OPERATIONS

Subsection 850.25: Arrow Board
Subsection 850.45: Arrow Board
Subsection 850.65: Arrow Board
Delete these subsections.

Subsection 850.80: Method of Measurement
Delete the 7th paragraph beginning with "Arrow Board will be measured …"

Subsection 850.81: Basis of Payment
Delete the 7th paragraph beginning with "Arrow Board will be paid for …"

Subsection 850.82: Payment Items
Revise description and unit of item 852. to Safety Signing for Traffic Management / Square Foot.
Delete item number 856.

SUBSECTION 856: CONNECTED WORK ZONE NOTIFICATION SYSTEM AND ASSOCIATED DEVICES

Subsection 856: Connected Work Zone Notification System and Associated Devices
Add this new subsection.

DESCRIPTION

856.20: General

The Connected Work Zone Notification System (CWZNS) is a system of field devices that transmit real-time location-based data about work zones. CWZNS field device data is provided in a Work Zone Data Exchange (WZDx) Device Feed in accordance with the United States Department of Transportation (USDOT) WZDx Specification. The Device Feed is consumed by the MassDOT Work Zone Manager (WZM) application.

The Contractor shall be responsible for furnishing, installing, repositioning, operating, maintaining, and removing these CWZNS devices.

MATERIALS

856.40: General

Materials shall meet the requirements specified in the following Subsections of Division III, Materials:

Material	Section
Connected Work Zone Notification System Devices	M10.18.0
Location Marker	M10.18.1
Connected Arrow Board	M10.18.2

End Location Markers shall conform to M10.18.1: Location Marker and include power and communication status lights and an on/off switch.

856.41: Arrow Board

Arrow Boards shall consist of a matrix of yellow elements that may be illuminated in flashing or sequential patterns, on a non-reflective, black background. The light output from the Arrow Board shall meet the minimum legibility distance, per the MUTCD. The elements shall be capable of at least 50% dimming from full brilliance to avoid nighttime glare. Arrow Boards that are continuously operational in both daylight and nighttime conditions shall automatically adjust the light output based upon ambient light conditions.

The mounting height of the Arrow Board, when in operation, shall be per the Plans.

The minimum dimensions and number of elements for Arrow Boards shall be per Table 856.41-1.

Table 856.41-1: Arrow Board Dimensions and Elements

Item Numbers	MUTCD Type	Minimum Dimensions (width by height)	Minimum Number of Elements
856.060, 856.160	B	60 in. by 30 in.	13
856.096, 856.196	C	96 in. by 48 in.	15

Arrow Boards shall be capable of the following operating modes, per the MUTCD:

- Four Corners Flashing Caution
- Alternating Diamond Caution
- Flashing Arrow (left or right)
- Sequential Chevron (left or right)
- Flashing Double Arrow

Arrow Boards that are categorized as "Connected Arrow Boards" (Items 856.160 and 856.196) shall meet the requirements of M10.18.2: Connected Arrow Board in addition to the requirements of an Arrow Board described in this Subsection.

856.42: Shop Drawings

Within 30 days of the Notice to Proceed, the Contractor shall submit to the Engineer for review and approval cut sheets for each model of CWZNS device to be used. The cut sheets shall document device specifications, including details of how the CWZNS device will communicate. Work that requires the use of CWZNS devices shall not commence until the submission has been approved.

CONSTRUCTION METHODS

856.60: General

At least 15 days prior to deploying CWZNS devices, the Contractor shall visit the site to verify cellular coverage. If the devices the Contractor plans to deploy do not have coverage, the Contractor shall swap out the cellular modem, SIM card, or both to a carrier that provides coverage. If no adequate cellular coverage exists from 4G LTE or 5G providers, the Contractor shall immediately notify the Engineer.

The Contractor shall install CWZNS devices at the locations shown on the Plans.

Per the WZDx Specification Device Feed, an End Location Marker shall have a single MarkedLocation with the "type" property as "work-zone-end".

The Contractor shall install and power on the End Location Marker coinciding with the deployment of the temporary traffic control setup that calls for its use. The Contractor shall power down and remove the Location Marker at the conclusion of the removal of the temporary traffic control setup. If the location of the work moves during a work shift, the Contractor shall power down the Location Marker, relocate it, and then power it back on.

The operating mode for the Arrow Board or Connected Arrow Board shall be per the Plans. When activated, the minimum element on-time shall be 50% for the flashing mode, with equal intervals of 25% for each sequential phase. The flashing rate shall be not less than 25 or more than 40 flashes per minute.

If a Connected Arrow Board is being used to transmit its location without utilizing other arrow board functions, such as operating a Flashing Arrow, the arrow board shall remain dark and removed from the roadway or protected from approaching traffic while the data is being transmitted.

The Contractor shall be responsible for remediating any CWZNS device that is not operating as specified, at no additional cost to the Department.

CWZNS devices that are lost, stolen, vandalized, damaged, destroyed, or deemed unacceptable while their use is required on the project shall be replaced by the Contractor at no additional cost to the Department.

COMPENSATION

856.80: Method of Measurement

Arrow Boards and Connected Arrow Boards will be measured by the Day. Each period of up to 24 hours during which an Arrow Board or Connected Arrow Board is in use will be measured as one day, regardless of the number of times that the unit is positioned, repositioned, removed, or returned to service.

End Location Markers will be measured by the Day. Each period of up to 24 hours during which a End Location Marker is in use will be measured as one day, regardless of the number of times that the unit is positioned, repositioned, removed, or returned to service.

856.81: Basis of Payment

Arrow Boards and Connected Arrow Boards will be paid for at the contract unit price per day which shall include full compensation for labor and materials, positioning, repositioning, and removing or returning to service.

End Location Markers will be paid for at the contract unit price per day which shall include full compensation for labor and materials, positioning, repositioning, and removing or returning to service.

If an End Location Marker is attached to another traffic control device that is not otherwise called for in the Plans or Specifications, that ancillary device shall be considered incidental to the cost of the End Location Marker.

Licenses, fees, communication costs, power costs, and access to real-time and recorded data associated with the Device Feed for CWZNS devices shall be considered incidental to the cost of the item.

The Department will not pay for CWZNS devices that fail to operate as specified.

856.82: Payment Items

Item number	Description	Unit
856.060	Arrow Board (Type B)	Day
856.096	Arrow Board (Type C)	Day
856.160	Connected Arrow Board (Type B)	Day
856.196	Connected Arrow Board (Type C)	Day
856.201	End Location Marker	Day

SECTION 900: STRUCTURES

SUBSECTION 901: CEMENT CONCRETE

Subsection 901.20: Materials

Delete Asphaltic Materials – M3, Preformed Bituminous Fiber Joint Filler – M3.05.3 and add the following in M number sequence:

Preformed Expansion Joint Filler	M9.14.0

SUBSECTION 983: REVETMENT

Subsection 983.40: General
Delete Preformed Bituminous Fiber Joint Filler – M3.05.3 and add the following in M number sequence:

Preformed Expansion Joint Filler	M9.14.0

DIVISION III

MATERIALS SPECIFICATIONS

SECTION M3: ASPHALTIC MATERIALS

Subsection M3.05.5: Preformed Bituminous Joint Filler for Concrete
Delete this subsection.

SECTION M9: MISCELLANEOUS MATERIALS

Subsection M9.14.0: Preformed Expansion Joint Filler
Replace this subsection with the following:

Preformed expansion joint filler for concrete applications and structural construction shall meet the requirements specified herein. The Contractor shall provide certified test data which documents compliance with the required physical properties. The certified test data shall be submitted to the Engineer for approval.

Table M9.14.0-1: Types of Preformed Expansion Joint Filler

Specification	Type and Description
AASHTO M 153	Type I – Sponge Rubber Type II – Cork Type III – Self-Expanding Cork Type IV – Polyurethane-Bonded Recycled Rubber
AASHTO M 213	Type I – Asphalt-Saturated Cellulosic Fiber Type II – Asphalt Binder-Cork with Asphalt-Saturated or Glass Fiber Felt Type III – Polyurethane-Bonded Recycled Rubber
ASTM D1752	Type IV – Recycled PVC
ASTM D7174	Type I – Closed-Cell Polyethylene or Blended Polyethylene Foam
ASTM D8139	Type I – Closed-Cell Polypropylene Foam

Subsection M9.14.2: Closed Cell Foam Joint Filler
Delete this subsection:

M10.03.1: Field Monitoring Unit

All Field Monitoring Units (FMU) shall be compatible with the MassDOT Critical Operations Multi-jurisdictional Modular System (MCOMMS), cloud-based management system.

Subsection M9.14.2: Closed Cell Foam Joint Filler
Delete this subsection:

SECTION M10: TRAFFIC CONTROL DEVICES

Subsection M10.03.1: Field Monitoring Unit
Add these new subsections:

M10.03.1: Field Monitoring Unit

All Field Monitoring Units (FMU) shall be compatible with the MassDOT Critical Operations Multi-jurisdictional Modular System (MCOMMS), cloud-based management system.

FMUs shall be capable of operating independently from the brand of traffic signal controller, vehicle and pedestrian detection systems, battery backup system (BBS), and any other Ethernet-based, web accessible device present in the traffic signal controller cabinet.

M10.03.1.A: Hardware

The FMU shall communicate via an Ethernet port with an RJ45 connector and have an integrated Ethernet switch with a minimum of four ports.

The FMU shall be powered via standard 120 VAC input power. The FMU shall include an integrated battery and battery charging/monitoring circuit that will allow the FMU to fully function even if all other electrical service to the cabinet has been interrupted. The battery shall continue to supply the FMU with power for a minimum of 5 hours on a single charge.

The FMU shall have an integrated GPS that will allow for automated telemetry without additional configuration. The GPS shall be capable of providing a time sync pulse to the internal clock of a connected traffic signal controller. The FMU shall utilize the integrated GPS to geolocate itself on a map via the FMU management software.

M10.03.1.B: Software

The configuration of the FMU shall be accomplished by accessing FMU management software via an internet browser. It shall be possible to configure the FMU without any special software.

The FMU shall operate without requiring a static IP address. The only configuration required at the FMU is to enter the URL to the host of the FMU management software.

The FMU shall utilize HTTPS protocols and XML data structure for communications with the FMU management software. The data shall be scalable for future expansion; proprietary protocols shall not be used.

M10.03.1.C: Wireless Connectivity

The FMU shall be supplied with an internal 4G LTE cellular modem.

The modem shall support future upgrades to 5G service, when available, and shall be compatible with SIM cards from multiple cellular carriers.

M10.03.1.D: Remote Access

Remote access to any traffic signal cabinet component that has a web interface via the FMU shall not require the end user to create a separate Virtual Private Network (VPN) connection.

Subsection M10.08.0: Vehicle Detection Systems
Subsection M10.08.0: Vehicle Detection Systems
Subsection M10.08.0: Vehicle Detection Systems
Add theses new subsections:

M10.08.0: Vehicle Detection Systems

Vehicle Detection Systems (VDS) shall be capable of detecting the presence of all motor vehicle types and bicycles in designated areas and sending corresponding detector outputs to a traffic signal controller.

All in-cabinet components of VDS shall be compatible with the following standards:

- ATCC 5301 v02
- ATC 5201 v06
- NEMA TS2 environmental standards

Through an ethernet-based connection to the detection module and/or cabinet interface device in the field or through the internal network of the traffic signal controller cabinet, the VDS shall support remote management of motor vehicle and bicycle detection configurations and access to data including:

- The number, location, and size of detection zones.
- Configuration of the detector channel and assigned phase for each zone.
- Configuration of detection zones for signal performance measurement data collection.
- The ability to add and remove users.
- Signal performance data:
  - Monitoring and recording the status of the phase and detector channels from the traffic signal controller through the SIU bus at a frequency of no less than 10 times per second.
  - Estimation of the speed of vehicles at defined, user-configurable points, such as entering or exiting a detection zone.
  - Retrieval of the signal performance data through an http-based Application Programming Interface (API), or equivalent process, in .xml, .json, or .csv format.
  - The data shall be available in a per vehicle format, be viewable in real time, and store at least 168 hours of data locally on the device.

VDS shall be capable of supporting user-based restrictions to limit functionality, including:

- The ability to make changes to the VDS settings.
- The ability to view imagery or digital video streams.
- The ability to view and download signal performance data.

VDS shall be capable of automatically determining if the system's ability to accurately detect vehicles and shall default to a constant call state if this system error is detected.

VDS shall be capable of classifying vehicles based upon length and/or number of axles.

VDS shall be capable of performing all detection, classification, and data collection functions in the absence of an internet connection.

VDS shall be capable of providing remote access to the latest images or digital video stream of all IP video units through either an HTTP request or through a Real Time Streaming Protocol compatible with RFC2326 standards. VDS that do not utilize video shall be able to display the current state of the vehicle detection zones and approximate vehicle locations in a digital twin model of the intersection.

M10.08.1: Passive Stop Line Detectors

Passive Stop Line Detectors shall demonstrate a reliability of 99% or greater for vehicle detection functions.

Passive Stop Line Detectors shall be able to track and classify turning movements for all motor vehicle types and bicycles and shall demonstrate an accuracy of 95% or greater for turning movement counts.

M10.08.2: Passive Advanced Detectors

Passive Advanced Detectors shall be capable of detecting all motor vehicle types at a minimum distance of 600 ft upstream of the stop line.

Subsection M10.09.0: Pedestrian Detectors
Subsection M10.09.1: Pedestrian Pushbutton Assembly
Subsection M10.09.2: APS Pushbutton Assembly
Add theses new subsections:

M10.09.0: Pedestrian Detectors

Pedestrian Detectors shall be capable of detecting the presence of pedestrians and placing a corresponding call for a phase in a traffic signal controller or similar device.

Pedestrian Detectors may be pushbuttons or passive detection devices.

Components of Pedestrian Detectors shall meet NEMA TS2 compliance for temperature and humidity, mechanical shock and vibration, transient voltage protection, transient suppression, and electrical reliability.

If Pedestrian Detectors include an in-cabinet control unit, it shall meet the following requirements:

- Operate on a cabinet-supplied 120 VAC power source.
- Include labelled LED indicators for each channel operation.
- Include a 10/100BaseT, RJ45 ethernet connector port.
- Capable of communication with the Pedestrian Detectors to allow for remote programming and firmware updates via the ethernet connection.
- Capable of supporting a minimum of 4 pedestrian detectors per NEMA pedestrian phase and up to 16 pushbuttons.
- Will automatically reset upon loss of internal communication.

M10.09.1: Pedestrian Pushbutton Assembly

A Pedestrian Pushbutton Assembly shall consist of a pushbutton, a sign, and a housing to mount those devices to a post.

The pushbutton shall be a minimum of 2 in. in diameter and the force to activate it shall be no greater than 5 lbs. The pushbutton must be weather-tight and tamper-resistant.

The pushbutton shall meet one of the following criteria:

- A normally open, mechanical phenolic enclosed, positive-acting, spring-loaded, audible (i.e., click) snap-action switch with single pole, single throw contacts; or
- A piezo-driven solid state switch rated for a minimum of 50 V, a minimum of 20 million cycles, and capable of providing an audible indication of actuation.

The pushbutton shall have an operating voltage range of 12 to 36 VDC.

The housing shall be yellow.

Housings that include an integral sign mount for the pedestrian pushbutton sign shall be capable of mounting a 9 in. by 12 in. or 9 in. by 15 in. sign (width by height).

M10.09.2: APS Pushbutton Assembly

An APS Pushbutton Assembly shall meet all of the requirements of M10.09.1: Pedestrian Pushbutton Assembly, and the following.

The pushbutton shall have a vibrotactile arrow. The arrow shall have high visual contrast (light on dark or dark on light).

APS Pushbutton Assembly shall be capable of the following:

- Emitting a locator tone.
- Providing two types of audible walk indications: an audible tone in multiple frequencies and a speech message. The type of audible walk indication will be programmed by Contractor per the Plans.
- Emitting sound via one or more speakers that automatically adjust to ambient noise and shall also be capable of being capped at a preprogrammed level.
- Providing three functions as a result of an extended pushbutton press: increased crossing time, audible beaconing, and speech pushbutton information. The function of the extended pushbutton press will be programmed by the Contractor per the Plans.

APS Pushbutton Assembly shall include a latching red LED pilot light.

Subsection M10.18.: Connected Work Zone Notification System Devices
Add this new subsection.

M10.18.0: Connected Work Zone Notification System Devices

Connected Work Zone Notification System (CWZNS) devices shall include the following:

- An internal 4G LTE or 5G cellular modem. The modem shall be compatible with SIM cards from multiple cellular carriers, or the device shall be capable of using a cellular modem from more than one cellular carrier.
- An integrated GPS that will allow for automated telemetry without additional configuration.
- A self-contained power source that can be recharged without manual intervention. The power source shall enable uninterrupted operation of the CWZNS field device.
- Mounting and supporting hardware and wiring necessary to complete a working system.

CWZNS devices shall be capable of operating in temperatures ranging from -40°F to +122°F with no degradation in operation due to rain, fog, snow, ice, darkness, dust, or road debris.

CWZNS devices shall be physically and digitally secured to prevent unauthorized access.

When powered on, real-time data from CWZNS devices shall be provided in a USDOT Work Zone Data Exchange (WZDx) Specification Device Feed version 4.2. The Device Feed shall then be able to be consumed by the MassDOT Work Zone Manager (WZM) application. The Device Feed shall meet the following requirements:

- Each manufacturer of CWZNS field devices and Smart Work Zone (SWZ) field devices shall provide a single statewide Device Feed (a single URL) that consists of that manufacturer's field devices that are used by or under the direction of the Department.
- The Device Feed shall be made available via an HTTP GET request. The response shall be the WZDx Device Feed JSON object without a wrapper or paging.
- The Device Feed shall be public or use "Basic" HTTP Authentication.
- The Device Feed shall be provided over HTTPS.
- The Device Feed shall reflect changes in CWZNS field device status (e.g., display changed or device moved) no later than 60 seconds after they occur.
- For each CWZNS field device, the "update date" property shall be no older than 60 minutes, except when it has stopped communicating or is otherwise in error.
- The "id" property of each CWZNS field device feature in the Device Feed shall stay the same for the duration of the Contract and shall be a Universally Unique IDentifier (UUID) to guarantee uniqueness between feeds and over time.

M10.18.1: Location Marker

Location Markers shall meet the requirements of M10.18.0: Connected Work Zone Notification System Devices.

Location Markers may be standalone devices or an attachment to a channelizing device. Either type shall be certified to comply with the relevant minimum TL-3 testing requirements of the *Manual on Assessing Safety Hardware*.

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END OF SUPPLEMENTAL SPECIFICATIONS

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**CONTRACT PROVISIONS FOR
FEDERAL-AID CONSTRUCTION CONTRACTS**

I. General
II. Nondiscrimination
III. Davis-Bacon and Related Act Provisions
IV. Contract Work Hours and Safety Standards Act Provisions
V. Subletting or Assigning the Contract
VI. Safety: Accident Prevention
VII. False Statements Concerning Highway Projects
VIII. Implementation of Clean Air Act and Federal Water Pollution Control Act
IX. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
X. Certification Regarding Use of Contract Funds for Lobbying
XI. Use of United States-Flag Vessels

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only).

I. GENERAL

1. Historically, contracting agencies using Federal-aid highway funds were required to ensure Form FHWA-1273 was physically incorporated into all contracts and subcontracts. Effective June 10, 2026, this requirement was eliminated [91 FR 25492]. Future use of Form FHWA-1273 is now optional on the part of the contracting agency using Federal-aid highway funds. FHWA continues to make Form FHWA-1273 available as a convenience to contracting agencies. Contracting agencies must continue to ensure compliance with the provisions cited in Form FHWA-1273 in accordance with the provisions regardless of the use of Form FHWA-1273. Accordingly, the contracting agency retains the authority to determine whether the contractor must use Form FHWA-1273 to physically incorporate required contract provisions in each subcontract and in lower tier contracts. Where permitted by the contracting agency, the contractor may choose other ways to include required contract provisions in each subcontract, besides incorporating Form FHWA-1273. Contract provisions in Form FHWA-1273 are not required to be physically included in subcontracts for design services on Federal-aid design-build contracts, or in purchase orders, rental agreements and other agreements for supplies or services.

The applicable provisions of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor or design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents.

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION

The contractor and all subcontractors must comply with the following policies: 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27, including any amendments thereto.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27, including any amendments thereto.

The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract.

1.Assurances Required:

a. The requirements of 49 CFR Part 26, including any amendments thereto, and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26, including any amendments thereto, in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E, including any amendments thereto, are incorporated by reference. 49 CFR Part 21.

III. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the

classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to DBAconformance@dol.gov. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to DBAconformance@dol.gov, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30–day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.* Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph 2.a. of this section or Section IV, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number

of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH–347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with 29 CFR part 30, including any amendments thereto.

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section III. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs (1) through (11) of this section, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the

contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility. a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

IV. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

* $33 as of January 15, 2025 (See 90 FR 1859) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section III paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

V. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1. of this section refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph 1. of this section is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however,

contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

VI. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

VII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

VIII. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

IX. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

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4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

* * * * *

X. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000. 49 CFR Part 20, App. A.

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

XI. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (40 U.S.C. sections 14501(d) and 14701 and the Appalachian Regional Commission Code as authorized under 40 U.S.C. section 14302)
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 40 U.S.C. 14501 allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

DOCUMENT 00811

SPECIAL PROVISIONS
MONTHLY PRICE ADJUSTMENT FOR HOT MIX ASPHALT (HMA) MIXTURES
Revised: 02/03/2023

This provision applies to all projects using greater than 100 tons of hot mix asphalt (HMA) mixtures containing liquid asphalt cement as stipulated in the Notice to Contractors section of the bid documents.

Price Adjustments will be based on the variance in price, for the liquid asphalt component only, between the Base Price and the Period Price. They shall not include transportation or other charges. Price Adjustments will occur on a monthly basis.

Base Price
The Base Price of liquid asphalt on a project as listed in the Notice to Contractors section of the bid documents is a fixed price determined by the Department at the time of the bid using the same method as the determination of the Period Price detailed below. The Base Price shall be used in all bids.

Period Price
The Period Price is the price of liquid asphalt for each monthly period as determined by the Department using the average selling price per standard ton of PG64-28 paving grade (primary binder classification) asphalt, FOB manufacturer's terminal, as listed under the "East Coast Market - New England, Boston, Massachusetts area" section of the Poten & Partners, Inc. "Asphalt Weekly Monitor". This average selling price is listed in the issue having a publication date of the second Friday of the month and will be posted as the Period Price for that month. The Department will post this Period Price on its website at https://www.mass.gov/service-details/massdot-current-contract-price-adjustments following its receipt of the relevant issue of the "Asphalt Weekly Monitor". Poten and Partners has granted the Department the right to publish this specific asphalt price information sourced from the Asphalt Weekly Monitor.

Price Adjustment Determination, Calculation and Payment
The Contract Price of the HMA mixture will be paid under the respective item in the Contract. Price Adjustments, as herein provided, either upwards or downwards, will be made after the work has been performed using the monthly period price for the month during which the work was performed.

Price Adjustments will be paid only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

The Price Adjustment applies only to the actual virgin liquid asphalt content in the mixture placed on the job in accordance with the approved Job Mix Formula.

Price Adjustments will be separate payment items. The pay item numbers are 999.401 for a positive price adjustment (a payment) and 999.402 for a negative price adjustment (a deduction). Price Adjustments will be calculated using the following equation:

Price Adjustment = Tons of HMA Placed X Liquid Asphalt Content % X RAP Factor X (Period Price - Base Price)

No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is a Department-approved extension of time.

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DOCUMENT 00812

SPECIAL PROVISIONS
MONTHLY PRICE ADJUSTMENT FOR DIESEL FUEL AND GASOLINE –
ENGLISH UNITS
Revised: 02/01/2021

This monthly fuel price adjustment is inserted in this contract because the national and worldwide energy situation has made the future cost of fuel unpredictable. This adjustment will provide for either additional compensation to the Contractor or repayment to the Commonwealth, depending on an increase or decrease in the average price of diesel fuel or gasoline.

This adjustment will be based on fuel usage factors for various items of work developed by the Highway Research Board in Circular 158, dated July 1974. These factors will be multiplied by the quantities of work done in each item during each monthly period and further multiplied by the variance in price from the Base Price to the Period Price.

The Base Price of Diesel Fuel and Gasoline will be the price as indicated in the Department's web site https://www.mass.gov/service-details/massdot-current-contract-price-adjustments for the month in which the contract was bid, which includes State Tax.

The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made during each month.

This adjustment will be effected only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

No adjustment will be paid for work done beyond the extended completion date of any contract.

Any adjustment (increase or decrease) to estimated quantities made to each item at the time of final payment will have the fuel price adjustment figured at the average period price for the entire term of the project for the difference of quantity.

The fuel price adjustment will apply only to the following items of work at the fuel factors shown:

ITEMS COVERED	FUEL FACTORS	
	Diesel	Gasoline
Excavation: and Borrow Work: Items 120, 120.1, 121, 123, 124, 125, 127, 129.3, 140, 140.1, 141, 142, 143, 144, 150, 150.1, 151 and 151.1 (Both Factors used)	0.29 Gallons / CY.	0.15 Gallons / CY
Surfacing Work: All Items containing Hot Mix Asphalt	2.90 Gallons / Ton	Does Not Apply

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DOCUMENT 00813

SPECIAL PROVISIONS

PRICE ADJUSTMENTS FOR STRUCTURAL STEEL AND REINFORCING STEEL

July 15, 2026

This special provision applies to all projects containing the use of structural steel and/or reinforcing steel as specified elsewhere in the Contract work. It applies to all structural steel and all reinforcing steel, as defined below, on the project. Compliance with this provision is mandatory, i.e., there are no "opt-in" or "opt-out" clauses. Price adjustments will be handled as described below and shall only apply to unfabricated reinforcing steel bars and unfabricated structural steel material, consisting of rolled shapes, plate steel, sheet piling, pipe piles, steel castings and steel forgings.

Price adjustments will be variances between Base Prices and Period Prices. Base Prices and Period Prices are defined below.

Price adjustments will only be made if the variances between Base Prices and Period Prices are 5% or more. A variance can result in the Period Price being either higher or lower than the Base Price. Once the 5% threshold has been achieved, the adjustment will apply to the full variance between the Base Price and the Period Price.

Price adjustments will be calculated by multiplying the number of pounds of unfabricated structural steel material or unfabricated reinforcing steel bars on a project by the index factor calculated as shown below under Example of a Period Price Calculation.

Price adjustments will ***not*** include guardrail panels or the costs of shop drawing preparation, handling, fabrication, coatings, transportation, storage, installation, profit, overhead, fuel costs, fuel surcharges, or other such charges not related to the cost of the unfabricated structural steel and unfabricated reinforcing steel.

The weight of steel subject to a price adjustment shall not exceed the final shipping weight of the fabricated part by more than 10%.

Base Prices and Period Prices are defined as follows:

Base Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are fixed prices determined by the Department and found in the table below. While it is the intention of the Department to make this table comprehensive, some of a project's unfabricated structural steel and/or unfabricated reinforcing steel may be inadvertently omitted. Should this occur, the Contractor shall bring the omission to the Department's attention so that a contract alteration may be processed that adds the missing steel to the table and its price adjustments to the Contract.

The Base Price Date is the month and year of the most recent finalized period price index at the time that MassDOT opened bids for the project. The Base Price Index for this contract is the Steel PPI listed in the Notice to Contractors.

Period Prices of unfabricated structural steel and unfabricated reinforcing steel on a project are variable prices that have been calculated using the Period Price Date and an index of steel prices to adjust the Base Price.

The Period Price Date is the date the steel was delivered to the fabricator as evidenced by an official bill of lading submitted to the Department containing a description of the shipped materials, weights of the shipped materials and the date of shipment. This date is used to select the Period Price Index.

The index used for the calculation of Period Prices is the U.S. Department of Labor Bureau of Labor Statistics Producer Price Index (PPI) Series ID WPU101702 (Not Seasonally Adjusted, Group: Metals and Metal Products, Item: Semi-finished Steel Mill Products.) As this index is subject to revision for a period of up to four (4) months after its original publication, no price adjustments will be made until the index for the period is finalized, i.e., the index is no longer suffixed with a "(P)".

Period Prices are determined as follows:

Period Price = Base Price X Index Factor
Index Factor = Period Price Index / Base Price Index

Example of a Period Price Calculation:

Calculate the Period Price for December 2009 using a Base Price from March 2009 of $0.82/Pound for 1,000 Pounds of ASTM A709 (AASHTO M270) Grade A36 Structural Steel Plate.

The Period Price Date is December 2009. From the PPI website*, the Period Price Index = 218.0.

The Base Price Date is March 2009. From the PPI website*, the Base Price Index = 229.4.

Index Factor = Period Price Index / Base Price Index = 218.0 / 229.4 = 0.950
Period Price = Base Price X Index Factor = $0.82/Pound X 0.950 = $0.78/Pound

Since $0.82 - $0.78 = $0.04 is less than 5% of $0.82, no price adjustment is required.

If the $0.04 difference shown above was greater than 5% of the Base Price, then the price adjustment would be 1,000 Pounds X $0.04/Pound = $40.00. Since the Period Price of $0.78/Pound is less than the Base Price of $0.82/Pound, indicating a drop in the price of steel between the bid and the delivery of material, a credit of $40.00 would be owed to MassDOT. When the Period Price is higher than the Base Price, the price adjustment is owed to the Contractor.

* To access the PPI website and obtain a Base Price Index or a Period Price Index, go to http://data.bls.gov/cgi-bin/srgate

End of example.

The Contractor will be paid for unfabricated structural steel and unfabricated reinforcing steel under the respective contract pay items for all components constructed of either structural steel or reinforced Portland cement concrete under their respective Contract Pay Items.

Price adjustments, as herein provided for, will be paid separately as follows:

Structural Steel
Pay Item Number 999.449 for positive (+) pay adjustments (payments to the Contractor)

Pay Item Number 999.457 for negative (-) pay adjustments (credits to MassDOT Highway Division)

Reinforcing Steel
Pay Item Number 999.466 for positive (+) pay adjustments (payments to the Contractor)

Pay Item Number 999.467 for negative (-) pay adjustments (credits to MassDOT Highway Division)

No price adjustment will be made for price changes after the Contract Completion Date, unless the MassDOT Highway Division has approved an extension of Contract Time for the Contract.

TABLE

Steel Type		Price per Pound
1	ASTM A615/A615M Grade 60 (AASHTO M31 Grade 60 or 420) Reinforcing Steel	$0.57
2	ASTM A27 (AASHTO M103) Steel Castings, H-Pile Points & Pipe Pile Shoes (See Note below.)	$0.80
3	ASTM A668 / A668M (AASHTO M102) Steel Forgings	$0.80
4	ASTM A108 (AASHTO M169) Steel Forgings for Shear Studs	$0.82
5	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Plate	$0.86
6	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Shapes	$0.81
7	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Plate	$0.86
8	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Shapes	$0.81
9	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Plate	$0.89
10	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Shapes	$0.82
11	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W 345W Structural Steel Plate	$0.89
12	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W or 345W Structural Steel Shapes	$0.82
13	ASTM A709/A709M Grade HPS 50W / AASHTO M270M/M270 Grade HPS 50W or 345W Structural Steel Plate	$0.93
14	ASTM A709/A709M Grade HPS 70W / AASHTO M270M/M270 Grade HPS 70W or 485W Structural Steel Plate	$1.00
15	ASTM A514/A514M-05 Grade HPS 100W / AASHTO M270M/M270 Grade HPS 100W or 690W Structural Steel Plate	$1.53
16	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Plate	$0.89
17	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Shapes	$0.82
18	ASTM A276 Type 316 Stainless Steel	$4.61
19	ASTM A240 Type 316 Stainless Steel	$4.61
20	ASTM A148 Grade 80/50 Steel Castings (See Note below.)	$1.58
21	ASTM A53 Grade B Structural Steel Pipe	$1.00
22	ASTM A500 Grades A, B, 36 & 50 Structural Steel Pipe	$1.00
23	ASTM A252, Grades 240 (36 KSI) & 414 (60 KSI) Pipe Pile	$0.80
24	ASTM 252, Grade 2 Permanent Steel Casing	$0.80
25	ASTM A36 (AASHTO M183) for H-piles, steel supports and sign supports	$0.84
26	ASTM A328 / A328M, Grade 50 (AASHTO M202) Steel Sheetpiling	$1.51
27	ASTM A572 / A572M, Grade 50 Sheetpiling	$1.51
28	ASTM A36/36M, Grade 50	$0.86
29	ASTM A570, Grade 50	$0.84
30	ASTM A572 (AASHTO M223), Grade 50 H-Piles	$0.86
31	ASTM A1085 Grade A (50 KSI) Steel Hollow Structural Sections (HSS), heat-treated per ASTM A1085 Supplement S1	$1.00
32	AREA 140 LB Rail and Track Accessories	$0.52

NOTE: Steel Castings are generally used only on moveable bridges. Cast iron frames, grates and pipe are not “steel” castings and will not be considered for price adjustments.

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DOCUMENT 00814

SPECIAL PROVISIONS
PRICE ADJUSTMENT FOR PORTLAND CEMENT CONCRETE MIXES

January 12, 2009

This provision applies to all projects using greater than 100 Cubic Yards (76 Cubic Meters) of Portland cement concrete containing Portland cement as stipulated in the Notice to Contractors section of the Bid Documents. This Price Adjustment will occur on a monthly basis.

The Price Adjustment will be based on the variance in price for the Portland cement component only from the Base Price to the Period Price. It shall not include transportation or other charges.

The Base Price of Portland cement on a project is a fixed price determined at the time of bid by the Department by using the same method as for the determination of the Period Price (see below) and found in the Notice to Contractors.

The Period Price of Portland cement will be determined by using the latest published price, in dollars per ton (U.S.), for Portland cement (Type I) quoted for Boston, U.S.A. in the **Construction Economics** section of *ENR Engineering News-Record* magazine or at the ENR website http://www.enr.com under **Construction Economics**. The Period Price will be posted on the MassDOT website the Wednesday immediately following the publishing of the monthly price in ENR, which is normally the first week of the month.

The Contract Price of the Portland cement concrete mix will be paid under the respective item in the Contract. The price adjustment, as herein provided, upwards or downwards, will be made after the work has been performed, using the monthly period price for the month during which the work was performed.

The price adjustment applies only to the actual Portland cement content in the mix placed on the job in accordance with the Standard Specifications for Highways and Bridges, Division III, Section M4.02.01. No adjustments will be made for any cement replacement materials such as fly ash or ground granulated blast furnace slag.

The Price Adjustment will be a separate payment item. It will be determined by multiplying the number of cubic yards of Portland cement concrete placed during each monthly period times the Portland cement content percentage times the variance in price between the Base Price and Period Price of Portland cement.

This Price Adjustment will be paid only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is a Department-approved extension of time.

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DOCUMENT 00820

THE COMMONWEALTH OF MASSACHUSETTS SUPPLEMENTAL EQUAL EMPLOYMENT OPPORTUNITY, NON-DISCRIMINATION AND AFFIRMATIVE ACTION PROGRAM

I. Definitions

For purposes of this contract,

"Minority" means a person who meets one or more of the following definitions:

(a) American Indian or Native American means: all persons having origins in any of the original peoples of North America and who are recognized as an Indian by a tribe or tribal organization.
(b) Asian means: All persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian sub-continent, or the Pacific Islands, including, but Not limited to China, Japan, Korea, Samoa, India, and the Philippine Islands.
(c) Black means: All persons having origins in any of the Black racial groups of Africa, including, but not limited to, African-Americans, and all persons having origins in any of the original peoples of the Cape Verdean Islands.
(d) Eskimo or Aleut means: All persons having origins in any of the peoples of Northern Canada, Greenland, Alaska, and Eastern Siberia.
(e) Hispanic means: All persons having their origins in any of the Spanish-speaking peoples of Mexico, Puerto Rico, Cuba, Central or South America, or the Caribbean Islands.

"State construction contract" means a contract for the construction, reconstruction, installation, demolition, maintenance or repair of a building or capital facility, or a contract for the construction, reconstruction, alteration, remodeling or repair of a public work undertaken by a department, agency, board, or commission of the commonwealth.

"State assisted construction contract" means a contract for the construction, reconstruction, installation, demolition, maintenance or repair of a building or capital facility undertaken by a political subdivision of the commonwealth, or two or more political subdivisions thereof, an authority, or other instrumentality and whose costs of the contract are paid for, reimbursed, grant funded, or otherwise supported, in whole or in part, by the commonwealth.

II. Equal Opportunity, Non-Discrimination and Affirmative Action

During the performance of this Contract, the Contractor and all subcontractors (hereinafter collectively referred to as "the Contractor") for a state construction contract or a state assisted construction contract, for him/herself, his/her assignees and successors in interest, agree to comply with all applicable equal employment opportunity, non-discrimination and affirmative action requirements, including but not limited to the following:

In connection with the performance of work under this contract, the Contractor shall not discriminate against any employee or applicant for employment because of race, color, religious creed, national origin, sex, sexual orientation, genetic information, military service, age, ancestry or disability, shall not discriminate in the selection or retention of subcontractors, and shall not discriminate in the procurement of materials and rentals of equipment.

The aforesaid provision shall include, but not be limited to, the following: employment upgrading, demotion, or transfer; recruitment advertising, layoff or termination; rates of pay or other forms of compensation; conditions or privileges of employment; and selection for apprenticeship or on-the-job training opportunity. The Contractor shall comply with the provisions of chapter 151B of the Massachusetts General Laws, as amended, and all other applicable anti-discrimination and equal opportunity laws, all of which are herein incorporated by reference and made a part of this Contract.

The Contractor shall post hereafter in conspicuous places, available for employees and applicants for employment, notices to be provided by the Massachusetts Commission Against Discrimination setting forth the provisions of the Fair Employment Practices Law of the Commonwealth (Massachusetts General Laws Chapter l51 B).

In connection with the performance of work under this contract, the Contractor shall undertake, in good faith, affirmative action measures to eliminate any discriminatory barriers in the terms and conditions of employment on the grounds of race, color, religious creed, national origin, sex, sexual orientation, genetic information, military service, age, ancestry or disability. Such affirmative action measures shall entail positive and aggressive measures to ensure nondiscrimination and to promote equal opportunity in the areas of hiring, upgrading, demotion or transfer, recruitment, layoff or termination, rate of compensation, apprenticeship and on-the-job training programs. A list of positive and aggressive measures shall include, but not be limited to, advertising employment opportunities in minority and other community news media; notifying minority, women and other community-based organizations of employment opportunities; validating all job specifications, selection requirements, and tests; maintaining a file of names and addresses of each worker referred to the Contractor and what action was taken concerning such worker; and notifying the administering agency in writing when a union with whom the Contractor has a collective bargaining agreement has failed to refer a minority or woman worker. These and other affirmative action measures shall include all actions required to guarantee equal employment opportunity for all persons, regardless of race, color, religious creed, national origin, sex, sexual orientation, genetic information, military service, age, ancestry or disability. One purpose of this provision is to ensure to the fullest extent possible an adequate supply of skilled tradesmen for this and future Commonwealth public construction projects.

III. Minority and Women Workforce Participation

Pursuant to his/her obligations under the preceding section, the Contractor shall strive to achieve on this project the labor participation goals contained herein. Said participation goals shall apply in each job category on this project including but not limited to bricklayers, carpenters, cement masons, electricians, ironworkers, operating engineers and those classes of work enumerated in Section 44F of Chapter 149 of the Massachusetts General Laws. The participation goals for this project shall be 15.3% for minorities and 6.9% for women. The participation goals, as set forth herein, shall not be construed as quotas or set-asides; rather, such participation goals will be used to measure the progress of the Commonwealth's equal opportunity, non-discrimination and affirmative action program. Additionally, the participation goals contained herein should not be seen or treated as a floor or as a ceiling for the employment of particular individuals or group of individuals.

IV. Liaison Committee

At the discretion of the agency that administers the contract for the construction project there may be established for the life of the contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of one representative each from the agency or agencies administering the contract for the construction project, hereinafter called the administering agency, a representative from the Office of Affirmative action, and such other representatives as may be designated by the administering agency. The Contractor (or his/her agent, if any, designated by him/her 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.

V. Reports and Records

The Contractor shall prepare projected workforce tables on a quarterly basis when required by the administering agency. 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 also, when updated, to the administering agency and the Liaison Committee when required.

The Contractor shall prepare weekly reports in a form approved by the administering agency, unless information required is required to be reported electronically by the administering agency, the number of hours worked in each trade by each employee, identified as woman, minority, or non-minority. Copies of these shall be provided at the end of each such week to the administering agency and the Liaison Committee.

Records of employment referral orders, prepared by the Contractor, shall be made available to the administering agency on request.

The Contractor will provide all information and reports required by the administering agency on instructions issued by the administering agency and will permit access to its facilities and any books, records, accounts and other sources of information which may be determined by the administering agency to effect the employment of personnel. This provision shall apply only to information pertinent to the Commonwealth's supplementary non-discrimination, equal opportunity and access and opportunity 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 administering agency and shall set forth what efforts he has made to obtain the information.

VI. Access to Work Site

A designee of the administering agency and a designee of the Liaison Committee shall each have a right to access the work site.

VII. Solicitations for Subcontracts, and for the Procurement of Materials and Equipment

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 equal opportunity.

VIII. Sanctions

Whenever the administering agency believes the General or Prime Contractor or any subcontractor may not be operating in compliance with the provisions of the Fair Employment Practices Law of the Commonwealth (Massachusetts General Laws Chapter 151B), the administering agency may refer the matter to the Massachusetts Commission Against Discrimination ("Commission") for investigation.

Following the referral of a matter by the administering agency to the Massachusetts Commission Against Discrimination, and while the matter is pending before the MCAD, the administering agency may withhold payments from contractors and subcontractors when it has documentation that the contractor or subcontractor has violated the Fair Employment Practices Law with respect to its activities on the Project, or if the administering agency determines that the contractor has materially failed to comply with its obligations and the requirements of this Section. The amount withheld shall not exceed a withhold of payment to the General or Prime Contractor of 1/100 or 1% of the contract award price or $5,000, whichever sum is greater, or, if a subcontractor is in non-compliance, a withhold by the administering agency from the General Contractor, to be assessed by the General Contractor as a charge against the subcontractor, of 1/100 or 1% of the subcontractor price, or $1,000 whichever sum is greater, for each violation of the applicable law or contract requirements. The total withheld from anyone General or Prime Contractor or subcontractor on a Project shall not exceed $20,000 overall. No withhold of payments or investigation by the Commission or its agent shall be initiated without the administering agency providing prior notice to the Contractor.

If, after investigation, the Massachusetts Commission Against Discrimination finds that a General or Prime Contractor or subcontractor, in commission of a state construction contract or state-assisted construction contract, violated the provisions of the Fair Employment Practices Law, the administering agency may convert the amount withheld as set forth above into a permanent sanction, as a permanent deduct from payments to the General or Prime Contractor or subcontractor, which sanction will be in addition to any such sanctions, fines or penalties imposed by the Massachusetts Commission Against Discrimination.

No sanction enumerated under this Section shall be imposed by the administering agency except after notice to the General or Prime Contractor or subcontractor and an adjudicatory proceeding, as that term is used, under Massachusetts General Laws Chapter 30A, has been conducted.

IX. Severability

The provisions of this section are severable, and if any of these provisions shall be held unconstitutional by any court of competent jurisdiction, the decision of such court shall not affect or impair any of the remaining provisions.

X. Contractor's Certification

After award and prior to the execution of any contract for a state construction contract or a state assisted construction contract, the Prime or General Contractor shall certify that it will comply with all provisions of this Document 00820 Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program, by executing Document 00859 Contractor/Subcontractor Certification Form.

XI. Subcontractor Requirements

Prior to the award of any subcontract for a state construction contract or a state assisted construction contract, the Prime or General Contractor shall provide all prospective subcontractors with a complete copy of this Document 00820 entitled "Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program" and will incorporate the provisions of this Document 00820 into any and all contracts or work orders for all subcontractors providing work on the Project. In order to ensure that the said subcontractor's certification becomes a part of all subcontracts under the prime contract, the Prime or General Contractor shall certify in writing to the administering agency that it has complied with the requirements as set forth in the preceeding paragraph by executing Document 00859 Contractor/Subcontractor Certification Form.

Rev'd 03/07/14

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DOCUMENT 00821

ELECTRONIC REPORTING REQUIREMENTS
CIVIL RIGHTS PROGRAMS AND CERTIFIED PAYROLL

Implemented on March 2, 2009 Revised June 04, 2019

The Massachusetts Department Of Transportation (MassDOT) has replaced the CHAMP reporting system with Equitable Business Opportunity Solution (EBO), a new web-based civil rights reporting software system. This system is capable of handling both civil rights reporting requirements and certified payrolls. The program's functions include the administration of Equal Employment Opportunity (EEO) requirements, On-The-Job Training requirements (OJT), Disadvantage Business Enterprise (DBE) and/or Minority / Women's Business Enterprise (M/WBE) subcontracting requirements, and the electronic collection of certified payrolls associated with MassDOT projects. In addition, this system is used to generate various data required as part of the American Recovery and Reinvestment Act (ARRA). Contractors are responsible for all coordination with all sub-contractors to ensure timely and accurate electronic submission of all required data.

Contractor and Sub-Contractor EBO User Certification

All contractors and sub-contractors must use the EBO software system. The software vendor, Internet Government Solutions (IGS), has developed an online EBO Training Module that is available to contractors and sub-contractors. This module is a self-tutorial which allows all users in the company to access the training, complete the tutorial, and become certified as EBO users for a one time fee of $75.00. This is the only cost to contractors and sub-contractors associated with the EBO software system. The online EBO Training Module can be accessed at www.ebotraining.com. Click the "Register My Company" button on the login page to begin your training registration. Questions regarding EBO online training should be directed to Gerry Anguilano, IGS at (440) 238-1684.

MassDOT will track contractors and sub-contractors who have successfully completed the on-line training module. All persons performing civil rights program and/or certified payroll functions should be EBO certified.

Vetting of Firms and Designated Firm Individuals

Contractors must authorize a Primary Log-In ID Holder who has completed EBO on-line training to have access to the EBO system by completing and submitting the "Request For EBO System Log-In/Password Form" located on the MassDOT website at: https://www.mass.gov/how-to/how-to-get-an-ebo-login
Contractors must also agree to comply with the EBO system user agreement located on the MassDOT website.

All subcontracts entered into on a project must include language that identifies the submission and training requirements that the sub-contractor must perform. Sub-contractors will be approved by the respective District Office of MassDOT through the existing approval process. When new sub-contractors, who have not previously worked for MassDOT, are initially selected by a general contractor, the new sub-contractor must be approved by the District before taking the EBO on-line training module.

Interim Reporting Requirements

Until MassDOT is satisfied that the EBO system is fully operational and functioning as designed, contractors and sub-contractors will be required to submit certified payrolls manually. There will be a transition period where dual reporting, through manual and electronic submission, will be required. MassDOT, however, will notify contractors and sub-contractors when they may cease manual submission of certified payrolls.

*** END OF DOCUMENT ***

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DOCUMENT 00859

CONTRACTOR/SUBCONTRACTOR CERTIFICATION FORM ‡

The contractor shall submit this completed document 00859 to MassDOT for each subcontract.

_____ **(Contractor)** **Date:**_____

_____**(Subcontractor)** ☐ District Approved Subcontractor

Contract No: 135786 **Project No.** 613163 **Federal Aid No.:** STP-0034(033)X

Location: LYNNFIELD

Project Description: Rail Trail Construction, from Ford Avenue to the Peabody City Line

PART 1 CONTRACTOR CERTIFICATION: I hereby certify, as an authorized official of this company, that to the best of my knowledge, information and belief, the company is in compliance with all applicable federal and state laws, rules, and regulations governing fair labor and employment practices, that the company will not discriminate in their employment practices, that the company will make good faith efforts to comply with the minority employee and women employee workforce participation ratio goals and specific affirmative action steps contained in Contract Document 00820 The Commonwealth of Massachusetts Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program, and that the company will comply with the special provisions and documentation indicated below (as checked).

I further hereby certify, as an authorized official of this company, that the special provisions and documentation indicated below (as checked) have been or are included in, and made part of, the Subcontractor Agreement entered into with the firm named above.

☐ **This is not a Federally-aided construction project**

Document #

☐ 00718 –Participation By Minority Or Women's Business Enterprises and SDVOBE†
☐ 00761 –Certification Regarding Debarment, Suspension, Ineligibility, and Voluntary Exclusion
☐ 00820 – MA Supplemental Equal Employment Opportunity, Non-Discrimination, and Affirmative Action Program
☐ 00821 – Electronic Reporting Requirements, Civil Rights Programs, and Certified Payroll
☐ 00859 – Contractor/Subcontractor Certification Form (this document)
☐ 00860 – MA Employment Laws
☐ 00861 – Applicable State Wage Rates in the Contract Proposal**
☐ B00842 – MA Schedule of Participation By Minority or Women Business Enterprises (M/WBEs)†
☐ B00843 – MA Letter of Intent – M/WBEs†

** Does not apply to Material Suppliers, unless performing work on-site
† Applies only if Subcontractor is a M/WBE; only include these forms for the particular M/WBE Entity

☐ B00844 - Schedule of Participation By SDVOBE
☐ B00845 - Letter of Intent – SDVOBE
☐ B00846 – M/WBE or SDVOBE Joint Check Arrangement Approval Form
☐ B00847 – Joint Venture Affidavit

☐ **This is a Federally-aided construction project (Federal Aid Number is present)**

Document #

☐ 00719 – Special Provisions for Participation by Disadvantaged Business Enterprises†
☐ 00760 - Form FHWA 1273 - Required Contract Provisions for Federal-Aid Construction Contracts
☐ 00820 – MA Supplemental Equal Employment Opportunity, Non-Discrimination and Affirmative Action Program
☐ 00821 – Electronic Reporting Requirements, Civil Rights Programs and Certified Payroll
☐ 00859 – Contractor/Subcontractor Certification Form (this document)
☐ 00860 – MA Employment Laws
☐ 00870 – Standard Federal Equal Employment Opportunity Construction Contract Specifications Executive Order 11246, (41 CFR Parts 60-4.2 and 60-4.3 (Solicitations and Equal Opportunity Clauses)*
☐ 00875 – Federal Trainee Special Provisions

☐ B00853 – Schedule of Participation by Disadvantaged Business Enterprise†
☐ B00854 – Letter of Intent – DBEs†
☐ B00855 – DBE Joint Check Arrangement Approval Form
☐ B00856 – Joint Venture Affidavit
☐ 00861/00880 - Applicable state and federal wage rates from Contract Proposal**

*Applicable only to Contracts or Subcontracts in excess of $10,000
**Does not apply to Material Suppliers, unless performing work on-site
† Applies only if Subcontractor is a DBE; only include these forms for the particular DBE Entity

Signed this _____ Day of _____, 20_____ Under The Pains And Penalties Of Perjury.

_____ _____
(Print Name and Title) (Authorized Signature)

PART 2

PART 2 SUBCONTRACTOR CERTIFICATION: I hereby certify, as an authorized official of this company, that the required documents in Part 1 above were physically incorporated in our Agreement/Subcontract with the Contractor and give assurance that this company will fully comply or make every good faith effort to comply with the same. I further certify that:

1. This company recognizes that if this is a Federal-Aid Project, then this Contract is covered by the equal employment opportunity laws administered and enforced by the United States Department of Labor ("USDOL"), Office of Federal Contract Compliance Programs ('OFCCP"). By signing below, we acknowledge that this company has certain reporting obligations to the OFCCP, as specified by 41 CFR Part 60-4.2.
2. This company further acknowledges that any contractor with fifty (50) or more employees on a Federal-aid Contract with a value of fifty-thousand ($50,000) dollars or more must annually file an EEO-1 Report (SF 100) to the EEOC, Joint Reporting Committee, on or before September 30th, each year, as specified by 41 CFR Part 60-1.7a.
3. For more information regarding the federal reporting requirements, please contact the USDOL, OFCCP Regional Office, at 1-646-264-3170 or EEO-1, Joint Reporting Committee at 1-866-286-6440.
4. This company ☐ has, ☐ has not, participated in a previous contract or subcontract subject to the Equal Opportunity clauses set forth in 41 CFR Part 60-4 and Executive Order 11246, and where required, has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance Programs or the EEO Commission all reports due under the applicable filing requirements.
5. This company is in full compliance with applicable Federal and Commonwealth of Massachusetts laws, rules, and regulations and is not currently debarred or disqualified from bidding on or participating in construction contracts in any jurisdiction of the United States. See : https://www.mass.gov/service-details/contractors-and-vendors-suspended-or-debarred-by-massdot
6. This company is properly registered and in good standing with the Office of the Secretary of the Commonwealth.

Signed this _____ Day of _____, 20_____, Under The Pains And Penalties Of Perjury.

Firm: _____
Address: _____
_____
_____
Telephone Number:_____
Federal I.D. Number:_____
Estimated Start Date:_____
Estimated Completion Date:_____
Estimated Dollar Amount:_____

_____
(Print Name and Title)

_____
(Authorized Signature)

_____
(Date)

Rev'd 09/02/22

*** END OF DOCUMENT ***

DOCUMENT 00860

COMMONWEALTH OF MASSACHUSETTS PUBLIC EMPLOYMENT LAWS

Revised February 20, 2019

The Contractor's attention is directed to Massachusetts General Laws, Chapter 149, Sections 26 through 27H, and 150A. This contract is considered to fall within the ambit of that law, which provides that in general, the Prevailing Rate or Total Rate must be paid to employees working on projects funded by the Commonwealth of Massachusetts or any political subdivision including Massachusetts Department of Transportation (MassDOT).

A Federal Aid project is also subject to the Federal Minimum Wage Rate law for construction. When comparing a state minimum wage rate, monitored by the Massachusetts Attorney General, versus federal minimum wage rate, monitored by the U.S. Department of Labor Wage and Hour Division, for a particular job classification the higher wage is at all times to be paid to the affected employee.

Every contractor or subcontractor engaged in this contract to which sections twenty-seven and twenty-seven A apply will keep a true and accurate record of all mechanics and apprentices, teamsters, chauffeurs and laborers employed thereon, showing the name, address and occupational classification of each such employee on this contract, and the hours worked by, and the wages paid to, each such employee, and shall furnish to the MassDOT's Resident Engineer, on a weekly basis, a copy of said record, in a form approved by MassDOT and in accordance with M.G.L. c. 149, § 27B, signed by the employer or his/her authorized agent under the penalties of perjury.

Each such contractor or subcontractor shall preserve its payroll records for a period of three years from the date of completion of the contract.

The Prevailing Wage Rate generally includes the following:

> Minimum Hourly Wage + Employer Contributions to Benefit Plans = Prevailing Wage Rate or Total Rate
>
> Any employer who does not make contributions to Benefit Plans must pay the total Prevailing Wage Rate directly to the employee.

Any deduction from the Prevailing Wage Rate or Total Rate for contributions to benefit plans can only be for a Health & Welfare, Pension, or Supplementary Unemployment plan meeting the requirements of the Employee Retirement Income Security Act (ERISA) of 1974. The maximum allowable deduction for these benefits from the prevailing wage rate cannot be greater than the amount allowed by Executive Office of Labor (EOL) for the specified benefits. Any additional expense of providing benefits to the employees is to be borne by the employer and cannot be deducted from the Minimum Hourly Wage. If the employer's benefit expense is less than that so provided by EOL the difference will be paid directly to the employee. The rate established must be paid to all employees who perform work on the project.

When an employer makes deductions from the Minimum Hourly Wage for an employee's contribution to social security, state taxes, federal taxes, and/or other contribution programs, allowed by law, the employer shall furnish each employee a suitable pay slip, check stub or envelope notifying the employee of the amount of the deductions.

No contractor or subcontractor contracting for any part of the contract week shall require or permit any laborer or mechanic to be employed on such work in excess of forty hours in any workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times his basic rate of pay for all hours worked in excess of forty hours in such workweek, whichever is the greater number of overtime hours.

Apprentice Rates are permitted only when there is an Apprentice Agreement registered with the Massachusetts Division of Apprentice Training in accordance with M.G.L. c. 23, § 11E-11L.

The Prevailing Wage Rates issued for each project shall be the rates paid for the entire project. The Prevailing Wage Rates must be posted on the job site at all times and be visible from a public way.

In addition, each such contractor and subcontractor shall furnish to the MassDOT's Resident Engineer, within fifteen days after completion of its portion of the work, a statement, executed by the contractor or subcontractor or by any authorized officer or employee of the contractor or subcontractor who supervises the payment of wages, in the following form:

STATEMENT OF COMPLIANCE

Date: _____

I , _____do hereby state:
(Name of signatory party) (Title)

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

_____
(Contractor or Subcontractor)

on the _____
(MassDOT Project Location and Contract Number)

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 _____

The above-mentioned copies of payroll records and statements of compliance shall be available for inspection by any interested party filing a written request to the MassDOT's Resident Engineer for such inspection and copying.

Massachusetts General Laws c. 149, §27, requires annual updates to prevailing wage schedules for all public construction contracts lasting longer than one year. MassDOT will request the required updates and furnish them to the Contractor. The Contractor is required to pay no less than the wage rates indicated on the annual updated wage schedules.

MassDOT will request the updates no later that two week before the anniversary of the Notice to Proceed date of the contract to allow for adequate processing by the Department of Labor Standards (DLS). The effective date for the new rates will be the anniversary date of the contract (i.e. the notice to proceed date), regardless of the date of issuance on the schedule from DLS.

All bidders are cautioned that the aforementioned laws require that employers pay to covered employees no less than the applicable minimum wages. In addition, the same laws require that the applicable prevailing wages become incorporated as part of this contract. The prevailing minimum wage law establishes serious civil and criminal penalties for violations, including imprisonment and exclusion from future public contracts. Bidders are cautioned to carefully read the relevant sections of the Massachusetts General Laws.

*** END OF DOCUMENT ***

DOCUMENT 00861

STATE PREVAILING WAGE RATES

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THE COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF LABOR AND WORKFORCE DEVELOPMENT
DEPARTMENT OF LABOR STANDARDS
Prevailing Wage Rates

MAURA HEALEY
Governor
KIM DRISCOLL
Lt. Governor

As determined by the Director under the provisions of the Massachusetts General Laws, Chapter 149, Sections 26 to 27H

LAUREN JONES
Secretary
MICHAEL FLANAGAN
Director

Awarding Authority:	Massachusetts Highway	**City/Town:**	LYNNFIELD
Contract Number:	135786		
Description of Work:	LYNNFIELD - Federal Aid Project No. STP-0034(033)X Rail Trail Construction, from Ford Avenue to the Peabody City Line		
Job Location:	Ford Avenue to the Peabody City Line		

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

- The wage rates will remain in effect for the duration of the project, except in the case of multi-year public construction projects. For construction projects lasting longer than one year, awarding authorities must request an updated wage schedule no later than two weeks before the anniversary of the date the contract was executed by the awarding authority and the general contractor. For multi-year CM AT RISK projects, the awarding authority must request an annual update no later than two weeks before the anniversary date, determined as the earlier of: (a) the execution date of the GMP Amendment, or (b) the execution date of the first amendment to permit procurement of construction services. The updated wage schedule must be provided to all contractors, including general and sub-contractors, working on the construction project.
- This annual update requirement is generally not applicable to 27F “rental of equipment” contracts. For such contracts, the prevailing wage rates issued by DLS shall remain in effect for the duration of the contract term. However, if the prevailing wage rate sheet issued does not contain wage rates for each year covered by the contract term, the Awarding Authority must request updated rate sheets from DLS and provide them to the contractor to ensure the correct rates are being paid throughout the duration of the contract. Additionally, if an Awarding Authority exercises an option to renew or extend the contract term, they must request updated rate sheets form DLS and provide them to the contractor.
- This wage schedule applies only to the specific project referenced at the top of this page and uniquely identified by the “Wage Request Number” on all pages of this schedule.
- An Awarding Authority must request an updated wage schedule if it has not opened bids or selected a contractor within 90 days of the date of issuance of the wage schedule. For CM AT RISK projects (bid pursuant to G.L. c.149A), the earlier of: (a) the execution date of the GMP Amendment, or (b) the bid for the first construction scope of work must be within 90-days of the wage schedule issuance date.
- The wage schedule shall be incorporated in any advertisement or call for bids for the project as required by M.G.L. c. 149, § 27. The wage schedule shall be made a part of the contract awarded for the project. The wage schedule must be posted in a conspicuous place at the work site for the life of the project in accordance with M.G.L. c. 149 § 27. The wages listed on the wage schedule must be paid to employees performing construction work on the project whether they are employed by the prime contractor, a filed sub-bidder, or a sub-contractor.
- Apprentices working on the project are required to be registered with the Massachusetts Division of Apprentice Standards (DAS). Apprentices must keep their apprentice identification card on their persons during all work hours on the project. An apprentice registered with DAS may be paid the lower apprentice wage rate at the applicable step as provided on the prevailing wage schedule. **Any apprentice not registered with DAS regardless of whether they are registered with another federal, state, local, or private agency must be paid the journeyworker's rate.**
- Every contractor or subcontractor working on the construction project must submit weekly payroll reports and a Statement of Compliance directly to the awarding authority by mail or email and keep them on file for three years. Each weekly payroll report must contain: the employee’s name, address, occupational classification, hours worked, and wages paid. Do not submit weekly payroll reports to DLS. For a sample payroll reporting form go to http://www.mass.gov/dols/pw.
- Contractors with questions about the wage rates or classifications included on the wage schedule have an affirmative obligation to inquire with DLS at (617) 626-6953.
- Contractors must obtain the wage schedules from awarding authorities. Failure of a contractor or subcontractor to pay the prevailing wage rates listed on the wage schedule to all employees who perform construction work on the project is a violation of the law and subjects the contractor or subcontractor to civil and criminal penalties.
- Employees not receiving the prevailing wage rate set forth on the wage schedule may file a complaint with the Fair Labor Division of the office of the Attorney General at (617) 727-3465.

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
(2 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$41.95	$16.17	$21.78	$0.00	$0.00	$79.90
	12/1/2026	$41.95	$16.17	$23.52	$0.00	$0.00	$81.64
	1/1/2027	$41.95	$16.77	$23.52	$0.00	$0.00	$82.24
(3 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$42.02	$16.17	$21.78	$0.00	$0.00	$79.97
	12/1/2026	$42.02	$16.17	$23.52	$0.00	$0.00	$81.71
	1/1/2027	$42.02	$16.77	$23.52	$0.00	$0.00	$82.31
(4 & 5 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$42.14	$16.17	$21.78	$0.00	$0.00	$80.09
	12/1/2026	$42.14	$16.17	$23.52	$0.00	$0.00	$81.83
	1/1/2027	$42.14	$16.77	$23.52	$0.00	$0.00	$82.43
ADS/SUBMERSIBLE PILOT PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1) For apprentice rates see "Apprentice- PILE DRIVER"	1/1/2024	$117.16	$10.08	$11.62	$12.67	$0.00	$151.53
AIR TRACK OPERATOR LABORERS LABORERS - ZONE 2 For apprentice rates see "Apprentice- LABORER"	6/1/2026	$42.41	$10.90	$9.75	$9.11	$0.00	$72.17
	12/1/2026	$43.85	$10.90	$9.75	$9.11	$0.00	$73.61
	6/1/2027	$45.30	$10.90	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$46.75	$10.90	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.25	$10.90	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$49.75	$10.90	$9.75	$9.11	$0.00	$79.51
AIR TRACK OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY) For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"	6/1/2026	$42.41	$10.90	$9.75	$9.21	$0.00	$72.27
	12/1/2026	$43.85	$10.90	$9.75	$9.21	$0.00	$73.71
ASBESTOS REMOVER - PIPE / MECH. EQUIPT. HEAT & FROST INSULATORS LOCAL 6 HEAT & FROST INSULATORS LOCAL 6 (BOSTON)	12/1/2025	$44.80	$14.50	$4.30	$6.75	$0.00	$70.35
ASPHALT RAKER LABORERS LABORERS - ZONE 2 For apprentice rates see "Apprentice- LABORER"	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
ASPHALT RAKER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY) For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BACKHOE/FRONT-END LOADER	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BARCO-TYPE JUMPING TAMPER	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER	6/1/2026	$42.41	$10.90	$9.75	$9.11	$0.00	$72.17
LABORERS	12/1/2026	$43.85	$10.90	$9.75	$9.11	$0.00	$73.61
LABORERS - ZONE 2	6/1/2027	$45.30	$10.90	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$46.75	$10.90	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.25	$10.90	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$49.75	$10.90	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)	6/1/2026	$42.41	$10.90	$9.75	$9.21	$0.00	$72.27
LABORERS	12/1/2026	$43.85	$10.90	$9.75	$9.21	$0.00	$73.71
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
BOILER MAKER	1/1/2024	$48.12	$7.07	$14.60	$6.00	$0.00	$75.79
BOILERMAKERS LOCAL 29							
BOILERMAKERS LOCAL 29							

Apprentice: BOILER MAKER

Effective Date: 1/1/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	65.00	$31.28	$7.07	$9.32	$3.90	$0.00	$51.57
2	65.00	$31.28	$7.07	$9.32	$3.90	$0.00	$51.57
3	70.00	$33.68	$7.07	$10.03	$4.20	$0.00	$54.98
4	75.00	$36.09	$7.07	$10.74	$4.50	$0.00	$58.40
5	80.00	$38.50	$7.07	$11.45	$4.80	$0.00	$61.82
6	85.00	$40.90	$7.07	$12.18	$5.10	$0.00	$65.25
7	90.00	$43.31	$7.07	$12.88	$5.40	$0.00	$68.66
8	95.00	$45.71	$7.07	$13.62	$5.70	$0.00	$72.10

Apprentice to Journeyworker Ratio: 1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	2/1/2026	$67.95	$12.84	$15.57	$8.02	$0.00	$104.38
BRICKLAYERS LOCAL 3	8/1/2026	$70.15	$12.84	$15.57	$8.02	$0.00	$106.58
BRICKLAYERS LOCAL 3 (LYNN)	2/1/2027	$71.55	$12.84	$15.57	$8.02	$0.00	$107.98

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$33.98	$12.84	$15.57	$8.02	$0.00	$70.41
2	60.00	$40.77	$12.84	$15.57	$8.02	$0.00	$77.20
3	70.00	$47.57	$12.84	$15.57	$8.02	$0.00	$84.00
4	80.00	$54.36	$12.84	$15.57	$8.02	$0.00	$90.79
5	90.00	$61.16	$12.84	$15.57	$8.02	$0.00	$97.59

Apprentice: BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$35.08	$12.84	$15.57	$8.02	$0.00	$71.51
2	60.00	$42.09	$12.84	$15.57	$8.02	$0.00	$78.52
3	70.00	$49.11	$12.84	$15.57	$8.02	$0.00	$85.54
4	80.00	$56.12	$12.84	$15.57	$8.02	$0.00	$92.55
5	90.00	$63.14	$12.84	$15.57	$8.02	$0.00	$99.57

Apprentice to Journeyworker Ratio: 1:5

BULLDOZER/GRADER/SCRAPER OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
CAISSON & UNDERPINNING BOTTOM MAN LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$50.40	$10.90	$9.75	$9.80	$0.00	$80.85
	12/1/2026	$51.90	$10.90	$9.75	$9.80	$0.00	$82.35
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING LABORER LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$49.25	$10.90	$9.75	$9.80	$0.00	$79.70
	12/1/2026	$50.75	$10.90	$9.75	$9.80	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING TOP MAN LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2026	$49.58	$10.90	$9.75	$9.80	$0.00	$80.03
	12/1/2026	$51.08	$10.90	$9.75	$9.80	$0.00	$81.53
For apprentice rates see "Apprentice- LABORER"							
CARBIDE CORE DRILL OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CARPENTER CARPENTERS CARPENTERS -ZONE 2 (Eastern Massachusetts)	3/1/2026	$50.85	$11.08	$11.47	$8.50	$0.00	$81.90
	9/1/2026	$52.10	$11.08	$11.47	$8.50	$0.00	$83.15
	3/1/2027	$53.35	$11.08	$11.47	$8.50	$0.00	$84.40

Apprentice: CARPENTER

Effective Date: 3/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$22.88	$11.08	$0.00	$1.73	$0.00	$35.69
2	45.00	$22.88	$11.08	$0.00	$1.73	$0.00	$35.69
3	55.00	$27.97	$11.08	$0.00	$3.40	$0.00	$42.45
4	55.00	$27.97	$11.08	$0.00	$3.40	$0.00	$42.45
5	70.00	$35.60	$11.08	$11.41	$5.10	$0.00	$63.19
6	70.00	$35.60	$11.08	$11.41	$5.10	$0.00	$63.19
7	80.00	$40.68	$11.08	$11.44	$6.80	$0.00	$70.00
8	80.00	$40.68	$11.08	$11.44	$6.80	$0.00	$70.00

Apprentice: CARPENTER

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$23.45	$11.08	$0.00	$1.73	$0.00	$36.26
2	45.00	$23.45	$11.08	$0.00	$1.73	$0.00	$36.26
3	55.00	$28.66	$11.08	$0.00	$3.40	$0.00	$43.14
4	55.00	$28.66	$11.08	$0.00	$3.40	$0.00	$43.14
5	70.00	$36.47	$11.08	$11.41	$5.10	$0.00	$64.06
6	70.00	$36.47	$11.08	$11.41	$5.10	$0.00	$64.06
7	80.00	$41.68	$11.08	$11.44	$6.80	$0.00	$71.00
8	80.00	$41.68	$11.08	$11.44	$6.80	$0.00	$71.00

Apprentice to Journeyworker Ratio: 1:5

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CARPENTER WOOD FRAME CARPENTERS CARPENTERS-ZONE 3 (Wood Frame)	10/1/2025	$27.37	$7.38	$4.47	$1.00	$0.00	$40.22
	10/1/2026	$28.47	$7.38	$4.47	$1.00	$0.00	$41.32

All Aspects of New Wood Frame Work

Apprentice: CARPENTER WOOD FRAME

Effective Date: 10/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$16.42	$7.38	$0.00	$0.00	$0.00	$23.80
2	60.00	$16.42	$7.38	$0.00	$0.00	$0.00	$23.80
3	65.00	$17.79	$7.38	$0.00	$1.00	$0.00	$26.17
4	70.00	$19.16	$7.38	$0.00	$1.00	$0.00	$27.54
5	75.00	$20.53	$7.38	$3.80	$1.00	$0.00	$32.71
6	80.00	$21.90	$7.38	$3.80	$1.00	$0.00	$34.08

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: CARPENTER WOOD FRAME

Effective Date: 10/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
7	85.00	$23.26	$7.38	$3.80	$1.00	$0.00	$35.44
8	90.00	$24.63	$7.38	$3.80	$1.00	$0.00	$36.81

Apprentice: CARPENTER WOOD FRAME

Effective Date: 10/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$17.08	$7.38	$0.00	$0.00	$0.00	$24.46
2	60.00	$17.08	$7.38	$0.00	$0.00	$0.00	$24.46
3	65.00	$18.51	$7.38	$0.00	$1.00	$0.00	$26.89
4	70.00	$19.93	$7.38	$0.00	$1.00	$0.00	$28.31
5	75.00	$21.35	$7.38	$3.80	$1.00	$0.00	$33.53
6	80.00	$22.78	$7.38	$3.80	$1.00	$0.00	$34.96
7	85.00	$24.20	$7.38	$3.80	$1.00	$0.00	$36.38
8	90.00	$25.62	$7.38	$3.80	$1.00	$0.00	$37.80

Apprentice to Journeyworker Ratio: 1:5

CEMENT MASONRY/PLASTERING PLASTERERS AND CEMENT MASONS LOCAL 534 Plasterers and Cement Masons - Zone 1	7/1/2026	$54.49	$13.35	$16.43	$7.78	$1.80	$93.85
	1/1/2027	$55.94	$13.35	$16.43	$7.78	$1.80	$95.30
	7/1/2027	$57.29	$13.35	$16.43	$7.78	$1.80	$96.65
	1/1/2028	$58.64	$13.35	$16.43	$7.78	$1.80	$98.00

Apprentice: CEMENT MASONRY/PLASTERING

Effective Date: 7/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$27.25	$13.35	$16.43	$0.00	$0.00	$57.03
2	60.00	$32.69	$13.35	$16.43	$7.78	$1.80	$72.05
3	65.00	$35.42	$13.35	$16.43	$7.78	$1.80	$74.78
4	70.00	$38.14	$13.35	$16.43	$7.78	$1.80	$77.50
5	75.00	$40.87	$13.35	$16.43	$7.78	$1.80	$80.23
6	80.00	$43.59	$13.35	$16.43	$7.78	$1.80	$82.95
7	90.00	$49.04	$13.35	$0.00	$7.78	$0.00	$70.17

Apprentice: CEMENT MASONRY/PLASTERING

Effective Date: 1/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$27.97	$13.35	$16.43	$0.00	$0.00	$57.75
2	60.00	$33.56	$13.35	$16.43	$7.78	$1.80	$72.92

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: CEMENT MASONRY/PLASTERING							
Effective Date: 1/1/2027							
Step / Percent		**Apprentice Base Wage**					
3 / 65.00		$36.36	$13.35	$16.43	$7.78	$1.80	$75.72
4 / 70.00		$39.16	$13.35	$16.43	$7.78	$1.80	$78.52
5 / 75.00		$41.96	$13.35	$16.43	$7.78	$1.80	$81.32
6 / 80.00		$44.75	$13.35	$16.43	$7.78	$1.80	$84.11
7 / 90.00		$50.35	$0.00	$16.43	$0.00	$0.00	$66.78
Apprentice to Journeyworker Ratio: 1:5							
CHAIN SAW OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
CLAM SHELLS/SLURRY BUCKETS/HEADING MACHINES OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$60.61	$17.05	$13.35	$3.25	$0.00	$94.26
	12/1/2026	$62.09	$17.05	$13.35	$3.25	$0.00	$95.74
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$37.63	$17.05	$13.35	$3.25	$0.00	$71.28
	12/1/2026	$38.58	$17.05	$13.35	$3.25	$0.00	$72.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DELEADER (BRIDGE) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$59.56	$10.35	$12.00	$12.60	$0.00	$94.51
Apprentice: DELEADER (BRIDGE)							
Effective Date: 1/1/2026							
Step / Percent		**Apprentice Base Wage**					
1 / 50.00		$29.78	$10.35	$0.00	$0.00	$0.00	$40.13
2 / 55.00		$32.76	$10.35	$0.00	$6.93	$0.00	$50.04
3 / 60.00		$35.74	$10.35	$0.00	$7.56	$0.00	$53.65
4 / 65.00		$38.71	$10.35	$0.00	$8.19	$0.00	$57.25
5 / 70.00		$41.69	$10.35	$12.00	$8.82	$0.00	$72.86
6 / 75.00		$44.67	$10.35	$12.00	$9.45	$0.00	$76.47
7 / 80.00		$47.65	$10.35	$12.00	$10.08	$0.00	$80.08
8 / 90.00		$53.60	$10.35	$12.00	$11.34	$0.00	$87.29
Apprentice to Journeyworker Ratio: 1:1							
DEMO: ADZEMAN	6/1/2026	$49.30	$10.90	$9.75	$9.65	$0.00	$79.60

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS LABORERS - ZONE 2	12/7/2026	$50.80	$10.90	$9.75	$9.65	$0.00	$81.10
	6/7/2027	$52.40	$10.90	$9.75	$9.65	$0.00	$82.70
	12/6/2027	$54.00	$10.90	$9.75	$9.65	$0.00	$84.30
	6/5/2028	$55.68	$10.90	$9.75	$9.65	$0.00	$85.98
	12/4/2028	$57.35	$10.90	$9.75	$9.65	$0.00	$87.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$50.30	$10.90	$9.75	$9.65	$0.00	$80.60
	12/7/2026	$51.80	$10.90	$9.75	$9.65	$0.00	$82.10
	6/7/2027	$53.40	$10.90	$9.75	$9.65	$0.00	$83.70
	12/6/2027	$55.00	$10.90	$9.75	$9.65	$0.00	$85.30
	6/5/2028	$56.68	$10.90	$9.75	$9.65	$0.00	$86.98
	12/4/2028	$58.35	$10.90	$9.75	$9.65	$0.00	$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BURNERS LABORERS LABORERS - ZONE 2	6/1/2026	$50.05	$10.90	$9.75	$9.65	$0.00	$80.35
	12/7/2026	$51.55	$10.90	$9.75	$9.65	$0.00	$81.85
	6/7/2027	$53.15	$10.90	$9.75	$9.65	$0.00	$83.45
	12/6/2027	$54.75	$10.90	$9.75	$9.65	$0.00	$85.05
	6/5/2028	$56.43	$10.90	$9.75	$9.65	$0.00	$86.73
	12/4/2028	$58.10	$10.90	$9.75	$9.65	$0.00	$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: CONCRETE CUTTER/SAWYER LABORERS LABORERS - ZONE 2	6/1/2026	$50.30	$10.90	$9.75	$9.65	$0.00	$80.60
	12/7/2026	$51.80	$10.90	$9.75	$9.65	$0.00	$82.10
	6/7/2027	$53.40	$10.90	$9.75	$9.65	$0.00	$83.70
	12/6/2027	$55.00	$10.90	$9.75	$9.65	$0.00	$85.30
	6/5/2028	$56.68	$10.90	$9.75	$9.65	$0.00	$86.98
	12/4/2028	$58.35	$10.90	$9.75	$9.65	$0.00	$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: JACKHAMMER OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$50.05	$10.90	$9.75	$9.65	$0.00	$80.35
	12/7/2026	$51.55	$10.90	$9.75	$9.65	$0.00	$81.85
	6/7/2027	$53.15	$10.90	$9.75	$9.65	$0.00	$83.45
	12/6/2027	$54.75	$10.90	$9.75	$9.65	$0.00	$85.05
	6/5/2028	$56.43	$10.90	$9.75	$9.65	$0.00	$86.73
	12/4/2028	$58.10	$10.90	$9.75	$9.65	$0.00	$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: WRECKING LABORER LABORERS LABORERS - ZONE 2	6/1/2026	$49.30	$10.90	$9.75	$9.65	$0.00	$79.60
	12/7/2026	$50.80	$10.90	$9.75	$9.65	$0.00	$81.10
	6/7/2027	$52.40	$10.90	$9.75	$9.65	$0.00	$82.70
	12/6/2027	$54.00	$10.90	$9.75	$9.65	$0.00	$84.30
	6/5/2028	$55.68	$10.90	$9.75	$9.65	$0.00	$85.98
	12/4/2028	$57.35	$10.90	$9.75	$9.65	$0.00	$87.65
For apprentice rates see "Apprentice- LABORER"							
DIRECTIONAL DRILL MACHINE OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
DIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$78.11	$10.08	$11.62	$10.04	$0.00	$109.85
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Diver wage 70/80/90 2A $69.83, 3A $91.79,4A $102.14 Total Rate							
DIVER TENDER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16
as of 8-1-24, Apprentices with diving licenses begin at second year. % of Piledriver wage 70/80/90 2A $54.20, 3A $73.93,4A $82.05 Total Rate							
DIVER TENDER (EFFLUENT) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$83.69	$10.08	$11.62	$12.67	$0.00	$118.06
For apprentice rates see "Apprentice- PILE DRIVER"							
DIVER/SLURRY (EFFLUENT) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$117.16	$10.08	$11.62	$12.67	$0.00	$151.53
For apprentice rates see "Apprentice- PILE DRIVER"							
DRAWBRIDGE OPERATOR (Construction) DRAWBRIDGE - SEIU LOCAL 888 DRAWBRIDGE - SEIU LOCAL 888	7/1/2020	$26.77	$6.67	$3.93	$0.00	$0.16	$37.53
ELECTRICIAN ELECTRICIANS LOCAL 103 ELECTRICIANS LOCAL 103	3/1/2026	$66.86	$13.00	$14.64	$9.00	$0.00	$103.50
	9/1/2026	$68.78	$13.00	$14.69	$9.00	$0.00	$105.47
	3/1/2027	$69.97	$13.00	$14.73	$9.00	$0.00	$106.70
	9/1/2027	$71.88	$13.00	$14.79	$9.00	$0.00	$108.67
	3/1/2028	$73.08	$13.00	$14.82	$9.00	$0.00	$109.90

Apprentice: ELECTRICIAN

Effective Date: 3/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$26.74	$13.00	$0.80	$0.00	$0.00	$40.54
2	40.00	$26.74	$13.00	$0.80	$0.00	$0.00	$40.54
3	45.00	$30.09	$13.00	$13.53	$4.05	$0.00	$60.67
4	45.00	$30.09	$13.00	$13.53	$4.05	$0.00	$60.67
5	50.00	$33.43	$13.00	$13.63	$4.50	$0.00	$64.56
6	55.00	$36.77	$13.00	$13.73	$4.95	$0.00	$68.45
7	60.00	$40.12	$13.00	$13.83	$5.40	$0.00	$72.35
8	65.00	$43.46	$13.00	$13.93	$5.85	$0.00	$76.24
9	70.00	$46.80	$13.00	$14.03	$6.30	$0.00	$80.13
10	75.00	$50.15	$13.00	$14.13	$6.75	$0.00	$84.03

Apprentice: ELECTRICIAN

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ELEVATOR CONSTRUCTOR ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2026	$77.26	$16.38	$11.06	$10.70	$0.00	$115.40
ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2027	$80.55	$16.48	$11.16	$11.00	$0.00	$119.19

Apprentice: ELECTRICIAN

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$27.51	$13.00	$0.83	$0.00	$0.00	$41.34
2	40.00	$27.51	$13.00	$0.83	$0.00	$0.00	$41.34
3	45.00	$30.95	$13.00	$13.56	$4.05	$0.00	$61.56
4	45.00	$30.95	$13.00	$13.56	$4.05	$0.00	$61.56
5	50.00	$34.39	$13.00	$13.66	$4.50	$0.00	$65.55
6	55.00	$37.83	$13.00	$13.76	$4.95	$0.00	$69.54
7	60.00	$41.27	$13.00	$13.87	$5.40	$0.00	$73.54
8	65.00	$44.71	$13.00	$13.97	$5.85	$0.00	$77.53
9	70.00	$48.15	$13.00	$14.07	$6.30	$0.00	$81.52
10	75.00	$51.59	$13.00	$14.18	$6.75	$0.00	$85.52

Apprentice Notes

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Apprentice to Journeyworker Ratio: 2:3

Apprentice: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$38.63	$0.00	$0.00	$0.00	$0.00	$38.63
2	55.00	$42.49	$16.38	$11.06	$10.70	$0.00	$80.63
3	65.00	$50.22	$16.38	$11.06	$10.70	$0.00	$88.36
4	70.00	$54.08	$16.38	$11.06	$10.70	$0.00	$92.22
5	80.00	$61.81	$16.38	$11.06	$10.70	$0.00	$99.95

Apprentice: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2027

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$40.28	$0.00	$0.00	$0.00	$0.00	$40.28
2	55.00	$44.30	$16.48	$11.16	$11.00	$0.00	$82.94
3	65.00	$52.36	$16.48	$11.16	$11.00	$0.00	$91.00
4	70.00	$56.39	$16.48	$11.16	$11.00	$0.00	$95.03
5	80.00	$64.44	$16.48	$11.16	$11.00	$0.00	$103.08

Apprentice to Journeyworker Ratio: 1:1

ELEVATOR CONSTRUCTOR HELPER	1/1/2026	$54.08	$16.38	$11.06	$10.07	$0.00	$91.59

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ELEVATOR CONSTRUCTORS LOCAL 4 ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2027	$56.39	$16.48	$11.16	$11.00	$0.00	$95.03
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"							
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
FIELD ENG.INST.PERSON-BLDG,SITE,HVY/HWY	5/1/2026	$54.40	$16.55	$13.35	$3.25	$0.00	$87.55
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	11/1/2026	$55.69	$16.55	$13.35	$3.25	$0.00	$88.84
	5/1/2027	$57.12	$16.55	$13.35	$3.25	$0.00	$90.27
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY	5/1/2026	$56.02	$16.55	$13.35	$3.25	$0.00	$89.17
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	11/1/2026	$57.32	$16.55	$13.35	$3.25	$0.00	$90.47
	5/1/2027	$58.77	$16.55	$13.35	$3.25	$0.00	$91.92
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY	5/1/2026	$26.28	$16.55	$13.35	$3.25	$0.00	$59.43
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	11/1/2026	$27.04	$16.55	$13.35	$3.25	$0.00	$60.19
	5/1/2027	$27.89	$16.55	$13.35	$3.25	$0.00	$61.04
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIRE ALARM INSTALLER	3/1/2026	$66.86	$13.00	$14.64	$9.00	$0.00	$103.50
ELECTRICIANS LOCAL 103 ELECTRICIANS LOCAL 103	9/1/2026	$68.78	$13.00	$14.69	$9.00	$0.00	$105.47
	3/1/2027	$69.97	$13.00	$14.73	$9.00	$0.00	$106.70
	9/1/2027	$71.88	$13.00	$14.79	$9.00	$0.00	$108.67
	3/1/2028	$73.08	$13.00	$14.82	$9.00	$0.00	$109.90
For apprentice rates see "Apprentice- ELECTRICIAN"							
FIRE ALARM REPAIR / MAINTENANCE	3/1/2026	$53.49	$13.00	$14.23	$7.20	$0.00	$87.92
/ COMMISSIONING ELECTRICIANS LOCAL 103 ELECTRICIANS LOCAL 103	9/1/2026	$55.02	$13.00	$14.28	$7.20	$0.00	$89.50
	3/1/2027	$55.98	$13.00	$14.31	$7.20	$0.00	$90.49
	9/1/2027	$57.50	$13.00	$14.36	$7.20	$0.00	$92.06
	3/1/2028	$58.46	$13.00	$14.38	$7.20	$0.00	$93.04
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"							
FIREMAN (ASST. ENGINEER)	6/1/2026	$47.55	$17.05	$13.35	$3.25	$0.00	$81.20
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$48.73	$17.05	$13.35	$3.25	$0.00	$82.38
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FLAGGER & SIGNALER (HEAVY & HIGHWAY)	6/1/2026	$29.21	$10.90	$9.75	$9.21	$0.00	$59.07
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$29.21	$10.90	$9.75	$9.21	$0.00	$59.07
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
FLOORCOVERER	3/1/2026	$59.24	$10.33	$11.47	$8.80	$0.00	$89.84
FLOORCOVERERS LOCAL 2168 FLOORCOVERERS LOCAL 2168 ZONE I	9/1/2026	$60.74	$10.33	$11.47	$8.80	$0.00	$91.34
	3/1/2027	$62.24	$10.33	$11.47	$8.80	$0.00	$92.84

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: FLOORCOVERER

Effective Date: 3/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$26.66	$10.33	$0.00	$1.76	$0.00	$38.75
2	45.00	$26.66	$10.33	$0.00	$1.76	$0.00	$38.75
3	55.00	$32.58	$10.33	$0.00	$3.52	$0.00	$46.43
4	55.00	$32.58	$10.33	$0.00	$3.52	$0.00	$46.43
5	70.00	$41.47	$10.33	$11.47	$5.28	$0.00	$68.55
6	70.00	$41.47	$10.33	$11.47	$5.28	$0.00	$68.55
7	80.00	$47.39	$10.33	$11.47	$7.04	$0.00	$76.23
8	80.00	$47.39	$10.33	$11.47	$7.04	$0.00	$76.23

Apprentice: FLOORCOVERER

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$27.33	$10.33	$0.00	$1.76	$0.00	$39.42
2	45.00	$27.33	$10.33	$0.00	$1.76	$0.00	$39.42
3	55.00	$33.41	$10.33	$0.00	$3.52	$0.00	$47.26
4	55.00	$33.41	$10.33	$0.00	$3.52	$0.00	$47.26
5	70.00	$42.52	$10.33	$11.47	$5.28	$0.00	$69.60
6	70.00	$42.52	$10.33	$11.47	$5.28	$0.00	$69.60
7	80.00	$48.59	$10.33	$11.47	$7.04	$0.00	$77.43
8	80.00	$48.59	$10.33	$11.47	$7.04	$0.00	$77.43

Apprentice Notes

Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

FORK LIFT/CHERRY PICKER	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GENERATOR/LIGHTING PLANT/HEATERS	6/1/2026	$37.63	$17.05	$13.35	$3.25	$0.00	$71.28
OPERATING ENGINEERS LOCAL 4	12/1/2026	$38.58	$17.05	$13.35	$3.25	$0.00	$72.23
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)	1/1/2026	$49.06	$10.35	$12.00	$12.60	$0.00	$84.01
GLAZIERS LOCAL 35							
GLAZIERS LOCAL 35 (ZONE 2)							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
HOISTING ENGINEER/CRANES/GRADALLS OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48

Apprentice: GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$24.53	$10.35	$0.00	$0.00	$0.00	$34.88
2	55.00	$26.98	$10.35	$0.00	$6.88	$0.00	$44.21
3	60.00	$29.44	$10.35	$0.00	$7.50	$0.00	$47.29
4	65.00	$31.89	$10.35	$0.00	$8.13	$0.00	$50.37
5	70.00	$34.34	$10.35	$12.00	$8.75	$0.00	$65.44
6	75.00	$36.80	$10.35	$12.00	$9.38	$0.00	$68.53
7	80.00	$39.25	$10.35	$12.00	$10.00	$0.00	$71.60
8	90.00	$44.15	$10.35	$12.00	$11.25	$0.00	$77.75

Apprentice to Journeyworker Ratio: 1:1

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	$32.66	$0.00	$0.00	$0.00	$0.00	$32.66
2	60.00	$35.63	$17.05	$13.35	$3.25	$0.00	$69.28
3	65.00	$38.60	$17.05	$13.35	$3.25	$0.00	$72.25
4	70.00	$41.57	$17.05	$13.35	$3.25	$0.00	$75.22
5	75.00	$44.54	$17.05	$13.35	$3.25	$0.00	$78.19
6	80.00	$47.50	$17.05	$13.35	$3.25	$0.00	$81.15
7	85.00	$50.47	$17.05	$13.35	$3.25	$0.00	$84.12
8	90.00	$53.44	$17.05	$13.35	$3.25	$0.00	$87.09

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	$33.46	$0.00	$0.00	$0.00	$0.00	$33.46
2	60.00	$36.50	$17.05	$13.35	$3.25	$0.00	$70.15
3	65.00	$39.54	$17.05	$13.35	$3.25	$0.00	$73.19
4	70.00	$42.58	$17.05	$13.35	$3.25	$0.00	$76.23
5	75.00	$45.62	$17.05	$13.35	$3.25	$0.00	$79.27
6	80.00	$48.66	$17.05	$13.35	$3.25	$0.00	$82.31
7	85.00	$51.71	$17.05	$13.35	$3.25	$0.00	$85.36
8	90.00	$54.75	$17.05	$13.35	$3.25	$0.00	$88.40

Apprentice to Journeyworker Ratio: 1:6

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 103 ELECTRICIANS LOCAL 103	3/1/2026	$66.86	$13.00	$14.64	$9.00	$0.00	$103.50
	9/1/2026	$68.78	$13.00	$14.69	$9.00	$0.00	$105.47
	3/1/2027	$69.97	$13.00	$14.73	$9.00	$0.00	$106.70
	9/1/2027	$71.88	$13.00	$14.79	$9.00	$0.00	$108.67
	3/1/2028	$73.08	$13.00	$14.82	$9.00	$0.00	$109.90
For apprentice rates see "Apprentice- ELECTRICIAN"							
HVAC (TESTING AND BALANCING - AIR) SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (TESTING AND BALANCING -WATER) PIPEFITTERS LOCAL 537 PIPEFITTERS LOCAL 537	3/1/2026	$70.58	$13.95	$14.00	$9.55	$0.00	$108.08
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HVAC MECHANIC PIPEFITTERS LOCAL 537 PIPEFITTERS LOCAL 537	3/1/2026	$70.58	$13.95	$14.00	$9.55	$0.00	$108.08
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HYDRAULIC DRILLS LABORERS LABORERS - ZONE 2	6/1/2026	$42.41	$10.90	$9.75	$9.11	$0.00	$72.17
	12/1/2026	$43.85	$10.90	$9.75	$9.11	$0.00	$73.61
	6/1/2027	$45.30	$10.90	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$46.75	$10.90	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.25	$10.90	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$49.75	$10.90	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
HYDRAULIC DRILLS (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$42.41	$10.90	$9.75	$9.21	$0.00	$72.27
	12/1/2026	$43.85	$10.90	$9.75	$9.21	$0.00	$73.71
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
INSULATOR (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6 HEAT & FROST INSULATORS LOCAL 6 (BOSTON)	9/1/2025	$60.34	$14.75	$9.52	$10.09	$0.00	$94.70
	9/1/2026	$63.76	$14.75	$9.52	$10.09	$0.00	$98.12

Apprentice: INSULATOR (PIPES & TANKS)

Effective Date: 9/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$30.17	$14.75	$9.27	$5.05	$0.00	$59.24
2	60.00	$36.20	$14.75	$9.32	$6.05	$0.00	$66.32
3	70.00	$42.24	$14.75	$9.37	$7.06	$0.00	$73.42

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: INSULATOR (PIPES & TANKS)

Effective Date: 9/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
4	80.00	$48.27	$14.75	$9.42	$8.07	$0.00	$80.51

Apprentice: INSULATOR (PIPES & TANKS)

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$31.88	$14.75	$9.27	$5.05	$0.00	$60.95
2	60.00	$38.26	$14.75	$9.32	$6.05	$0.00	$68.38
3	70.00	$44.63	$14.75	$9.37	$7.06	$0.00	$75.81
4	80.00	$51.01	$14.75	$9.42	$8.07	$0.00	$83.25

Apprentice to Journeyworker Ratio: 1:4

IRONWORKER/WELDER IRONWORKERS LOCAL 7 IRONWORKERS LOCAL 7 (BOSTON AREA)	3/16/2026	$58.65	$9.25	$12.75	$15.00	$0.00	$95.65

Apprentice: IRONWORKER/WELDER

Effective Date: 3/16/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	70.00	$41.06	$9.25	$12.75	$5.00	$0.00	$68.06
2	80.00	$46.92	$9.25	$12.75	$5.00	$0.00	$73.92
3	90.00	$52.79	$9.25	$12.75	$5.00	$0.00	$79.79
4	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
5	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
6	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Apprentice to Journeyworker Ratio: 1:4

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01

For apprentice rates see "Apprentice- LABORER"

LABORER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: LABORER

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.00	$10.90	$9.75	$9.11	$0.00	$54.76
2	70.00	$29.16	$10.90	$9.75	$9.11	$0.00	$58.92
3	80.00	$33.33	$10.90	$9.75	$9.11	$0.00	$63.09
4	90.00	$37.49	$10.90	$9.75	$9.11	$0.00	$67.25

Apprentice: LABORER

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.86	$10.90	$9.75	$9.11	$0.00	$55.62
2	70.00	$30.17	$10.90	$9.75	$9.11	$0.00	$59.93
3	80.00	$34.48	$10.90	$9.75	$9.11	$0.00	$64.24
4	90.00	$38.79	$10.90	$9.75	$9.11	$0.00	$68.55

Apprentice to Journeyworker Ratio: 1:5

LABORER (HEAVY & HIGHWAY)	6/1/2026	$41.66	$10.90	$9.75	$9.21	$0.00	$71.52
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$43.10	$10.90	$9.75	$9.21	$0.00	$72.96

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.00	$10.90	$9.75	$9.21	$0.00	$54.86
2	70.00	$29.16	$10.90	$9.75	$9.21	$0.00	$59.02
3	80.00	$33.33	$10.90	$9.75	$9.21	$0.00	$63.19
4	90.00	$37.49	$10.90	$9.75	$9.10	$0.00	$67.24

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 12/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.86	$10.90	$9.75	$9.21	$0.00	$55.72
2	70.00	$30.17	$10.90	$9.75	$9.21	$0.00	$60.03
3	80.00	$34.48	$10.90	$9.75	$9.21	$0.00	$64.34
4	90.00	$38.79	$10.90	$9.75	$9.21	$0.00	$68.65

Apprentice to Journeyworker Ratio: 1:5

LABORER: CARPENTER TENDER	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS LABORERS - ZONE 2	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: CEMENT FINISHER TENDER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS LABORERS - ZONE 2	6/1/2026	$41.75	$10.90	$9.75	$9.65	$0.00	$72.05
	12/7/2026	$43.19	$10.90	$9.75	$9.65	$0.00	$73.49
	6/7/2027	$44.64	$10.90	$9.75	$9.65	$0.00	$74.94
	12/6/2027	$46.09	$10.90	$9.75	$9.65	$0.00	$76.39
	6/5/2028	$47.59	$10.90	$9.75	$9.65	$0.00	$77.89
	12/4/2028	$49.09	$10.90	$9.75	$9.65	$0.00	$79.39
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
LABORER: MULTI-TRADE TENDER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: TREE REMOVER LABORERS LABORERS - ZONE 2	6/1/2026	$41.66	$10.90	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.10	$10.90	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.55	$10.90	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.00	$10.90	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.50	$10.90	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.00	$10.90	$9.75	$9.11	$0.00	$78.76
This classification applies to the removal of standing trees, and the trimming and removal of branches and limbs when related to public works construction or site clearance							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
incidental to construction . For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
MARBLE & TILE FINISHERS BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 - MARBLE & TILE	2/1/2026	$52.08	$12.84	$15.57	$5.78	$0.00	$86.27
	8/1/2026	$53.84	$12.84	$15.57	$5.78	$0.00	$88.03
	2/1/2027	$54.96	$12.84	$15.57	$5.78	$0.00	$89.15

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$26.04	$12.84	$15.57	$5.78	$0.00	$60.23
2	60.00	$31.25	$12.84	$15.57	$5.78	$0.00	$65.44
3	70.00	$36.46	$12.84	$15.57	$5.78	$0.00	$70.65
4	80.00	$41.66	$12.84	$15.57	$5.78	$0.00	$75.85
5	90.00	$46.87	$12.84	$15.57	$5.78	$0.00	$81.06

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$26.92	$12.84	$15.57	$5.78	$0.00	$61.11
2	60.00	$32.30	$12.84	$15.57	$5.78	$0.00	$66.49
3	70.00	$37.69	$12.84	$15.57	$5.78	$0.00	$71.88
4	80.00	$43.07	$12.84	$15.57	$5.78	$0.00	$77.26
5	90.00	$48.46	$12.84	$15.57	$5.78	$0.00	$82.65

Apprentice to Journeyworker Ratio: 1:5

MARBLE MASONS,TILELAYERS & TERRAZZO MECH BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 - MARBLE & TILE	2/1/2026	$67.97	$12.84	$15.57	$7.99	$0.00	$104.37
	8/1/2026	$70.17	$12.84	$15.57	$7.99	$0.00	$106.57
	2/1/2027	$71.57	$12.84	$15.57	$7.99	$0.00	$107.97

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH							
Effective Date: 2/1/2026							
Step / Percent		**Apprentice Base Wage**	**Health**	**Pension**	**Annuity**	**Supplemental Unemployment**	**Total Rate**
1 / 50.00		$33.99	$12.84	$15.57	$7.99	$0.00	$70.39
2 / 60.00		$40.78	$12.84	$15.57	$7.99	$0.00	$77.18
3 / 70.00		$47.58	$12.84	$15.57	$7.99	$0.00	$83.98
4 / 80.00		$54.38	$12.84	$15.57	$7.99	$0.00	$90.78
5 / 90.00		$61.17	$12.84	$15.57	$7.99	$0.00	$97.57
Apprentice: MARBLE MASONS,TILELAYERS & TERRAZZO MECH							
Effective Date: 8/1/2026							
Step / Percent		**Apprentice Base Wage**	**Health**	**Pension**	**Annuity**	**Supplemental Unemployment**	**Total Rate**
1 / 50.00		$35.09	$12.84	$15.57	$7.99	$0.00	$71.49
2 / 60.00		$42.10	$12.84	$15.57	$7.99	$0.00	$78.50
3 / 70.00		$49.12	$12.84	$15.57	$7.99	$0.00	$85.52
4 / 80.00		$56.14	$12.84	$15.57	$7.99	$0.00	$92.54
5 / 90.00		$63.15	$12.84	$15.57	$7.99	$0.00	$99.55
Apprentice to Journeyworker Ratio: 1:5							
MECH. SWEEPER OPERATOR (ON CONST. SITES)	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MECHANICS MAINTENANCE	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MILLWRIGHT (Zone 1)	1/5/2026	$52.47	$10.58	$11.47	$10.25	$0.00	$84.77
MILLWRIGHTS LOCAL 1121							
MILLWRIGHTS LOCAL 1121 - Zone 1							
Apprentice: MILLWRIGHT (Zone 1)							
Effective Date: 1/5/2026							
Step / Percent		**Apprentice Base Wage**	**Health**	**Pension**	**Annuity**	**Supplemental Unemployment**	**Total Rate**
1 / 55.00		$28.86	$10.58	$0.00	$5.64	$0.00	$45.08
2 / 65.00		$34.11	$10.58	$0.00	$6.66	$0.00	$51.35
3 / 75.00		$39.35	$10.58	$11.47	$7.69	$0.00	$69.09
4 / 85.00		$44.60	$10.58	$11.47	$8.71	$0.00	$75.36

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice Notes							
Step 1&2 Appr. indentured after 1/6/2020 receive no pension,							
Apprentice to Journeyworker Ratio: 1:4							
MORTAR MIXER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
OILER (OTHER THAN TRUCK CRANES,GRADALLS) OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$25.07	$17.05	$13.35	$3.25	$0.00	$58.72
	12/1/2026	$25.74	$17.05	$13.35	$3.25	$0.00	$59.39
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$31.17	$17.05	$13.35	$3.25	$0.00	$64.82
	12/1/2026	$31.97	$17.05	$13.35	$3.25	$0.00	$65.62
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OTHER POWER DRIVEN EQUIPMENT - CLASS II OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$59.56	$10.35	$12.00	$12.50	$0.00	$94.41

Apprentice: PAINTER (BRIDGES/TANKS)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$29.78	$10.35	$0.00	$0.00	$0.00	$40.13
2	55.00	$32.76	$10.35	$0.00	$6.93	$0.00	$50.04
3	60.00	$35.74	$10.35	$0.00	$7.56	$0.00	$53.65
4	65.00	$38.71	$10.35	$0.00	$8.19	$0.00	$57.25
5	70.00	$41.69	$10.35	$12.00	$8.82	$0.00	$72.86
6	75.00	$44.67	$10.35	$12.00	$9.45	$0.00	$76.47
7	80.00	$47.65	$10.35	$12.00	$10.08	$0.00	$80.08
8	90.00	$53.60	$10.35	$12.00	$11.34	$0.00	$87.29

Apprentice to Journeyworker Ratio: 1:1							
PAINTER (SPRAY OR SANDBLAST, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35	1/1/2026	$50.46	$10.35	$12.00	$12.60	$0.00	$85.41

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PAINTERS LOCAL 35 - ZONE 2							

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) *

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$25.23	$10.35	$0.00	$0.00	$0.00	$35.58
2	55.00	$27.75	$10.35	$0.00	$6.93	$0.00	$45.03
3	60.00	$30.28	$10.35	$0.00	$7.56	$0.00	$48.19
4	65.00	$32.80	$10.35	$0.00	$8.19	$0.00	$51.34
5	70.00	$35.32	$10.35	$12.00	$8.82	$0.00	$66.49
6	75.00	$37.85	$10.35	$12.00	$9.45	$0.00	$69.65
7	80.00	$40.37	$10.35	$12.00	$10.08	$0.00	$72.80
8	90.00	$45.41	$10.35	$12.00	$11.34	$0.00	$79.10

Apprentice to Journeyworker Ratio: 1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$48.52	$10.35	$12.00	$12.60	$0.00	$83.47

Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$24.26	$10.35	$0.00	$0.00	$0.00	$34.61
2	55.00	$26.69	$10.35	$0.00	$6.93	$0.00	$43.97
3	60.00	$29.11	$10.35	$0.00	$7.56	$0.00	$47.02
4	65.00	$31.54	$10.35	$0.00	$8.19	$0.00	$50.08
5	70.00	$33.96	$10.35	$12.00	$8.82	$0.00	$65.13
6	75.00	$36.39	$10.35	$12.00	$9.45	$0.00	$68.19
7	80.00	$38.82	$10.35	$12.00	$10.08	$0.00	$71.25
8	90.00	$43.67	$10.35	$12.00	$11.34	$0.00	$77.36

Apprentice to Journeyworker Ratio: 1:1

PAINTER / TAPER (BRUSH, NEW) * * If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used. PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$49.06	$10.35	$12.00	$12.60	$0.00	$84.01

Apprentice: PAINTER / TAPER (BRUSH, NEW) *

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$24.53	$10.35	$0.00	$0.00	$0.00	$34.88
2	55.00	$26.98	$10.35	$0.00	$6.93	$0.00	$44.26

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PAINTER / TAPER (BRUSH, NEW) *							
Effective Date: 1/1/2026							
Step / Percent		**Apprentice Base Wage**					
3 / 60.00		$29.44	$10.35	$0.00	$7.56	$0.00	$47.35
4 / 65.00		$31.89	$10.35	$0.00	$8.19	$0.00	$50.43
5 / 70.00		$34.34	$10.35	$12.00	$8.82	$0.00	$65.51
6 / 75.00		$36.80	$10.35	$12.00	$9.45	$0.00	$68.60
7 / 80.00		$39.25	$10.35	$12.00	$10.08	$0.00	$71.68
8 / 90.00		$44.15	$10.35	$12.00	$11.34	$0.00	$77.84
Apprentice to Journeyworker Ratio: 1:1							
PAINTER / TAPER (BRUSH, REPAINT) PAINTERS LOCAL 35 PAINTERS LOCAL 35 - ZONE 2	1/1/2026	$47.12	$10.35	$12.00	$12.60	$0.00	$82.07
Apprentice: PAINTER / TAPER (BRUSH, REPAINT)							
Effective Date: 1/1/2026							
Step / Percent		**Apprentice Base Wage**					
1 / 50.00		$23.56	$10.35	$0.00	$0.00	$0.00	$33.91
2 / 55.00		$25.92	$10.35	$0.00	$6.93	$0.00	$43.20
3 / 60.00		$28.27	$10.35	$0.00	$7.56	$0.00	$46.18
4 / 65.00		$30.63	$10.35	$0.00	$8.19	$0.00	$49.17
5 / 70.00		$32.98	$10.35	$12.00	$8.82	$0.00	$64.15
6 / 75.00		$35.34	$10.35	$12.00	$9.45	$0.00	$67.14
7 / 80.00		$37.70	$10.35	$12.00	$10.08	$0.00	$70.13
8 / 90.00		$42.41	$10.35	$12.00	$11.34	$0.00	$76.10
Apprentice to Journeyworker Ratio: 1:1							
PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.66	$10.90	$9.75	$9.21	$0.00	$71.52
	12/1/2026	$43.10	$10.90	$9.75	$9.21	$0.00	$72.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PANEL & PICKUP TRUCKS DRIVER TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$41.78	$16.17	$21.78	$0.00	$0.00	$79.73
	12/1/2026	$41.78	$16.17	$23.52	$0.00	$0.00	$81.47
	1/1/2027	$41.78	$16.77	$23.52	$0.00	$0.00	$82.07
PIER AND DOCK CONSTRUCTOR (UNDERPINNING AND DECK) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16
For apprentice rates see "Apprentice- PILE DRIVER"							
PILE DRIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 1)	8/1/2024	$55.79	$10.08	$11.62	$12.67	$0.00	$90.16

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: PILE DRIVER							
Effective Date: 8/1/2024							
Step / Percent		**Apprentice Base Wage**	**Health**	**Pension**	**Annuity**	**Supplemental Unemployment**	**Total Rate**
1 / 45.00		$25.11	$10.08	$0.00	$2.53	$0.00	$37.72
2 / 55.00		$30.68	$10.08	$0.00	$5.07	$0.00	$45.83
3 / 70.00		$39.05	$10.08	$11.62	$7.60	$0.00	$68.35
4 / 80.00		$44.63	$10.08	$11.62	$10.14	$0.00	$76.47
Apprentice to Journeyworker Ratio: 1:5							
PIPEFITTER & STEAMFITTER PIPEFITTERS LOCAL 537 PIPEFITTERS LOCAL 537	3/1/2026	$70.58	$13.95	$14.00	$9.55	$0.00	$108.08
Apprentice: PIPEFITTER & STEAMFITTER							
Effective Date: 3/1/2026							
Step / Percent		**Apprentice Base Wage**	**Health**	**Pension**	**Annuity**	**Supplemental Unemployment**	**Total Rate**
1 / 40.00		$28.23	$13.95	$0.30	$9.55	$0.00	$52.03
2 / 45.00		$31.76	$13.95	$14.00	$9.55	$0.00	$69.26
3 / 60.00		$42.35	$13.95	$14.00	$9.55	$0.00	$79.85
4 / 70.00		$49.41	$13.95	$14.00	$9.55	$0.00	$86.91
5 / 80.00		$56.46	$13.95	$14.00	$9.55	$0.00	$93.96
Apprentice to Journeyworker Ratio: 1:3							
PIPELAYER LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
PIPELAYER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
PLUMBERS & GASFITTERS PLUMBERS & GASFITTERS LOCAL 12 PLUMBERS & GASFITTERS LOCAL 12	3/2/2026	$72.64	$15.32	$12.61	$8.00	$0.00	$108.57
	8/31/2026	$74.79	$15.32	$12.61	$8.00	$0.00	$110.72
	3/1/2027	$76.94	$15.32	$12.61	$8.00	$0.00	$112.87
	8/30/2027	$79.09	$15.32	$12.61	$8.00	$0.00	$115.02
	2/28/2028	$81.29	$15.32	$12.61	$8.00	$0.00	$117.22
	9/4/2028	$83.49	$15.32	$12.61	$8.00	$0.00	$119.42
	3/5/2029	$85.69	$15.32	$12.61	$8.00	$0.00	$121.62
	9/3/2029	$87.89	$15.32	$12.61	$8.00	$0.00	$123.82
	3/4/2030	$89.84	$15.32	$12.61	$8.00	$0.00	$125.77

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: PLUMBERS & GASFITTERS

Effective Date: 3/2/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	35.00	$25.42	$15.32	$4.61	$2.80	$0.00	$48.15
2	40.00	$29.06	$15.32	$5.22	$3.20	$0.00	$52.80
3	55.00	$39.95	$15.32	$7.07	$4.40	$0.00	$66.74
4	65.00	$47.22	$15.32	$8.30	$5.20	$0.00	$76.04
5	75.00	$54.48	$15.32	$9.53	$6.00	$0.00	$85.33

Apprentice: PLUMBERS & GASFITTERS

Effective Date: 8/31/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	35.00	$26.18	$15.32	$4.61	$2.80	$0.00	$48.91
2	40.00	$29.92	$15.32	$5.22	$3.20	$0.00	$53.66
3	55.00	$41.13	$15.32	$7.07	$5.20	$0.00	$68.72
4	65.00	$48.61	$15.32	$8.30	$5.20	$0.00	$77.43
5	75.00	$56.09	$15.32	$9.53	$6.00	$0.00	$86.94

Apprentice to Journeyworker Ratio: 1:2

PNEUMATIC CONTROLS (TEMP.) PIPEFITTERS LOCAL 537 PIPEFITTERS LOCAL 537	3/1/2026	$70.58	$13.95	$14.00	$9.55	$0.00	$108.08
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
PNEUMATIC DRILL/TOOL OPERATOR LABORERS LABORERS - ZONE 2	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
POWDERMAN & BLASTER LABORERS LABORERS - ZONE 2	6/1/2026	$42.66	$10.90	$9.75	$9.11	$0.00	$72.42
	12/1/2026	$44.10	$10.90	$9.75	$9.11	$0.00	$73.86
	6/1/2027	$45.55	$10.90	$9.75	$9.11	$0.00	$75.31
	12/1/2027	$47.00	$10.90	$9.75	$9.11	$0.00	$76.76
	6/1/2028	$48.50	$10.90	$9.75	$9.11	$0.00	$78.26
	12/1/2028	$50.00	$10.90	$9.75	$9.11	$0.00	$79.76
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
POWDERMAN & BLASTER (HEAVY & HIGHWAY)	6/1/2026	$42.66	$10.90	$9.75	$9.21	$0.00	$72.52
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$44.10	$10.90	$9.75	$9.21	$0.00	$73.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
POWER SHOVEL/DERRICK/TRENCHING MACHINE	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (CONCRETE)	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (DEWATERING, OTHER)	6/1/2026	$37.63	$17.05	$13.35	$3.25	$0.00	$71.28
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$38.58	$17.05	$13.35	$3.25	$0.00	$72.23
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
READY-MIX CONCRETE DRIVER	5/1/2026	$30.50	$12.00	$7.00	$0.00	$0.00	$49.50
TEAMSTERS 42 - J.G. MacLeallan (Wakefield) TEAMSTERS 42 - J.G. MacLeallan (Wakefield)							
RECLAIMERS	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
RIDE-ON MOTORIZED BUGGY OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS LABORERS - ZONE 2	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
ROLLER/SPREADER/MULCHING MACHINE	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)	2/1/2026	$53.53	$14.53	$12.67	$9.03	$0.00	$89.76
ROOFERS LOCAL 33 ROOFERS LOCAL 33							

Apprentice: ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$26.77	$14.53	$6.52	$9.03	$0.00	$56.85
2	60.00	$32.12	$14.53	$12.67	$9.03	$0.00	$68.35

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
3	65.00	$34.79	$14.53	$12.67	$9.03	$0.00	$71.02
4	75.00	$40.15	$14.53	$12.67	$9.03	$0.00	$76.38
5	85.00	$45.50	$14.53	$12.67	$9.03	$0.00	$81.73

Apprentice Notes

** 1:5, 2:6-10, the 1:10; Reroofing: 1:4, then 1:1

Apprentice to Journeyworker Ratio: 1:5

ROOFER SLATE / TILE / PRECAST CONCRETE ROOFERS LOCAL 33 ROOFERS LOCAL 33	2/1/2026	$53.78	$14.53	$12.67	$9.03	$0.00	$90.01

For apprentice rates see "Apprentice- ROOFER"

SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 17 SHEETMETAL WORKERS LOCAL 17 - A	2/1/2026	$62.93	$14.91	$18.74	$9.53	$2.98	$109.09

Apprentice: SHEETMETAL WORKER

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	42.00	$26.43	$14.91	$6.19	$0.00	$0.00	$47.53
2	42.00	$26.43	$14.91	$6.19	$0.00	$0.00	$47.53
3	47.00	$29.58	$14.91	$10.93	$1.25	$1.62	$58.29
4	47.00	$29.58	$14.91	$10.93	$1.25	$1.62	$58.29
5	52.00	$32.72	$14.91	$11.66	$1.50	$1.74	$62.53
6	52.00	$32.72	$14.91	$11.66	$1.75	$1.75	$62.79
7	60.00	$37.76	$14.91	$12.84	$2.00	$1.93	$69.44
8	65.00	$40.90	$14.91	$13.58	$2.25	$2.04	$73.68
9	75.00	$47.20	$14.91	$15.06	$2.75	$2.28	$82.20
10	85.00	$53.49	$14.91	$16.53	$2.75	$2.49	$90.17

Apprentice to Journeyworker Ratio: 1:4

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$42.24	$16.17	$21.78	$0.00	$0.00	$80.19
	12/1/2026	$42.24	$16.17	$23.52	$0.00	$0.00	$81.93
	1/1/2027	$42.24	$16.77	$23.52	$0.00	$0.00	$82.53
SPECIALIZED EARTH MOVING EQUIP > 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2026	$42.53	$16.17	$21.78	$0.00	$0.00	$80.48
	12/1/2026	$42.53	$16.17	$23.52	$0.00	$0.00	$82.22
	1/1/2027	$42.53	$16.77	$23.52	$0.00	$0.00	$82.82
SPRINKLER FITTER SPRINKLER FITTERS LOCAL 550	1/1/2026	$72.05	$13.45	$7.45	$18.25	$0.00	$111.20

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1							

Apprentice: SPRINKLER FITTER

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	35.00	$25.22	$13.45	$13.84	$0.00	$0.00	$52.51
2	40.00	$28.82	$13.45	$14.75	$0.00	$0.00	$57.02
3	45.00	$32.42	$13.45	$15.67	$0.00	$0.00	$61.54
4	50.00	$36.03	$13.45	$16.57	$0.00	$0.00	$66.05
5	55.00	$39.63	$13.45	$17.49	$0.00	$0.00	$70.57
6	60.00	$43.23	$13.45	$18.40	$0.00	$0.00	$75.08
7	65.00	$46.83	$13.45	$19.32	$0.00	$0.00	$79.60
8	70.00	$50.44	$13.45	$20.22	$0.00	$0.00	$84.11
9	75.00	$54.04	$13.45	$21.15	$0.00	$0.00	$88.64
10	80.00	$57.64	$13.45	$22.05	$0.00	$0.00	$93.14

Apprentice Notes

Apprentice entered prior 9/30/10:

Apprentice to Journeyworker Ratio: 1:3

STEAM BOILER OPERATOR	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TELECOMMUNICATION TECHNICIAN	3/1/2026	$53.49	$13.00	$14.23	$7.20	$0.00	$87.92
TELECOMMUNICATION TECHNICIAN	9/1/2026	$55.02	$13.00	$14.28	$7.20	$0.00	$89.50
ELECTRICIANS LOCAL 103	3/1/2027	$55.98	$13.00	$14.31	$7.20	$0.00	$90.49
ELECTRICIANS LOCAL 103	9/1/2027	$57.50	$13.00	$14.36	$7.20	$0.00	$92.06
	3/1/2028	$58.46	$13.00	$14.38	$7.20	$0.00	$93.04
For apprentice rates and ratios see "Apprentice- ELECTRICIAN"							

Apprentice: TELECOMMUNICATION TECHNICIAN

Effective Date: 3/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$24.07	$13.00	$0.72	$0.00	$0.00	$37.79
2	45.00	$24.07	$13.00	$0.72	$0.00	$0.00	$37.79
3	50.00	$26.75	$13.00	$13.43	$3.60	$0.00	$56.78
4	50.00	$26.75	$13.00	$13.43	$3.60	$0.00	$56.78
5	55.00	$29.42	$13.00	$13.51	$3.96	$0.00	$59.89

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: TELECOMMUNICATION TECHNICIAN

Effective Date: 3/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
6	60.00	$32.09	$13.00	$13.59	$4.32	$0.00	$63.00
7	65.00	$34.77	$13.00	$13.67	$4.68	$0.00	$66.12
8	70.00	$37.44	$13.00	$13.75	$5.04	$0.00	$69.23
9	75.00	$40.12	$13.00	$13.83	$5.40	$0.00	$72.35
10	80.00	$42.79	$13.00	$13.91	$5.76	$0.00	$75.46

Apprentice: TELECOMMUNICATION TECHNICIAN

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$24.76	$13.00	$0.74	$0.00	$0.00	$38.50
2	45.00	$24.76	$13.00	$0.74	$0.00	$0.00	$38.50
3	50.00	$27.51	$13.00	$13.46	$3.60	$0.00	$57.57
4	50.00	$27.51	$13.00	$13.46	$3.60	$0.00	$57.57
5	55.00	$30.26	$13.00	$13.54	$3.96	$0.00	$60.76
6	60.00	$33.01	$13.00	$13.62	$4.32	$0.00	$63.95
7	65.00	$35.76	$13.00	$13.70	$4.68	$0.00	$67.14
8	70.00	$38.51	$13.00	$13.79	$5.04	$0.00	$70.34
9	75.00	$41.27	$13.00	$13.87	$5.40	$0.00	$73.54
10	80.00	$44.02	$13.00	$13.96	$5.76	$0.00	$76.74

Apprentice to Journeyworker Ratio: 1:1

TERRAZZO FINISHERS	2/1/2026	$66.89	$12.84	$15.57	$8.02	$0.00	$103.32
BRICKLAYERS LOCAL 3	8/1/2026	$69.09	$12.84	$15.57	$8.02	$0.00	$105.52
BRICKLAYERS LOCAL 3 - MARBLE & TILE	2/1/2027	$70.49	$12.84	$15.57	$8.02	$0.00	$106.92

Apprentice: TERRAZZO FINISHERS

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$33.45	$12.84	$15.57	$8.02	$0.00	$69.88
2	60.00	$40.13	$12.84	$15.57	$8.02	$0.00	$76.56
3	70.00	$46.82	$12.84	$15.57	$8.02	$0.00	$83.25
4	80.00	$53.51	$12.84	$15.57	$8.02	$0.00	$89.94
5	90.00	$60.20	$12.84	$15.57	$8.02	$0.00	$96.63

Apprentice: TERRAZZO FINISHERS

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate

Apprentice: TERRAZZO FINISHERS

Effective Date: 8/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$34.55	$12.84	$15.57	$8.02	$0.00	$70.98
2	60.00	$41.45	$12.84	$15.57	$8.02	$0.00	$77.88
3	70.00	$48.36	$12.84	$15.57	$8.02	$0.00	$84.79
4	80.00	$55.27	$12.84	$15.57	$8.02	$0.00	$91.70
5	90.00	$62.18	$12.84	$15.57	$8.02	$0.00	$98.61

Apprentice to Journeyworker Ratio: 1:5

TEST BORING DRILLER	6/1/2026	$53.25	$10.90	$9.75	$9.80	$0.00	$83.70
LABORERS LABORERS - FOUNDATION AND MARINE	12/1/2026	$54.75	$10.90	$9.75	$9.80	$0.00	$85.20
For apprentice rates see "Apprentice- LABORER"							
TEST BORING DRILLER HELPER	6/1/2026	$49.37	$10.90	$9.75	$9.80	$0.00	$79.82
LABORERS LABORERS - FOUNDATION AND MARINE	12/1/2026	$50.87	$10.90	$9.75	$9.80	$0.00	$81.32
For apprentice rates see "Apprentice- LABORER"							
TEST BORING LABORER	6/1/2026	$49.25	$10.90	$9.75	$9.80	$0.00	$79.70
LABORERS LABORERS - FOUNDATION AND MARINE	12/1/2026	$50.75	$10.90	$9.75	$9.80	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"							
TRACTORS/PORTABLE STEAM GENERATORS	6/1/2026	$58.70	$17.05	$13.35	$3.25	$0.00	$92.35
OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.14	$17.05	$13.35	$3.25	$0.00	$93.79
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TRAILERS FOR EARTH MOVING EQUIPMENT	6/1/2026	$42.82	$16.17	$21.78	$0.00	$0.00	$80.77
TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	12/1/2026	$42.82	$16.17	$23.52	$0.00	$0.00	$82.51
	1/1/2027	$42.82	$16.77	$23.52	$0.00	$0.00	$83.11
TUNNEL WORK - COMPRESSED AIR	6/1/2026	$61.48	$10.90	$9.75	$10.25	$0.00	$92.38
LABORERS LABORERS (COMPRESSED AIR)	12/1/2026	$62.98	$10.90	$9.75	$10.25	$0.00	$93.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)	6/1/2026	$63.48	$10.90	$9.75	$10.25	$0.00	$94.38
LABORERS LABORERS (COMPRESSED AIR)	12/1/2026	$64.98	$10.90	$9.75	$10.25	$0.00	$95.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR	6/1/2026	$53.55	$10.90	$9.75	$10.25	$0.00	$84.45
LABORERS LABORERS (FREE AIR TUNNEL)	12/1/2026	$55.05	$10.90	$9.75	$10.25	$0.00	$85.95
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR (HAZ. WASTE)	6/1/2026	$55.55	$10.90	$9.75	$10.25	$0.00	$86.45
LABORERS							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS (FREE AIR TUNNEL)	12/1/2026	$57.05	$10.90	$9.75	$10.25	$0.00	$87.95
For apprentice rates see "Apprentice- LABORER"							
VAC-HAUL	6/1/2026	$42.24	$16.17	$21.78	$0.00	$0.00	$80.19
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2026	$42.24	$16.17	$23.52	$0.00	$0.00	$81.93
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2027	$42.24	$16.77	$23.52	$0.00	$0.00	$82.53
WAGON DRILL OPERATOR	6/1/2026	$41.91	$10.90	$9.75	$9.11	$0.00	$71.67
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.11	$0.00	$73.11
LABORERS - ZONE 2	6/1/2027	$44.80	$10.90	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.25	$10.90	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$47.75	$10.90	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.25	$10.90	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
WAGON DRILL OPERATOR (HEAVY & HIGHWAY)	6/1/2026	$41.91	$10.90	$9.75	$9.21	$0.00	$71.77
LABORERS	12/1/2026	$43.35	$10.90	$9.75	$9.21	$0.00	$73.21
LABORERS - ZONE 2 (HEAVY & HIGHWAY)							
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
WASTE WATER PUMP OPERATOR	6/1/2026	$59.38	$17.05	$13.35	$3.25	$0.00	$93.03
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.83	$17.05	$13.35	$3.25	$0.00	$94.48
OPERATING ENGINEERS LOCAL 4							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
WATER METER INSTALLER	3/2/2026	$72.64	$15.32	$12.61	$8.00	$0.00	$108.57
PLUMBERS & GASFITTERS LOCAL 12	8/31/2026	$74.79	$15.32	$12.61	$8.00	$0.00	$110.72
PLUMBERS & GASFITTERS LOCAL 12	3/1/2027	$76.94	$15.32	$12.61	$8.00	$0.00	$112.87
	8/30/2027	$79.09	$15.32	$12.61	$8.00	$0.00	$115.02
	2/2/2028	$81.29	$15.32	$12.61	$8.00	$0.00	$117.22
	9/4/2028	$83.49	$15.32	$12.61	$8.00	$0.00	$119.42
	3/5/2029	$85.69	$15.32	$12.61	$8.00	$0.00	$121.62
	9/3/2029	$87.89	$15.32	$12.61	$8.00	$0.00	$123.82
	3/4/2030	$89.84	$15.32	$12.61	$8.00	$0.00	$125.77

For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"

Additional Apprentice Information

All apprentices must be registered with the Division of Apprenticeship Training(DAS) in accordance with M.G.L.c. 23, §§ 11E-11L. Minimum wage rates for apprentices employed on public works projects are listed above as a percentage of the hourly prevailing wage rate established by the Commissioner under the provisions of M.G.L.c. 149, §§ 26-27D.

Apprentice ratios are established by DAS pursuant to M.G.L.c. 23, §§ 11E-11L. Ratios are expressed as the allowable number of apprentices to journeymen or fraction thereof, unless otherwise specified. The ratios listed herein have been taken from relevant private collective bargaining agreements(CBAs) and are provided for illustrative purposes only. They have not been independently verified as being accurate or continuing to be accurate.

Parties having questions regarding what ratio to use should contact DAS.

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STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS
(EXECUTIVE ORDER 11246)
Revised April 9, 2019

1. As used in these specifications:

   a. "Covered area" means the geographical area described in the solicitation from which this contract resulted:

   b. "Director" means Director, Office of Federal Contract Compliance Programs, United States Department of Labor, or any person to whom the Director delegates authority.

   c. "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

   d. "Minority" includes:

      (i) Black (all persons having origins in any of the black African racial groups not of Hispanic origin);
      (ii) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);
      (iii) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
      (iv) American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $ 10,000 the provisions of the specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in Paragraphs 7a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. The Contractor is expected to make substantially uniform progress toward its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

    a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

    b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

    c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

    d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

    e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

    f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

    g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

    h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisor's adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (7a through p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 7a through p of these Specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables of affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

11 The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 7 of these specifications so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as many be required by the Government and keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

APPENDIX A

The following goals and timetables for female utilization shall be included in all Federal and federally assisted construction contracts and subcontracts in excess of $ 10,000. The goals are applicable to the Contractor's aggregate on-site construction workforce whether or not part of that workforce is performing work on a Federal or federally-assisted construction contract or subcontract.

Area covered: Goal for Women apply nationwide

Goals and Timetables

Timetable	Goals (percent)
From Apr. 1, 1980 until further notice	6.9

APPENDIX B-80

Until further notice, the following goals for minority utilization in each construction craft and trade shall included in all Federal or federally assisted construction contracts and subcontracts in excess of $ 10,000 to be performed in the respective geographical areas. The goals are applicable to each nonexempt contractor's total on- site construction workforce, regardless of whether or not part of that workforce is performing work on a Federal, federally assisted or nonfederally related project, contract or subcontract.

Construction contractors participating in an approved Hometown Plan (see 41 CFR 6-4.5) are required to comply with the goals of the Hometown Plan with regard to construction work they perform in the area covered by the Hometown Plan. With regard to all their other covered construction work, such contractors are required to comply with the applicable SMSA or EA goal contained in this Appendix B-80.

Economic Areas

STATE:	Goals (percent)
MASSACHUSETTS	
004 Boston MA: SMSA Counties: 1123 Boston-Lowell-Brockton-Lawrence-Haverhill, MA-NH	4.0
MA Essex, MA Middlesex, MA Norfolk, MA Plymouth, MA Suffolk, NH Rockingham.	
5403 Fall River- New Bedford MA, Bristol	1.6
9243 Worcester-Fitchburg-Leominster, MA	1.6
6323 Springfield-Chicopee-Holyoke MA-CT MA Hampden, MA Hampshire	4.8
Non-SMSA Counties: MA Barnstable, MA Dukes, MA Nantucket	3.6
Non-SMSA Counties: MA Franklin	5.9

APPENDIX C

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin (including limited English proficiency), age, sex, disability, or low-income status in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. **Solicitations for Subcontractors, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to nondiscrimination on the grounds of race, color, national origin (including limited English proficiency), age, sex, disability, or low-income status.

4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Massachusetts Department of Transportation (MassDOT) or FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor will so certify to MassDOT or FHWA, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Nondiscrimination provisions of this contract, MassDOT will impose such contract sanctions as it or FHWA may determine to be appropriate, including, but not limited to:

    a. withholding payments to the contractor under the contract until the contractor complies; and/or
    b. cancelling, terminating, or suspending a control, in whole or in part.

6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as MassDOT or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request MassDOT to enter into any litigation to protect the interests of MassDOT. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

APPENDIX D

During the performance of this contact, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor," which includes consultants) agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

PERTINENT NON-DISCRIMINATION AUTHORITIES:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21

- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-Aid programs and projects)

- Federal-Aid Highway Act of 1973 (23 U.S.C. § 324 *et seq.*) (prohibits discrimination on the basis of sex)

- Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794 *et seq.*), as amended (prohibits discrimination on the basis of disability) and 49 CFR Part 27

- The Age Discrimination Act of 1975, as amended (42 U.S.C. § 6101 *et seq.*) (prohibits discrimination on the basis of age)

- Airport and Airway Improvement Act of 1982 (49 U.S.C. § 471, Section 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex)

- The Civil Rights Restoration Act of 1987 (PL 100-209) (broadened the scope, coverage, and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975, and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of Federal-Aid recipients, sub-recipients, and contractors, whether such programs or activities are Federally funded or not)

- Titles II and III of the Americans with Disabilities Act (42 U.S.C. §§ 12131-12189), as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38 (prohibits discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities)

- The Federal Aviation Administration's Non-Discrimination Statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex)

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations)

- Executive Order 13166, Improving Access to Services for People with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100)

- Title IX of the Education Amendments Act of 1972, as amended (20 U.S.C. 1681 *et seq*.) (prohibits discrimination on the basis of sex in education programs or activities)

*** END OF DOCUMENT ***

DOCUMENT 00880

Revised January 12, 2022

DEPARTMENT OF LABOR

Employment Standards Administration

MINIMUM WAGES FOR FEDERAL AND FEDERALLY ASSISTED CONTRACTS

"General Decision Number: MA20260018 05/18/2026

State: Massachusetts

Construction Types: Highway

Counties: Massachusetts Counties of
Essex

Modification Number	Publication Date
0	01/02/2026
1	05/18/2026

CARP0339-004 09/01/2025

	Rates	Fringes
CARPENTER (INCLUDES FORM WORK)	$ 50.10	31.45

ELEC0103-007 09/01/2025

	Rates	Fringes
ELECTRICIAN	$ 66.17	37.08

ENGI0004-025 06/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR GROUP 2 BULLDOZER; GRADER/BLADE; MILLING MACHINE; ROLLER FOOTNOTE FOR POWER EQUIPMENT OPERATORS: A. PAID HOLIDAYS: NEW YEAR'S DAY, WASHINGTON'S BIRTHDAY, LABOR DAY, MEMORIAL DAY, INDEPENDENCE DAY, PATRIOT'S DAY, COLUMBUS DAY, VETERAN'S DAY, THANKSGIVING DAY, CHRISTMAS DAY	$ 57.18	33.70
POWER EQUIPMENT OPERATOR GROUP 1 BACKHOE/EXCAVATOR/TRACKHOE; BOBCAT/SKID STEER/SKID LOADER; BROOM/SWEEPER; GRADALL; LOADER; PAVER (ASPHALT, AGGREGATE, AND CONCRETE); POST DRIVER (GUARDRAIL/FENCES) FOOTNOTE FOR POWER EQUIPMENT OPERATORS: A. PAID HOLIDAYS: NEW YEAR'S DAY, WASHINGTON'S BIRTHDAY, LABOR DAY, MEMORIAL DAY,		

INDEPENDENCE DAY, PATRIOT'S DAY, COLUMBUS DAY,
VETERAN'S DAY, THANKSGIVING DAY, CHRISTMAS DAY.....$ 57.83 33.70

IRON0007-026 09/16/2025

	Rates	Fringes
IRONWORKER: ORNAMENTAL AND STRUCTURAL	$ 57.87	37.67

LABO0022-016 12/01/2024

	Rates	Fringes
LABORER: COMMON OR GENERAL	$ 38.95	29.70
LABORER (LANDSCAPE)	$ 38.95	29.70
LABORER (ASPHALT, INCLUDES RAKER, SHOVELER, SPREADER, AND DISTRIBUTOR)	$ 38.95	29.70

LABO0039-001 06/01/2021

	Rates	Fringes
LABORER: GUARDRAIL INSTALLATION	$ 35.00	25.94

PAIN0035-023 07/01/2024

	Rates	Fringes
PAINTER: STEEL	$ 56.76	36.00

SUMA2014-008 01/11/2017

	Rates	Fringes
TRUCK DRIVER: FLATBED TRUCK	$ 48.53	0.00
TRUCK DRIVER: DUMP TRUCK	$ 38.92	9.73
TRUCK DRIVER: CONCRETE TRUCK	$ 33.69	15.79
TRAFFIC CONTROL: LABORER-CONES/ BARRICADES/BARRELS - SETTER/MOVER/SWEEPER	$ 44.49	12.41
TRAFFIC CONTROL: FLAGGER	$ 23.00	20.44
PILEDRIVERMAN	$ 45.65	23.33
PAINTER: SPRAY (LINESTRIPING)	$ 41.14	15.50
OPERATOR: PILEDRIVER	$ 44.46	16.94
OPERATOR: MECHANIC	$ 48.14	17.02
OPERATOR: FORKLIFT	$ 64.67	0.00
OPERATOR: CRANE	$ 52.14	21.08
LABORER: CONCRETE SAW (HAND HELD/WALK BEHIND)	$ 41.78	18.37
IRONWORKER, REINFORCING	$ 49.94	22.45
CEMENT MASON/CONCRETE FINISHER	$ 56.70	21.08

WELDERS - Receive rate prescribed for craft performing
operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.65 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract from May 11, 2026, through December 31, 2026. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than
SU, UAVG, SA, or SC denotes that a union rate was
prevailing for that classification in the survey. Example:
PLUM0198-005 07/01/2024. PLUM is an identifier of the union
whose collectively bargained rate prevailed in the survey for
this classification, which in this example would be Plumbers.
0198 indicates the local union number or district council
number where applicable, i.e., Plumbers Local 0198. The next
number, 005 in the example, is an internal number used in
processing the wage determination. The date, 07/01/2024 in the
example, is the effective date of the most current negotiated
rate.

Union prevailing wage rates are updated to reflect all changes
over time that are reported to WHD in the rates
in the collective bargaining agreement (CBA) governing the
classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for
those classifications, but that 100% of the data reported for
the classifications reflected union rates. EXAMPLE:
UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a
weighted union average rate. OH indicates the State of Ohio.
The next number, 0010 in the example, is an internal number
used in producing the wage determination. The date, 01/01/2024
in the example, indicates the date the wage determination was
updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to
reflect a weighted average of the current rates in the
collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The SU identifier indicates that either a single non-union
rate prevailed (as defined in 29 CFR 1.2) for this
classification in the survey or that the rate was derived by
computing a weighted average rate based on all the rates
reported in the survey for that classification. As a weighted
average rate includes all rates reported in the survey, it may
include both union and non-union rates. Example: SUFL2022-007
6/27/2024. SU indicates the rate is a single non-union
prevailing rate or a weighted average of survey data for that
classification. FL indicates the State of Florida. 2022 is the
year of the survey on which these classifications and rates are

based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

"SU" wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The "SA" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the "SA" identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division

U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

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END OF GENERAL DECISION

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DOCUMENT A00801

SPECIAL PROVISIONS

LYNNFIELD

Federal Aid Project No. STP-0034(033)X

Rail Trail Construction, From Ford Avenue to the Peabody City Line

Labor participation goals for this Project shall be 15.3% for minorities and 6.9% for women for each job category. The goals are applicable to both Contractor's and Subcontractor's on-site construction workforce. Refer to Document 00820 for details.

SCOPE OF WORK

All work under this Contract shall be done in conformance with the *2026 Standard Specifications for Highways and Bridges, the Supplemental Specifications* contained in this book, the *Construction Standard Details* in effect as of May 2026, the *1990 Standard Drawings for Signs and Supports*, the 2015 *Overhead Signal Structure and Foundation Standard Drawings*, the *11th Edition of the Manual on Uniform Traffic Control Devices (MUTCD)* and the *January 2026 Massachusetts Amendments to the MUTCD*, *the 1968 Standard Drawings for Traffic Signals and Highway Lighting*, the latest edition of The *American Standard for Nursery Stock*, the Plans and these Special Provisions.

The Lynnfield Rail Trail – Phase 1 project consists of a 12-ft wide asphalt shared-use path with 2-ft wide soft surface (grass) shoulders. The route extends 1.81 miles from Ford Avenue in Lynnfield to the Lynnfield Peabody town line with most of the route occupying the former railroad track bed. There are two roadway crossings at Summer Street and Pillings Pond Road, both in Lynnfield. The project scope includes a shared-use path, connecting pathways, minor landscaping, trail amenities (benches, interpretive signage, bicycle racks, etc.), wetland replication area, removal of former railroad structures, crosswalks with ADA compliant pedestrian curb ramps, fencing, a pedestrian activated warning beacon, traffic signage, and pavement markings.

RAILROAD INSURANCE REQUIREMENTS

The insurance requirements set forth in this section are in addition to the requirements of the Standard Specifications.

Railroad Operations Directorate: Section F:

1. Refer to the railroad insurance requirements included in the lease agreement - Document A00813 included in the Contract Documents. Railroad special instructions are included in Document A00807.

2. Such insurance shall be written on an occurrence basis.

3. The MBTA and applicable railroads shall the named insured on such insurance. Additional named insured are listed below. Original policies and certificates shall be made out to the MBTA and applicable railroads and mailed to:

MBTA: Treasurer-Controller
Massachusetts BayTransportation Authority
10 Park Plaza
Boston, MA 02116
Tel. (617) 222-3064

Keolis: General Counsel
Keolis Commuter Services, LLC
470 Atlantic Avenue
Boston, Ma 02210

4. Railroad Protective Liability is not required in this project.

5. Such policies shall provide 30 days notice to eacj insured by the insurance company before any cancellation of the policies.

6. Such Railroad Protective Insurance policies may be provided in forms commonly referred to as AAR/AASHTO or ISO/RIMA but not Oregon.
Questions regarding insurance should be directed to the MNTA's Risk Manager at 617-222-3064.

The contractor shall be aware of the latest MBTA insurance limits/ requirements. See the following link for more information:
https://www.mbtarealty.com/licenses.html

CONTRACTOR QUESTIONS AND ADDENDUM ACKNOWLEDGEMENTS

Prospective bidders are required to submit all questions to the Construction Contracts Engineer by 3:00 P.M. on the Tuesday of the previous week before the scheduled bid opening date. Any questions received after this time will not be considered for review by the Department.

Contractors should email questions and addendum acknowledgements to the following email address massdotspecifications@dot.state.ma.us The MassDOT proposal number and municipality is to be placed in the subject line.

NONCONFORMING COMPRESSIVE STRENGTH OF CEMENT CONCRETE

Concrete with compressive strength test results failing to attain the limits specified in Table 901.64-3 of 901.64.B: Acceptance Testing shall be evaluated for structural adequacy and serviceability at the Contractors' expense. The Department will review all production records, the concrete test records, petrographic analysis report, field notes, and the placement records for the concrete in question. If the Engineer determines the material is found to be adequate to remain in place, payment shall be adjusted in accordance with the following formula:

$$P = \frac{2(fc - f'c)(UP)(Q)}{f'c}$$

Where:

P = pay adjustment for substandard concrete
$f'c$ = specified minimum compressive strength at 28 days
fc = substandard concrete cylinder compressive strength at 56 days
Q = quantity of concrete represented by the acceptance cylinders tested
UP = unit contract price or the lump sum breakdown price per cubic yard for the class of concrete involved complete in place

WORK SCHEDULE

The work on this project is to be done using one (1) 8-hour shift per day, 5 days a week, between the hours of 7:00 am and 3:30 pm, with the Prime Contractor and all Subcontractors working on the same shift. Set-up and removal of all equipment and materials for construction and / or traffic maintenance shall be done only during working hours for the particular work being done. The roadway shall be free of the Contractor's personnel and operations during non-work hours.

Short-term temporary lane closures will be allowed with prior written permission of the Engineer.

Work shall be coordinated with the school at 127 Summer Street to avoid impacts to dropoff and pickup times.

PROJECT SITE ACCESS RESTRICTIONS

No access to the project site is permitted from Nichols Lane and the MBTA property in Peabody.

TRUCK SAFETY DEVICES

(Supplementing Subsection 7.04: Motor Vehicles)

All motor vehicles subject to Section 7 of Chapter 90 to be operated under this Contract shall be equipped with safety devices as provided therein and in 540 CMR 4.00.

The Contractor shall certify to the Registry of Motor Vehicles, in a manner prescribed by the Registrar, that all applicable vehicles are equipped with Lateral Protective Devices, Convex Mirrors, Cross Over Mirror(s) and Back Up Cameras in accordance with the requirements of 540 CMR 4.00.

The Contractor shall provide evidence satisfactory to the Department to demonstrate compliance with the above certification requirement for all applicable vehicles operated under this Contract by the Contractor and its subcontractors and vendors in a manner set forth by the Department. Thereafter, the Contractor shall have an affirmative obligation to continue to provide such evidence of compliance on an ongoing basis and no later than 7 days after certification with the Registry of Motor Vehicles of any additional vehicles operated under this Contract by the Contractor and its subcontractors and vendors.

Non-compliance with respect to a vehicle that is subject to 540 CMR 4.00 may subject the Contractor to statutory fines as established in M.G.L. c. 90, § 7 and/or contractual remedies up to and including termination of the Contract.

HOLIDAY WORK RESTRICTIONS

(Supplementing Subsection 7.09)

The District Highway Director (DHD) may authorize work to continue during these specified time periods if it is determined by the District that the work will not negatively impact the traveling public. DHD may allow work in those areas on a case by case basis and where work is behind barrier and will not impact traffic

Below are the holiday work restrictions:

New Years Day (Federal Holiday)
No work on major arterial roadways from 5:00 AM on the day before until the normal start of business on the next subsequent business day. No work on local roadways on the holiday without permission by the DHD and the local police chief.

Martin Luther King's Birthday (Federal Holiday)
No work restrictions due to traffic concerns, however work on local roadways requires permission by the DHD and local police chief.

President's Day (Federal Holiday)
No work restrictions due to traffic concerns, however work on local roadways requires permission by the DHD and local police chief.

Evacuation Day (Suffolk County State Holiday)
No work restrictions due to traffic concerns.

Patriot's Day (State Holiday)
Work restrictions will be in place for Districts 3 and 6 along the entire Boston Marathon route and any other locations that the DHD in those districts determine are warranted so as to not to impact the marathon. All other districts work restrictions will be as per DHD.

Mother’s Day
No work on Western Turnpike and Metropolitan Highway System from 5:00 AM on the Friday before, until the normal start of business on the following day.

Memorial Day (Federal Holiday)
No work on major arterial roadways from 5:00 AM on the Friday before, until the normal start of business on the following day.

Bunker Hill Day (Suffolk County State Holiday)
No work restrictions due to traffic concerns.

Juneteenth
No work restrictions due to traffic concerns, however work on local roadways requires permission by the DHD and local police chief.

HOLIDAY WORK RESTRICTIONS (Continued)

Independence Day (Federal Holiday)
No work on major arterial roadways from 5:00 AM on the day before until the normal start of business on the next subsequent business day. No work on local roadways on the holiday without permission by the DHD and the local police chief.

Labor Day (Federal Holiday)
No work on major arterial roadways from 5:00 AM on the Friday before, until the normal start of business on the following day.

Columbus Day (Federal Holiday)
No work on major arterials from 5:00 AM on the Friday before, until the normal start of business on the following day

Veterans' Day (Federal Holiday)
No work restrictions due to traffic concerns.

Thanksgiving Day (Federal Holiday)
No work on major arterials from 5:00 AM two days before until the normal start of business on the following Monday.

Christmas Day (Federal Holiday)
No work on major arterial roadways from 5:00 AM on the day before until the normal start of business on the next subsequent business day.

SUBSECTION 8.02 SCHEDULE OF OPERATIONS
Replace this subsection with the following:

An integrated cost and schedule controls program shall be implemented by the Contractor to track and document the progress of the Work from Notice to Proceed (NTP) through the Contractor Field Completion (CFC) Milestone. The Contractor's schedules will be used by the Engineer to monitor project progress, plan the level-of-effort required by the Department's work force and consultants and as a critical decision-making tool. Accordingly, the Contractor shall ensure that it complies fully with the requirements specified herein and that its schedules are both accurate and updated as required by the specification throughout the life of the project. Detailed requirements are provided in Division II, Section 722 Construction Scheduling.

SOIL STOCKPILING DIRECTIVE P-22-001

Any stockpiling of soil must be performed in compliance with Policy Directive P-22-001, Off-Site Stockpiling of Soil from MassDOT Construction Projects. This directive limits the allowable locations for off-site stockpiling of soil generated during MassDOT projects and includes various requirements that must be satisfied by the contractor prior to off-site stockpiling. The Contractor is responsible for identifying a suitable stockpile location.

SUBSECTION 8.14 UTILITY COORDINATION, DOCUMENTATION, AND MONITORING RESPONSIBILITIES

A. GENERAL

In accordance with the provisions of Section 8.00 Prosecution and Progress, utility coordination is a critical aspect to this Contract. This section defines the responsibility of the Contractor and MassDOT, with regard to the initial utility relocation plan and changes that occur as the prosecution of the Work progresses. The Engineer, with assistance from the Contractor shall coordinate with Utility companies that are impacted by the Contractor's operations. To support this effort, the Contractor shall provide routine and accurate schedule updates, provide notification of delays, and provide documentation of the steps taken to resolve any conflicts for the temporary and/or permanent relocations of the impacted utilities. The Contractor shall provide copies to the Engineer of the Contractor communication with the Utility companies, including but not limited to:

- Providing advanced notice, for all utility-related meetings initiated by the Contractor.
- Providing meeting minutes for all utility-related meetings that the Contractor attends.
- Providing all test pit records.
- Request for Early Utility work requirements of this section (see below).
- Notification letters for any proposed changes to Utility start dates and/or sequencing.
- Written notification to the Engineer of all apparent utility delays within seven (7) Calendar Days after a recognized delay to actual work in the field – either caused by a Utility or the Contractor.
- Any communication, initiated by the Contractor, associated with additional Right-of-Way needs in support of utility work.
- Submission of completed Utility Completion Forms.

B. PROJECT UTILITY COORDINATION (PUC) FORM

The utility schedule and sequence information provided in the Project Utility Coordination Form (if applicable) is the best available information at the time of the bid and has been considered in setting the contract duration. The Contractor shall use all of this information in developing the bid price and the Baseline Schedule Submission, inclusive of the individual utility durations sequencing requirements, and any work that has been noted as potentially concurrent utility installations.

C. INITIATION OF UTILITY WORK

The Engineer will issue all initial notice-to-proceed dates to each Utility company based on either the:

1) Contractor's accepted Baseline Schedule
2) An approved Early Utility Request in the form of an Early Utility sub-net schedule (in accordance with the requirements of this Subsection)
3) An approved Proposal Schedule

C.1 - BASELINE SCHEDULE – UTILITY BASIS

The Contractor shall provide a Baseline Schedule submission in accordance with the requirements of Subsection 8.02 and inclusive of all of the information provided in the PUC Form that has been issued in the Contract documents. This is to include the utility durations, sequencing of work, allowable concurrent work, and all applicable considerations that have been depicted on the PUC Form.

SUBSECTION 8.14 (Continued)

C.2 – EARLY UTILITY REQUEST – (aka SUBNET SCHEDULE) PRIOR TO THE BASELINE
All early utility work is defined as any anticipated/required utility relocations that need to occur prior to the Baseline Schedule acceptance. In all cases of proposed early utility relocation, the Contractor shall present all known information at the pre-construction conference in the form of a 'sub-net' schedule showing when each early utility activity needs to be issued a notice-to-proceed. The Contractor shall provide advance notification of this intent to request early utility work in writing at or prior to the Pre-Construction meeting. Prior to officially requesting approval for early utility work, the Contractor shall also coordinate with MassDOT and all utility companies (private, state or municipal) which may be impacted by the Contract. If this request is acceptable to the Utilities and to MassDOT, the Engineer will issue a notice-to-proceed to the affected Utilities, based on these accepted dates.

C.3 – PROPOSAL SCHEDULE - CHANGES TO THE PUC FORM
If the Contractor intends to submit a schedule (in accordance with MassDOT Standard Specifications, Division I, Subsection 8.02) that contains durations or sequencing that vary from those provided in the Project Utility Coordination (PUC) Form, the Contactor must submit this as an intended change, in the form of a Proposal Schedule and in accordance with MassDOT Standard Specifications, Division I, Subsection 8.02. These proposed changes are subject to the approval of the Engineer and the impacted utilities, in the form of this Proposal Schedule and a proposed revision to the PUC form. The Contractor shall not proceed with any changes of this type without written authorization from the Engineer, that references the approved Proposal Schedule and PUC form changes. The submission of the Baseline Schedule should not include any of these types of proposed utility changes and should not delay the submission of the Baseline Schedule. As a prerequisite to the Proposal Schedule submission, and in advance of the utility notification(s) period, the Contractor shall coordinate the proposed utility changes with the Engineer and the utility companies, to develop a mutually agreed upon schedule, prior to the start of construction.

D. UTILITY DELAYS
The Contractor shall notify the Engineer upon becoming aware that a Utility owner is not advancing the work in accordance with the approved utility schedule. Such notice shall be provided to the Engineer no later than seven (7) calendar days after the occurrence of the event that the Contractor believes to be a utility delay. After such notice, the Engineer and the Contractor shall continue to diligently seek the Utility Owner's cooperation in performing their scope of Work.

In order to demonstrate that a critical path delay has been caused by a third-party Utility, the Contractor must demonstrate, through the requirements of the monthly Progress Schedule submissions and the supporting contract records associated with Subsection 8.02, 8.10 and 8.14, that the delays were beyond the control of the Contractor.

SUBSECTION 8.14 (Continued)

All documentation provided in this section is subject to the review and verification of the Engineer and, if required, the Utility Owner. In accordance with MassDOT Specifications, Division I, Subsection 8.10, a Time Extension will be granted for a delay caused by a Utility, only if the actual duration of the utility work is in excess of that shown on the Project Utility Coordination Form, and only if;

1) proper Notification of Delay was provided to MassDOT in accordance with the time requirements that are specified in this Section
2) the utility delay is a critical path impact to the Baseline Schedule (or most recently approved Progress Schedule)

E. LOCATION OF UTILITIES

The locations of existing utilities are shown on the Contract drawings as an approximation only. The Contractor shall perform a pre-construction utility survey, including any required test pits, to determine the location of all known utilities no later than thirty (30) calendar days before commencing physical site work in the affected area.

F. POST UTILITY SURVEY – NOTIFICATION

Following completion of a utility survey of existing locations, the Contractor will be responsible to notify the Engineer of any known conflicts associated with the actual location of utilities prior to the start of the work. The Engineer and the Contractor will coordinate with any utility whose assets are to be affected by the Work of this Contract. A partial list of utility contact information is provided in the Project Utility Coordination Form.

G. MEETINGS AND COOPERATION WITH UTILITY OWNERS

The Contractor shall notify the Engineer in advance of any meeting they initiate with a Utility Owner's representative to allow MassDOT to participate in the meeting if needed.

Prior to the Pre-Construction Meeting, the Contractor should meet with all Utility Owners who will be required to perform utility relocations within the first 6 months of the project, to update the affected utilities of the Project Utility Coordination Form and all other applicable Contract requirements that impact the Utilities. The Contractor shall copy the Engineer on any correspondence between the Utility Owner and the Contractor.

H. FORCE ACCOUNT / UTILITY MONITORING REQUIREMENTS

The Engineer will be responsible for recording daily Utility work force reports. The start, suspension, re-start, and completion dates of each of the Utilities, within each phase of the utility relocation work, will be monitored and agreed to by the Engineer and the Contractor as the work progresses.

I. ACCESS AND INSPECTION

The Contractor shall be responsible for allowing Utility owners access to their own utilities to perform the relocations and/or inspections. The Contractor shall schedule their work accordingly so as not to delay or prevent each utility from maintaining their relocation schedule.

MBTA COMMUTER RAIL

Keolis Commuter Service (KCS) operates the commuter rail for the MBTA. All references to MBCR in the provisions will mean Keolis Commuter Service (KCS).

RAILROAD FLAGGERS

Railroad flaggers are not anticipated, but in the case it is required during the time of construction, then the Contractor will be reimbursed for the costs, as required by the Engineer.

MBTA RAILROAD COORDINATION / ACCESS TO MBTA PROPERTY

The Contractor shall be required to coordinate the work of this Contract with the MBTA and Keolis Commuter Services Co. ("KCS") through the MassDOT Resident Engineer and MassDOT designated Field Staff. A majority of the prerequisites for the Contractor to perform work on or adjacent to MBTA transit lines may be found in the "MBTA Special Instructions" provided herein. The Contractor shall be required to comply with the all applicable requirements of the latest edition of the MBTA Special Instructions available at the time of Contract Award.

The Contractor will have to perform construction related activities on, over, under, within or adjacent to railroad property owned or controlled by the MBTA. Any work that will affect Commuter Rail operations, involve work on, over, under, within or adjacent to the commuter rail right of way must be coordinated with MBTA Railroad Operations and KCS and shall comply with the latest version of the MBTA Railroad Operations Directorate.

An owner or Contractor who wishes permission to enter upon or perform work over, on, under or adjacent to MBTA property shall submit to the offices of the MBTA's designated representative, a request in writing, a minimum of forty-two (42) days prior to the owner or the Contractor's planned commencement of any of the above stated activities.

SUMMARY OF POTENTIALLY IMPACTING CONDITIONS

Railroad

Most of the project is located within an historic railroad right-of-way. Based upon the historical use of the land as a railroad line, it is expected that residual contamination is present, and it is likely that contaminated soils will be encountered in the project area. It is possible that residual levels of polycyclic aromatic hydrocarbons, trace levels of metals, pesticides (such as lead arsenate), and constituents of oil or fuel (petroleum products), coal ash from engines, and creosote from ties could be present in soil. The proposed construction activities will result in handling of and exposure to potentially contaminated soil.

NATIONAL GRID EMERGENCY TELEPHONE NUMBERS

GAS:
Emergency: 1-800-233-5325
New Service: 1- 877-696-4743
Customer Support: 1-800-732-3400

READING MUNICIPAL LIGHT DEPT. EMERGENCY TELEPHONE NUMBERS

ELECTRIC:
Outage/Emergency: 1-781-942-6598
New Service: 1-781-942-6598
Customer Support: 1-781-942-6598

PEABODY MUNICIPAL LIGHT EMERGENCY TELEPHONE NUMBER

ELECTRIC
Outage/Emergency/Customer Support: 1-978-531-5975

PEABODY PUBLIC SERVICES CONTACT INFORMATION

WATER/SEWER:
William Paulitz
Director & City Engineer
24 Lowell St
Peabody, MA 01960
Phone: 978-536-7126

UTILITY CONTACTS

Written notice shall be given by the Contractor to all public service corporations or municipal and State officials owning or having charge of publicly or privately-owned utilities at least one week in advance of the commencement of operations that will affect the utilities. The Contractor shall, at the same time, file a copy of such notice with the Engineer.

National Grid Electric 40 Sylvan Road Waltham, MA 02451 Casey Silva 617-429-7797 Casey.Silva@nationalgrid.com	Peabody Municipal Light Plant 201 Warren Street Ext. Peabody, MA 01960 Roy Simoes 978-573-1230 rsimoes@pmlp.com	Peabody Municipal Light Plant 201 Warren Street Ext. Peabody, MA 01960 Brian Abcunas 978-531-5975 Ext. 234 babcunas@pmlp.com
Verizon 385 Myles Standish Blvd. Taunton, MA 02780 Paul Diamantopoulos 978-323-0282 Paul.e.Diamantopoulos@verizon.com	Lynnfield Water District 842 Salem Street Lynnfield, MA 01940 James Finegan 781-598-4223 jfinegan@lwdma.us	Lynnfield Center Water District 83 Phillips Road Lynnfield, MA 01940 John Scenna 781-334-3901 scennaj@lcwd.us
Peabody Public Services 50 Farm Ave. Peabody, MA 01960 William Paulitz 978-536-7126 William.Paulitz@peabody-ma.gov	MWRA 2 Griffin Way Chelsea, MA 02150 Ralph Francesconi 617-461-3573 Ralph.Francesconi@mwra.com	South Essex Sewer District 50 Fort Avenue, P.O. Box 989 Salem, MA 01970 Peter Pommersheim 978-744-4550 ext. 221 ppommersheim@sesd.com
National Grid Gas 170 Data Dr Waltham, MA 02451 Melissa Owens 781-907-2845 melissa.owens@nationalgrid.com	Tennessee Gas Pipeline Company 8 Anngina Drive Enfield, CT 06082 David Wood 860-763-6005 KMencroachmentsNorth@kindermorgan.com	Enbridge 8 Wilson Way Westwood, MA 02090 Kathy M. Aruda 508-938-7728 kathleen.aruda@enbridge.com
CSX Transportation 2000 West Cabot Blvd - Suite 130 Langhorne, PA 19047 Michael Sliper Michael_Sliper@csx.com	MBTA Archives & Digital Asset Preservation 500 Arborway Boston, MA 02130 Sylvia Welsh archives@mbta.com	Comcast Cable Corporation PO Box 6505, 5 Omni Way Chelmsford, MA 01824 Michael Cook Michael_Cook7@comcast.com
Zayo 80 Central Street Boxborough, MA 01719 Mark Bonanno 508-616-7818 mark.bonanno@zayo.com	Astound 956 Massachusetts Avenue Arlington, MA 02476 Alex Ortiz 781-316-8878 alex.ortiz@astound.com	Lynnfield DPW 55 Summer Street Lynnfield, MA 01940 Deborah Duhamel 781-334-9500 dduhamel@town.lynnfield.ma.us
Peabody City Engineer 50 Farm Ave. Peabody, MA 01960 William Paulitz 978-536-7126 William.Paulitz@Peabody-ma.gov	FirstLight 359 Corporate Drive Portsmouth, NH 01940 FirstLight_MA@firstlight.net	Verizon Wireless Small Cell 20 Alexander Drive Wallingford, CT 06492 Elizabeth Glidden elizabeth.glidden@verizonwireless.com
Lynnfield Fire Alarm 59 Summer Street Lynnfield, MA 01940 Ted Cohen 781-710-1103 tcohen@town.lynnfield.ma.us	Peabody Fire Alarm 47 Lowell Street Peabody, MA 01960 Shawn Mahoney 978-538-5789 Shawn.mahoney@peabody-ma.gov	Reading Municipal Light Plant 20 Ash Street, Reading, MA Peter Price pprice@RMLD.com

KINDER MORGAN (ALSO KNOWN AS TENNESSE GAS) PIPELINE REQUIREMENTS

1. Contact Wesley Maribito (Wesley_Maribito@kindermorgan.com) at least 10 business days prior to any work within 25 feet of Kinder Morgan (also known as Tennessee Gas) facility.
2. No stock piling of equipment or materials within 25 feet of Kinder Morgan (also known as Tennessee Gas) facility.
3. Kinder Morgan (also known as Tennessee Gas) shall be invited to the pre-construction meeting.

COMPLIANCE WITH THE NATIONAL DEFENSE AUTHORIZATION ACT

(Supplementing Subsection 7.01)

On all projects, the "Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment" Regulation (2 CFR 200.216) prohibits the Contractor from using or furnishing the following telecommunications equipment or services:

- Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
- For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
- Telecommunications or video surveillance services provided by such entities or using such equipment.
- Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

This prohibition applies to all products manufactured by the aforementioned companies, including any individual components or parts.

By submitting a bid on a project, the Contractor certifies that all work will be in compliance with the terms of 2 CFR 200.216. The Contractor shall submit a COC indicating compliance with the above provisions for all telecommunications equipment or services included in the Contract.

Payment for the item in which the materials are incorporated may be withheld until these COCs are received. Any cost involved in furnishing the certificate(s) shall be borne by the Contractor.

BIDDERS LIST

Pursuant to the provisions of 49 CFR Part 26.11 all official bidders will be required to report the names, addresses and telephone numbers of all firms that submitted bids or quotes in connection with this project. Failure to comply with a written request for this information within 15 business days may result in a recommendation to the Prequalification Committee that prequalification status be suspended until the information is received.

The Department will survey all firms that have submitted bids or quotes during the previous year prior to setting the annual goal and shall request that each firm report its age and gross receipts for the year.

BUILD AMERICA BUY AMERICA PREFERENCE

On Federally-aid projects the Buy America (23.CFR § 635.410) and Build America, Buy America Act. requires the following,

(1) all iron and steel used in the project are produced in the United States--this means all manufacturing processes, from the initial melting stage through the application of coatings, must occur in the United States. Foreign steel and iron can be used if the cost of the materials does not exceed 0.1% of the total Contract cost or $2,500, whichever is greater. The action of applying a coating to a covered material (i.e., steel and iron) is deemed a manufacturing process subject to Buy America. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to requirements of Build America, Buy America. Steel used for temporary support of excavation, including H piles, soldier piles, and sheeting when the steel is required to be left in place is subject to requirements of Build America, Buy America. Temporary steel, shall remain in place when it falls within the influence zone of the soil supporting any structure or railroad tracks.

(2) all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States and

(3) all construction materials are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States. "Construction materials" includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives—that is or consists primarily of:

- non-ferrous metals,
- plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables),
- glass (including optic glass),
- lumber; or
- drywall.

BUILD AMERICA BUY AMERICA PREFERENCE (Continued)

The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

All articles, materials, and supplies should be classified as an iron or steel product, a manufactured product, or another product as specified by law or in 2 CFR part 184 (such other products specified by law or in 2 CFR part 184 include "excluded materials" and "construction materials"); an article, material, or supply must not be considered to fall into multiple categories.

MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION FILE NUMBER SIGN

This project is subject to Massachusetts General Laws, Chapter 131, Section 40 as amended. Signs shall be in accordance with the latest MassDOT Construction Standards. All costs for the manufacture, erection, maintenance, moving, and removal of the signs shall be absorbed by the contractor with no additional compensation other than the contract unit prices.

For this project the Massachusetts Department of Environmental Protection File Number is 209-0694.

ENVIRONMENTAL PERMITTING

An Order of Conditions (DEP#209-0694) has been obtained from the Lynnfield Conservation Commission under the Wetlands Protection Act. The proposed work occurs in jurisdictional wetland resources subject to section 404 of the Clean Water Act; therefore, authorization from the US Army Corps of Engineers has been obtained. The Contractor is advised that all terms and conditions within said permits shall be strictly adhered to. If field conditions and/or Contractor-proposed erection, demolition, storage, or other procedures not originally allowed by existing environmental permits require work to occur in or otherwise impact water or wetland resource areas, the Contractor is advised that no associated work can occur until all required environmental permits have been either amended or obtained allowing such work. The Contractor must notify the District 4 Highway Director and Resident Engineer in writing at least 60 days prior to desired commencement of the proposed activity. All environmental submittals, including any contact with Local, State, or Federal environmental agencies, must be coordinated with the District 4 Environmental Engineer. The Contractor is expected to fully cooperate with requests for information and provide same in a timely manner. The Contractor is further advised that the Department will not entertain a delay claim due to the time required to modify or obtain the environmental permits.

NORTHERN LONG-EARED BAT AND TRICOLORED BAT PROTECTION

The northern long-eared bat (*Myotis septentrionalis*; NLEB) and tricolored bat (*Perimyotis subflavus*; TCB) are listed as federally endangered or proposed endangered, respectfully, under the Endangered Species Act (ESA). The U.S. Fish and Wildlife Service (USFWS) developed this guidance to address ESA compliance and promote conservation of NLEB and TCB. MassDOT, on behalf of FHWA, submitted a Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key Consultation through Information for Planning and Consultation (IPaC) and generated a May Affect, Not Likely to Adversely Affect (NLAA) determination (see **Document A00855 included herein**). Subsequently, the project has completed Section 7 consultation under the ESA.

In advance of the uplisting of the TCB to endangered under the ESA, the following Avoidance and Minimization Measures (AMMs) must be strictly adhered to in order to protect NLEB and TCB and to be in compliance with the ESA. Contact MassDOT Environmental Services - Wildlife Unit Supervisor for questions about project limits, restrictions, or conservation measures.

General AMMs

- The Contractor shall ensure all personnel working in on the project site are aware of all environmental commitments related to NLEB and TCB, including all applicable AMMs. NLEB and TCB information (https://www.fws.gov/midwest/endangered/mammals/nleb/ and https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus) shall be made available to all personnel.

Lighting AMMs

- Direct temporary lighting away from suitable habitat during the active season: **April 15 to October 31**

Tree Removal AMMs

- *If additional cutting is proposed by the Contractor that is outside the scope of this contract, additional review is required by the MassDOT Highway Division's Environmental Services Section, and additional review and restrictions may be required by the USFWS.*

- Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).

- No tree cutting, trimming, or removal of trees and/or woody vegetation >3-inch in diameter shall be conducted between **April 15 to October 31** The Contractor shall ensure all personnel working in on the project site are aware of all environmental commitments related to NLEB and/or TCB, including the **TOY** restriction. If this restriction needs to be waived at any location(s) the Resident Engineer shall send a locus map of the proposed work to MassDOT Highway Division's Environmental Services Section for review and a determination if the restriction can be waived.

NORTHERN LONG-EARED BAT AND TRICOLORED BAT PROTECTION (Continued)

Bridge AMMs

- On April 30, 2025, MassDOT Highway Division Environmental Services, conducted a northern long-eared bat bridge/structure bat assessment, in accordance with the USFWS guidelines. The assessment did not find presence of, or evidence of use by bats, and as stated within the guidelines, the assessment is valid for two years. If bridge work is not complete before April 30, 2027, assessment of the bridge for the presence of, or evidence of use by, bats shall be completed by the MassDOT Wildlife Unit prior to continuing bridge work. The Contractor shall notify the MassDOT Wildlife Unit no later than fourteen (14) days prior to April 30, 2027, to provide adequate time for inspection. If bats are found to be present, or, if there is evidence of bat usage, work at the bridge shall not commence until after the MassDOT Wildlife Unit has completed coordination with the US Fish and Wildlife Service to determine the appropriate follow up or mitigation actions.

EMERALD ASH BORER ADVISORY

To the extent possible, all trees and brush shall be disposed on site, typically chipped and spread in place. When trees or brush must be removed, such as in urban, or otherwise populated areas, Contractor shall identify proposed location for disposal, and provide written notification to the Engineer for approval. Disposal shall be in city or town of project, or at minimum, within county, of construction operations.

EQUIVALENT SINGLE AXLE LOADS (ESALS)

The estimated traffic level to be used for SUPERPAVE HMA mixture designs for this contract, expressed in Equivalent Single Axle Loads (ESALs) for the design travel lane over a 20-year period, is 0.29 Million 18-kip (80-kn) ESALs.

CONTAMINATED SOIL

Soil to be removed from the project area shall not be assumed to be uncontaminated and must be evaluated prior to off-site management for potential contamination with hazardous materials. No soil may be disposed of off-site without proper assessment by the contractor and approval from the Resident Engineer (RE), District Environmental Engineer (DEE), or the project designee.

NOTIFICATION OF FUNDING SOURCES FOR WORK TO BE PAID BY OTHERS

This Contract has an agreement with the *Town of Lynnfield;* whereas when the construction costs for the Contract scope exceed the total participating Contract bid price by more than ten percent (10%), the *Town* shall be responsible for the amount over 110% of the total participating Contract bid price.

GENERAL REQUIREMENTS FOR DEMOLITION AND WORK INVOLVING PAINTED STEEL

(02/06/2020)

Demolition and work involving painted steel shall conform to the requirements of Subsection 961 of the Standard Specifications.

Work Involving Painted Steel

Hazardous materials shall be removed in the immediate area of any intended welding, heating, saw cutting or burning of steel. Hazardous material removal is required to allow the demolition of structural steel, railings, drainage systems, utility supports, steel lamp posts, etc.

The contractor shall assume that the coatings on the steel contain lead (Pb), unless otherwise determined by testing. The contractor shall certify in writing to the Engineer the results of all testing, and shall also certify that any lead (Pb) coated steel removed from the project was not reused or buried, but was sent to a scrap metal recycling facility.

Implement and maintain programs and procedures, which comply with the requirements of this specification and all applicable standards and regulations. Comply with all applicable regulations even if the regulation is not specifically referenced herein. If a state or local regulation is more restrictive than the regulation of this specification, follow the more restrictive requirements.

This requirement is intended only for the demolition and preparation prior to repair and does not include provisions for recoating of steel.

Environmental

All applicable portions of Subsections 961.65 “Worker Protection” and 961.66 “Environmental Protection and Monitoring” shall be followed when performing this work.

During chemical stripping a hand washing facility may be used in lieu of a decontamination/changing facility.

Hazardous material shall be collected during the disassembly and disposed of as outlined in Subsection 961.68 “Handling of Hazardous Waste and Reporting Release Programs”.

The applicable submittals shall be according to Subsection 961.69 “Submittals”.

GENERAL REQUIREMENTS FOR DEMOLITION AND WORK INVOLVING PAINTED STEEL (Continued)

Cleaning/Removal

Cutting Or Burning Of Steel

All surfaces to be welded, heated, saw cut or burned shall be cleaned so as to remove all contaminants and/or hazardous materials, which could be discharged to the environment as a function of the subsequent operations.

Lead paint shall be removed in its entirety in an area prescribed by a 6 inch (15 cm) minimum offset from the required work. The paint removal operation may be dry abrasive blasting, wet abrasive blasting or chemical stripping.

Proper level of containment shall be used when performing this work in accordance with Subsection 961.67 "Containment". Full containment is not required during chemical stripping operation however; the Contractor shall install proper shielding and/or tarpaulins under the chemical stripping operations in order to catch all debris generated during this procedure. A cleaned area must be inspected and approved before the demolition operations are started.

During cleaning operations the Contractor shall be required to furnish and erect temporary floodlights illuminating the steel surface at a minimum of 30-foot candles. This lighting shall be used in areas where there is insufficient lighting for proper cleaning operations and inspection. The Contractor shall supply electrical power.

The Contractor shall provide support for interim and final inspection of the bridge during cleaning operations. This support shall include the necessary traffic controls and safe access to the work.

Mechanical Disassembly Of Steel

All surfaces to be mechanically disassembled by shear cutting or removing bolts or rivets shall not require deleading. When shear cutting or removing bolts or rivets, the Contractor shall not use any method that will cause dust and/or particles to be emitted and/or dispersed into the environment to an extent that would expose the workers above the Action Levels of 30µg/m3.

For purposes of limiting the lead (Pb) dust, the Contractor will be required to dampen the lead paint work areas.

The contractor shall install a proper shielding and/or tarpaulins under all lead-paint-coated surfaces to be shear cut or bolts or rivets ordered removed in order to catch any loose lead paint chips, dust or particles.

ITEM 102. SELECTIVE CLEARING AND THINNING ACRE

The work under this Item shall conform to the applicable provisions of Subsection 101 of the Standard Specifications, and the following:

The work under this Item shall include the clearing of trees, shrubs, and limbs along the entire length of the shared-use path in order to obtain the necessary minimum clear shoulder area off the edge of the shared-use path and adequate sight distance around existing signs.

The Contractor shall take all necessary safety precautions when completing this work as overhead energized lines are present along the project.

LIMITS OF CLEARING

The limits of Selective Clearing and Thinning shall be as shown on the Contract drawings and as required by the Engineer.

METHOD OF MEASUREMENT

Item 102. will be measured for payment by the ACRE for the actual number of acres cleared and thinned.

BASIS OF PAYMENT

Item 102. will be paid for at the Contract unit price per ACRE, which price shall include safety precautions at overhead energized lines, the removal of all trees as directed, brush, dead, dying and diseased trees, previously fallen trees, branches, uprooted stumps and other debris within the designated area, all labor, materials, equipment, and all incidental costs required to complete the work.

No separate payment will be made for any individual trees or stumps removed within the area.

ITEM 102.001 TREE TRIMMING CREW DAY

The work under this Item shall conform to the relevant provisions of Subsection 101 of the Standard Specifications and the following:

The purpose of this Item is to provide tree work separate from and in addition to clearing and selective clearing operations for construction of the path. The work under this Item shall occur after installation of the path pavement.

The work under this Item shall consist of trimming/pruning trees not paid for separately and shall include the removal of trees, hanging limbs, downed trees/limbs, and/or any leaning trees which pose a risk to the path user as required by the Engineer.

All pruning and tree work shall be in conformance with the most current version of the American National Standards Institute (ANSI) Standard Z-133.1 and A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance.

Tree work shall be by certified arborists and shall conform to the requirements of the ANSI A300. Submit qualifications to MassDOT Landscape Design. Qualified Arborists shall have a Massachusetts Certified Arborist, or International Society of Arboriculture Tree Worker Certification, or equivalent.

All cut trees/limbs shall be flush cut at their base or trunk and removed from the site unless otherwise directed. All wood chip material shall be removed from the site and disposed per the Standard Specifications, unless otherwise directed by the Engineer.

The minimum crew shall consist of the following: a supervisor and three tree-trimmers/laborers. The crew shall be equipped with all necessary equipment needed to complete the work including, powered lift equipment/tree truck, pickup trucks, chippers, gas powered chain saws, hand saws, pole saws, brush butters, loppers, shears, pruners, branch trimmers, ladders, tree-climbing equipment, shovels, dump vehicle with attached box container, log truck, etc.

All work performed under this Item shall be supervised by a Massachusetts Certified Arborist, International Society of Arboriculture Tree Worker, or equivalent, with proof of certification submitted to the Engineer prior to the commencement of work.

METHOD OF MEASUREMENT

Item 102.001 will be measured for payment by the DAY, for time spent on the project doing actual tree trimming/removal work by the tree trimming crew and shall NOT include travel time to and from the Contractor's place of business.

Each period of 8 hours during which tree trimming crew is working will be measured as one DAY.

BASIS OF PAYMENT

Item 102.001 will be paid for at the Contract unit price per DAY, which price shall include all labor, materials, equipment, the offsite transport and disposal of cut trees or other vegetation, the cost of all arrangements and methods required to protect from harm all existing overhead or underground installations, and all incidental costs required to complete the work.

ITEM 102.511 TREE PROTECTION – ARMORING AND PRUNING EACH

The work under this Item shall conform to the relevant provisions of Subsection 771 of the Standard Specifications and the following:

Tree protection – armoring and pruning shall be used for instances where construction activity (the use of heavy equipment), comes within proximity to potentially damage tree trunk(s) or limbs.

The work shall include the furnishing and installing of temporary tree trunk protection, minor limb pruning, or removal of lower tree limbs to prevent injury to the tree from construction equipment and activities; as shown on the Drawings; and/or as required by the Engineer.

REFERENCES

If requested, the Contractor shall provide to the Engineer one copy of the latest edition of the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance: Part 1-Pruning and Part 5-Construction Management Standard. Provision of reference shall be incidental to this item.

MATERIALS

Trunk armoring shall be such that it prevents damage to the trunk from construction equipment. Material used for trunk armoring or mounting shall be such that installation and removal shall not damage the trunk.

Acceptable trunk armoring materials shall include two by four (2x4) wood cladding, mounted with wire or metal strapping, or when duration of construction activities is less than three months, slotted corrugated plastic pipe, mounted with duct tape. Eight (8) once untreated burlap shall be used to wrap the tree trunk prior to installation of cladding.

Alternative armoring methods or materials may be acceptable if approved by the Engineer.

The height of tree trunk cladding shall be measured from the base of the tree (including root flare) to the bottom of the first branch, or to a height of eight (8) feet, or as may be required by the Engineer.

METHODS OF WORK

Prior to construction activities, the Engineer, Contractor, and the Arborist (if item is included in the contract), shall review trees noted on the Drawings to be protected. Final decision and selection of trees to be armored and/or pruned shall be per the Engineer.

ITEM 102.511 (Continued)

Care shall be taken to avoid damage to the bark during installation and removal of armoring. Trunk armoring shall be maintained such that it is effective for as long as required or replaced when materials are found to be damaged or ineffective, as determined by the Engineer. Replacement, if required, shall be incidental to the work. Armoring shall be removed immediately upon completion of work activities adjacent to the protected tree(s).

Pruning of limbs shall conform to the techniques and standards of the most recent ANSI A300 standards.

DAMAGES OR LOSS

If trees designated for protection under this item are damaged, including root damage from unapproved trespassing onto the root zone, the Contractor shall, at his own expense, secure the services of an Arborist, described in Item 102.55. The Arborist shall be approved by MassDOT.

If, based on the recommendation of the Arborist, the Engineer determines that damages can be remedied by corrective measures, such as repairing trunk or limb injury; soil compaction remediation; pruning; soil injection fertilization; and/or watering; the damage shall be repaired as soon as possible, within the appropriate season for such work and according to industry standards.

If, based on the recommendation of the Arborist, the Engineer determines that damages are irreparable, or that the damages are such that the tree is sufficiently compromised to pose a future safety hazard, the tree shall be removed. Tree removal shall include cleanup of all wood, grinding of the stump to a depth sufficient to plant a replacement tree or plant, removal of all chips from the stump site, and filling the resulting hole with topsoil. Such tree removal(s), grinding, debris removal, and topsoil filling, shall be at the Contractor's expense.

Tree removal from improper or inadequate tree protection shall result in the Engineer assessing the Contractor monetary damages consistent with industry standards for assessed value and/or replacement.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 102.511 will be measured and paid at the contract unit price per EACH tree to be armored and pruned. This will include full compensation for all labor, equipment, materials, and incidentals for the satisfactory completion of the work and the subsequent removal and satisfactory disposal of the protective materials upon completion of the contract or as required by the Engineer.

Payment for work under this item will be scheduled as follows:

- 40% of the value shall be paid upon installation of trunk armoring and completion of pruning work, if required.

ITEM 102.511 (Continued)

- 60% of the value shall be paid at the end of construction operations that would potentially damage the tree and after protection materials have been removed and properly disposed of by the Contractor. In the event of repairable damages, payment shall be made after the completion of remediation measures.

No separate payment will be made for costs of remedial actions, including Arborist services, tree removal, but all costs in connection therewith shall be included in the Contract unit price bid.

Tree damages assessed, due to lack of or improper tree and plant protective measures being taken, shall be deducted from the contract price of the work.

ITEM 102.513 AIR EXCAVATION AND ROOT PRUNING FOOT

Item 102.513 Air Excavation and Root Pruning is for the services of excavating soil with an air pressure tool in order to expose tree roots, and for associated services and materials necessary to complete the work of pruning, backfilling with existing soil, watering, mulching, and fertilizing. This item shall include the furnishing and operating the air excavating tool.

Associated Item: All references to Arborist herein shall refer to the Arborist under Item 102.55 Arborist. Arborist shall meet the requirements as specified under that Item and shall be compensated under that Item.

Trees to be air spaded shall be those shown on the plans and/or as determined necessary by the Engineer per the recommendations of the Arborist.

REFERENCES

The standards from American National Standards Institute (ANSI): A300 (Part 8)-2013 Root Management with special attention to Section 84 shall apply to this work. If requested, the Contractor shall provide to the Engineer one copy of this reference. Provision of reference shall be incidental to this item.

METHODS

Air excavation and pruning work shall be performed by or overseen by the Arborist.

Air excavation of soil and root pruning shall occur any time prior to equipment work within the root zone of marked trees.

Air excavation shall be done along the limit of proposed excavation. Trench shall be of sufficient width to observe and cut roots and shall be to the depth of proposed excavation. Immediately following air excavation, roots shall be pruned.

Following pruning, roots shall immediately be fully covered with backfill and immediately watered. Roots shall continue to be watered and fertilized as directed by the Arborist.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 102.513 will be measured and paid per foot where air spading, pruning, watering, and fertilizing are performed. This item will include full compensation for all labor, equipment, materials, and incidentals required for the satisfactory completion of the work.

Arborist services shall be per Item 102.55 Arborist and compensated under that Item.

ITEM 102.521 TREE AND PLANT PROTECTION FENCE FOOT

The work under this Item shall conform to the relevant provisions of Subsections 644 and 771 of the Standard Specifications and the following:

Work under this item shall consist of furnishing, installing, and maintaining tree and plant protection fence(s) in a vertical and taut position; removing and resetting fencing as may be required; and final removal of protection fence(s) at the completion of construction activities, or as otherwise required by the Engineer.

The purpose of the fencing is to signify a construction work-free zone and physical barrier, thereby preventing damage to tree roots, tree trunks, soil, and all other vegetation within this delineated Tree and Plant Protection Zone (TPPZ), as shown on the Drawings, as required by the Engineer, and as described herein.

Protection shall be for the duration of the construction activities unless otherwise required by the Engineer.

MATERIALS

Tree and plant protection fence(s) shall provide a minimum forty-eight (48) inch tall barrier, that remains vertical and taut. The Fence shall be orange plastic safety fence (recommended where high visibility is necessary), or wooden snow fencing, or other approved material. Posts and anchoring materials shall be incidental to the work.

Per requirements of the Engineer, additional posts, deeper post depths, and/or additional attachments shall be used if the fabric or fence sags, leans or otherwise is not providing visible or physical protection to the TPPZ.

REFERENCES

If requested, the Contractor shall provide to the Engineer one copy of the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance Part 1, Pruning and Part 5, Construction Management Standard. Provision of reference shall be incidental to this item.

ESTABLISHMENT OF THE TPPZ

Fencing shall be used to delineate and establish the TPPZ, adjacent to construction areas, staging areas, stockpile areas, as shown on the Drawings, and/or as required by the Engineer.

Fencing shall be located as close to the work zone limit and as far from tree trunk(s) and plants as possible to maximize the area to be protected. Fence shall run parallel and adjacent to construction activity to create a barrier between the work zone and the root zone or designated limit of plants and soils to be protected.

ITEM 102.521 (Continued)

When construction activities surround (or have the potential to surround) trees or plants to be protected, a circular enclosure shall be used. In these instances, the TPPZ limit shall be the drip line of each tree or as close as possible to the drip line, and/or as shown on the Drawings. The drip line is defined as the outermost limit of tree canopy.

The Contractor shall not engage in any construction activity within the TPPZ without the approval of the Engineer. Activities may including operating, moving, or storing equipment, supplies, or materials; and locating temporary facilities, including trailers or portable toilets, Accessing or traversing the TPPZ shall not be permitted.

METHOD OF WORK

TPPZ fencing shall be installed prior to any construction work or staging activities. Fence(s) shall be repositioned where and as necessary for optimum tree and plant protection. Repositioning shall be incidental to this item. TPPZ fencing shall not be moved without prior approval by the Engineer.

The TPPZ shall be protected at all times from compaction of the soil; damage of any kind to trunks, bark, branches, leaves, and roots of all plants; and contamination of the soil with construction materials, debris, silt, fuels, oils, and any chemicals substance.

After construction activities are completed, or when required by the Engineer, fencing, stakes, and other anchoring materials, if any, shall be removed and disposed off-site by the Contractor.

REQUIRED WORK WITHIN THE TPPZ

In the event that grading, trenching, utility work, or storage is unavoidable within the TPPZ, the Engineer shall be notified. Measures may be required for tree protection and preservations, including air spading; the use of six (6) inch depth of wood chips or approved matting for root protection; pruning of branches; and/or trunk protection. These protection measures shall be paid under applicable contract items.

Landscaping work specified within the TPPZ shall be accomplished by hand tools. Where handwork is not feasible, with permission of the Engineer, work shall be conducted with the smallest mechanized equipment necessary.

TREE AND PLANT INJURY OR LOSS

If the TPPZ is encroached by construction activity without approval, at the discretion of the Engineer, the Contractor may be required to provide a more durable barrier (e.g., Jersey Barriers, chain link fence (if not already in use) to secure the area. Costs of furnishing and installing additional or more durable barrier(s) shall be borne by the Contractor.

In such cases of encroachment, soils shall be considered compacted and tree root injury will be assumed. Action shall be taken as specified below.

ITEM 102.521 (Continued)

In the event that trees designated for protection under this item are injured, including root injury from unapproved trespassing onto the root zone, the Contractor shall, at his own expense, secure the services of an Arborist, described under Item 102.55. The Arborist shall be approved by MassDOT.

In the event of spills, compaction or injury, the Contractor shall take corrective action immediately using methods approved by the Engineer, in coordination with the Arborist.

If, based on the recommendations of the Arborist, the Engineer determines that injuries can be remedied by corrective measures, such as repairing trunk or limb injury, soil compaction remediation, pruning, and/or watering; the injury shall be repaired as soon as possible, within the appropriate season for such work, and according to industry standards.

If, based on the recommendations of the Arborist, the Engineer determines that injuries are irreparable, or that the injuries are such that the tree is sufficiently compromised to pose a future safety hazard, the tree shall be removed. Tree removal shall include cleanup of all wood, grinding of the stump to a depth sufficient to plant a replacement tree or plant, removal of all chips from the stump site, and filling the resulting hole with topsoil. Such tree removal(s), grinding, debris removal, and filling, shall be at the Contractor's expense.

Tree removal from improper or inadequate protection of the TPPZ shall result in the Engineer assessing the Contractor monetary damages consistent with industry standards for assessed value and/or replacement.

Shrubs removals from improper or inadequate protection of the TPPZ shall be replaced with plants of similar species and equal size or the largest size plants reasonably available. The Engineer shall approve the size, quality, and quantity of the replacement plant(s). Each replacement shall include a minimum of one year of watering and establishment care, specified under Subsection 771.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Tree and Plant Protection Fence will be measured by the FOOT, complete in place, by the length along the top of the fence.

Tree and plant protection fence will be paid for under the Contract unit price per FOOT, complete in place and shall include all materials, labor, and equipment required to furnish, install, anchor, maintain, and remove the fence upon completion, as described herein. Posts, temporary footings, anchoring and removal upon completion, shall be incidental to this item.

No separate payment will be made for costs of remedial actions, including addition of more durable barriers, Arborist services, tree or plant removal, shrub replacement and establishment, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 102.521 (Continued)

Tree damages assessed, due to lack of or improper tree and plant protective measures being taken, shall be deducted from the Contract price of the work.

Payment for work under this item will be scheduled as follows:

- Forty (40) percent of the value payment will be made upon installation of fencing.

- Sixty (60) percent of the value payment will be made when fencing materials have been maintained to function as specified, for the intended duration, and removed and disposed off-site at the completion of protection measure requirement.

ITEM 102.55 **ARBORIST** **HOUR**

DESCRIPTION

The work under this Item is for the services of a Certified Arborist. Arborist shall be an International Society of Arboriculture (ISA) Certified Arborist or a Massachusetts Certified Arborist. The Arborist shall have at least 10 years of experience in tree care, including tree protection during construction, and shall demonstrate a familiarity with the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance Part 1Pruning, Part 5 Construction Management Standards, and Part 9 Tree Risk Assessment.

The Arborist's general responsibilities include protecting high priority trees within and adjacent to the project limits, stating areas, and access routes; recommending removal of diseased, damaged or otherwise unhealthy trees that pose a potential safety hazard; evaluating effects of construction on future health of trees close to proposed work; and recommending and/or overseeing tree work amd care.

The Arborist for this item shall not be from the same company as the company responsible for selective clearing or tree removal work.

For projects with multiple phases, projects where construction activities (work or stockpiling) shifts, or when otherwise directed by the Engineer, the Arborist shall re-evaluate conditions and provide follow-up recommendations.

SUBMITTALS

- Contractor shall submit to the Engineer for approval by MassDOT Landscape Design the qualifications and experience of the Arborist. Submittal shall include copy of current certification and a resume summarizing specific construction experience (including relevant MassDOT projects) for a minimum of five projects.
- Arborist's Report documenting recommendations shall be submitted to the Engineer and an electronic copy forwarded to MassDOT Landscape Design Section. Report shall include the following:

SCOPE OF WORK

The Arborist shall be responsible for the following tasks:

- Initial Evaluation and Report
  - recommend and prioritize trees that require removal as appropriate to contract scope, project limits, and project intent;
  - review and modify, if necessary, tree protection measures shown on the drawings
  - review and mark limits of protective fencing for trees and groups of trees to be retained;
  - review and recommend protection measures for high priority trees (including trees over 8" diameter within wetland resource areas);

ITEM 102.55 (Continued)

- submit a marked-up Construction Plan that briefly notes recommendations and decisions made in the field;
- submit a corresponding report including photo documentation;

- Coordination of work within Wetland Resource Areas:
  - site visit to discuss tree impacts and protection measures within Wetland Resource Areas
- Oversight
  - direct or execute pruning of branches and/or roots, air spading, and/or other tree care operations

METHODS

Prior to any work, the Arborist shall walk the site with the Contractor, the Engineer, the Town Tree Warden, and, if specified, the MassDOT Landscape Architect, to review trees, limits of construction activities, and other concerns. Where required for proper assessment of tree impacts, limits of work shall be staked or otherwise marked in the field prior to the site walk.

Trees to be removed shall be painted or otherwise marked.

Trees to be retained shall be marked such that it does not mar or damage the tree and such that marker is not easily removed. As applicable to the work and scope of the project, trees designated for removal or to be retained shall be noted on the plan and/or in the arborist's report and photographed.

Trees designated to remain that are damaged or removed by construction activities shall be noted and photographed for inclusion in inspection reports submitted to the Engineer.

MEASUREMENT AND BASIS OF PAYMENT

Item 102.55 will be measured for payment by the HOUR of time spent onsite.

Item 102.55 will be paid at the Contract unit price per HOUR upon submittal and acceptance of Reports described above.

ITEM 114.4 DEMOLITION OF FORMER RAILROAD BRIDGE LUMP SUM

The work under this Item shall conform to the applicable provisions of Subsection 112 of the Standard Specifications and the following:

The work under this Item shall consist of the demolition and removal of the entire existing superstructure of the former railroad bridge at Station 184+20.

The demolition of the superstructure includes, but is not limited to, removal of the metal I-beams, metal rails, wood decking, and any parts of the superstructure which are above the abutment beam seats and within the limits as shown on the Plans.

Any salvagable steel removed from the existing structure is the property of the MBTA and shall be stockpiled at a location determined by the Engineer and made accessible to the MBTA for pickup of the salvaged material. All other materials removed under this Item shall become the property of the Contractor and shall be disposed of in accordance with all local, State and Federal regulations.

BASIS OF PAYMENT

Item 114.4, will be paid for at the Contract unit price LUMP SUM, which price shall include all labor, tools, equipment, materials, storage, and all incidental costs required to complete the work.

Compensation for the demolition of the two existing abutments and associated wingwalls will be paid for under Item 120., Earth Excavation.

Compensation for the disposal of any treated wood products encountered during demolition of the bridge will be paid for under Item 184.1 Disposal of Treated Wood Products.

Compensation for backfilling the remaining void left after demolition will be paid for under the applicable grading, earthwork, and borrow items.

ITEM 129.5 TRACK EXCAVATION FOOT

The work under this Item shall consist of the removal and stacking or disposal of railroad tracks as shown on the Plans and as required by the Engineer. This includes all labor, equipment, materials and protection necessary to remove the steel track, tie plates, spikes, pins, rail anchors, timber cross ties, timber switch ties, signs, junction boxes, wire, signal crossings and other rail infrastructure and hardware.

The Contractor shall coordinate with the MBTA to arrange a mutually agreed time and location to stack the rails removed. MBTA Contact information is as follows:

Robert Proulx
Railroad Operations
857-330-2813
RProulx@MBTA.com

CONSTRUCTION METHODS

All materials shall be approved by the Engineer for removal prior to the Contractor commencing activities. Any salvagable steel removed under this Item is the property of the MBTA and shall be stockpiled at a location determined by the Engineer and made accessible to the MBTA for pickup of the salvaged material. The Contractor shall assist MBTA in loading salvage material onto trucks. All other materials removed under this Item shall become the property of the Contractor and shall be disposed of in accordance with all local, State and Federal regulations. No stockpiling of rail materials within the Right-of-Way shall be allowed without prior approval from the Engineer.

Rock/ballast between the ties shall remain in place for areas where the existing ground is below the bottom of the proposed pavement box.

METHOD OF MEASUREMENT

Item 129.5 will be measured for payment by the FOOT, of single track removed. The measurement will be along the centerline between the 2 rails that form the single track. A single track is defined as a pair of rails, ties, and all connecting hardware.

BASIS OF PAYMENT

Item 129.5 will be paid for at the Contract unit price per FOOT, which price shall include all labor, tools, equipment, materials, storage, testing, loading, transportation, approvals, permits, and all incidental costs required to complete the work.

In locations where cross ties have been stockpiled within the right-of-way, their removal shall be measured and paid for under Item 120. Earth Excavation.

In locations where the Steel Rails have been removed Track Excavation will not be measured and the Excavation of the ties will be measured for payment under Item 120 Earth Excavation and disposed of under Item 184.1 Disposal of Treated Wood Products.

Disposal of Treated Wood Products shall be measured and paid for under Item 184.1, Disposal of Treated Wood Products.

Rock/ballast between the ties, where the existing ground is above the bottom of the propsoed pavement box shall be paid for separately under Item 120.

ITEM 180.01 ENVIRONMENTAL HEALTH AND SAFETY PROGRAM LUMP SUM

The work shall consist of ensuring the health and safety of the Contractor's employees and subcontracting personnel, the Engineer, their representatives, the environment, and public welfare from any on-site chemical contamination present in air, soil, water and sediment.

The Contractor shall prepare and implement a site-specific Environmental Health and Safety Plan (EHASP) which has been approved and stamped by a Certified Industrial Hygienist (CIH) and includes the preparer's name and work experience. The EHASP shall include appropriate components required by OSHA Standard 29 CFR 1910.120(b) and the Massachusetts Contingency plan (MCP) 310 CMR 40.0018 and must comply with all applicable state and federal laws, regulations, standards and guidelines, and provide a degree of protection and training appropriate for implementation on the project. The EHASP shall be a dynamic document with provision for change to reflect new information, new practices or procedures, changing site environmental conditions or other situations which may affect site workers and the public. The EHASP shall be developed and implemented independently from the standard construction HASP required to work on all MassDOT construction projects.

Health and safety procedures provided by the Contractor shall comply with all the appropriate regulations that address employee working conditions, including but not limited to standards established by OSHA and National Institute for Occupational Safety and Health (NIOSH). Equipment used for the purpose of health and safety shall be approved by and meet pertinent standards and specifications of the appropriate regulatory agencies.

A copy of the most up-to-date version of the EHASP shall be maintained on-site at all times by the Contractor. The on-site copy shall contain the signature of the Engineer and each on-site employee of the MassDOT, Contractor, and Subcontractors involved with on-site activities. The employee's signature on the EHASP shall be deemed prima facie evidence that the employee has read and understands the plan. Updated copies of signature sheets shall be submitted to the Engineer.

The EHASP shall specify a Contractor Site Safety and Health Officer responsible for implementation of the EHASP and to oversee all construction activities, including handling, storage, sampling and transport, which require contact with or exposure to potentially hazardous materials.

The level of protection, required to ensure the health and safety of on-site personnel will be stipulated in the EHASP. The Site Safety and Health Officer shall implement the EHASP based on changing site and weather conditions, type of operation or activity, chemical compounds identified on-site, concentration of the chemicals, air monitoring data, physical state of the hazardous materials, potential duration of exposure to hazardous materials, dexterity required to perform work, decontamination procedures, necessary personnel and type of equipment to be utilized.

ITEM 180.01 (Continued)

During implementation of the EHASP, a daily log shall be kept by the Site Safety and Health Officer and a copy shall be provided weekly to the Engineer. This log shall be used to record a description of the weather conditions, levels of personal protection being employed, screening data and any other information relevant to on-site environmental safety conditions. The Site Safety and Health Officer shall sign and date the daily log.

Method of Measurement and Basis of Payment

Preparation and implementation of the Environmental Health and Safety Program, including the monitoring, protection and storage of all contaminated materials, as well as subsequent modifications to the EHASP, will be measured and paid for at the Lump Sum Bid Price.

Payment of 50% of the Environmental Health and Safety Program contract price will be made upon the initial acceptance of the EHASP by the Engineer. Payment of the remaining 50% of the Environmental Health and Safety Program contract price will be made upon completion of the work. The bid price shall include preparation and implementation of the EHASP as well as the cost for its enforcement by the Site Safety and Health Officer along with any necessary revisions and updates. The work of implementing the Environmental Health and Safety Program includes work involving, but not limited to, the monitoring, protection, and storage of all contaminated materials.

ITEM 180.02 PERSONAL PROTECTION LEVEL C UPGRADE HOUR

The work shall consist of providing appropriate personal protective equipment (PPE) for all personnel in an area either containing or suspected of containing a hazardous environment.

Contingencies for upgrading the level of protection for on-site workers will be identified in the EHASP and the Contractor shall have the capability to implement the personal protection upgrade in a timely manner. The protective equipment and its use shall be in compliance with the EHASP and all appropriate regulations and/or standards for employee working conditions.

Personal Protection Level C Upgrade will be measured and paid only upon upgrade to Level C and will be at the contract unit price, per hour, per worker, required in Level C personal protection. No payment will be made to the Contractor to provide Level D PPE.

ITEM 180.03 LICENSED SITE PROFESSIONAL SERVICES HOUR

Within limited areas of the project site, media (i.e. soils, sediments, surface water and/or groundwater) requiring evaluation and/or management under the Massachusetts Contingency Plan (MCP) may be encountered. A Licensed Site Professional (LSP) shall be required to provide the services necessary to comply with the requirements of the MCP. These services may include a site walk, field screening, sampling, analysis and characterization of potentially contaminated media, preparation and implementation of Immediate Response Action (IRA) Plans, Utility-Related Abatement Measure (URAM) and Release Abatement Measure (RAM) Plans, Imminent Hazard Evaluations, status reports, transmittal forms, release notification forms, risk assessments, completion statements, and related documents required pursuant to the MCP. LSP services shall also be necessary to temporarily move material generated on the project to an off-site storage location.

The name and qualifications of the LSP and all environmental technicians to be assigned to the project shall be submitted to the Engineer for approval at least four weeks prior to initial site activities. The LSP shall have a current, valid license issued by the Massachusetts Board of Registration of Hazardous Waste Site Cleanup Professionals. The LSP shall have significant experience in the oversight of MCP activities at active construction sites. Qualification packages for the LSP and each technician shall include a resume, all recent work assignments with responsibilities identified (previous 5 years), and applicable training and certifications. A list of all Notices of Noncompliance, Notice of Audit Findings and Enforcement Orders issued by the Massachusetts Department of Environmental Protection (DEP) shall be submitted for all work assignments listed for the LSP and environmental technicians. Upon approval of the LSP Qualifications, the LSP will be designated as the LSP of Record unless MassDOT designates in writing otherwise. The LSP of Record will serve as the primary point of contact for all hazardous material matters on the project.

The LSP shall evaluate soil and/or sediment with discoloration, odor, elevated field screening results, presence of petroleum liquid or sheen on the groundwater surface, or any abnormal gas or materials in the ground which are known or suspected to be oil or hazardous materials. Excavated soil and sediment which is suspected of petroleum contamination shall be field screened using the jar headspace procedures according to established DEP Guidance. All field screening equipment must be pre-approved by the Engineer. The LSP shall ensure proper on-site calibration of all field screening instrumentation.

The Engineer shall be contacted immediately when observations or any field screening results verify contamination requiring further analysis, and/or enhanced management of suspect media. Any enhanced management of contaminated soil to ensure proper stockpiling and storage is incidental to the LSP Services item. The LSP shall evaluate the need for confirmatory sampling prior to backfill in areas where contaminated material has been excavated and disposed off-site for compliance with applicable regulatory requirements. The Engineer shall approve the locations of the testing sites prior to the sampling.

ITEM 180.03 (Continued)

Contaminated media shall be handled in accordance with all applicable state and federal statutes, regulations, and policies. The LSP shall adequately evaluate contaminated media for compliance with the requirements of the MCP and Department Policies.

The Contractor and the LSP shall be aware of the reporting requirements for releases of oil and/or other hazardous material (OHM) as set forth in federal and state laws and regulations and both shall be held responsible for performing the work in accordance with all applicable Federal and State laws and regulations. The LSP shall maintain written records in a clear and concise tabular format which tracks the excavation, stockpiling, analysis and reuse/disposal of all known/suspect contaminated media. These records shall be up-to-date and submitted to the Engineer on a bi-weekly basis. The LSP shall review and summarize the laboratory data from any analyses performed on contaminated media in a tabular format and compare the results to applicable reporting thresholds. A report shall be delivered to the Engineer outlining the material sampling methods, laboratory analysis results, evaluation of applicable regulatory exemptions, reporting obligations, and proposed course of action. The laboratory report together with Chain of Custody forms for all analytical results shall be submitted to the Engineer within 14 days after completion of such analyses.

The LSP and Contractor shall be held responsible for the submission of all MCP-related documents to the Engineer at least 14 days in advance of any timeframe specified in the MCP and for the timely submission of data and tracking information as noted within this Item. All documents prepared under this Item must be reviewed and signed by the approved LSP. The Contractor and LSP shall be responsible for all fines, damages, and enforcement requirements imposed by applicable regulatory agencies for failure to meet regulatory and contract timeframes. No compensation will be provided for such fines, damages, and enforcement actions.

The Contractor and the LSP shall be aware of the reporting requirements for releases of oil and/or other hazardous material (OHM) as set forth in federal and state laws and regulations and shall both be held responsible for performing the work in accordance with all applicable Federal and State laws and regulations.

If the Contractor causes a release of OHM, the Contractor shall be responsible for assessing and remediating the release in accordance with all pertinent State and Federal regulations, including securing the services of a LSP, at his own expense.

The LSP shall coordinate all activities involving both MassDOT and the DEP through the Engineer. Any notification of release shall be approved by the Engineer before submittal to the DEP, except if an imminent hazard condition exists as defined in 309 CMR 4.03(4)(b).

ITEM 180.03 (Continued)

LABORATORY TESTING IN SUPPORT OF LSP SERVICES

Laboratory testing provides for analytical testing in support of LSP services related to maintaining MCP compliance, such as delineating the extent and type of contamination present. Sampling and testing for disposal purposes are not included and are incidental to Items 181.11-181.14.

In order to maintain compliance with the MCP and Department Policies or other regulatory requirements, the LSP shall request approval from the Engineer to obtain samples from various locations and depths within the project area and to perform laboratory analyses on those samples. No sampling shall be conducted without prior approval from the Engineer. The samples shall be delivered to a DEP-certified laboratory using proper chain-of-custody documentation for analyses which, depending upon site conditions and suspected and/or identified contaminants of concern, may include, but are not limited to, metals, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, polycyclic aromatic hydrocarbons (PAHs), extractable petroleum hydrocarbons (EPHs) and volatile petroleum hydrocarbons (VPHs). Subsequent testing, depending upon initial results, may be required for Toxicity Characteristic Leaching Procedure (TCLP) analyses (EPA Method 1311) for metals.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

LSP Services for work under this item will be measured per person, per hour of service provided by LSP, Environmental Technicians and other approved personnel. Travel time shall not be included in the billable hours.

The quantity and type of laboratory tests must be approved by the Engineer beforehand. The Contractor will be reimbursed upon satisfactory written evidence of payment. The Contractor may be required to obtain cost estimates from three DEP certified laboratories for the Engineer to choose the service provider.

LSP Services will be paid at the Contractor bid price for each hour, or fraction thereof, spent to perform the work as described above. The bid price shall be a blended rate that includes the cost of the LSP, environmental technicians and other personnel, the performance of all work tasks and field screening, including required equipment, materials and instrumentation, and production of all documentation described above. All requests for payment must be accompanied by the following information: the names of the personnel associated with the work charged under LSP Services, dates and hours worked, work conducted, including, where appropriate, locations as identified on the construction plans, and a copy of the field diary for the dates submitted.

ITEM 181.11	**DISPOSAL OF UNREGULATED SOIL**	**TON**
ITEM 181.12	**DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY**	**TON**
ITEM 181.13	**DISPOSAL OF REGULATED SOIL - OUT-OF-STATE FACILITY**	**TON**
ITEM 181.14	**DISPOSAL OF HAZARDOUS WASTE**	**TON**

The work under these Items shall include the transportation and disposal of contaminated material excavated, or excavated and stockpiled. It shall also include the cost of any additional laboratory analyses required by a particular disposal facility beyond the standard disposal test set.

Excavation of existing subsurface materials may include the excavation of contaminated soils. The Contractor shall be responsible for the proper coordination of characterization, transport and disposal, recycling or reuse of contaminated soils. Disposal, recycling or reuse will be referred to as "disposal" for the purposes of this specification. However, regardless of the use of the term herein, there will be no compensation under these items for reuse within the project limits. The Contractor will be responsible for coordinating the activities necessary for characterization, transport and disposal of contaminated soils. Such coordination will include the Engineer and his/her designee overseeing management of contaminated materials. Contaminated soils must be disposed of in a manner appropriate for the soil classification as described below and in accordance with the applicable laws of local, state and federal authorities. The Contractor shall be responsible for identifying disposal facility (ies) licensed to accept the class of contaminated soils to be managed and assure that the facility can accept the anticipated volume of soil contemplated by the project. The Contractor shall be responsible for hiring a Licensed Site Professional (LSP) and all ancillary professional services including laboratories as needed for this work. The Contractor will be responsible for obtaining all permits, approvals, manifests, waste profiles, Bills of Lading, etc. subject to the approval of the Engineer prior to the removal of the contaminated soil from the site. The Contractor and LSP shall prepare and submit to the Engineer for approval all documents required under the Massachusetts Contingency Plan (MCP) and related laws and environmental regulations to conduct characterization, transport, and disposal of contaminated materials.

CLASSES OF CONTAMINATED SOILS

The Contractor and its LSP shall determine if soil excavated or soil to be excavated is unregulated soil or contaminated soil as defined in this section. Such materials shall be given a designation for purposes of reuse or disposal based on the criteria of the MCP. Soils and sediments which are not suitable for reuse will be given a designation for purposes of off-site disposal based on the characterization data and disposal facility license requirements. The Classes of Contaminated Soils are defined as follows:

ITEMS 181.11 through 181.14 (Continued)

UNREGULATED SOIL consists of soil, fill and dredged material with measured levels of oil and hazardous material (OHM) contamination at concentrations below the applicable Reportable Concentrations (RCs) presented in the MCP. Unregulated soil consists of material which may be reused (or otherwise disposed) as fill within the Commonwealth of Massachusetts subject to the non-degradation criteria of the MCP (310 CMR 40.0032(3), in a restricted manner, such that they are sent to a location with equal or higher concentrations of similar contaminants. Disposal areas include licensed disposal facilities, approved industrial settings in areas which will be capped or covered with pavement or loamed and seeded, and for purposes of this project should be reused as fill within the project site construction corridor whenever possible. The material cannot be placed in residential and/or environmentally sensitive (e.g. wetlands) areas. Under no circumstances shall contaminated soils be placed in an uncontaminated or less contaminated area (including the area above the groundwater table if this area shows no sign of contamination).

The Contractor shall submit to MassDOT the proposed disposal location for unregulated soils for approval. If such a disposal location is not a licensed disposal facility, the Contractor shall submit to the Engineer analytical data to characterize the disposal area sufficiently to verify that the unregulated material generated within the MassDOT construction project limits is equal to or less than the contaminant levels at the disposal site and meets the non-degradation requirements of the MCP. In addition, the Contractor shall provide written confirmation from the owner of the proposed disposal location that they have been provided with the analytical data for both the materials to be disposed as well as the disposal site characterization and that s/he agrees to accept this material. A Material Shipping Record or Bill of Lading, as appropriate, shall be used to track the off-site disposal of unregulated soil and a copy, signed by the disposal facility or property owner, shall be provided to the Engineer in order to document legal disposal of the unregulated material.

The cost of on-site disposal of unregulated soil within the project area will be considered incidental to the item of work to which it pertains.

ITEMS 181.11 through 181.14 (Continued)

REGULATED SOIL consists of materials containing measurable levels of OHM that are equal to or exceed the applicable Reportable Concentrations for the site as defined by the MCP, 310 CMR 40.0000. Regulated soil which meets the MCP reuse criteria of the applicable soil/groundwater category for this project area may be reused on site provided that it meets the appropriate geotechnical criteria established by the Engineer. Regulated Soil may be reused (as daily or intermediate cover or pre-cap contouring material) or disposed (as buried waste) at lined landfills within the Commonwealth of Massachusetts or at an unlined landfill that is approved by the Massachusetts Department of Environmental Protection (DEP) for accepting such material, in accordance with DEP Policy #COMM-97-001, or at a similar out-of-state facility. It should be noted that soils which exceed the levels and criteria for disposal at in-state landfills, as outlined in COMM-97-001, may be shipped to an in-state landfill, but require approval from the DEP Division of Solid Waste Management and receiving facility. An additional management alternative for this material is recycling into asphalt. Regulated Soils may also be recycled at a DEP approved recycling facility possessing a Class A recycling permit subject to acceptance by the facility and compliance with DEP Policy #BWSC-94-400. Regulated Soil removed from the site for disposal or treatment must be removed via an LSP approved Bill of Lading, Manifest or applicable material tracking form. This type of facility shall be approved/permitted by the State in which it operates to accept the class of contaminated soil in accordance with all applicable local, state and federal regulations.

HAZARDOUS WASTE consists of materials which must be disposed of at a facility permitted and operated in full compliance with Federal Regulation 40 CFR 260-265, Massachusetts Regulation 310 CMR 30.000, Toxic Substances Control Act (TSCA) regulations, or the equivalent regulations of other states, and all other applicable local, state, and federal regulations. All excavated materials classified as hazardous waste shall be disposed of at an out-of-state permitted facility. This facility shall be a RCRA hazardous waste or TSCA facility, or RCRA hazardous waste incinerator. This type of facility shall be approved/permitted by the State in which it operates to accept hazardous waste in accordance with all applicable local, state and federal regulations and shall be permitted to accept all contamination which may be present in the soil excavate. The Contractor shall ensure that, when needed, the facility can accept TSCA waste materials i.e. polychlorinated biphenyls (PCBs). Hazardous waste must be removed from the site for disposal or treatment via an LSP approved Manifest.

MONITORING/SAMPLING/TESTING REQUIREMENTS

The Contractor shall be responsible for monitoring, sampling and testing during and following excavation of contaminated soils to determine the specific class of contaminated material. Monitoring, sampling and testing frequency and techniques should be performed in accordance with Item 180.03 – LSP Services. Additional sampling and analysis may be necessary to meet the requirements of the disposal facility license. The cost of such additional sampling and analysis shall be included in the bid cost for the applicable disposal items. The Contractor shall obtain sufficient information to demonstrate that the contaminated soil meets the disposal criteria set by the receiving facility that will accept the material.

ITEMS 181.11 through 181.14 (Continued)

No excavated material will be permanently placed on-site or removed for off-site disposal until the results of chemical analyses have been received and the materials have been properly classified. The Contractor shall submit to the Engineer results of field and laboratory chemical analyses tests within seven days after their completion, accompanied by the classification of the material determined by the Contractor, and the intended disposition of the material. The Contractor shall submit to the Engineer for review all plans and documents relevant to LSP services, including but not limited to, all documents that must be submitted to the DEP.

WASTE TRACKING:

Copies of the fully executed Weight Slips/Bills of Lading/ Manifests/Material Shipping Records or other material tracking form received by the Contractor from each disposal facility and for each load disposed of at that facility, shall be submitted to Engineer and the Contractor's LSP within three days of receipt by the Contractor. The Contractor is responsible for preparing and submitting such documents for review and signature by the LSP or other appropriate person with signatory authority, three days in advance of transporting soil off-site. The Contractor shall furnish a form attached to each manifest or other material tracking form for all material removed off-site, certifying that the material was delivered to the site approved for the class of material. If the proposed disposition of the material is for reuse within the project construction corridor, the Contractor shall cooperate with MassDOT to obtain a suitable representative sample(s) of the material to establish its structural characteristics in order to meet the applicable structural requirements as fill for the project.

All material transported off-site shall be loaded by the Contractor into properly licensed and permitted vehicles and transported directly to the selected disposal or recycling facility and be accompanied by the applicable shipping paper. At a minimum, truck bodies must be structurally sound with sealed tail gates, and trucks shall be lined and loads covered with a liner, which shall be placed to form a continuous waterproof tarpaulin to protect the load from wind and rain.

DECONTAMINATION OF EQUIPMENT

Tools and equipment which are to be taken from and reused off site shall be decontaminated in accordance with applicable local, state and federal regulations. This requirement shall include, but not be limited to, all tools, heavy machinery and excavating and hauling equipment used during excavation, stockpiling and handling of contaminated material. Decontamination of equipment is considered incidental to the applicable excavation item.

ITEMS 181.11 through 181.14 (Continued)

REGULATORY REQUIREMENTS

The Contractor shall be responsible for adhering to regulations, specifications and recognized standard practices related to contaminated material handling during excavation and disposal activities. MassDOT shall not be responsible at any time for the Contractor's violation of pertinent State or Federal regulations or endangerment of laborers and others. The Contractor shall comply with all rules, regulations, laws, permits and ordinances of all authorities having jurisdiction including, but not limited to, Massachusetts DEP, the U.S. Environmental Protection Agency (EPA), Federal Department of Transportation (DOT), Massachusetts Water Resources Authority (MWRA), the Commonwealth of Massachusetts and other applicable local, state and federal agencies governing the disposal of contaminated soils.

All labor, materials, equipment and services necessary to make the work comply with such regulations shall be provided by the Contractor without additional cost to MassDOT. Whenever there is a conflict or overlap within the regulations, the most stringent provisions shall apply. The Contractor shall reimburse MassDOT for all costs it incurs, including damages and/or fines, as a result of the Contractor's failure to adhere to the regulations, specifications, recognized standard practices, etc., that relate to contaminated material handling, transportation and disposal.

SUBMITTALS

I. Summary of Sampling Results, Classification of Material and Proposed Disposal Option.

The following information, presented in tabular format, must be submitted to the Engineer for review and approval prior to any reuse on-site or disposal off-site. This requirement is on-going throughout the project duration. At least two weeks prior to the start of any excavation activity, the Contractor shall submit a tracking template to be used to present the information as stipulated below. Excavation will not begin until the format is acceptable to MassDOT.

Characterization Reports will be submitted for all soil, sediment, debris and groundwater characterized through the sampling and analysis program. Each report will include a site plan which identifies the sampling locations represented in the Report. The Construction Plan sheets may be used as a baseplan to record this information.

The Sampling Results will be presented in tabular format. Each sample will be identified by appropriate identification matching the sample identification shown on the Chain of Custody Record. The sample must also be identified by location (e.g. grid number or stockpile number). For each sample, the following information must be listed: the classification (unregulated, regulated, etc.), proposed disposal option for the stockpile or unit of material represented, and, all analytical results.

ITEMS 181.11 through 181.14 (Continued)

Each Characterization Report will include the laboratory analytical report and Chain of Custody Record for the samples included in the Report.

II. Stockpiling, Transport, and Disposal.

At least two weeks prior to the start of any excavation activity, the Contractor shall submit, in writing, the following for review and shall not begin excavation activity until the entire submittal is acceptable to MassDOT.

Excavation and Stockpiling Protocol:
Provide a written description of the management protocols for performing excavation and stockpiling and/or direct loading for transport, referencing the locations and methods of excavating and stockpiling excavated material.

Disposal and Recycling Facilities:

1. Provide the name, address, applicable licenses and approved waste profile for disposal and/or recycling location(s) where contaminated soil will be disposed. Present information substantiating the suitability of proposed sites to receive classifications of materials intended to be disposed there, including the ability of the facility to accept anticipated volumes of material.

2. Provide a summary of the history of compliance actions for each disposal/recycling facility proposed to be used by the Contractor. The compliance history shall include a comprehensive list of any state or federal citations, notices of non-compliance, consent decrees or violations relative to the management of waste (including remediation waste) at the facility. Material should not be sent to facilities which are actively considered by the DEP, USEPA or other responsible agency to be in violation of federal, state or local hazardous waste or hazardous material regulations. MassDOT reserves the right to reject any facility on the basis of poor compliance history.

Transportation:
The name, address, applicable license and insurance certificates of the licensed hauler(s) and equipment and handling methods to be used in excavation, segregation, transport, disposal or recycling.

III. Material Tracking and Analytical Documentation for Reuse/Disposal.

The following documents are required for all excavation, reuse and disposal operations and shall be in the format described. At least two weeks prior to the start of any excavation or demolition activity, the Contractor shall submit the tracking templates required to present the information as stipulated below. Excavation or demolition will not begin until the format is acceptable to MassDOT.

ITEMS 181.11 through 181.14 (Continued)

All soils, sediments and demolition debris must be tracked from the point of excavation to stockpiling to onsite treatment/processing operations to off-site disposal or onsite reuse as applicable.

Demolition Debris:
Demolition debris must be tracked if the debris is stockpiled at a location other than the point of origin or if treatment or material processing is conducted. Identification of locations will be based on the station-offset of the location. The tracking table will identify date and point of generation, any field screening such as PID or dust monitoring, visual observations/comments, quantity, and stockpile ID/processing operation location. For each unit of material tracked, the table will also track reuse of the material on-site, providing reuse date, location of reuse as defined by start and end station, width of reuse location by offset, the fill elevation range, quantity, and finish grade for said location. For demolition debris which is not reused on site, the table will also track disposal of the material as defined by disposal date, quantity and disposal facility. The table must provide a reference to any analytical data generated for the material.

Soil/Sediment:
Soil excavation will be identified based on the station-offset of the excavation location limits. The tracking table will identify date and point of generation, any field screening such as PID or dust monitoring, visual observations, quantity, and stockpile number/location. For each unit of material tracked, the table will also track reuse of the material on-site and disposal of the material off-site using the same categories identified for demolition debris above.

Method Of Measurement And Basis Of Payment

Disposal of contaminated soil shall be measured for payment by the Ton of actual and verified weight of contaminated materials removed and disposed of. The quantities will be determined only by weight slips issued by and signed by the disposal facility. The most cost-effective, legal disposal method shall be used. The work of the LSP for disposal under all of these items shall be incidental to the work with no additional compensation.

ITEM 181.11 Measurement for Disposal of Unregulated Soil shall be under the Contract Unit Price by the weight, in tons, of contaminated materials removed from the site and transported to and disposed of at an approved location or licensed facility, and includes any and all costs for approvals, permits, fees and taxes, additional testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEM 181.12 Measurement for Disposal of Regulated Soil – In-State Facility shall be under the Contract Unit Price by the weight in tons of contaminated materials removed from the site and transported to and disposed of at an approved in-state facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEMS 181.11 through 181.14 (Continued)

ITEM 181.13 Measurement for Disposal of Regulated Soil - Out-of-State Facility shall be under the Contract Unit Price by the weight in tons of contaminated materials removed from the site and transported to and disposed of at an approved out-of-state facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEM 181.14 Measurement for Disposal of Hazardous Waste shall be under the Contract Unit Price by the weight in tons of hazardous waste removed from the site and transported to and disposed of at the licensed hazardous waste facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEM 184.1 DISPOSAL OF TREATED WOOD PRODUCTS TON

The work under this Item shall include, but not be limited to the transportation and disposal of treated wood railroad ties (removed under Items 120. and 129.5), timber walls, timber decking, timber utility/guy pole, fences, posts, and other treated existing wood products as required by the Engineer, which are excavated or removed by other items in the Contract.

This Item shall include all costs for sampling, laboratory testing, loading, transportation and disposal of the treated wood. The Contractor is required to submit disposal manifests to the Engineer prior to the completion of the project. All aspects of this Item are to be completed in accordance with state and federal regulations.

COMPENSATION

Measurement and payment shall be by the weight, in TONS, of treated timber removed from the site and subsequently accepted at a licensed facility. The work shall be considered full compensation for all labor, tools, equipment, materials, testing, loading, transportation, approvals, and permits necessary for the completion of the work.

ITEM 504.2 GRANITE CURB TYPE VA4 - SPLAYED END EACH

The work under this Item shall conform to the relevant provisions of Subsection 501 of the Standard Specifications and the following:

The work under this Item shall consist of the furnishing and setting of a granite transition curb between vertical granite curb and either hot mix asphalt curbing or sloped granite edging in close conformity with the lines, grades and detail shown on the plans or as required by the Engineer.

METHOD OF MEASUREMENT

Item 504.2 will be measured for payment by the EACH Granite Curb Type VA4 - Splayed End, installed, complete in place.

BASIS OF PAYMENT

Item 504.2 will be paid at the Contract price per EACH, which price shall include all labor, materials, equipment, sawcuts made in existing pavement, cement concrete placed to set the curb, and all incidental costs required to complete the work.

ITEM 655.3 WOOD RAIL FENCE FOOT
ITEM 655.5 WOOD RAIL FENCE WITH GUARDRAIL FOOT

The work under these Items shall conform to the relevant provisions of Subsection 601 of the Standard Specifications and the following.

The work under these Items shall consist of furnishing and installing timber rail fence and timber rail fence with guardrail at locations where indicated on the Plans and as required by the Engineer.

MATERIALS

All timber posts and rail components shall conform with the following:

- Commercial lumber grade No. 1 or better after treatment;
- AASHTO M 133;
- All timber shall be Southern Yellow Pine, seasoned and pressure treated as specified herein. Posts shall be square with nominal dimensions as indicated on the Plans, surfaced four sides (S4S) and shall conform to the requirements of the "Standard Grading Rules for Southern Yellow Pine" of the Southern Products Association. Variations in the size of any dimension shall not be more than ± ¼"
- All timber components shall be pressure treated with waterborne preservative according to requirements of AWPA U1. Use Category UC3b for exterior construction not in contact with the ground and Category UC4a for items in contact with the ground.
- Do not use preservative chemicals containing arsenic or chromium. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not contain colorants, bleed through, or otherwise adversely affect finishes;
- All timber components shall be fabricated (including but not necessarily limited to cutting, drilling, dapping and chamfering) prior to treatment.
- Use a process that includes water-repellent treatment.
- After treatment, redry materials using a Kiln or air dry to a maximum moisture content of 19%;
- Mark treated materials with treatment quality mark of an inspection agency certified by the American Lumber Standard Committee's (ALSC) Board of Review.
- Pressure treated wood shall be marked in accordance with AASHTO M133 standards.
- Round head bolts including nuts and washers shall be sized as indicated and hot dipped galvanized
- Damaged post and rail elements will not be accepted.

CONSTRUCTION METHODS

Wood Rail Fence and Wood Rail Fence with Guardrail shall be installed at the locations and according to the details as shown on the Plans. Wood rail fence posts shall be set plumb in augered holes, backfilled with material shown on the Contract Drawings, as required, and compacted to the lines and grades shown on the Plans. Posts shall not be driven.

The Contractor is cautioned that within the limits of this project, buried cables for illumination or utilities, which may be energized, may be present.

ITEMS 655.3 and 655.5 (Continued)

The Contractor shall be required to furnish extra length posts at transition areas or where field conditions warrant. These posts shall be of such length that the minimum depth in the ground, as shown on the Plans, is maintained.

Rails shall be butt joined together and securely bolted with lag bolts to the posts.

Carriage bolts shall be countersunk into smaller predrilled holes. Finish head of carriage bolt shall be round and have less than 1/8 inch of head protruding above the face of rail.

Where preservative-treated members must be cut during erection, apply a field-treatment preservative to comply with AWPA M4. Use inorganic boron (SBX) treatment for members not in contact with the ground and continuously protected from liquid water.

METHOD OF MEASUREMENT

Item 655.3 and Item 655.5 will be respectively measured for payment by the FOOT of Wood Rail Fence and Wood Rail Fence with Guardrail as measured by actual fence installed from outside to outside of end posts approximately parallel to the ground by the foot.

BASIS OF PAYMENT

Item 655.3 and Item 655.5 will be paid for at the respective Contract unit price per FOOT, which prices shall include all labor, tools, equipment and materials, including all required excavation, backfill, fasteners, bolts, nuts, and washers, and all incidental costs required to complete the work.

ITEM 657. TEMPORARY FENCE FOOT

The work under this Item shall conform to the relevant provisions of Subsection 644 of the Standard Specifications and the following:

The work to be done under this Item shall consist of the furnishing, installation, removing and resetting, and final removal of a temporary construction fence at 127 Summer Street Lynnfield, MA, to separate the construction activities from public access.

The temporary fence shall be 6-feet high and of chain link construction, erected in a substantial manner, straight, plumb, and true as approved by the Engineer. Gates shall be built into the fence, as required, at such approved locations and at a size required to allow access and egress to the work site.

METHOD OF MEASUREMENT

Item 657. will be measured for payment by the FOOT of temporary fence, installed, maintained, relocated, and removed.

BASIS OF PAYMENT

Item 657. will be paid for at the Contract unit price per FOOT, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

No separate payment will be made for all posts including end, corner, and intermediate brace posts, all gates and gate posts, removing and resetting of temporary fence or providing privacy screening, the replacement and/or restoration of fence damaged due to construction accidents, vandalism and/or any other manner, and final removal, but all costs in connection therewith shall be included in the Contract unit price bid.

The fence shall not be removed without prior approval of the Engineer.

ITEM 697.1 SILT SACK EACH

Work under this item shall conform to the relevant provisions of Subsections 227 and 670 of the Standard Specifications and the following:

The work under this item includes the furnishing, installation, maintenance and removal of a reusable fabric sack to be installed in drainage structures for the protection of wetlands and other resource areas and the prevention of silt and sediment from the construction site from entering the storm water collection system. Devices shall be ACF Environmental (800)-448-3636; Reed & Graham, Inc. Geosynthetics (888)-381-0800; The BMP Store (800)-644-9223; or approved equal.

CONSTRUCTION

Silt sacks shall be installed in retained existing and proposed catch basins and drop inlets within the project limits and as required by the Resident Engineer.

The silt sack shall be as manufactured to fit the opening of the drainage structure under regular flow conditions, and shall be mounted under the grate. The insert shall be secured from the surface such that the grate can be removed without the insert discharging into the structure. The filter material shall be installed and maintained in accordance with the manufacturer's written literature and as directed by the Engineer.

Silt sacks shall remain in place until the placement of the pavement overlay or top course and the graded areas have become permanently stabilized by vegetative growth. All materials used for the filter fabric will become the property of the Contractor and shall be removed from the site.

The Contractor shall inspect the condition of silt sacks after each rainstorm and during major rain events. Silt sacks shall be cleaned periodically to remove and disposed of accumulated debris as required. Silt sacks, which become damaged during construction operations, shall be repaired or replaced immediately at no additional cost to the Department.

When emptying the silt sack, the contractor shall take all due care to prevent sediment from entering the structure. Any silt or other debris found in the drainage system at the end of construction shall be removed at the Contractors expense. The silt and sediment from the silt sack shall be legally disposed of offsite. Under no condition shall silt and sediment from the insert be deposited on site and used in construction.

All curb openings shall be blocked to prevent stormwater from bypassing the device.

All debris accumulated in silt sacks shall be handled and disposed of as specified in Subsection 227 of the Standard Specifications

ITEM 697.1 (Continued)

COMPENSATION

Silt sacks will be measured and paid at the Contract unit price per each, complete in place, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for removal and disposal of the sediment from the insert, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 698.3 GEOTEXTILE FABRIC FOR SEPARATION SQUARE YARD

The work under this item shall conform to the relevant provisions of Subsections 670, 751, and 767 of the Standard Specifications and the following:

The work under this Item shall consist of furnishing and installing approved geotextile filter fabric at the locations and in the manner shown on the plans or as required by the engineer.

Geotextile Fabric for Separation shall conform to the requirements of AASHTO M 288 for the intended application, selected from the MassDOT Qualified Materials List.

CONSTRUCTION METHOD

The geotextiles shall be protected from exposure to sunlight during transport and storage. After placement, the geotextile shall not be left uncovered for more than two (2) weeks.

Traffic or construction equipment will not be permitted directly on the geotextile fabric. Geotextile fabric may be joined either by sewing or overlapping.

Sewn seams shall be lapped a minimum of four inches and double sewn. The thread used to sew the seam shall be nylon or polypropylene.

Overlapped seams shall have a minimum overlap of 18 inches

All seams shall be subject to the approval of the Engineer.

Geotextile that becomes torn or damaged shall be replaced or patched. The patch shall extend 3 feet beyond the perimeter of

METHOD OF MEASUREMENT

Item 698.3 will be measured for payment by the SQUARE YARD of geotextile fabric for separation, complete in place, across the surface of grade and does not include overlapped portions.

BASIS OF PAYMENT

Item 698.3 will be paid for at the Contract unit price per SQUARE YARD, which price shall include all labor, materials, equipment, sewing and/or overlapping material, and all incidental costs required to complete the work.

ITEM 701.2 CEMENT CONCRETE PEDESTRIAN CURB RAMP SQUARE YARD

The work under this Item shall conform to the relevant provisions of Subsection 701 of the Standard Specifications and the following:

Concrete placed under Item 701.2 Cement Concrete Pedestrian Curb Ramp shall be 6-inches deep.

Detectable warning panels shall be brick red in color and shall be in accordance with MassDOT Standard Detail 701.2.1.

METHOD OF MEASUREMENT

Item 701.2 will be measured for payment in accordance with the provisions of Subsection 701.70 of the Standard Specifications.

BASIS OF PAYMENT

Payment for Item 701.2 will be paid for in accordance with the provisions of Subsection 701.81 of the Standard Specifications.

ITEM 703.4 IMPRINT SYSTEM - MEDIAN SQUARE YARD

The work under this Item shall consist of preparing pavement surfaces and installation of Texturized Decorative Pavement in accordance with manufacturer's specifications, as shown on the Plans and as required by the Engineer.

Submittals

Prior to commencing the placement of the Texturized Decorative Pavement, a sample of the finished product shall be submitted to the Engineer for review and approval.

CONSTRUCTION METHODS

Preparation of Asphalt Surface:
For proposed pavement surfaces, prior to installing Texturized Decorative Pavement material in the designated area, the Contractor shall install 0.75 inches of Superpave Surface Course 9.5 (SSC-9.5) material over 2.5 inches Superpave Intermediate Course 19.0 (SIC 19.0) material to a depth 0.75 inches below proposed finished grade immediately below the Texturized Decorative Pavement as indicated on the Plans.

Installation of Texturized Decorative Pavement:

The Contractor shall be responsible for the preparation, placement and patterning of Texturized Decorative Pavement. This synthetic paving material shall be composed of hot-applied, resin-based compound formulated with a color stable pigment throughout that can be surface textured to simulate a brick running bond pattern (the color should be traditional brick red). The color shall be approved by the Engineer before installation.

The Contractor must be a manufacturer authorized applicator, experienced with this specialized system, satisfactory to the Engineer. Using manufacturer prescribed methods and equipment, the Contractor shall adequately heat and uniformly mix the materials together. The Engineer will select the application color from the available pigments supplied by the manufacturer. Maximum heating temperature of the completed formulation is 440 degrees Fahrenheit.

The Contractor shall then apply the heated, mixed material to the surface of the hardened, structurally sound, asphalt pavement, as required. The material shall be spread and leveled to the desired build thickness of 0.75 inches, using manufacturer's specialized ironing tools, heated sufficiently to smooth the surface to a state of readiness for texturizing. No material shall be applied when precipitation is present.

A 3 foot by 3 foot "mock up" shall be constructed for review and approval by the Engineer.

Texturizing will begin immediately after leveling has occurred, while the material is still hot enough to allow the mold selected, to adequately penetrate the surface and create the desired pattern or form.

ITEM 703.4 (Continued)

Once the finished surface has cooled sufficiently, the application area may be opened to vehicular and/or pedestrian traffic.

Any residue resulting from this work shall be removed and disposed of in a proper manner off site. The completed work area shall be left in a neat and clean condition, satisfactory to the Engineer. The products used in the surfacing system shall meet the following specifications and conform to the minimum following physical and performance properties; hot-applied, resin-based compound developed specifically for use on asphalt or cement concrete, with superior adhesion, flexibility and abrasion resistance characteristics, as well as color stability, chemical resistance and scrub ability.

Material:
The material to be utilized in the Texturized Decorative Pavement shall conform to the following physical properties:

GRADE	60 Heavy traffic
Average Temp. Range	25-140 degrees F
Wheel Tracking @ 113 F	less than 1 mm/hr
Wheel Tracking @ 140 F	less than 5 mm/hr
Density	2.12
Cone Flow Test (5 hrs. @ 194 F)	15% maximum
Plane Test (5 hrs. @ 194 F)	5% maximum
Indent @ 104 F	50 dmm maximum
Indent @ 122 F	75 dmm maximum
Ash Content	90% maximum
Skid Resistance Value	55-70

Equipment Required:
Contractor must possess and be familiar with the specialized machinery necessary to perform the procedures as outlined and contained within this technical specification package, including, but not limited to appropriate trucks, compressors, miscellaneous asphalt equipment, dispensers, applicators, cutters and/or specialized tools, etc.

METHOD OF MEASUREMENT

Item 703.4 will be measured for payment by the SQUARE YARD of imprint system - median installed, complete in place.

BASIS OF PAYMENT

Item 703.4 will be paid for at the Contract unit price per SQUARE YARD, which price shall include all labor, materials, equipment, submittals, mock up, wire templates, imprinting, and necessary protection to maintain traffic during the installation period as required, and all incidental costs required to complete the work.

Hot mix asphalt shall be paid for under Items 450.22 and 450.23.

ITEM 704. STONE DUST WALKS TON

The work under this Item shall conform to the relevant provisions of Subsection 701 of the Standard Specifications and the following.

The work under this Item shall consist of the construction of stone dust driveway areas at roadway entrances, as shown on the plans.

CONSTRUCTION METHODS

Stone dust shall meet the requirements of Subsection M2.05.0 of the Standard Specifications and shall be placed in a uniform thickness of 4 inches.

Subgrade shall be shaped parallel to the proposed surface of the driveway and thoroughly compacted. Stone dust shall be placed directly on the subgrade to the thickness shown on the plan.

METHOD OF MEASUREMENT

Item 704. will be measured for payment by the TON of stone dust walks installed, complete in place. Stone dust will be measured by the TON by weight slips presented to the Engineer for material placed on the job.

BASIS OF PAYMENT

Item 704. will be paid for at the Contract unit price per TON, which price shall include all labor, materials, tools, equipment, and all incidental costs required to complete the work.

Gravel will be paid for at the Contract unit price per cubic yard under Item 151. Gravel Borrow.

Fine grading and compacting will be paid for at the Contract unit price per square yard under Item 170. Fine Grading and Compacting – Subgrade Areas.

Excavation will be paid for at the Contract unit price per cubic yard under Item 120..

ITEM 707.9 BICYCLE RACK EACH

The work under this Item shall include the furnishing and installation of the bike racks at the locations indicated on the plans.

MATERIALS

A. Rack Assembly:
    a. Rack assembly shall be manufactured from 2-inch (2 3/8-inch OD) ASTM A513 schedule 40 steel tubing and 3/8-inch thick ASTM A36 steel plate.
B. Anchoring:
    a. Stainless steel expansion anchors (1/2-inch x 3 3/4-inch).
C. Concrete:
    a. Minimum 28-day compressive strength of 4,000 psi, 3/4-inch 610, air entrained.
D. Dimensions
    a. Overall: 40 ¾-inch long x 6-inch deep x 32 ½-inch high
E. Finish:
    a. Powder Coating
        i. Color shall be Black.
        ii. All parts are processed through an 8-stage iron phosphorous wash system.
        iii. Parts are coated with a zinc-rich epoxy primer to an AVERAGE of 4-5 mils.
        iv. Parts are then finished with a top coat of TGIC-polyester powder to an AVERAGE of 4-5 mils.
        v. Powder is cured at the powder manufacturers specifications using combination of infrared and convection heat for approximately 20 minutes.
        vi. Finished parts shall comply with the following American Standard Test Method (ASTM) for coating and coating method: ASTM-D-523, ASTM-D-3363, ASTM-D-1737, ASTM-D-3359, ASTM-D-2794, ASTM-B-117 and ASTM-D-3451.

SUBMITTALS

A. Product Data: Include physical characteristics such as shape, dimensions and finish for each bench.
B. Shop Drawings: Provide installation details for each product.
C. Samples for Verification: For the following product, show the color of the powder coat finish.
D. Maintenance Data: For each product.
    a. Provide recommended methods for repairing damage and abrasions to the powder coat finish.

ITEM 707.9 (Continued)

STORAGE, HANDLING, AND INSTALLATION

Store products in original undamaged packaging in a dry location until ready for installation.

Handle powder coated products carefully to prevent any damage to the finish.

Handle and install bike racks according to manufacturer's recommendations and installation instructions.

METHOD OF MEASUREMENT

Item 707.9 will be measured for payment by the EACH bicycle rack installed, complete in place.

BASIS OF PAYMENT

Item 707.9 will be paid for at the Contract unit price per EACH, which price shall include all materials, tools, equipment and labor for furnishing and installation of the bicycle racks (including cement concrete pad); and for all incidental costs required to complete the work.

ITEM 710.52 GRANITE SEAT WALL EACH

The work under this Item shall consist of furnishing and installing granite seat walls as shown on the plans or as required by the Engineer..

REFERENCES

American Society for Testing and Materials (ASTM):

C 91	Masonry Cement
C 144	Aggregate for Masonry Mortar
C 150	Portland Cement
C 207	Hydrated Lime for Masonry Purposes
C 270	Mortar for Unit Masonry

Sources of Supply

A. All granite shall be obtained from quarries having adequate capacity and facilities to meet the specified requirements. Cutting and finishing shall be done by a firm equipped to process the material promptly on order and in strict accord with specifications.

B. Granite shall conform to the requirements of ASTM C 615, Architectural Grade and National Building Granite Quarries Association, Inc. “Specifications for Architectural Granite”.

SUBMITTALS

A. Shop Drawings: Submit shop drawings to the Engineer for review and approval at an approved scale for location, installation and erection of all parts of the work under this section including but not limited to the following items:
   1. Granite Seat Wall

B. Shop drawings shall accurately show the dimensions, sections and jointing of all granite work.

C. Shop drawings shall show the setting number of each pieces and each piece shall bear the corresponding number in a non-staining paint.

D. Samples: Submit sample for approval of granite color(s) and finish(es).

E. Construct mockup before start of any work. Mockup shall exhibit proposed backup construction, texture, finish, anticipated range of color and veining, fastening, jointing, and workmanship of all elements of the construction.

F. Size of seat wall sample wall shall be a minimum length of 4 ft.

G. Sample sections shall be inspected by the Landscape Architect. If the wall section is not acceptable, construct additional seat wall sections at no additional cost until an acceptable sample is constructed. Accepted sample shall become the standard for the entire job, and shall remain undisturbed until completion of all work. Sample may be part of the final work.

ITEM 710.52 (Continued)

MATERIALS

GRANITE SEAT WALLS

A. Granite shall be standard architectural grade, free of cracks, seams, or starts which may impair its structural integrity or function. Color or other visual characteristics indigenous to the particular material and adequately demonstrated in the sampling or mock-ups will be accepted provided they do not compromise the structural or durability capabilities of the material. Texture and finish shall be within the range of samples approved.

B. All exposed surfaces shall be thermal finished, polished or rock faced as indicated on drawings.

C. Granite shall be clean and show no trace or evidence of any rust or iron particles. Test samples shall conform to the requirements of ASTM C615-85.

D. Cut granite to the dimensions and patterns shown on the plans.

E. Granite shall be:

1. Traditional American stone with a medium to coarse gray grain.

EXPANSION JOINT FILLER

A. Expansion joint filler shall meet the requirements of M9.14.0.

DENSE GRADED CRUSHED STONE

A. Dense graded crushed stone shall meet the requirements of M2.01.7.

CONSTRUCTION METHODS

Construction Tolerances for Stone Work

A. Variation from Plumb: for lines and surfaces do not exceed ½ inch in 10 feet.

B. Variation from Level: For grades shown and other conspicuous lines, do not exceed 1/8 inch for individual grades or 1/8 inch in 10 feet for level line. All abutting sections shall be flush.

C. Bottoms of all pieces to be set in mortar shall be sawn or split to approximately true planes. Maximum variation from that drawn shall not exceed 1.2 inch. Mortar contact surfaces shall be cleaned of all rust stains and iron particles.

ITEM 710.52 (Continued)

METHOD OF MEASUREMENT

Item 710.52 will be measured for payment by the EACH granite seat wall installed, complete in place.

BASIS OF PAYMENT

Item 710.52 will be paid for at the Contract unitprice per EACH, which prices shall include all materials, tools, equipment and labor for furnishing and installation of the Granite Seat Wall, submittals, mock-up, and for all incidental costs required to complete the work.

No separate payment will be made for dense graded crushed stone or expansion joint filler. These materials will be considered incidental to the cost of the Item.

ITEM 710.53 INTERPRETIVE KIOSK – GRANITE BASE EACH

The work under this Item shall include the fabrication and installation of granite bases for interpretive kiosks as shown on the plans and as required by the Engineer.

SUBMITTALS

Submit manufacturer's product data, installation instructions, use limitations and recommendations for each material used. Provide certifications stating that materials comply with requirements.

Prior to ordering materials, submit representative samples to the Engineer for selection and approval. Do not order materials until Engineer's approval has been obtained. Delivered materials shall closely match the approved samples.

Granite Samples

Submit a minimum of three 12 inches x 12 inch granite samples showing options for color and texture in thermal or flame finish. Samples shall represent typical range of color and size expected in final product.

Prior to ordering the below listed materials, the Contractor shall submit shop drawings and product literature to the Engineer for approval. The Contractor shall not order materials until Engineer's approval has been obtained. Delivered materials shall closely match the approved samples. The Contractor shall submit dimensioned shop drawings for material, design, and layout including locations, and installation including footings, all fasteners, adjacent materials, and associated items required for installation for review and approval.

PRODUCT HANDLING AND STORAGE

The Contractor shall deliver materials in original sealed containers marked with name of manufacturer and identification of contents. After delivery, store materials under waterproof covers on planking clear of ground and protect from handling damage dirt, stain, water and wind.

Take all necessary precautions to protect all items from moisture, chipping, cracking, or other damage, during the transportation of these materials to the project, unloading and storage on the site. After delivery take all necessary precautions to prevent all items from chipping, cracking, construction dust and debris, or damage of any kind. Damaged units will not be allowed to be installed and should any damage units be found in constructed work, such units shall be removed immediately and replaced with new units, and the Contractor shall assume all expenses incurred.

Stored materials shall be adequately protected against moisture by (1) stacking in such a manner as to allow a complete circulation of air under each stack, and (2) covering each stack, top and sides with a waterproof paper or membrane. Coverings shall remain in place at all times, when not working from the particular stack.

ITEM 710.53 (Continued)

MATERIALS

Granite Bases for Interpretive Panels shall be fabricated from Kitledge Grey, Deere Isle, or Woodbury Grey selected from samples provided for review and selection before construction that may be obtained from the following suppliers and fabricators:

- Kitledge Grey or Deere Isle, available from Fletcher Granite, Westford, MA;
- Deere Isle or Woodbury Grey, available from Swenson Granite Works, Rowley, MA or Concord, NH;
- Deere Isle, available from Kenneth Castellucci & Associates, Inc., Lincoln, RI;
- Or approved equal

Substitutions shall be made only with permission of the Engineer.

Granite shall be selected by the Engineer from samples and provided by the Contractor during construction. Finish for exposed granite faces shall be as shown on the Drawings and as specified herein. Dimensions shown on the Drawings for interpretive panel base provided by the Contractor shall be actual, not nominal dimensions.

Expansion joint filler shall meet the requirements of Subsection M9.14.0 of the Standard Specifications.

Crushed stone shall meet the requirements of Subsection M2.01.4 of the Standard Specifications.

All architectural granite site improvements shall be fabricated from one type of granite. Alternate granites are provided as options.

Interpretive panel base shall be solid granite, split faced exposed sides to at least 6 inches below grade with honed edges at perimeter of interpretive plaque as shown on the Drawings.

CONSTRUCTION METHODS

All fabrication and installation work shall be accomplished using the highest standards of workmanship and shall include all excavation, crushed stone for footings, labor, transportation and incidentals to make the work complete.

ITEM 710.53 (Continued)

Contractor shall schedule delivery of items and all necessary equipment and hardware so as to arrive at the site in a timely manner to comply with construction schedule and minimize on-site storage time. The Contractor shall be ready to discuss the fabrication of granite with long lead times at the beginning of the Contract so suitable arrangements can be made to meet the date of completion. Items delivered to the site prior to scheduled installation time shall be stored in a secured staging area with all small components retained separately by the Contractor. Protect all items from weather, careless handling, and construction in the vicinity, and from vandals or pilferers.

Mark locations of all items in the field for approval by the Engineer before commencing installations.

Contractor shall install all items level and with plumb vertical alignment, or as indicated otherwise on the drawings.

Any incidence of damage, vandalism, or theft of any item during installation shall be reported immediately to the Engineer, remedial action shall be decided, and repairs made to the satisfaction of the Engineer. The Contractor is required to secure all items of the work from access by the public until final acceptance, unless otherwise permitted by the Engineer.

The Contractor shall clean and dry all stone and surfaces before installing. Use only mild cleaning compounds and brushes that do not scratch, abrade, or otherwise damage the surfaces.

Granite must be protected during transport, delivery, storage, and installation. Any damage or failure such as chipping, scratches, or cracking of any kind in granite before acceptance may be cause for rejection of stone and replacement at Contractor's expense.

Stone Improvements shall be fabricated and installed only by skilled stonemasons and stone fitters.

All new stone items shall be shop cut, pre-drilled and pre-assembled to verify dimensions in the Shop before delivery to the site. All dimensions shall be verified by the stone supplier in the field, and shop drawings and samples approved by the Engineer before stone fabrication. Supplier shall clearly label and number stone pieces, with accompanying key drawings and locations, for installation in the field.

Construction tolerances for stone items shall be the following:

- All stone items shall be installed plumb. Maximum variation shall be 0.25-inch in 10 feet vertical.
- Variation from horizontal shall not exceed 1/2 inch in 20 feet, or 3/4 inch in 40 feet.
- Edge alignments shall not exceed 1/8 inch offset of adjacent panels across any joint unless indicated in the drawings (overhanging cap).

Set stones to comply with requirements.

ITEM 710.53 (Continued)

METHOD OF MEASUREMENT

Item 710.53 will be measured for payment by the EACH interpretive kiosk - granite base installed, complete in place.

BASIS OF PAYMENT

Item 710.53 will be paid for at the Contract unit price per EACH, which price shall include all all labor, tools, equipment, materials, crushed stone base, expansion joint filler, submittals, samples, loading and transportation, and all incidental costs required to complete the work.

ITEM 716.1 INTERPRETIVE SIGN PANEL EACH

The work under this Item shall include the fabrication and installation of interpretive sign panels on interpretive kiosk - granite base as detailed and where shown on the plans, as directed by the engineer and as follows:

SUBMITTALS

Submit color samples from full range of colors provided by the Manufacturer of each interpretive sign for review and selection. The Engineer will indicate which color/colors shall be used for fabrication of material sample for each sign. After this submittal has been processed, submit two, 6 inch x 6-inch sample (one each of material for interpretive signs) showing typical finish and color selected from initial color submittal.

The Contractor shall submit shop drawings for graphics and artwork for each sign type in true size format for review before construction. Graphics for interpretive panels will be provided by the Town of Lynnfield as an Adobe Illustrator file. Provision of these files does not relieve the Contractor of requirement to produce accurate shop drawings for fabrication and installation that are verifiable in the field.

PRODUCT HANDLING AND STORAGE

The Contractor shall deliver materials in original sealed containers marked with name of manufacturer and identification of contents. After delivery store materials under waterproof covers on planking clear of ground and protect from handling damage dirt, stain, water and wind.

Take all necessary precautions to protect all items from moisture, chipping, cracking, or other damage, during the transportation of these materials to the project, unloading and storage on the site. After delivery take all necessary precautions to prevent all items from chipping, cracking, construction dust and debris, or damage of any kind. Damaged units will not be allowed to be installed and should any damage units be found in constructed work, such units shall be removed immediately and replaced with new units, and the Contractor shall assume all expenses incurred.

Stored materials shall be adequately protected against moisture by (1) stacking in such a manner as to allow a complete circulation of air under each stack, and (2) covering each stack, top and sides with a waterproof paper or membrane. Coverings shall remain in place at all times, when not working from the particular stack.

MATERIALS

Interpretive panels shall be fabricated from phenolic-fused graphic on a black phenolic core, fabricated to dimensions and installed in locations shown on the Drawings and as directed by the Engineer.

Top face of graphic panels shall have a textured, semi-matte finish that is resistant to temperature fluctuation (humidity, frost, heat corrosion), UV rays, and graffiti.

Graphics for interpretive panels will be provided by the Town of Lynnfield as an Adobe Illustrator files.

ITEM 716.1 (Continued)

Interpretive panels shall affix to granite bases, fastened with stainless steel, threaded button-head screws with Helicoil threaded inserts, and as shown on the Drawings. Fasteners shall not be visible on the sign faces either because fasteners are inset below the top of the sign face anchored to granite base, or because the fasteners are concealed by an aluminum frame anchored to plywood backing, as shown on the Drawings.

Interpretive panels meeting these requirements may be fabricated or supplied by the following manufacturers, or an approved equal:

- Fossil Industries, Inc., 44 Jefryn Boulevard, Deer Park, NY 11729, tel: 631-254-9200, fax: 631-254-4172, www.FossilGraphics.com.
- I-Zone Imaging, 2526 Charter Oak Dr., Suite 100, Temple, TX, 76502, 1-888-464-9663, www.izoneimaging.com.
- Vacker Sign, 948 Sherren Street W Roseville, MN 55113, tel: 651-487-3100, 877-487-3101, https://vackersign.com/

All fasteners shall be stainless steel, type and size provided to meet structural load and use requirements for specific site improvement and according to the Drawings. Exposed fasteners shall be vandal resistant. Exposed fasteners shall not extend more than ½ inch beyond nut/washers and shall have sharp edges filed smooth.

CONSTRUCTION METHODS

All items located on the drawings shall be fabricated and installed by the Contractor as detailed on the Drawings, as per manufacturers' written installation procedures and as reviewed by the Engineer. All fabrication and installation work shall be accomplished using the highest standards of workmanship and shall include all excavation, crushed stone for footings, labor, transportation and incidentals to make the work complete.

Contractor shall schedule delivery of items and all necessary equipment and hardware so as to arrive at the site in a timely manner to comply with construction schedule and minimize on-site storage time. Items delivered to the site prior to scheduled installation time shall be stored in a secured staging area with all small components retained separately by the Contractor. Protect all items from weather, careless handling, and construction in the vicinity, and from vandals or pilferers.

Dimensions, grades, and imbedded hardware shall be as indicated on the drawings and approved shop drawings. Secure and brace all imbedded hardware and objects in concrete in a true and vertical position until cured.

Contractor shall protect the interpretive panels from damage of any kind, including theft and vandalism, during construction and installation until Final Acceptance.

Panels shall be installed tightly and cleanly on granite face, without rocking or movement of any kind, with concealed stainless steel fasteners.

ITEM 716.1 (Continued)

Panels shall be lightly sanded and covered with light layer of epoxy before applying to granite base. Granite surface to accept panel shall also be covered with epoxy.

After panel has been attached to granite, clear off epoxy that escapes during compression.

METHOD OF MEASUREMENT

Item 716.1 will be measured for payment by the EACH interpretive sign panel installed, complete in place.

BASIS OF PAYMENT

Item 716.1 will be paid for at the Contract unit price per EACH, which price shall include all labor, tools, equipment, materials, hardware, and all incidental costs required to complete the work.

ITEM 720. GRANITE MILE MARKER POST EACH
ITEM 720.2 GRANITE TENTH MILE MARKER EACH

The work under these Items shall include the furnishing and installation of granite mile posts, and flush granite markers as shown on the plans and as required by the Engineer.

MATERIALS

A. Granite shall conform to the requirements of ASTM C-615.
B. Granite shall be standard grade, free of flaws, reeds, rifts, laminations, cracks seams, starts or other defects which may impair its strength, durability or function. Exposed surfaces shall be free from spots, spalls, chips, stains, discoloration or other defects which are not within the approved sample range and would affect its appearance.
C. Granite color shall be an approved shade of light grey.
D. Granite shall be cut to the dimensions and with finishes as indicated on the plans.

CONSTRUCTION METHODS

Prior to installation, granite shall be stored on wood skids or pallets, covered with non-staining, waterproof membrane and protected from the weather. Granite shall be stored to allow air to circulate around the material and shall not be permitted to be in direct contact with the ground at any time during storage.

The zero-mile reference point for all granite mile posts and mile markers shall be the Lynnfield/Peabody Town Line, counting up in mileage as you travel south/west into Lynnfield, towards Wakefield. All mile posts shall be installed at the stationing indicated on the plans and tenth markers installed accordingly.

Granite shall be carefully handled to prevent chipping, breakage, soiling or other damage. Pinch or wrecking bars shall not be used without the protecting edges of granite with wood or other rigid materials. Granite shall be lifted with wide-belt type slings; wire rope or other materials that may cause staining or damage to the granite finish will not be permitted.

Damaged granite shall be repaired, if possible, or replaced with new stone at no additional cost. The Contractor shall excavate a hole to the lines and grades necessary to install the granite posts to the depth as indicated on the drawings. Granite posts shall be set plumb with lettered markings oriented to the bikeway as indicated on the drawings. After setting the granite post, the Contractor shall backfill the hole with gravel borrow in six-inch lifts, compacting the gravel with each lift. The Contractor shall take precautions to keep the granite post plumb during backfill and to avoid damaging the granite at all times.

ITEMS 720. and 720.2 (Continued)

Granite tenth mile markers shall be set to the lines and grades as indicated on the drawings. The Contractor shall install the markers prior to paving the final course of hot mix asphalt. The Contractor shall make provisions for covering the top surface of the granite to prevent staining or marring of the exposed surface during paving operations. Upon completion of the paving operation, granite markers shall be cleaned to remove all dirt, stains and other blemishes. Mild abrasive cleaners that contain no harsh caustic ingredients may be used, with fiber brooms or brushes and clean water. Wire brushes, steel wool, and acids or other solutions (gasoline) which may cause discoloration are prohibited. Should the granite markers become stained or damaged beyond repair due the operations of the Contractor, they shall be removed and replaced with new granite mile markers at no additional cost.

SUBMITTALS

Prior to ordering granite posts and granite markers, the Contractor shall provide the Engineer with sample pieces of granite that demonstrate the color, shade, veining, texture, finish, text font and size to be used and shall be approved by the Town of Lynnfield. No granite shall be ordered prior to receiving material approval from the Engineer.

METHOD OF MEASUREMENT

Items 720. and 720.2 will be respectively measured for payment by the EACH granite mile marker post or granite tenth mile marker installed, complete in place.

BASIS OF PAYMENT

Items 720. and 720.2 will be paid for at the respective Contract unit price per EACH, which prices shall include all labor, materials, equipment, submittals, samples, gravel backfill, and all incidental costs required to complete the work.

No separate payment will be made for excavation, gravel subbase, backfill, and cleaning granite surfaces, but all costs in connection therewith shall be included in the unit price bid.

ITEM 740. ENGINEER'S FIELD OFFICE AND EQUIPMENT (TYPE A) MONTH

The work under this Item shall conform to the relevant provisions of Subsection 740 of the Standard Specifications and the following:

Two computer systems and printer system meeting minimum requirements set forth below including installation, maintenance, power, paper, disks, and other supplies shall be provided at the Resident Engineer's Office:

All equipment shall be UL approved and Energy Star compliant.

The Computer System shall meet the following minimum criteria or better:

Processor:	Intel, 3.5 GHz
System Memory (RAM):	12 GB
Hard Drive:	500 GB
Optical Drive:	DVD-RW/DVD+RW/CD-RW/CD+RW
Graphics Card:	8 GB
Network Adapter:	10/100 Mbit/s
USB Ports:	6 USB 3.0 ports
Keyboard:	Generic
Mouse:	Optical mouse with scroll, MS-Mouse compliant
Video/Audio	the computer system shall be capable of allow video calling and recording:
Video camera	shall be High Definition 1080p widescreen capable video calling and recording with built in microphone. The microphone system shall capture natural audio while filtering out background noise.
Audio	shall be stereo multimedia speaker system delivering premium sound.
OS:	Latest Windows Professional with all security updates
Web Browser:	Latest Internet Explorer with all security updates
Applications:	Latest MS Office Professional with all security updates Latest Adobe Acrobat Professional with all security updates Latest Autodesk AutoCAD LT Antivirus software with all current security updates maintained through the life of the contract.
Monitors:	Two 27" LED with Full HD resolution. Max. resolution 1920 x 1080
Flash drives:	2 (two) - 128GB USB 3.0
Internet access:	High Speed (min. 24 mbps) internet access with wireless router.

ITEM 740. (Continued)

The Multifunction Printer System shall meet the following minimum criteria or better:

Color laser printer, fax, scanner, email and copier all in one with the following minimum capabilities:

- Estimated volume 8,000 pages per month
- LCD touch panel display
- 50 page reversing automatic document feeder (RADF) (not including the bypass tray)
- Reduction/enlargement capability
- Ability to copy and print 11” x 17” paper size
- email and network pc connectivity
- Microsoft and Apple compatibility
- ability to overwrite latent images on hard drive
- 600 x 600 dpi capability
- 30 pages per minute print speed (color),
- 4 Paper Trays Standard
- Automatic duplexing
- Finisher with staple functions
- Standard Ethernet. Print Controller
- Scan documents to PDF, PC and USB
- ability to print with authenticated access protection

The Contractor shall supply a maintenance contract for next day service, and all supplies (toner, staples, paper) necessary to meet estimated monthly usage.

The Engineer's Field Office and the equipment included herein including the computer system, and printer shall remain the property of the Contractor at the completion of the project. Disks, flash drives, and card readers with cards shall become the property of the Department.

Compensation for this work will be made at the contract unit price per month which price includes full compensation for all services and equipment, and incidentals necessary to provide equipment, maintenance, insurance as specified and as directed by the Engineer.

ITEM 751.7 COMPOST BLANKET CUBIC YARD

The work under this Item shall conform to the relevant provisions of Subsections 751 and M1.06.0 Compost of the Standard Specifications and the following:

Work shall consist of furnishing and pneumatically applying compost as a thin mulch blanket (1/2-1 inch depth) over prepared soil to provide temporary soil stabilization and organic matter for plant growth.

SUBMITTALS AND MATERIALS

No materials shall be delivered until the required submittals have been approved by the Engineer. Delivered materials shall match the approved samples. Approval of test results does not constitute final acceptance.

Contractor shall submit to the Engineer samples and certified test results no sooner than 60 days prior to application of compost. Vender certification that material delivered meets the test results shall be submitted if requested.

Compost shall meet the requirements for M1.06.0: Compost, Type 2, as referenced in the MassDOT– Highway Division Standard Specifications for Highways and Bridges, Division III: Materials Specifications, latest edition.
The Engineer shall approve the Contractor's equipment for application.

CONSTRUCTION METHODS

Application of compost material shall not begin until the Engineer has approved the site and soil conditions. Soil preparation shall be as specified under the applicable item for soil placement or for seeding. The Contractor shall notify the Engineer when areas are ready for inspection and application of compost.

Compost blanket shall be pneumatically applied (blown on) to a minimum depth of one half to one inch. Where shown on the plans or when directed by the Engineer depth may be increased to provide berms for sediment control or to otherwise prevent slope erosion.

When compost blanket is proposed with seeding, seed shall be broadcast and shall occur in conjunction with compost blanket, as specified under the relevant item for seeding.

When compost blanket is proposed for areas with planting, compost (and seed if applicable) shall be applied after planting. If compost and seed occur prior to planting, areas shall be regraded and compost and seed reapplied to the satisfaction of the Engineer and at the Contractor’s expense.

ITEM 751.7 (Continued)

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 751.7 will be measured and paid for at the Contract unit price per Cubic Yard which price shall include all labor, materials, equipment, and all incidental costs required to complete the work of pneumatically applying compost.

Surface preparation of substrate receiving compost blanket shall be compensated under the applicable item for placement of loam, sand, ordinary borrow, wetland soil, topsoil rehandled and spread, tilled existing soil, or other specified substrate.

Seeding, if utilized, will be compensated for under the appropriate seeding items.

ITEM 755.35 INLAND WETLAND REPLICATION AREA LUMP SUM

The work under this item shall conform to the relevant provisions of Subsections 120, 770, 771 of the Standard Specifications and the following:

Work under this item shall include furnishing material and the construction and maintenance of inland wetland replication areas as shown on the drawings and as required by the Engineer. Inland Wetland Replication Area shall hereafter be referred to as Replication Area. All work shall be in coordination with an approved Wetland Specialist as specified under that item.

Wetland Restoration work shall be as specified and compensated under that item. Construction of tidal wetlands shall be as specified under the appropriate item for tidal wetland mitigation.

The Replication Area shall be constructed prior to wetland impacts unless otherwise approved by the Engineer, specified herein, or specified in permit conditions and approvals. Construction schedule shall be appropriate to planting and seeding season (see below). Changes to this schedule will require written approval from the Engineer.

DESCRIPTION OF WORK

Construction of the Replication Area shall be completed as shown on the drawings at the following location(s):

Area A at Station: ***155+50, RIGHT*** Area = ***3,092*** sf.

Replication Area shall be constructed to meet the requirements of all associated permits and certifications, including relevant performance standards of the Massachusetts Wetlands Protection Act (MGL C. 131, s40), Section 401 Water Quality Certification, and Section 404, U.S. Army Corps of Engineers Permit.

The Contractor is responsible for protection and preservation of natural areas adjacent to the Replication Area both within and outside the project limits and for the duration of the Contract; including but not limited to damage to soils or vegetation due to erosion, sedimentation, compaction, trampling, vehicles, storage of materials, or other negligence shall be repaired to the satisfaction of the Engineer and at the Contractor's expense.

The Wetland Specialist overseeing the Wetland Replication construction work shall not be from the same company as that which is performing planting, seeding, or participating in any aspect of the Wetland Replication construction.

ITEM 755.35 (Continued)

SUBMITTALS - DOCUMENTS

Request for Conditional Acceptance: As specified below, a letter requesting Conditional Acceptance of the work and the site conditions shall be submitted to the Engineer.

Request for Certificate of Compliance (Partial or Full): As specified below, shall be submitted to the Engineer for distribution to appropriate regulatory agencies.

Request for Final Acceptance: As specified below, a letter requesting Final Acceptance of the work and the site conditions shall be submitted to the Engineer.

SUBMITTALS - MATERIAL

Soil and Amendments

No soil, compost, or other soil amendment imported to the work site shall contain seeds, roots, stems, or other viable parts of invasive plants or other noxious plants.

At least sixty (60) days prior to installation and prior to ordering, the Contractor shall submit for approval sources of soil, compost, and amendments. Submittal shall include the supplier and location of the source. Off-site sources shall be identified and available for inspection by the Wetland Specialist prior to transport of material to the site to verify that they are likely to be free of invasive plant species, including all viable plant parts.

Samples of tested and approved wetland soil and soil amendments for soil texture, organic carbon content or other routine soil analysis parameters (e.g., pH, Cation Exchange Capacity, Percent Base Saturation) and Soil Organic Matter Analysis will be required if requested by the Engineer. The grab samples shall be collected by the Contractor or Wetland Specialist from multiple representative locations in the wetland topsoil mix following the “Umass Soil and Plant Tissue Testing Laboratory Sampling and Collection Protocols” (or equivalent certification paperwork provided by the soil supplier). The lab analysis shall be provided to the Engineer along with written certification from the Contractor or Wetland Specialist that the wetland topsoil was collected per the referenced protocol and meets the desired specification. The analysis and written certification of same shall be provided to the Engineer prior to placing the wetland topsoil in the Replication Area.

ITEM 755.35 (Continued)

Seed Mix

Certificate of Materials from the supplier shall be submitted 30 days prior to seeding and must be approved prior to ordering materials. Seed species listed on the certificate shall include ecotype region (i.e., *Asclepias incarnata*, PA Ecotype).

Seed tag from the bag of seed used shall be submitted to the Engineer at the time of seeding. Seed tag shall include ecotype region and species, guaranteed percentages of purity, weed content and germination of the seed, and the net weight. Seed tag shall match the Certificate of Materials, include the name of the supplier, and date material was sent.

Bill of lading or notarized Certificate of Compliance from the Supplier serving as proof of purchase shall be submitted if requested by the Engineer. Document shall include date of sale, quantity, lot number, and address of Supplier. This shall match the seed tag. Notary shall not work for either the Contractor or seed supplier.

Plant Certification

Plant Certification shall be per the applicable requirements of Subsection 771, PLANTING TREES, SHRUBS AND GROUNDCOVER, of the Standard Specifications. The nursery source shall certify the provenance or origin of all plants.

Other Material: Submittals shall be per the respective item.

MATERIALS

Sediment Control Barrier and Erosion Prevention Measures
Sediment control barriers shall be per Item 767.121.

Erosion prevention measures for disturbed areas adjacent to the Replication Area shall include but not necessarily be limited to compost blankets, seeding, and/or combinations thereof as approved by the Engineer.

Sediment controls and erosion prevention devices and measures shall be compensated under the respective items.

Wetland Soil

Soil appropriate for the Replication Area may be either hydric soil excavated from the impacted wetland, a manufactured mix of compost and on-site borrow, or a combination thereof, as approved by the Engineer.

ITEM 755.35 (Continued)

Hydric soil from the impacted wetland area may be spread on the surface of the constructed Replication Area as an inoculant or can be placed in a bulk fashion in a roughly 1:1 ratio of area and depth. Soil shall be handled such that the original soil structure is preserved and shall not be compacted, screened, or otherwise processed.

Hydric soil from the impacted wetland that is infested with invasive plant species identified on the Massachusetts Invasive Plant Advisory Group (MIPAG) shall not be used in the Replication Area unless approved by the Wetland Specialist and Engineer. To the extent possible, infested soil shall be disposed of within the project limits in an upland area outside of regulated areas and as approved by the Invasive Plant Management Strategy item (if in the contract) or by the Engineer.

A manufactured mix suitable for wetlands shall consist of on-site borrow from the proposed Replication Area (if approved by the Wetland Specialist and Engineer) thoroughly mixed with compost to achieve a target organic carbon content of 10-12% (up to 21% percent organic matter) by dry weight. The organic material used for mixing shall be well or partially decomposed. Clean leaf compost is the preferred soil amendment to achieve these standards though other materials may be used if approved by the Wetland Specialist and Engineer. Note that "clean" refers both to a negligible amount (<1%) of physical contaminants such as plastic and to the lack of chemical contaminants that might pose a hazard to plants or animals. Off-site borrow may be used for mixing if approved in advance by the Engineer.

No soil or soil amendment shall be brought on site without approval of the material source by the Wetland Specialist and the Engineer. Soils used in the replacement area shall be free of rocks greater than 4 inches in diameter.

Plants

Plant material shall conform to the applicable requirements of Subsection 771, PLANTING TREES, SHRUBS AND GROUNDCOVER, of the latest edition of the Standard Specifications and as amended below.

Plants shall be native species, not cultivars. To the extent possible, plants shall originate from the applicable EPA Level III Ecoregion.

Plant species and sizes to be included in the Replication Area shall be as specified on the plans.

Requests for substitutions shall be submitted in writing to the Engineer for review by the Wetland Specialist, MassDOT Landscape Architect, and, if required, the relevant regulatory agency at least thirty (30) days prior to planting. All proposed substitutes shall be in conformance with the requirements herein and suitable for the site conditions.

Transplanting and plant material collected from the wild is prohibited unless approved in writing by the Engineer. Plants shall be selected from certified nurseries that have been inspected by state and/or federal agencies.

Seed Mix

Seeding shall conform to the Standard Specifications Section M6, ROADSIDE DEVELOPMENT MATERIALS.

ITEM 755.35 (Continued)

Wetland Mix – FACW Meadow Mix:

	Botanical Name	Common Name	% PLS by Weight
Grass			
	Carex vulpinoidea	Fox Sedge	26.00%
	Elymus riparius	Riverbank Wild Rye	23.00%
	Carex lurida	Shallow Sedge	17.00%
	Carex lupulina	Hop Sedge	8.00%
	Scirpus atrovirens	Green Bulrush	3.00%
	Juncus effusus	Soft Rush	2.50%
	Cinna arundinacea	Sweet Woodreed	2.00%
	Carex comosa	Bearded Sedge	2.00%
	Glyceria canadensis	Manna Grass	1.00%
	Scirpus cyperinus	Woolgrass	1.00%
	Juncus tenuis	Path Rush	0.50%
			86.00%
Herb/Forb			
	Verbena hastata	Blue Vervain	4.00%
	Asclepias incarnata	Swamp Milkweed	2.00%
	Aster prenanthoides	Zig Zag Aster	1.00%
	Sisyrinchium angustifolium	Narrowleaf blue-eyed grass	1.00%
	Eupatorium maculatum	Joe-pye Weed	1.00%
	Aster puniceus	Aster - Swamp	1.00%
	Aster novae-angliae	New England Aster	1.00%
	Vernonia noveboracensis	New York Ironweed	1.00%
	Eupatorium perfoliatum	Boneset	1.00%
	Aster umbellatus	Flat Topped White Aster	0.50%
	Mimulus ringens	Monkey Flower	0.50%
			14.00%
			100.00%

Seeding Rate:
Species ecotype shall be as native to New England region as possible. Apply this mix at 20 lbs PLS/acre.

Fertilizers shall not be used.

ITEM 755.35 (Continued)

Water

The Contractor shall provide water and all equipment required at no extra cost. Water shall be suitable for irrigation and free from ingredients harmful to plants and wildlife. Water from the adjacent water bodies or waterways shall not be utilized. It is the Contractor's responsibility to correct injury or damage due to the lack of water, too much water, or use of contaminated water.

Mulch/Compost Blanket for Seeding

Hydromulch shall be per the manufacturer's recommendations and shall be wood fiber or straw mulch only. Mulch shall be incidental to seeding.

Compost Blanket may be used in lieu of mulch for seeding. Compost Blanket shall meet the material and submittal requirements of that Item and shall be applied as specified below. Compost Blanket shall be compensated under that item.

CONSTRUCTION METHODS & SEQUENCE

SITE PROTECTION MEASURES

Minimizing Damage

The Contractor shall plan and execute operations in a manner minimizing the amount of excavated and exposed fill or other foreign materials that could be washed or otherwise carried into Replication Area and nearby resource areas.

Construction of and access to the Replication Area shall minimize damage to existing vegetation and soils as specified herein. Damage to soils or vegetation shall be repaired to the satisfaction of the Engineer and at the Contractor's expense. If required for soil remediation, tilling and the addition of compost shall be at the Contractor's expense.

Wetland topsoil shall be deposited and graded in the Replication Area in a manner that minimizes travel and subsequent compaction of the subgrade (including any specified pit and mound topography) to the extent practicable, including use of track mounted excavators as appropriate. Should soils be compacted, they shall be loosened by a method such as disking, spring-tooth harrowing and/or rototilling. The Contractor shall use boards, timber or composite mats, or other approved materials as necessary, to protect existing and/or new wetlands from compaction due to heavy foot traffic or if equipment is required to travel over wetland soil. All labor and materials required for protection and preservation of site shall be incidental to this item.

ITEM 755.35 (Continued)

Stockpiling of Soil

Stockpiling of soil, including hydric soil for replication, shall be at least 100 feet from the edge of the bordering and isolated vegetated wetlands and inland banks, unless approved otherwise by the Engineer. Stockpiled soils shall be securely stabilized and contained. Any areas of exposed soil or stockpiles within and adjacent to the Replication Area that will remain inactive for more than 7 calendar days shall be sown with a mix of rapid germinating annual grasses (e.g., annual rye) covered with a layer of straw mulch applied at a rate of 90 pounds per 1,000 square feet. As necessary, the mulch shall be anchored with a tacking coat (non-tar) applied by a hydro seeder or other method recommended by the Wetland Specialist in consultation with the Engineer. In the event that there is excess borrow, it shall be disposed of under Excavation, Item 120..

Sediment Barriers

Placement: Sediment barriers shall be installed along the downslope perimeter of the Replication Area beginning and ending in the surrounding upland so that no excavated material or disturbed soil can enter adjacent wetlands or waters. Where construction work is immediately upgradient of the wetland, barriers shall be located so as to protect the Replication Area until slopes are stabilized. Sediment barriers shall be in place and approved by the Engineer prior to excavation work. No work shall take place outside the barriers.

Maintenance: The Contractor shall ensure that all sediment barriers function as intended and at all times per the specifications of those respective items.

Existing Trees to Remain

Tree protection shall be per the relevant specifications and as shown on the plans or as required by the Engineer. To protect root systems of existing trees to remain, the limits of the Replication Area may be adjusted, but, the total area of replication required by the permits shall not be reduced. Access route may be adjusted as required.

Trees to be retained as snags (upright dead or dying trees left for wildlife habitat) within or adjacent to the Replication Area shall be as shown on the plans or as directed by the Wetland Specialist or Landscape Architect during the initial site walk. Trees to remain as snags shall be clearly marked prior to clearing. Trees that pose a potential fall hazard (i.e., are near a roadway) should have limbs and trunk cut such that the tree does not pose a fall hazard.

Coarse woody debris in the form of cut trees, stumps, logs, and brush shall be incorporated as shown on the plans or as directed by the Wetland Specialist or Landscape Architect. On site material shall be selected and marked by the Wetland Specialist, retained on the project site, and placed as specified below under Placement of Coarse Woody Debris.

All trees, stumps, or brush not specified to remain shall be removed and shall not be stockpiled in the wetland resource areas while awaiting disposal.

Work shall be coordinated with Clearing or Tree Removal Item and compensated under that Item.

ITEM 755.35 (Continued)

PRE-WETLAND CONSTRUCTION SITE WALK

Delineating the Replication Area and Access Route. The Contractor shall stake out the Replication Area boundaries and the intended access route and set grade stakes for approval by the Wetland Specialist and Engineer. Following staking and demarcation of areas, the Engineer and Wetland Specialist shall approve or modify as necessary the limits of work, the access route, final location and configuration of replication, grade stake elevations, proposed location of sediment barriers, and review proposed construction methods.

As part of the delineation and approval process, the Wetland Specialist shall mark trees to be converted to snags, select course woody debris to be retained for re-use, and select rocks or other elements to be used for habitat features.

Invasive Plants: As part of the initial site walk, the wetland to be impacted and the proposed replication site shall be inspected for the presence of invasive plants. If invasive plants are found they shall be addressed as described herein under Invasive Plants.

SOIL WORK

Final grades in the Replication Area shall meet the target elevations as shown on the Plans or as adjusted by the Wetland Specialist to achieve the desired hydrology and micro-habitat. If adjustments are required, a Request for Information (RFI) shall be submitted to the Engineer for approval. Adjustments shall be documented and included in the As-Built plans (if required) and/or other applicable required documents.

Excavation & Grading

When required by permits, the Wetland Specialist shall notify MADEP and the ACOE (as applicable) at least 72 hours prior to excavation.

Soil in the proposed wetland areas that must be removed for grades to conform to the proposed elevations shall be stripped and disposed of, or, if suitable for reuse, be stockpiled in an approved location. Stockpiled soils shall be kept wet and not allowed to dry out. Procedures for maintaining appropriate moisture levels shall be documented by the Wetland Specialist and provided to the Engineer and the Contractor.

Replication area shall be excavated as shown on the drawings. Where replication area is adjacent to existing reference wetland, finish grade of replication shall generally match existing grades and micro-topography, notwithstanding any deviations that are necessary to achieve the desired hydrology and habitat in the Replication Area.

Prior to placement of backfill, scarify subgrade to a depth of 4 to 6 inches.

ITEM 755.35 (Continued)

Placement of Wetland Soil

Following excavation, scarification, and grading of sub-grade, and after the sub-grade elevations are approved by the Wetland Specialist, suitable soil previously removed or an evenly mixed organic/mineral soil created on-site shall be spread to the design depth and thickness over the proposed wetland areas as shown on the plans and as directed by the Wetland Specialist.

Vehicles used to transport soil from offsite shall be washed or cleaned with air pressure to prevent exotic or invasive seeds or root fragments from contaminating the Replication Area.

Final Grading

The finished grade of the Replication Area shall be at an elevation that will provide an unrestricted hydrologic connection between the Replication Area and adjacent resource areas. The hydrologic connection should be in keeping with restoring the intended function of the replacement wetland relative to the impacted reference wetland. The Contractor shall verify that this elevation is not at a level that could negatively alter the hydrology of an adjacent wetland. Microtopography in the form of hummocks, pits and mounds shall be as shown on the plans or as adjusted by the Wetland Specialist. Final elevations and grading of wetland soil shall be approved by the Wetland Specialist and the Engineer.

To avoid compaction once soil has been placed, no heavy equipment shall travel across placed soil and no work shall occur in wet or moist soil. Soil that is compacted due to construction activities shall be replaced with soil as specified herein and at the Contractor's expense.

RESTORING VEGETATION

Placement of Coarse Woody Material

If specified within this Contract or if directed by the Wetland Specialist or Landscape Architect during the initial site walk, woody debris shall be placed in the Replication Area and/or adjacent upland buffer. Material shall be placed as shown on the plans or as directed following placement of wetland soil and prior to application of compost and/or seed. Woody material shall cover a minimum of 5-20 percent of the Replication Area, depending on whether it is a meadow or woodland wetland and how much wood is available from construction clearing. Where trees are cut for construction purposes, logs of a minimum length of 8 feet must comprise a minimum of 50% of the woody material left on site. Brush shall be included along with logs and stumps as directed. Woody material shall be placed in a deliberate and naturalistic manner.

Planting

Following placement of wetland soil and approval of final grade and conditions, Replication Area shall be planted. Planting shall conform to SUBSECTION 771 PLANTING TREES, SHRUBS AND GROUNDCOVER of the Division I Standard Specifications and as amended below.

Planting Season shall be May 15-June 15 and September 1-November 1 unless otherwise specified in applicable permit conditions.

ITEM 755.35 (Continued)

Prior to planting, the Wetland Specialist shall approve the condition of the plant material and the method of installation and shall oversee the planting work. Replication Area shall be planted in the dry. Plants shall be placed according to the planting details and within the range of target elevations and at the spacing shown on the Plans or, if spacing is not indicated on the Plans, at the direction of the Wetland Specialist. Unless otherwise noted on the Plans, final plant locations shall be determined on site and located with regard to expected hydrology, plant growth characteristics, habitat desired, and water protection.

Plant material shall be installed as soon as possible after delivery. Plants stored on-site prior to installation shall be stored in the shade and watered twice daily up until time of installation. Plants showing signs of stress or compromised health may be rejected by the Engineer or Wetland Specialist and shall be replaced at the Contractor's expense.

Plant material shall be furnished and installed as indicated including all labor, materials, plants, equipment, incidentals, re-setting of plants (frost heaves, etc), irrigation, re-planting and clean up. If previously approved species are not available at the time of planting, the Wetland Specialist may propose substitutions relative to species, size, and quantities for review and approval by the MassDOT Landscape Architect. Upon approval by MassDOT, substitutions shall be approved by the regulating authority, if and as necessary. Provisions shall be made for a growth warranty of at least two (2) calendar years from the date of Conditional Acceptance as described below or as required by permits.

Seeding

Following placement of wetland soil and planting (if included), the Replication Area shall be seeded using one of the following methods:

- Broadcast by hand or with a hand-held spreader followed by application of straw mulch. If necessary, seed shall be lightly raked to insure good seed-to-soil contact.
- Hydro-seeded with hydro mulch per the Standard Specifications and per the manufacturer's directions.
- Hand broadcast seed with Compost Blanket pneumatically applied at the same time to ensure light cover of soil topdressing over seed.

If spring conditions are drier than usual, supplemental watering may be required. If sowing during the summer months, supplemental watering will likely be required until germination.

If required, seeding limits for different seed mixes shall be determined by the Wetland Specialist.

PLANT ESTABLISHMENT AND INVASIVE MANAGEMENT

Plants shall be watered as necessary to maintain healthy establishment. Plants that fail by September 1 after spring planting or by May 15 after fall planting shall be replaced within the immediate or next planting period and at the Contractor's expense.

ITEM 755.35 (Continued)

Seeding that fails to established according to the conditions of acceptance below shall be over-seeded as required by the Engineer. Washouts and channels shall be repaired and stabilized prior to overseeding. Excessive weed growth shall be pulled out by the roots or, with approval from the Engineer, cut prior to over-seeding. Soil repair and weed control are incidental to this item.

Invasive Plants: Corrective measures shall be taken to remove or treat invasive plant species in the Replication Areas. Invasive plants shall include those listed as invasive by Massachusetts Invasive Plant Advisory Group (MIPAG) and the US Army Corp of Engineer's New England District's Compensatory Mitigation Guidance

The strategy for chemical and/or manual removal shall be as directed by the Wetland Specialist, and shall be incidental to this Item.

CONDITIONAL ACCEPTANCE OF WORK

Conditional Acceptance shall indicate approval of the wetland construction work and agreement that work has been done according to plan or modified as approved.

Upon completion of construction, the Contractor shall submit a Request for Conditional Acceptance that includes a brief narrative from the Wetland Specialist demonstrating that the wetland replication construction work was done according to plans (or how modified) and meets required permit conditions. The narrative shall include, photo-documentation of pre-construction conditions as well as soil work, planting, and seeding. Seed tags shall be submitted as part of the Request for Conditional Acceptance.

Upon receipt of a Request for Conditional Acceptance, the Engineer, the Wetland Specialist, and regulatory representative (if required) shall assess the Replication Area and surrounding areas. At a minimum, the following conditions shall be included in the narrative and reviewed as part of the on-site assessment of whether:

- The final finished target elevations have been met and maintained relative to the approved plans and reference wetland. Areas that are too high or too low should be identified along with suggested corrective measures.
- Hydrology meets performance standards.
- Specified seed mix has been seeded. If inspected 30 or more days after seeding, seeded species in the wetland and adjacent upland shall show signs of good germination and healthy growth.
- Planted woody and herbaceous species meet specifications and are establishing well.
- Soils are stabilized and there is no sediment in the wetland and no channeling of slopes.
- There are no invasive plants visible in the replication area.

Upon approval that the work meets the above conditions, MassDOT will issue a letter of Conditional Acceptance. If the Wetland Replication work is not approved, MassDOT will issue a rejection letter requiring corrective actions. The Wetland Specialist shall recommend corrective actions. Work not approved shall be addressed by the Contractor at no extra cost.

ITEM 755.35 (Continued)

Wetland Specialist shall be compensated under Item 755.75.

Erosion of adjacent slopes or the flow of sediments into the wetland between Conditional and Final Acceptance shall be immediately addressed by the Contractor.

REQUEST FOR CERTIFICATE OF COMPLIANCE

If required, a request for a Certificate of Compliance (Partial or Full) pursuant to the Massachusetts Wetlands Protection Act regulations shall be prepared and submitted to MassDOT within 30 days following Conditional Acceptance.

The Request for Certificate of Compliance shall include the following:

- A brief narrative of the work on company letterhead signed by the Wetland Specialist. Narrative shall be prepared as a MS Word document and shall include substantive explanation that demonstrates compliance with EACH relevant permit condition. Narrative shall note variations from the originally permitted design.
- As-built Drawings signed by the Contractor's PE registered in the Commonwealth of Massachusetts. As-built drawings shall show hydrologic conditions, status of plantings and seeding, and shall include a narrative and minimum of 4 photographs documenting site conditions. Plans should note variations from the originally permitted design.

  When required, drawings shall meet the Army Corp of Engineer's New England District's Compensatory Replication Guidance, including: scale in the range of 1"=20' to 1" = 100', contours at 1' intervals, spot elevations for intermediate elevations, and polygons outlining each Replication Area, and, as applicable, plant community types. The As-built Drawings shall be provided to the Engineer electronically in Portable Document Format (PDF). If requested by the Engineer, the Drawings shall be provided in printed paper format (11" x 17" sheets, unless otherwise directed). Drawings must be scalable.

- Other documents as required.

FINAL ACCEPTANCE OF WORK

Following one full growing season, the Contractor shall submit a Request for Final Acceptance. Submittal shall include a brief narrative of conditions. Upon receiving the Request, the Engineer, Contractor, Wetland Specialist and regulatory representative (if required) shall assess the Replication Area.

ITEM 755.35 (Continued)

The following conditions shall be inspected and approved for acceptance and payment.

- Hydrology is functioning as intended.
- The desired seeded species are establishing well and cover at least 95 percent of the Replication Area, excluding areas of open water areas or planned bare soil.
- No sediments have entered the wetland.
- Adjacent slopes are stabilized with desirable vegetation.
- All planted species (if included) are living and establishing well.
- There are no visible invasive plants.
- Silt fence and non-biodegradable sediment barrier materials have been removed.

If the mitigation work does not meet the above condition and is not approved, MassDOT will issue a rejection letter requiring corrective action. The Wetland Specialist shall recommend corrective actions. Work not approved will be addressed by the Contractor at no extra cost.

Wetland Specialist shall be compensated under Item 755.75.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 755.35 will be paid for at the Contract unit price per Lump Sum, which price shall include all labor, materials, equipment, submittals, maintenance, all required soil, site preparation, grading, wetland seeding, mulching, watering, monitoring wells, registered surveyor, as-built plans, Request for Certificate of Compliance, and all incidental costs necessary to complete the work as `.

Payment shall be as follows:

- 60% upon Conditional Acceptance.
- 20% after receipt and acceptance of Certificate of Compliance by the Engineer and once all permit construction requirements have been met and approved.
- 20% upon Final Acceptance.

Excavation will be paid under Item 120.
Sediment Control Barrier will be paid under Item 767.121
Wetland Specialist will be paid under Item 755.75
Compost Blanket will be paid under Item 751.7
Tree and Shrub Plantings will be paid under Items 776.525, 778.157, 793.714, 796.769, 796.771, & 796.772

ITEM 755.75 WETLAND SPECIALIST HOUR

Work under this Item shall be for services of a Wetland Scientist, Wetland Ecologist, Restoration Ecologist, or other professional with similar qualifications hereafter referred to as the "Wetland Specialist."

"Wetland Mitigation" shall be used herein for applicable wetland work. For this project, applicable wetland work is for: ***Item 755.35 Inland Wetland Replication Area*** (creation of a new wetland)**.**

The Wetland Specialist shall demonstrate knowledge and expertise to coordinate and oversee all work associated with the Wetland Mitigation as defined herein, as shown on the Plans, as required by permits, and as specified under the relevant Wetland Mitigation items.

For all onsite work, the Wetland Specialist shall sign in and sign out with the Engineer.

The Wetland Specialist shall not be from the same company as the company responsible for planting, seeding, and/or maintaining the wetland.

QUALIFICATIONS

The Wetland Specialist shall have a minimum of five (5) years of experience with construction and monitoring of wetland mitigation areas similar in size, type, and complexity to the Contract mitigation. When required by permits, at least ten (10) years of experience may be required. The Wetland Specialist shall be thoroughly versed in the Commonwealth of Massachusetts Wetlands Protection Act (MGL C.131, s.40), U.S. Army Corps of Engineers New England District Compensatory Mitigation Guidance, and all other relevant regulations of the Massachusetts Department of Environmental Protection and the U.S. Army Corps of Engineers New England District.

SUBMITTALS - QUALIFICATION

Within sixty (60) days following the Notice to Proceed, the Contractor shall provide proof of qualifications for the Wetland Specialist to the Engineer for approval. Submittals shall include, but not be limited to, the following:

- Resume of the individual on-site implementing the Wetland Specialist work. If the Wetland Specialist changes over the course of the project, the new individual shall submit resume and qualifications for approval 30 days prior to doing any work on-site.

ITEM 755.75 (Continued)

- Resume of any personnel working on-site in place of the Wetland Specialist. Individual shall be approved prior to work on-site.
- Narrative describing the company, its expertise, technical qualifications and experience with wetland construction.
- At least three (3) references from prior work of a similar nature completed in the last five (5) years and by the individuals who will perform the work. Provide contact information for each reference including address, phone number and email.
- A summary of each reference project including nature of the work, project size, dates, and period of construction and monitoring, methodologies used, and summary of success (or not) in terms of meeting performance objectives. Summary shall include a minimum of one before and one after photo for each project.

SUBMITTALS – DOCUMENTATION AND REPORTS

Wetland Construction Oversight

Wetland Specialist shall provide documentation of pre-existing conditions and wetland construction as specified below and as part of fulfilling the Scope of Work described below. Documentation shall include photos that are clear and legible. Photos are incidental to this item.

- ***Site Walk Prior to Disturbance and Construction of Wetlands:*** Provide brief assessment with photos, including documentation of the existing wetlands to be impacted (both permanent and temporary), proposed wetland replication area, and reference/model wetland areas (typically an adjacent undisturbed wetland or the existing wetland to be impacted). Photos of existing wetlands that will be temporarily impacted shall include a view from at least 3 angles.
- ***Excavation and Grading:*** Documentation shall include minimum of two photos of the excavated wetland and two photos after final grading prior to planting and seeding. For restoration areas, photos shall show soil preparation (i.e, tilling and grading), if applicable.
- ***Approval of Subgrades****:* The Wetland Specialist shall inspect the sub-grade of the Replication Area to ensure that proper hydrology is likely to be established and shall provide the Engineer with written confirmation and photographs upon completion of subgrade excavation work. Written confirmation shall include recommended field adjustments, based on field observations, to achieve the desired hydrology and designed wetland system.
- ***Planting and Seeding:*** Provide assessment and photos of vegetation upon completion of planting and seeding work.

Wetland construction documentation and reports shall be submitted with Request for Conditional Acceptance and for the Order of Conditions, Water Quality Certifications, and other regulatory permits as required.

ITEM 755.75 (Continued)

Requests for Acceptance of Work & Regulatory Compliance

The Wetland Specialist shall submit the following documents if and as specified herein and under Item the relevant Wetland Mitigation items:

- Request for Conditional Acceptance.
- Request for Certificate of Compliance (Partial or Full) when applicable.
- Request for Final Acceptance.

SCOPE OF WORK

In the event of discrepancies with the applicable permits, the Wetland Specialist shall submit a Request for Information (RFI) to the Engineer.

General

The Wetland Specialist shall be responsible for the following:

- Review and have a comprehensive knowledge of the environmental permits relevant to the specific mitigation work being done so as to ensure compliance throughout the duration of the contract.
- Identify and inform the Contractor and Engineer of unique site conditions which may require adjustments to the schedule, design, or construction methods. For example, wildlife nesting, illegal dumping, or rare species.
- Identify and inform the Contractor and Engineer of any sediment or erosion control problems observed within mitigation areas.
- Advise so as to avoid impacts to adjacent areas and regulated wetland resources.
- Participate in necessary meetings as required by permits and when requested by the Engineer.

Inspections & Construction Oversight

The Wetland Specialist shall be responsible for, but not limited to, the following:

- Pre-Construction Site Walk
    - Following surveying, flagging, and staking of all relevant boundaries and elevations by the Contractor, the Wetland Specialist shall walk the site with the Engineer and the Contractor to review existing and proposed conditions, recommend changes if necessary, and approve the following: location and boundaries of the Mitigation Area, target elevations and grades, location of tree protection associated with the Mitigation Area, and final layout and limits of clearing for access route.
    - Select and mark snags, logs, and woody material to be retained for placement in the Wetland Mitigation, as appropriate.
    - Note invasive plants in and adjacent to Wetland Mitigation.
    - Provide summary report if and as specified under Wetland Mitigation items.

ITEM 755.75 (Continued)

- Excavation, Soil Placement, Grading for Replication Areas
    - Approve excavated depth and grading for appropriate wetland hydrology, subsoil preparation, and finished grade of placed wetland soil.
    - Adjust grades as required and approve microtopography. If grades need to be adjusted, submit an RFI to the Engineer.
    - If requested by the Engineer, the Wetland Specialist shall inspect stockpiled wetland soil for moisture content and signs of undesirable weeds.
- Soil Protection and Restoration Measures for Restoration Areas
    - Review and approve methods of soil protection and restoration if required.
    - Confirm decompaction will adequately restore appropriate wetland hydrology. If decompaction measures need to be adjusted, submit an RFI to the Engineer.
- Re-vegetation of Mitigation Area
    - Placement of woody material to be re-used.
    - Verify seed used complies with specifications and site conditions, determine limits for wetland seeding based on elevations, approve seeding and mulching methods, and collect seed tags to submit with Request for Conditional Acceptance.
    - Review planting methods (if applicable) prior to installation and oversee layout of wetland plants.

Conditional Acceptance

Upon completion of construction of the wetland, as part of the Request for Conditional Acceptance, the Wetland Specialist shall provide a brief narrative demonstrating that the wetland construction work was done according to plans (or how modified) and meets the conditions required for acceptance as specified under the Wetland Mitigation items. Submittal shall include a report and photo documention of pre-construction conditions, construction work, seeding, planting, and other work as specified under the Wetland Mitigation items. Photos of completed Wetland Restoration areas shall include the same views as the pre-construction reference photos.

Upon receipt of a Request for Conditional Acceptance, the Engineer, the Wetland Specialist and regulatory representative (if required) shall assess the Wetland Mitigation and surrounding area to ensure that it meets the conditions specified under the Wetland Mitigation items.

Upon approval, MassDOT will issue a letter of Conditional Acceptance. If the Wetland Mitigation work is not approved, MassDOT will issue a rejection letter requiring corrective action. The Wetland Specialist shall recommend corrective actions.

Request for Certificate of Compliance

If required, a Request for Certificate of Compliance shall be prepared and submitted to the Engineer immediately following Conditional Acceptance. Request shall be as specified under the relevant Wetland Mitigation items.

ITEM 755.75 (Continued)

Request for Final Acceptance

Following one full growing season, the Wetland Specialist shall provide a brief narrative of the status of the Wetland Mitigation to be submitted with the Request for Final Acceptance.

Upon receipt of the Request, the Engineer, the Wetland Specialist and regulatory representative (if required) shall assess the Wetland Mitigation and surrounding area to ensure that it meets the conditions specified under the relevant Wetland Mitigation items.

If the Wetland Mitigation is not approved, MassDOT will issue a rejection letter requiring corrective action. The Wetland Specialist shall recommend corrective actions.

METHOD OF MEASUREMENT

Item 755.75 Wetland Specialist shall be measured per hour for on-site service provided by the Wetland Specialist.

Work shall include all inspections, photos, submittals, and associated tasks for construction and restoration oversight, narratives for Conditional and Final Acceptance, Request for Certificate of Compliance (Partial or Full) if required, documentation required for permits, and all other work specified above. Payment shall not include travel time or time spent off-site on reports. Decimal Pay Limits will be 0.25 hours.

BASIS OF PAYMENT

Item 755.75 Wetland Specialist shall be paid at the Contractor bid price for each hour, or fraction thereof, spent on-site to perform the work as described above. Reports and photo documentation are required for payment.

ITEM 756. NPDES STORM WATER POLLUTION PREVENTION PLAN LUMP SUM

This Item addresses the preparation and implementation of a Storm Water Pollution Prevention Plan required by the National Pollutant Discharge Elimination System (NPDES) and applicable Construction General Permit (CGP) issued by the U.S. Environmental Protection Agency (EPA).

Pursuant to the Federal Clean Water Act, construction activities which disturb one acre or more are required to apply to the EPA for coverage under the NPDES General Permit for Storm Water Discharges from Construction Activities. The Contractor shall be fully responsible for compliance with the most recently issued CGP and any subsequent revisions. Should a fine or damages be assessed against it, or MassDOT, as a result of a local, state, or federal enforcement action due to non-compliance with the CGP, the Contractor shall take full responsibility.

The NPDES CGP requires the submission of a Notice of Intent (NOI) to the EPA prior to the start of construction (defined as any activity which disturbs land, including clearing and grubbing). There is a fourteen (14) day review period commencing from the date on which EPA enters the Notice into their database. Based on the review of the NOI, EPA may require additional information, including but not limited to, the submission of the Storm Water Pollution Prevention Plan (SWPPP) for review. Work may not commence on the project until final authorization has been granted by EPA. Any additional time required by EPA for review of submittals will not constitute a basis for claim of delay.

In addition, if the project discharges to an Outstanding Resource Water, vernal pool, or is within a coastal ACEC as identified by the Massachusetts Department of Environmental Protection (DEP), a separate notification to DEP is required. DEP may also require submission of the Storm Water Pollution Prevention Plan for review and approval. Filing fees associated with the notification to DEP and, if required, the SWPPP filing to DEP shall be paid by the Contractor.

The CGP also requires the preparation and implementation of a SWPPP in accordance with the afore-mentioned statutes and regulations. The Plan will include the CGP conditions and detailed descriptions of controls of erosion and sedimentation to be implemented during construction. The contractor shall prepare the SWPPP and update it as necessary. The Contractor shall submit the Plan to the Engineer for approval at least four (4) weeks prior to any site activities. It is the responsibility of the Contractor to comply with the CGP conditions and the conditions of any state Wetlands Protection Act Order, Water Quality Certification, Corps of Engineers Section 404 Permit and other environmental permits applicable to the project and to include in the SWPPP the methods and means necessary to comply with applicable conditions of said permits.

It is the responsibility of the Contractor to complete the SWPPP in accordance with the EPA CGP, provide all information required, and obtain any and all certifications as required by the CGP. Any amendments to the SWPPP required by site conditions, schedule changes, revised work, regulations, construction methodologies, and the like are the responsibility of the Contractor. Amendments will require the approval of the Engineer prior to implementation.

ITEM 756. (Continued)

In addition to the CGP requirements for inspections, MassDOT requires inspection of all erosion controls and site conditions on a weekly basis. Inspections are also required at portions of sites that discharge to sediment or nutrient impaired or high quality waters per the CGP when each incidence of rainfall exceeding 0.25 inches in twenty-four hours or after snowmelt discharge from a storm event that produces 3.25 inches or more of snow within twenty-four hours occurs. The CGP requires that inspections be performed by a qualified individual as outlined in the CGP. MassDOT requires proof of completion of a 4 hour minimum sedimentation and erosion control training class current to the latest CGP. This individual can be, but not limited to, someone that is either a certified inspector, certified professional, or certified storm water inspector. The documentation shall be included as an appendix in the SWPPP. The inspector's qualifications shall be submitted to the Engineer for approval prior to beginning any work. This individual shall be on-site during construction to perform these inspections. In addition, if the Engineer determines at any time that the inspector's performance is inadequate, the Contractor shall provide an alternate inspector. Written weekly inspection forms, storm event inspection forms, and Monthly Summary Reports must be completed and provided to the Engineer. Monthly Summary Reports must include a summary of construction activities undertaken during the reporting period, general site conditions, erosion control maintenance and corrective actions taken, the anticipated schedule of construction activities for the next reporting period, any SWPPP amendments, and representative photographs.

The Contractor is responsible for preparation of the Plan, all SWPPP certifications, inspections, reports and any and all corrective actions necessary to comply with the provisions of the CGP. The Standard Specifications require adequate erosion control for the duration of the Contract. All control measures must be properly selected, installed, and maintained in accordance with manufacturer specifications and good engineering practices. If periodic inspections or other information indicates a control has been used inappropriately or is no longer adequate, it is the responsibility of the Contractor to replace or modify the control for site conditions at no additional cost to the Department. Contractor must maintain all control measures and other protective measures in effective operating conditions and shall consider replacement of erosion controls for each construction season.

The work under this Item shall also include the preparation, submission and implementation of a Flood Contingency Plan. The plan shall address the potential need for the temporary relocation of construction and auxiliary equipment situated within the 1% annual chance of flooding zone to designated upland locations above the Base Flood Elevation during flood events. The Flood Contingency Plan shall address any additional MassDEP-required information requirements, as applicable. The Flood Contingency Plan shall be submitted to the Engineer for review and approval at the same time as the SWPPP.

This Item addresses acceptable completion of the SWPPP, any revisions/amendments required during construction, preparation of monthly reports and Flood Contingency Plan. In addition, any erosion controls beyond those specified in bid items which are selected by the

ITEM 756. (Continued)

Contractor to facilitate and/or address the Contractor's schedule, methods and prosecution of the work shall be considered incidental to this Item.

The CGP provides specific requirements for temporary and final stabilization. This shall be incorporated into the project schedule. The permit defines specific deadline requirements for Initial Stabilization ("immediately", i.e., no later than the end of the next work day following the day when earth-disturbing activities have temporarily or permanently ceased) and for Complete Stabilization Activities (no later than 14 calendar days after the initiation of stabilization). Stabilization criteria for vegetative and non-vegetative measures are provided in the CGP.

The CGP requires the submission of a Notice of Termination (NOT) from all operators when final stabilization has been achieved, as well as removal and proper disposal of all construction materials, waste and waste handling devices, removal of all equipment and construction vehicles, removal of all temporary stormwater controls, etc. Approval of final stabilization by the Engineer and confirmation of submission of the NOT will be required prior to submission of the Resident Engineer's Final Estimate. The permittee shall use EPA's website to prepare and submit the NOT.

BASIS OF PAYMENT

Item 756 will be paid for at the Contract unit price Lump Sum, which price shall include all labor, materials, equipment, SWPPP & Flood Contingency Plan preparation, revisions/addenda during construction, monthly reports, filing fees, and all incidental costs required to complete the work.

Payment of 50% of the Lump Sum price of this Item will be made upon acceptance of the NPDES Stormwater Pollution Prevention Plan & Flood Contingency Plan.

Payment of 40% of the Lump Sum price of this Item will be will be paid in equal monthly installments distributed across the time remaining in the accepted baseline schedule until substantial completion.

The remaining 10% of the Lump Sum price of this Item will be paid following accepted submission of a Notice of Termination (NOT) when final stabilization has been achieved.

ITEM 767.121 SEDIMENT CONTROL BARRIER FOOT

The work under this Item shall conform to the relevant provisions of Subsections 670, 751 and 767 of the Standard Specifications and shall include the furnishing and placement of a sediment control barrier. Sediment control barrier shall be installed prior to disturbing upslope soil.

The purpose of the sediment control barrier is to slow runoff velocity and filter suspended sediments from storm water flow. Sediment barrier may be used to contain stockpile sediments, to break slope length, and to slow or prevent upgradient water or water off road surfaces from flowing into a work zone. Contractor shall be responsible for ensuring that barriers fulfill the intent of adequately controlling siltation and runoff.

Twelve-inch diameter (after installation) compost filter tubes with biodegradable natural fabric (i.e., cotton, jute, burlap) are intended to be the primary sedimentation control barrier. Photo-biodegradable fabric shall not be used.

For small areas of disturbance with minimal slope and slope length, the Engineer may approve the following sediment control methods:

- 9-inch compost filter tubes
- Straw bales which shall be trenched

No straw wattles may be used. Additional compost filter tubes (adding depth or height) shall be used at specific locations of concentrated flow such as at gully points, steep slopes, or identified failure points in the sediment capture line.

When required by permits, additional sediment barrier shall be stored on-site for emergency use and replacement for the duration of the contract.

Where shown on the plans or when required by permits, sedimentation fence shall be used in addition to compost filter tubes and straw bales and shall be compensated under that item.

Sediment control barriers shall be installed in the approximate location as shown on the plans and as required so that no excavated or disturbed soil can enter mitigation areas or adjacent wetlands or waterways. If necessary to accommodate field conditions and to maximize effectiveness, barrier locations may be shifted with approval from the Engineer. Barriers shall be in place prior to excavation work. No work shall take place outside the barriers.

MATERIALS AND CONSTRUCTION

Prior to initial placement of barriers, the Contractor and the Engineer shall review locations specified on the plans and adjust placement to ensure that the placement will provide maximum effectiveness.

ITEM 767.121 (Continued)

Barriers shall be staked, trenched, and/or wedged as specified herein and according to the Manufacturer's instructions. Barriers shall be securely in contact with existing soil such that there is no flow beneath the barrier.

Compost Filter Tube

Compost material inside the filter tube shall meet M1.06.0, except for the following: no peat, manure or bio-solids shall be used; no kiln-dried wood or construction debris shall be allowed; material shall pass through a 2-inch sieve; and the C:N ratio shall be disregarded.

Outer tube fabric shall be made of 100% biodegradable materials (i.e., cotton, hemp or jute) and shall have a knitted mesh with openings that allow for sufficient water flow and effective sediment capture.

Tubes shall be tamped, but not trenched, to ensure good contact with soil. When reinforcement is necessary, tubes shall be stacked as shown on the detail plans.

Straw Bales

Straw bales shall be used if shown on the plans or when specified by Orders of Condition or other permit requirements.

Bales should be placed in a single row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another. All bales should be either wire-bound or string-tied. Straw bales should be installed so that bindings are oriented around the sides (rather than along the tops and bottoms) of the bales in order to prevent deterioration of the bindings.

The barrier should be entrenched and backfilled. A trench should be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. The trench must be deep enough to remove all grass and other material which might allow underflow. After the bales are staked and chinked (filled by wedging), the excavated soil should be backfilled against the barrier. Backfill soil should conform to the ground level on the downhill side and should be built up to 4 inches against the uphill side of the barrier.

Each bale should be securely anchored by at least 2 stakes or re-bars driven through the bale. The first stake in each bale should be driven toward the previously laid bale to force the bales together. Stakes or re-bars should be driven deep enough into the ground to securely anchor the bales. For safety reasons, stakes should not extend above the bales but should be driven in flush with the top of the bale.

The gaps between the bales should be chinked (filled by wedging) with straw to prevent water from escaping between the bales. Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency. Wedging must be done carefully in order not to separate the bales.

ITEM 767.121 (Continued)

When used in a swale, the barrier should be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to assure that sediment-laden runoff will flow either through or over the barrier but not around it.

Sedimentation Fence

Materials and Installation shall be per Subsections 670.40 and 670.60 of the Standard Specifications and the following:

Sedimentation fence shall only be used if shown on the plans or when specified by Orders of Condition or other permit requirements.

When used with compost filter tubes, the tube shall be placed on a minimum of 8 inches of folded fabric on the upslope side of the fence. Fabric does not need to be trenched.

When used with straw bales, an 8-inch deep and 4-inch wide trench or V-trench shall be dug on the upslope side of the fence line. One foot of fabric shall be placed in the bottom of the trench followed by backfilling with compacted earth or gravel. Stakes shall be on the down slope side of the trench and shall be spaced such that the fence remains vertical and effective.

Width of fabric shall be sufficient to provide a 36-inch high barrier after fabric is folded or trenched. Sagging fabric will require additional staking or other anchoring.

MAINTENANCE

Maintenance of the sediment control barrier shall be per Subsection 670.60 of the Standard Specifications or per the Stormwater Pollution Prevention Plan (SWPPP), whichever is more restrictive.

The contractor shall inspect the sediment barrier in accordance with relevant permits. At a minimum, barriers shall be inspected at least once every 7 calendar days and after a rain event resulting in 0.25 inches or more of rainfall. Contractor shall be responsible for ensuring that an effective barrier is in place and working effectively for all phases of the Contract.

Barriers that decompose such that they no longer provide the function required shall be repaired or replaced as directed. If the resulting berm of compost within the fabric tube is sufficiently intact (despite fabric decay) and continues to provide effective water and sediment control, barrier does not necessarily require replacement.

DISMANTLING & REMOVING

Barriers shall be dismantled and/or removed, as required, when construction work is complete and upslope areas have been permanently stabilized and after receiving permission to do so from the Engineer.

ITEM 767.121 (Continued)

Regardless of site context, nonbiodegradable material and components of the sediment barriers, including photo-biodegradable fabric, plastic netting, nylon twine, and sedimentation fence, shall be removed and disposed off-site by the Contractor.

For naturalized areas, biodegradable, natural fabric and material may be left in place to decompose on-site. In urban, residential, or other locations where aesthetics is a concern, the following shall apply:

- Compost filter tube fabric shall be cut and removed, and compost shall be raked to blend evenly (as would be done with a soil amendment or mulch). No more than a 2-inch depth shall be left on soil substrate.
- Straw bales shall be removed and disposed off-site by the Contractor. Areas of trenching shall be raked smooth and disturbed soils stabilized with a seed mix matching adjacent seeding or existing grasses (i.e., lawn or native grass mix).
- Sedimentation fence, stakes, and other debris shall be removed and disposed off-site. Site shall be restored to a neat and clean condition.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 767.121 will be measured and paid for at the contract unit price per foot of sediment control barrier which price shall include all labor, equipment, materials, maintenance, dismantling, removal, restoration of soil, and all incidental costs required to complete the work.

Additional barrier, such as double or triple stacking of compost filter tubes, will be paid for per foot of tube installed.

Barriers that have been driven over or otherwise damage by construction activities shall be repaired or replaced as directed by the Engineer at the Contractors expense.

ITEM 772.1	**MIXED EVERGREEN PLANTINGS AT SUMMER STREET**	**EACH**
ITEM 772.2	**MIXED EVERGREEN PLANTINGS AT FORD AVENUE**	**EACH**
ITEM 776.525	**MAPLE - RED - 1-1.5 INCH CALIPER**	**EACH**
ITEM 778.157	**BIRCH - RIVER 1-1.5 INCH CALIPER**	**EACH**
ITEM 793.714	**COMMON SPICEBUSH 2-3 FEET**	**EACH**
ITEM 796.769	**SWAMP AZALEA 2-3 FEET**	**EACH**
ITEM 796.771	**HIGHBUSH BLUEBERRY 2-3 FEET**	**EACH**
ITEM 796.772	**ARROWWOOD 2-3 FEET**	**EACH**

The work under these Items shall conform to the applicable requirements of Subsection 771, PLANTING TREES, SHRUBS AND GROUNDCOVER, of the Supplemental Specifications.

As indicated on the plans, plantings are schematic and shall be staked out in the field and confirmed with the MassDOT Landscape Design Section.

Plant substitutions must be approved by the MassDOT Landscape Design Section prior to ordering plants.

Planting plan and plant list must be approved by the Engineer and the Lynnfield Conservation Commission prior to planting within jurisdictional areas.

Planting plan and plant list must be approved by the Engineer and the Town of Lynnfield prior to planting under Item 722.1.

METHOD OF MEASUREMENT

Items 772.1, 772.2, 776.525, 778.157, 793.714, 796.769, 796.771, and 796.772 will be respectively measured for payment by the EACH living trees, shrubs, vines and ground cover plants of specified kinds and sizes furnished, planted, and accepted in accordance with these specifications.

BASIS OF PAYMENT

Items 772.1, 772.2, 776.525, 778.157, 793.714, 796.769, 796.771, and 796.772 will be paid for at the respective Contract unit price per EACH, which prices shall include furnishing and delivering all plants, furnishing and delivering prepared backfill soil, mulch, fertilizer, excavation for plant pits, planting, pruning, guying and staking, mulching, weeding, watering, cleanup, plant establishment work and care including replacements, and for all labor, equipment, tools, and all incidental costs required to complete the work.

No separate payment will be made for mulching specified as required and included in payment for other Contract items.

ITEM 799.1	**TREE REMOVAL AND REPLACEMENT REPORTS WITHIN WETLAND RESOURCE AREAS**	**LUMP SUM**
ITEM 799.11	**TREE-DECIDUOUS 4-5 FEET HT**	**EACH**
ITEM 799.12	**TREE-DECIDUOUS 5-6 FEET HT**	**EACH**
ITEM 799.13	**TREE-EVERGREEN 4-5 FEET HT**	**EACH**

The work under these Items shall conform to the applicable requirements of Subsection 771, PLANTING TREES, SHRUBS AND GROUNDCOVER, of the Standard Specifications.

The work under these Items is intended to replace trees removed during construction activities within wetland resource areas and provide documentation for their removal and replacement. Trees removed within wetland resource areas measuring 8 inches in diameter or greater will require replacement planting at a 1:1 ratio, per the Lynnfield Conservation Commission Order of Conditions (see Document A00861 included herein). The quantity, locations and species of trees are not shown on plan but will be determined by MassDOT during construction. There shall be no obligation to plant Contract quantity of Trees under these Items.

The goal is to restore the ecological balance and maintain the integrity of the wetland resource areas. The replacement trees shall be of native species.

Wetland Resource Areas include all areas under the jurisdiction of the Lynnfield Conservation Commission, including locations within the 100-ft Wetland Buffer Zone & 200-ft Riverfront Area, as depicted on the plans. The approximate station limits for these locations are provided below:

Approximate Locations of Wetland Resource Areas

Station Start (±)	Station End (±)
133+58	140+23
147+79	151+75
156+64	159+60
164+95	168+55

Station Start (±)	Station End (±)
179+31	183+08
185+12	195+41
206+90	212+38
212+81	226+71

CONSTRUCTION METHODS

Site Preparation:

Prior to clearing work commencing, the Contractor shall stake the limit of work and finish grade along the project baseline within the wetland resource areas.

After the work area is staked, the Contractor shall determine the locations of trees larger than 8 inches in diameter that will require removal due to their operations and mark them, temporarily, with surveying ribbon.

Once work has been staked, and potential tree removal locations have been temporarily marked, the Contractor shall arrange for a site visit with the Arborist, Resident Engineer, Design Engineer, MassDOT Landscape Design Section, and a representative of the Lynnfield Conservation Commission to review the location of trees to be removed.

Incorporating the feedback from the site visit, the Contractor shall seek approval for the locations of trees to be removed, in accordance with the Submittal section of this specification.

ITEMS 799.1, 799.11, 799.12, and 799.13 (Continued)

Tree Removal and Protection:

Trees approved for removal shall be permanently marked and shall be removed in accordance with work Specified under Item 101. – Clearing and Grubbing.

Trees not approved for removal, that are at risk of damage due to proximate work, shall be protected under Item 102.511 - Tree Protection - Armoring and Pruning, Item 102.521 - Tree and Plant Protection Fence, Item 102.513 – Air Excavation and Root Pruning as required by the Resident Engineer and in consultation with the Arborist (Item 102.55).

Planting Plan Development:

The Design Engineer at Stantec will provide the Contractor with a planting plan for the replacement tree plantings during construction. The Contractor must provide the Design Engineer notice of at least two months before the planting plan is needed. Planting locations are intended to be as close to the removed tree locations as is feasible.

Planting, Maintenance, Establishment, Warranty, and Replacement:

Upon receipt of the planting plan, the Contractor shall perform all remaining work in accordance with Section 771 of the Standard Specifications.

The work shall be conducted under the supervision of the MassDOT Landscape Architect. The Contractor shall contact Stephanie Smoot at (857) 368-9175 to establish coordination for the conduct of the work.

The Contractor shall verify that there are no conflicts with existing or proposed utilities or the drainage system at the recommended locations.

Replacement tree locations shall not compromise ADA and AAB accessibility requirements. No additional Right of Way or easements will be acquired for contingency trees.

When applicable, municipality shall be responsible for all permits and approvals needed to plant contingency trees under the conditions described in Massachusetts Chapter 87 Public Shade Tree Law.

SAMPLES & SUBMITTALS

Requirements of the Standard Specifications

The Contractor shall provide samples and submittals in accordance with Section 771.41 of the Standard Specifications.

ITEMS 799.1, 799.11, 799.12, and 799.13 (Continued)

Approval & Documentation

Request for Tree Removal within Wetland Resource Areas

The Contractor shall submit a written request containing the list of trees to be removed within wetland resource areas, including approximate station, offset, tree size, & tree species for approval, based on the locations reviewed at the site visit.

List of Tree Removal and Replacement Plantings within Wetland Resource Areas

After installation of replacement plantings, the Contractor shall submit a final list including both the removed trees and the installed replacement plantings including approximate station, offset, tree size, & tree species for all. This information will be submitted to the Lynnfield Conservation Commission in support of receiving a Certificate of Compliance post-construction.

MATERIALS

Plants

Plant material shall conform to the applicable requirements of Subsection 771, PLANTING TREES, SHRUBS AND GROUNDCOVER, of the latest edition of the Standard Specifications and as amended below.

Replacement Trees shall be normally available species native to the northeast region of the United States and shall be a mixture of following species:

Decidous Trees 5-6':
Red Maple Acer rubrum
Yellow Birch Betula alleghaniensis
Northern Red Oak Quercus rubra
White Oak Quercus alba

Deciduous Trees 4-5':
Redbud Cercis canadensis
Shad Amelanchier laevis

Evergreen Trees 4-5':
White Pine Pinus strobus
Eastern Red Cedar Juniperus virginiana (full sun only)

Final quantity of Trees shall be approved prior to ordering and delivery. Tree locations shall be field located. Locations shall be approved by the Landscape Architect. MassDOT Landscape Architect contact info: Stephanie Smoot 857 368-9175

Tree Guards: install to prevent herbivory. Guards shall be made of flexible plastic and shall expand to allow tree to grow without girdling.

ITEMS 799.1, 799.11, 799.12, and 799.13 (Continued)

METHOD OF MEASUREMENT

Items 799.11, 799.12, & 799.13 - will be respectively measured for payment by the EACH tree planting installed and accepted in accordance with this specification. No measurement will be made for replacement trees for trees that show unsatisfactory evidence of growth.

BASIS OF PAYMENT

Item 799.1 will be paid for at the Contract unit price per LUMP SUM , which price shall include all labor, materials, equipment, submittals, and all incidental costs necessary to complete the work as required.
Payment shall be as follows:

- 50% upon Acceptance and Approval of the *Request for Tree Removal within Wetland Resource Areas* by the Engineer.
- 50% upon Acceptance and Approval of the *List of Tree Removal and Replacement Plantings within Wetland Resource Areas* by the Engineer.

Payment for Items 799.11, 799.12, and 799.13 will be made at the respective Contract unit price per EACH, which prices shall include furnishing and delivering all plants, furnishing and delivering prepared backfill soil, mulch, fertilizer, excavation for plant pits, planting, pruning, guying and staking, mulching, weeding, watering, cleanup, plant establishment work and care including replacements, tree guards, and for all labor, equipment, tools, and all incidental costs required to complete the work.

No separate payment will be made for mulching in planting beds, as required under Subsection 771 of the Standard Specifications.

No separate payment will be made for in-kind replacement of trees within wetland resources areas that are removed prior to receiving approval under this Specification.

Trees not planted or showing unsatisfactory growth shall not be paid for.

All tree removal shall be paid under Item 101. - Clearing and Grubbing.

Tree protection measures shall be paid under Item 102.511 - Tree Protection - Armoring and Pruning, Item 102.521 - Tree and Plant Protection Fence, and Item 102.513 – Air Excavation and Root Pruning.

All work of the Arborist associated with these Items shall be paid under Item 102.55 – Arborist.

ITEM 825.21 RRFB (2-POST ASSEMBLY SYSTEM) EACH

The work under this Item shall conform to the relevant provisions of Subsection 825 of the Standard Specification and the following:

The work under this Item shall include furnishing and installing a solar-powered, wireless communication, pedestrian actuated, rectangular rapid flashing beacon (RRFB) with crosswalk illumination system at the locations shown in the plans.

The foundations associated with the RRFB shall be installed at the following locations.

Summer St Sta 153+83.71, 8.75 feet Right
Sta 154+27.70, 8.35 feet Left

CONSTRUCTION METHODS

No work shall commence until the shop drawings are approved.

Foundation installations shall be per Subsection 801.62 of the Standard Specifications . The top of the foundation shall be one quarter inch (¼") to one inch (1") proud of the sidewalk and chamfered at 45 degrees. Gaps between the sidewalk and foundation shall be no larger than one quarter inch (¼") and grouted with preformed joint filler. The crosswalk illumination shall be bracketed to pole and aimed at crosswalk.

SYSTEM OPERATION

Wireless Communication

The RRFB light bars in the system shall communicate wirelessly with each other to ensure simultaneous activation of the RRFB light bars. The system shall include frequency hopping spread spectrum (or other alternate FCC approved) wireless activation unit with up to a 900 foot range.

Software/Programming

Software required for the programming and/or operation of the system shall be included at no additional cost.

METHOD OF MEASUREMENT

Item 825.21 will be measured for payment by the EACH RRFB (2 post assembly system) installed, complete in place.

BASIS OF PAYMENT

Item 825.21 will be paid for at the Contract unit price per EACH, which price shall include all labor, materials, equipment, submittals, foundations, and all incidental costs to complete the work.

ITEM 852.11 TEMPORARY PEDESTRIAN BARRICADE FOOT
ITEM 852.12 TEMPORARY PEDESTRIAN CURB RAMP EACH

Description

Work under these Items consist of furnishing, deploying, maintaining in proper operating conditions, and removing temporary pedestrian barricades and temporary pedestrian ramps as part of a Temporary Pedestrian Access Route (TPAR) in order to guide pedestrians around a fully- or partially-closed sidewalk. These devices are intended to prevent pedestrians from entering the work area and to prevent pedestrians from inadvertently entering the vehicle travel lane by providing visual and physical separation between each space.

Materials

The Temporary Pedestrian Barricade shall have a continuous bottom rail or edge no more than two (2) inches above the ground and eight (8) inches in height (minimum) to accommodate cane users, have a smooth and continuous hand railing along the top edge no less than 32 inches above the ground and not obstruct or project into the pedestrian path of travel. Barricade walls shall be nearly vertical and generally within the same plane.

If exposed to traffic, Temporary Pedestrian Barricades shall be crashworthy.

The Temporary Pedestrian Curb Ramp shall provide a 48 inch minimum width, with a firm, stable, and non-slip surface. Protective edging with a two (2) inch minimum height shall be installed when the curb ramp or landing platform has a vertical drop of six (6) inches or greater.

The Temporary Pedestrian Curb Ramp walkway and landing area surface shall be of a solid, continuous, contrasting color abutting up to the existing sidewalk.

If a Temporary Pedestrian Curb Ramp leads to a crosswalk, a detectable warning pad must be used at the base of the ramp; if it leads to a protected path that does not conflict with vehicular traffic then a detectable pad shall not be used.

Construction Methods

The Temporary Pedestrian Barricade shall be placed in an area that will provide pedestrians with a TPAR on a smooth, continuous hard surface for its entirety. The geometry and alignment of the facility shall meet the applicable requirements of the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities" and the Massachusetts Architectural Access Board.

The recommended width of the TPAR is 60 inches, but if constraints exist a minimum clear width of 48 inches shall be provided along its entirety. If a 60 inch width cannot be accommodated in full, a 60 inch by 60 inch passing space shall be provided every 200 feet or less along the TPAR.

Turning areas shall be 60 inches by 60 inches minimum.

Lateral joints between any surfaces shall not exceed 0.5 inches. Lateral edges may be vertical up to 0.25 inches high and shall be beveled at 1V:2H between 0.25 inches and 0.5 inches.

ITEMS 852.11 and 852.12 (Continued)

The TPAR shall be kept clear of debris, snow, and ice and the Temporary Pedestrian Barricades and Temporary Pedestrian Curb Ramps shall not obstruct drainage.

Removal and/or resetting of Temporary Pedestrian Barricades and Temporary Pedestrian Curb Ramps shall be considered incidental.

COMPENSATION

Payment for Temporary Pedestrian Barricades will be made at the Contract price per foot installed in place, including all incidental items. This price shall include the cost of furnishing, installing, resetting, removal, and maintaining in good working condition.

Payment for Temporary Pedestrian Curb Ramps will be made at the Contract price per each unit installed in place, including all incidental items. This price shall include the cost of furnishing, installing, resetting, removal, and maintaining in good working condition.

ITEM 867.104 4 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC) FOOT

The work under this Item shall conform to the relevant provisions of Subsection 860 of the Standard Specifications and the following.

The work under this Item shall consist of furnishing materials and application of reflectorized thermoplastic pavement markings in accordance with the Contract Drawings, as specified in these Specifications, and where required by the Engineer.

CONSTRUCTION METHODS

Pavement markings installed under Item 867.104 shall be 4 inches wide reflectorized yellow thermoplastic markings.

METHOD OF MEASUREMENT

Item 867.104 will be measured for payment by the FOOT of 4 inch reflectorized yellow line (thermoplastic) installed, complete in place.

BASIS OF PAYMENT

Item 867.104 will be paid for at the Contract unit price, per FOOT, which price shall include all material, labor, equipment, and all incidental costs required to complete the work.

ITEM 874. STREET NAME SIGN EACH

The work under this Item shall conform to the relevant provisions of Subsections 828 and 840 of the Standard Specifications and the following:

The work under this Item shall consist of fabricating and furnishing street name signs and mounting them overhead on traffic signal mast arms, on traffic signal mast arm poles or on traffic sign poles where shown on the plans, and as required by the Engineer.

MATERIALS

Street Name signs shall have a height as specified on the plans.

The length of each sign will vary depending up on the number of letters required for each street name.

CONSTRUCTION METHODS

Shop drawings for the traffic signal mast arm pole support attachment hardware shall be submitted to the Engineer for approval within sixty (60) calendar days after Contract award. Material or fabrication shall not begin until Engineer's written approval has been obtained.

The street name signs being attached to the traffic signal pole shall have sufficient hardware to prevent the sign panel from being deformed by wind pressure.

The Contractor shall submit shop drawings for all custom sign panels to MassDOT District Traffic section for review and approval prior to fabrication.

METHOD OF MEASUREMENT

Item 874. will be measured for payment by the EACH street name sign installed, complete in place.

BASIS OF PAYMENT

Item 874. will be paid for at the Contract unit price per EACH, which price shall include all labor, tools, equipment, materials, mounting hardware, shop drawings, submittals, and all incidental costs required to complete the work.

ITEM 874.2 TRAFFIC SIGN REMOVED AND RESET EACH

The work under this Item shall conform to the relevant provisions of Subsection 840 of the Standard Specifications and the following:

The work under this Item consists of removing and resetting the existing street name, warning and regulatory signs, Bus Stop signs and their supports to new locations as shown on the Plans or as required by the Engineer.

The Contractor shall replace at his own expense, all sign panels that are damaged or lost either directly or indirectly as a result of his actions.

Signs and attached hardware shall be carefully removed from their supports. The supports and existing foundations shall be removed to a depth of at least 6 inches below grade in proposed loam and seed areas, 12 inches below grade in proposed sidewalk areas and 36 inches below grade in proposed roadway areas. The holes backfilled with gravel and the surface shall be patched with a material to match the existing ground or as required by the Engineer.

The work includes dismantling, loading, transporting and discarding of supports, as necessary, the excavating and disposal of the existing foundation and the supplying and placing of compacted gravel backfill where foundations and posts are removed, and the patching of the existing surface, including all labor, material and incidentals to complete the work as shown on the Plans and as required by the Engineer.

If signs are attached to existing light poles, utility poles or traffic poles, only the sign and attached hardware shall be removed.

MATERIALS

Materials for street signs and traffic signs removed and reset shall be the existing signs. If in the opinion of the Engineer, the existing sign panel is unsuitable for reuse, a new sign panel of a size and composition equal to the existing sign panel, shall be furnished, as required by the Engineer.

CONSTRUCTION METHOD

The sign shall be mounted in accordance with the 2023 Manual on Uniform Traffic Control Devices (MUTCD) and the 1990 Standard Drawings for Signs and Supports.

When the visibility of the relocated sign panels is obstructed by trees and other vegetation, the Contractor shall clear the obstruction for proper sight distance. All clearing shall be done within the roadway layout, as approved by the Engineer.

Traffic sign and street name panels, to be removed and reset, shall be cleaned before being reset. Damage during removal or resetting to any sign panel or support designated for reuse by the Engineer shall be repaired or replaced by the Contractor at his own expense.

ITEM 874.2 (Continued)

METHOD OF MEASUREMENT

Item 874.2 will be measured for payment by the EACH traffic sign removed and reset, complete in place.

BASIS OF PAYMENT

Item 874.2 will be paid for at the Contract unit price per EACH, which price shall include all labor, tools, materials, equipment, excavation and backfill, and removal and disposal of the existing sign support (if required) and foundation, involved in removing and resetting signs. The price shall also include all required mounting fixtures (nuts, bolts and other miscellaneous items) and all incidental costs required to complete the work.

Clearing of vegetation shall be paid for under the Contract unit price for the appropriate tree/vegetation clearing item.

If required by the Engineer or if shown on the Drawings, new sign posts for Traffic Signs shall be paid for separately under Item 847.1, Sign Support (Not Guide) and Route Marker with 1 Breakaway Post Assembly –Steel.

If required by the Engineer, new Traffic Sign panels shall be furnished, installed and paid for under Item 832. Warning - Regulatory and Route Marker - Aluminum Panel (Type A). The cost of any work or materials required, due to the Contractor's negligence, shall be paid by the Contractor.

ITEM 874.41 TRAFFIC SIGN REMOVED AND DISCARDED EACH

The work under this item shall consist of the dismantling, removing, and discarding of all existing regulatory and warning signs and their supports as shown on the plans and/or as required by the Engineer.

CONSTRUCTION METHODS

Signs and attached hardware shall be carefully removed from their supports. The supports and existing foundations shall be removed to a depth of at least 6 inches below the existing ground and the holes backfilled with gravel. The surface shall be patched with a material to match the existing ground or as required by the Engineer.

If signs are attached to existing light poles, utility poles, or traffic poles, only the sign and attached hardware shall be removed and discarded.

METHOD OF MEASUREMENT

Item 874.41 will be measured for payment by the EACH traffic sign with its supports removed and discarded.

BASIS OF PAYMENT

Item 874.41will be paid at the Contract unit price per EACH, which price shall include all labor, tools, equipment, materials, and all incidental costs required to complete the work. Payment shall include dismantling, loading, transporting, and discarding of the signs and supports, the excavating and disposal of the existing foundation and the supplying and placing of compacted gravel backfill where foundations and posts are removed, and the patching of the existing surface.

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DETAIL SHEETS

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Earth Excavation	4,000 CY	Gravel Borrow	5,550 CY
Class A Rock Excavation	105 CY	Ordinary Borrow	920 CY
Class B Rock Excavation	40 CY	Loam for Roadsides	1,660 CY
Class B Trench Excavation	10 CY	Modified Rockfill	90 TON

PAVEMENT NOTES

Full Depth Trail Pavement Sections — Area = 12,811 SY

Surface:	1 ½" Superpave Surface Course 9.5 (SSC-9.5)
Tack Coat:	Asphalt Emulsion for Tack Coat (RS-1H)
Intermediate:	2 ½" Superpave Intermediate Course 19.0 (SIC-19.0)
Base:	8" (Min) Gravel Borrow, Type b

Full Depth Roadway Pavement Sections — Area = 158 SY

Surface:	2" Superpave Surface Course 12.5 (SSC-12.5)
Tack Coat:	Asphalt Emulsion for Tack Coat (RS-1H)
Intermediate:	2 ½" Superpave Intermediate Course 19.0 (SIC-19.0)
Tack Coat:	Asphalt Emulsion for Tack Coat (RS-1H)
Base:	4" Superpave Base Course 37.5 (SBC-37.5)
	4" Dense Graded Crushed Stone
	8" (Min) Gravel Borrow, Type b

Full Depth Curb Setting Pavement Sections — Area = 36 SY

Surface:	2" HMA for Patching
Tack Coat:	Asphalt Emulsion for Tack Coat (RS-1H)
Base:	10"± Cement Concrete
	6" (Min) Gravel Borrow, Type b

Full Depth Cement Concrete Sidewalk Sections — Area = 184 SY

Surface:	4" Cement Concrete (4000 psi, ¾", 610 lbs. Air Entrained)
Base:	8" (Min) Gravel Borrow, Type b

Full Depth Cement Concrete Pedestrian Curb Ramp Sections — Area = 88 SY

Full Depth Cement Concrete Driveway Sections — Area = 10 SY

Surface:	6" Cement Concrete (4000 psi, ¾", 610 lbs. Air Entrained)
Base:	8" (Min) Gravel Borrow, Type b

Full Depth Stabilized Stonedust Area Sections — Area = 60 SY

Surface:	4" Stabilized Stonedust
Base:	8" (Min) Gravel Borrow, Type b

ITEM 101. CLEARING AND GRUBBING

To be used project wide to remove trees & vegetation from the site within the limit of work, as required by The Engineer.

ITEM 120. EARTH EXCAVATION

To be used as required by the Engineer and at the following locations:

Full Depth Trail Construction
Summer Street Parking Area
Cement Concrete Sidewalks, Driveways, Ped. Curb Ramps, and Trailheads
Stonedust Areas
Compost and Seed Over Modified Rockfill Areas
Wetland Replication Area
Demo of Existing Abutments at Station 184+20
Fencing to Be Removed and Discarded
Removal of Timber Retaining Wall at Station 149+90, RT
Removal of Guy Pole at Station 200+15, RT
Removal of Stockpiled Wooden Railroad Ties

ITEM 121. CLASS A ROCK EXCAVATION

To be used when rock or ledge is encountered, and must be removed within the project limits, as required by the Engineer.

ITEM 144. CLASS B ROCK EXCAVATION

To be used for removal of boulders during excavation for fencing installation.

ITEM 150. ORDINARY BORROW

To be used as fill material project wide, including as backfill to fill voids left during track excavation & railroad bridge demolition, under the shared-use path when the bottom of the proposed pavement box is higher than existing ground, and as required by the Engineer.

ITEM 156. CRUSHED STONE

To be used as a base material for modified rockfill areas (Item 986.), as bedding under proposed drain structures (Item 201) and drain pipes (Item 244.18), and as required by The Engineer.

ITEM 170. FINE GRADING AND COMPACTING – SUBGRADE AREA

To be used where gravel borrow (Item 151.) is placed as a paving subgrade.

ITEM 184.1 DISPOSAL OF TREATED WOOD PRODUCTS

To be used for the disposal of wooden railroad ties, disposal of the timber retaining wall at Station 149+90, RT, disposal of the timber decking at the existing rail bridge at Station 184+20, disposal of the guy pole at Station 200+15, RT, and as required by the Engineer.

ITEM 358. GATE BOX ADJUSTED

To be used for any water gate boxes in conflict with the proposed work and requiring adjustment, as required by the Engineer.

ITEM 381.3 SERVICE BOX ADJUSTED

To be used for any water service boxes in conflict with the proposed work and requiring adjustment, as required by the Engineer.

ITEM 451. HMA FOR PATCHING

To be used at full depth curb setting construction areas and project wide as required by the Engineer.

ITEM 472. TEMPORARY ASPHALT PATCHING

To be used for temporary paving required to maintain continuity in pedestrian and vehicle routes in the travelled way during construction, project wide as required by the Engineer.

ITEM 506. GRANITE CURB TYPE VB – STRAIGHT

To be used as required by the Engineer and at the following locations:

Sta.	To	Sta.	
133+71		133+81	Left
133+76		133+81	Right
153+67		153+78	Left
153+89		153+91	Left
153+92		153+92	Right
153+92		153+92	Left
154+24		154+24	Right
154+24		154+24	Right
154+28		154+37	Right
154+28		154+37	Right
199+63		199+63	Left
199+64		199+64	Right
199+89		199+90	Left
199+91		199+91	Right

ITEM 506.1 GRANITE CURB TYPE VB – CURVED

To be used as required by the Engineer and at the following locations:

Sta.	**To**	**Sta.**	
153+89		153+91	Left
154+24		154+31	Right
154+24		154+37	Right
154+25		154+28	Right
154+31		154+37	Right

ITEM 509. GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS – STRAIGHT

To be used as required by the Engineer and at the following locations:

Sta.	**To**	**Sta.**	
133+81		133+87	Right
133+81		133+87	Left
153+60		153+67	Left
153+79		153+85	Left
153+92		153+92	Right
153+92		153+92	Left
154+24		154+24	Left
154+24		154+24	Right
154+37		154+37	Right
154+37		154+37	Right

ITEM 509.1 GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS – CURVED (Continued)

199+63	199+63	Left
199+63	199+64	Right
199+64	199+65	Right
199+90	199+90	Left
199+90	199+91	Right

ITEM 509.1 GRANITE CURB FOR PEDESTRIAN CURB RAMPS – CURVED

To be used as required by the Engineer and at the following location:

Sta.	To	Sta.	
133+69		133+76	Right

ITEM 594. CURB REMOVED AND DISCARDED

To be used where existing vertical granite curbs are not suitable for reuse at the following locations, as required by the Engineer.

Sta.	To	Sta.	
133+67		133+85	Left
133+69		133+86	Right
153+89		153+92	Left/Right
153+90		153+92	Left
154+23		154+24	Left/Right
199+63		199+64	Left/Right
199+89		199+91	Left/Right

ITEM 628.304 TEMPORARY IMPACT ATTENUATOR, NON-REDIRECTIVE, TL-2

To be used as required by the Engineer at the Summer Street crossing during installation of the RRFB.

ITEM 645.072 72 INCH CHAIN LINK FENCE (PIPE TOP RAIL) (LINE POST OPTION)

To be used as required by the Engineer to address locations of existing fencing adjacent to Item 652.072 requiring replacement.

ITEM 657. TEMPORARY FENCE

To be used at the following location:

Sta.	To	Sta.	
150+85		153+85	Left

ITEM 669. FENCE REMOVED AND STACKED

To be used as required by the Engineer and at the following locations:

Station 134+47 to 135+01, 52' LT
Station 134+99 to 135+06, 28' LT/RT

ITEM 697.1 SILT SACK

To be used as required by The Engineer and at the following locations:

Sta.	Offset	
153+92	63.00	RT
153+93	45.65	LT
154+24	38.00	LT
154+24	62.26	RT

ITEM 698.3 GEOTEXTILE FABRIC FOR SEPARATION

To be used at compost and seed over modified rockfill areas, as shown under Item 986., and as required by the Engineer.

ITEM 710.4 BOUND – PLAIN GRANITE

To be used when existing bounds to be reset under Item 711. are too damaged to be re-used, as required by the Engineer.

TEM 799.1 TREE REMOVAL AND REPLACEMENT REPORTS WITHIN WETLAND RESOURCE AREAS

To be used to document tree removal and replacement within wetland resource areas, as required by the Engineer.

ITEM 799.11 TREE-DECIDUOUS 4-5 FEET HT
ITEM 799.12 TREE-DECIDUOUS-5-6 FEET HT
ITEM 799.13 TREE-EVERGREEN 4-5 FEET HT

To be used to provide replacement plantings within wetland resource areas, as required by the Engineer. Locations to be determined during construction, in conjunction with the Arborist (Item 102.55) after the extent of tree removal is documented under Item 799.1.

ITEM 832. WARNING-REGULATORY AND ROUTE MARKER - ALUM. PANEL (TYPE A)

To be used along the shared-use path and roadways at the following locations:

Ford Avenue
Middle School Connecting Path
Summer Street
Pillings Pond Road

ITEM 847.1 SIGN SUP (NOT GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY - STEEL

To be used with Item 832. and Item 874.

ITEM 864.04 PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC)

To be used along the shared-use path and roadways at the following locations:

Ford Avenue & Perry Avenue: Shared-Use Path and Street
Middle School Connecting Path
Summer Street: Shared-Use Path and Street
Pillings Pond Road: Shared-Use Path and Street

ITEM 866.106 6 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)

To be used as required by the Engineer in locations where the solid white line at roadway intersections requires restriping.

ITEM 866.112 12 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC)

To be used for stop lines and crosswalks at the following locations:

Ford Avenue
Middle School Connecting Path
Summer Street
Pillings Pond Road

ITEM 867.104 4 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC)

To be used for solid yellow lines and broken yellow lines along the shared-use path at the following locations:

Ford Avenue
Middle School Connecting Path
Summer Street
Pillings Pond Road

ITEM 867.106 6 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC)

To be used as required by the Engineer in locations where the double yellow center line at roadway intersections requires restriping.

ITEM 874. STREET NAME SIGN

To be used along the shared-use path and roadways at the following locations:

Ford Avenue
Summer Street
Pillings Pond Road

ITEM 874.2 TRAFFIC SIGN REMOVED AND RESET

To be used where existing traffic signs and posts require relocation, project wide as required by the Engineer

ITEM 874.41 TRAFFIC SIGN REMOVED AND DISCARDED

To be used where existing traffic signs and posts require removal, project wide as required by the Engineer

ITEM 986. MODIFIED ROCKFILL

To be used at the following locations, where sideslopes are steeper than 2:1, as required by the Engineer:

Sta.	To	Sta.	Side
148+70		148+96	Left
148+70		148+97	Right
186+55		186+75	Left
187+29		187+82	Right
188+09		188+79	Right
209+02		209+32	Left
217+62		218+12	Left

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MBTA RAILROAD OPERATIONS DIRECTORATE

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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

The attached Specifications are required for any construction and/or related activities on, over, under, within or adjacent to railroad property owned or controlled by the Massachusetts Bay Transportation Authority. They are intended to provide general guidelines and safeguards. Attachment "A" of Construction Guidelines and Procedures contains a summary of MBTA Railroad Operations Specifications which may be required. It is the responsibility of the Contractor to obtain all the necessary specifications for each project.

AUGUST 2014

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

GUIDELINES AND PROCEDURES

FOR CONSTRUCTION ON

MBTA RAILROAD PROPERTY

AUGUST 2014

SECTION 1. SCOPE

1.01 These specifications provide general safeguards to railroad property owned or controlled by the Massachusetts Bay Transportation Authority and to railroad operations upon that property during the performance of construction and/or related activities on, over, under, within or adjacent to the railroad property. They are intended as guidelines and do not represent all legal requirements which are or may be associated with construction and/or related activities. The MBTA reserves the right to require additional information and clarification and to make unilateral changes to these specifications at any time, at its sole discretion.

SECTION 2. DEFINITIONS

MBTA

Massachusetts Bay Transportation Authority; Massachusetts Realty Group, Designated Representative of MBTA Real Estate

RAILROAD COMPANY

The particular reference for the purpose of these specifications is the railroad company which maintains and/or operates or has trackage rights on the subject MBTA Railroad Property, including, but not limited to:

- Massachusetts Bay Transportation Authority (MBTA")
- Keolis Commuter Services
- Providence and Worcester Railroad (PW)
- National Railroad Passenger Corporation ("Amtrak")
- CSX Transportation ("CSX")
- Pan Am Railways (PAR) and subsidiaries The Boston and Maine Corporation (BM), The Springfield Terminal Railway Company (ST), its affiliates, successors and assigns
- Bay Colony Railroad Corporation (BLCR)

MBTA RAILROAD PROPERTY

All railroad rights of way and adjacent owned and/or controlled by the MBTA.

OWNER

The individual, utility, government, or corporation having title to the structure to be constructed upon, over or adjacent to the railroad property owned or controlled by the MBTA.

UTILITY

Public or private communication, water, sewer, electric, gas and petroleum companies or other entity governed by the Massachusetts Department of Public Utilities.

GOVERNMENT

Federal, State, Town, City, County and other forms of government.

CORPORATION

Any firm duly incorporated under laws of a state government.

INDIVIDUAL

Any party not defined by "Owner, Utility, Government or Corporation".

CONTRACTOR

The individual, partnership, firm, corporation or any combination thereof, or joint venture, contracting with a Utility. Government, Firm, Company, Corporation or Individual for work to be done on, over, under, within or adjacent to MBTA Railroad Property.

OWNER OR ITS CONTRACTOR

As used in these specifications, does not affect the responsibilities of either party for work conducted on, over, under, within or adjacent to MBTA Railroad Property.

CONSTRUCTION DRAWINGS

Original drawings, submitted to the Engineer by the Contractor pursuant to the Work, including, but not limited to: stress sheets, working drawings, diagrams, illustrations, schedules, performance charts, brochures, erection plans, falsework plans, framework plans, cofferdam plans, bending diagrams for reinforcing steel, or other supplementary plans or similar data which are prepared by the Contractor or a Subcontractor, manufacturer, supplier or distributor, and which the Contractor is required to submit for review and approval by the MBTA. Working Drawings: Contractor prepared plans for temporary

structures and facilities. Working Drawings for elements of work which may affect safety of persons or property included but are not limited to Contractor's plans for temporary structures such as decking, temporary bulkheads, support of utilities, and for such other work as may be required for construction but which do not become an integral part of completed project.

SECTION 3. SUBMITTALS

3.01 INITIAL CONTACT

A. The MBTA owns the majority of the railroad lines in eastern Massachusetts. Many of these railroad lines are operated for passenger service, using a Railroad Company as an operating and maintaining Contractor. Some of the railroad lines are used for freight-only service, operated and maintained by other Railroad Company(s). In most instances, both passenger and freight service are operated over the same railroad lines.

B. All of the MBTA railroad lines are maintained by a designated Railroad Company(s), excepting rapid transit and light rail lines. The maintaining Railroad Company(s) has rights and responsibilities, in addition to the MBTA's property owner's rights.

C. To obtain further information concerning License Agreements, Easements, Licenses for Entry and performance of construction related activities which affect MBTA Railroad Property, a written request may be forwarded to:

License Administrator
Massachusetts Realty Group
20 Park Plaza, Suite 1120
Boston, MA 02116

or you may access the website at www.mbtarealty.com

The License Administrator is also the contact person for information concerning rapid transit and light rail lines.

SECTION 4. PLANS AND SPECIFICATIONS

4.01 SCOPE: It is the intent of the MBTA to eliminate or minimize any risk involved with construction or related activities on, over, under, within or adjacent to MBTA Railroad Property. Therefore, MBTA approval and

frequently one or more Railroad Company(s) approval of construction plans and specifications for all phases of a proposed project affecting MBTA Railroad Property is required.

4.02 GENERAL: If requested by the License Administrator, the applicant must provide six (6) sets of plans and specifications to the License Administrator. These plans and specifications must meet the approval of the Railroad Company(s) and the MBTA prior to the start of construction. These plans are to be prepared in sizes as small as possible (no smaller than 11" x 17") and are to be folded to an 8-1/2 inch by 11 inch size (folded dimensions) with a 1-1/2 inch margin on the left side and a 1 inch margin on the top.

A. After folding, the title block and other identification of the plans shall be visible at the lower right corner, without the necessity of unfolding. Each plan shall bear an individually identifying number and an original date, together with subsequent revision dates, clearly identified on the plan.

B. All plans are to be individually folded or rolled and where more than one plan is involved, they shall be assembled into complete sets before submission to the MBTA.

4.03 PLANS: The plans are to show all the work which may affect MBTA Railroad Property, and contain a location map and plan view of the project, with appropriate cross sections and sufficient details. The proposed construction or related activities must be (orated with respect to top of rail (vertical) and center line of track (horizontal). The plan must also include railroad stationing, property lines and subsurface soil conditions. The subsurface information is to be in the form of boring logs with the borings located on the plan view. The plans must be stamped by a Professional Engineer registered in the state of Massachusetts. (The purchase of railroad valuation plans may be arranged by contacting MBTA Engineering offices at (617) 222-6178).

4.04 SPECIFICATIONS: The specifications summarized on Attachment "A" attached hereto are the Standard Specifications of the MBTA Railroad Operations Department and apply to all types of construction work affecting MBTA Railroad Property.

A. In addition to "Maintenance and Protection of Railroad Traffic" and "Insurance Specifications" which are required for all work on, over, under, within or adjacent to MBTA Railroad Property, certain other Specifications contained in Attachment "A" shall be incorporated into construction/engineering submittals when deemed necessary by the MBTA and/or Railroad Company(s). (The purchase

of additional specifications may be arranged by contacting MBTA offices at (617) 222-3448 or visiting Massachusetts Realty Group website at www.mbtarealty.com.

SECTION 5. SUBMISSION REVIEW

5.01 An initial submission of six (6) sets of plans and specifications for MBTA review must be forwarded to the License Administrator, along with a completed MBTA Application for Entry (Attachment "B"). The submission will be circulated for review and comment to MBTA departments which may be impacted by the proposed project. If approved by the MBTA, the Railroad Company(s) will review.

5.02 The applicant is advised that the MBTA's initial review process requires a minimum forty-five (45) day period, prior to the Railroad Company(s) involvement, and additional processing time may be required for specific documents (See Section 9).

SECTION 6. INSPECTIONS/PAYMENTS

6.01 The MBTA may inspect all projects affecting MBTA Railroad Property at least twice, at the applicant's sole expense. The actual number of MBTA inspections will depend on the size and complexity of the project.

6.02 The MBTA may utilize Railroad Company inspectors and flagmen for daily inspection and protection of rail traffic during the term of the construction period or related activities. The Owner or Contractor will be responsible for advance payment of all associated fees.

6.03 Advance payments to the MBTA for construction/engineering review of plans and specifications by MBTA staff must be submitted when initial contact is made with the License Administrator. Payments shall be in the form of check or money order, made payable to the Massachusetts Bay Transportation Authority.

6.04 Advance payments covering the services for Railroad Company(s) construction/engineering review of plans and specifications, or services of an inspector or flagman, will be paid directly to the Railroad Company(s). The MBTA will advise when such services are required, and the Railroad Company(s) will advise of the amount of the required advance payment.

SECTION 7. EXAMINATION OF PLANS OR PROPERTY

7.01 The Contractor/Applicant shall have no claim for any differences between MBTA valuation plans and the actual conditions encountered in the field.

SECTION 8. INSURANCE AND INDEMNIFICATION

8.01 Prior to entry upon MBTA Railroad Property, insurance will be provided to and approved by the MBTA and affected Railroad Company(s), as outlined in “Insurance Specifications."

8.02 Additionally, all MBTA Licenses and Letters of Authorization contain a clause for Indemnifying MBTA and the Railroad Company(s) from and against any and all liabilities, losses, damages, costs, expenses, causes of action, suits, claims, demands and/or judgments of any nature whatsoever that may be imposed upon or incurred by or asserted against the MBTA or the Railroad Company(s).

SECTION 9. LEGAL DOCUMENTS FOR TEMPORARY AND PERMANENT INSTALLATIONS

9.01 The nature of entry upon or installation within MBTA Railroad Property will determine the authorizing document to be issued. Listed below are brief descriptions of MBTA documents:

A. **License for Entry**: Authorizes short-term entry for purposes of survey, Inspection, test borings, access, etc. One time administrative/ engineering/legal review and access fees.

B. **License Agreement**: Authorizes installations, subject to termination clause, if Applicant chooses not to pursue an Easement. One time administrative/engineering/legal review fee as well as annual rental fee.

C. **Easement**: Authorizes permanent installations in form suitable for recording at Registry Deeds. All easements are non-exclusive and subject to relocation at the Owner's expense, for Mass transportation purposes:

1. Easements must receive MBTA Board of Directors approval, which involves considerable time. Once approved by the Board of Directors and upon payment in full to the MBTA, a License for Construction is issued. Upon final inspection and acceptance of the installation by the MBTA the Easement document is issued.

2. Permanent Subsurface Easement widths are limited to a maximum three-foot distance on either side of the occupation.

3. a) A one-time administrative/engineering/legal review fee, in addition to value of easement, as established by independent appraisal conducted at the Applicant's expense.

   b) If easement size is minimal, as determined by the MBTA, a fixed fee, encompassing administrative/engineering/legal review fee.

D. **Letter of Authorization**: Authorizes installations and construction activities in association with Master License Agreements. One-time administrative/engineering/legal review as well as access and/or annual fees.

ATTACHMENT "A"

SUMMARY OF MBTA RAILROAD OPERATIONS SPECIFICATIONS

I. GUIDELINES AND PROCEDURES FOR CONSTRUCTION ON MBTA RAILROAD PROPERTY

This general specification outlines the immediate design requirements and methodology for progressing construction activities on MBTA Railroad Property.

II. MAINTENANCE AND PROTECTION OF RAILROAD TRAFFIC

This specification will be included in ALL work requirements on MBTA Railroad Property, and covers rules, requirements, and protective services or any construction-related activity on MBTA Railroad Property. Supplemental specifications are listed below.

III. INSURANCE SPECIFICATIONS

This specification details the required insurance coverages and limits of the MBTA and Railroad Company(s).

IV. PIPELINE OCCUPANCY SPECIFICATIONS

This specification details requirements for all pipeline borings/jacking's and open cuts on or adjacent to MBTA Railroad Property, as well as requirements for Drawing submittals.

V. SPECIFICATIONS FOR WIRE CONDUIT AND CABLE OCCUPATIONS

This specification details requirements for clearances and installations of parallel and overhead crossings on MBTA Railroad Property, as well as requirements for Drawing submittals.

VI. BRIDGE ERECTION DEMOLITION AND HOISTING OPERATIONS

This specification details plan preparation for demolition and/or hoisting and erection of structures on and over MBTA Railroad Property.

VII. TEMPORARY SHEETING AND SHORING

This specification details requirements for plan preparation and calculations necessary for sheeting and shoring for construction on or adjacent to MBTA Railroad Property.

VIII. BLASTING SPECIFICATIONS

This specification outlines submittals, details and requirements for blasting on or adjacent to MBTA Railroad Property.

IX. TEMPORARY PROTECTION SHIELDS FOR DEMOLITION AND CONSTRUCTION

This specification outlines criteria for plan preparation related to protection of MBTA Railroad Property when work takes place on overhead structures.

X. INDUSTRIAL SIDE TRACK SPECIFICATIONS

This specification outlines minimal requirements for materials and installation submission for private railroad side tracks up to MBTA property line and/or clearance point. Other provisions, site-specific, may be required, including signal protection maintenance and protection of railroad traffic.

XI. RIGHT OF WAY FENCING SPECIFICATIONS

This specification details the requirements for the materials, construction and installation of standard right of way fence.

XII. TEST BORING SPECIFICATIONS

This specification outlines procedures and requirements for the performance of test borings on MBTA Railroad Property.

XIII. FIBER OPTIC CABLE SPECIFICATIONS

This specification details requirements for design and installation of fiber optic cables on MBTA Railroad Property; and is modified by site-specific requirements, including the construction methodology, location and type of fiber optic cables and protection conduits.

XIV. RAILROAD OPERATIONS BOOK OF STANDARD PLANS, TRACK AND ROADWAY, MW-I SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF TRACK

Certain construction activities may require obtaining this comprehensive package if rail construction details and requirements are related to the track operation.

XV. COMMUTER RAIL DESIGN STANDARDS

ATTACHMENT "B"

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
APPLICATION FOR ENTRY UPON MBTA RAILROAD, TRANSIT,
OR OTHER PROPERTY

Date_____

1. Name of Applicant: _____
2. Type of Entity (Partnership, Corporation, Proprietorship, Public Authority, etc.):

   _____
3. Mailing Address: _____
4. Contact info:_____
5. If incorporated, state of incorporation:_____
6. Proposed license term commencement date:_____
7. Agents for applicant for service of notice or process: _____

   _____

   _____
8. Administrative Fee: 1,000.00 paid with application
9. *If plan reviews by The MBTA Design and Construction are deemed necessary the following fee shall apply:*

   Design and Construction Plan Review Fee: 1,600.00 Paid with Application Fee

10. Applicant shall submit Drawings in pdf form and one set of paper Drawings to License Administrator
11. If applicant is self-insured, please provide limits of self-insurance and attach copies of authorizing legislation or certification thereof:_____

    _____
12. If applicant is authorized by public authority to enter into such license agreement, please provide:

    Motion, Resolution, or Ordinance No.: _____

    Date of Adoption: _____

Adopted by: _____

13. Is the applicant seeking permission to perform environmental testing and/or assessment on Authority property?

_____

a) Is the proposed testing and/or assessment required by the Massachusetts Contingency Plan ("MCP")?

_____

b) What is the Release Tracking number and current status of the MCP work?

_____

_____

_____

_____

14. Name, title and email of applicant's officer authorized to sign agreement: _____

_____

_____

Project Description

1. Brief description of construction (including types of pipes and other attachments or ancillary facilities to be installed on MBTA Railroad Property): _____

_____

_____

_____

_____

2. Brief description of purpose of entry and/or installation: _____

_____

_____

_____

Space Requirements
[*To Be Provided*]

Technical Information

1. Is this occupancy within the limits of a public road? _____
   Attach copies of applicant's franchise to occupy such space.

2. If occupancy is under, over, though, or attached to undergrade or overhead bridge, who owns such bridge? _____

   _____

3. Type of occupancy (facility):
   a) Exact Length of MBTA Railroad Property to be burdened by occupancy: ____

   _____

   b) Width of excavation facility on MBTA Railroad Property:

   _____

   c) Number of manholes: _____

   A. Aerial or underground wire and cable:

   (1) Telephone and other communication cables:

   Number of cables: _____

   Number of pairs/cable: _____

   Are these composite coaxial cables? _____

   (2) Power Cables:

   Number of cables/size: _____

   Number of volts per conductor: _____

   Are these pipe-type cables consisting of one or more high voltage cables encased in steel pipe under inert oil pressure? _____

   (3) Fiber optic cables:

   Number of cables: _____

   Number of distribution cables: _____

   Number of transmission cables: _____

   Number of strands in each cable: _____

Number of repeater stations on MBTA Railroad Property: _____

Systems (check one):

Transmission _____

Distribution _____

Sensor _____

(4) Number of spare or unoccupied ducts to be installed: _____

B. Pipes and Sewers

(1) Circular line carrying no pressure:

Number of pipes: _____

Number of inches of inside nominal diameter per pipe: _____

(2) Circular lines under pressure and carrying non-flammable, non-explosive, or non-combustible supporting materials, except coal and slurry:

Number of pipes: _____

Number of inches of inside nominal diameter per pipe: _____

(3) Circular lines under pressure and carrying flammable, explosive, or combustible supporting material:

Number of pipes: _____

Number of inches of inside nominal diameter per pipe: _____

(4) Non-circular pipe: _____

(5) Will a pipe tunnel be constructed? _____

(6) Will pipe be supported by MBTA structures, bridges, etc.? _____

Explain: _____

_____

(7) Will pipe be attached to MBTA structures, bridges, etc.? _____

Explain: _____

_____

C. Ancillary Facilities

Number of wooden poles to be installed on MBTA Railroad Property:

_____

Other wooden supporting structures: _____

_____

Steel supporting structures: _____

Explain: _____

Number of braces, stub poles: _____

Number of guy wires anchored on MBTA Railroad Property: _____

Number of span guy wires crossing MBTA Railroad Property: _____

D. Attachments

(1) Attachment of aerial wires and cables to poles or other structures of MBTA used in wire line construction or support:

Number of wires attached to MBTA cross-arm: _____

Voltage of wire: _____

Number of wires attached to applicant's cross-arm or bracket: ____

Voltage of wire: _____

Number of cross-arms or brackets attached to MBTA poles: _____

(2) Attachment of aerial wires and cables to building or structures other than those used in wire line construction or support:

Number of wires or cables attached to MBTA's building or structures:

_____

(3) Attachment of cable terminals to poles, buildings, or structures including highway bridges, railroad bridges over highways, or other bridges of MBTA:

Number of cable terminals, loading coils, transformers, or like devices attached:

_____

Explain: _____

E. Guy wire crossings and overhanging cross-arms and power wires of pole lines outside MBTA right-of-way.

Number of guy wires crossing MBTA Railroad property but not anchored thereon: _____

Number of cross-arms overhanging MBTA Railroad Property from poles located outside thereof: _____

Number of cross-arms on any poles: _____

It is hereby understood and agreed that the undersigned applicant will bear any and all costs associated with MBTA's preliminary and final engineering review in connection with this application. Any charges in excess of the initial advance payment will be billed directly to the address indicated in Item #3 above.

Agent: _____

For: _____
Name of Applicant

By: _____
(Title)

_____
(Date)

REVENUE ENFORCEMENT AND PROTECTION PROGRAM CERTIFICATION

Pursuant to M.G.L. Ch. 62C, Sec. 49A, I certify under penalties of perjury that I (my company), to my best knowledge and belief, have (has) filed all state tax returns and paid all state taxes required under law.

_____	_____
Social Security Number or Federal Identification Number	Signature of Individual or Corporate Name
	By: _____ Corporate Officer (If applicable)
	Date: _____

EMPLOYER'S CERTIFICATE OF COMPLIANCE WITH MASSACHUSETTS EMPLOYMENT SECURITY LAW

Pursuant to G. L. C. 151A, Sec. 19A (b), I _____

on behalf of (Name of Employer) _____,

D.E.T. ID Number _____, certify under the penalties of perjury[1] that the aforementioned employer has complied with all laws of the Commonwealth relating to contributions and payments in lieu of contributions.

Signed under the penalties of perjury this _____ day of _____, 20__.

_____
Name of Employer

_____
Signature

_____
Name (Printed)

_____
Title (Printed)

[1] The employer may certify its compliance if it has entered into and is complying with a repayment agreement satisfactory to the Commissioner or there is a pending adjudicatory proceeding or court action contesting the amount due pursuant to G. L. C. 161A, Sec. 19A(c).

STATEMENT REGARDING BENEFICIAL INTEREST

In compliance with the provisions of Chapter 7, Sec. 40J of the General Laws, I hereby state, under the penalties of perjury, that the true names and addresses of all persons who have or will have a direct or indirect beneficial interest in the real property subject to this Application dated _____, 20__,

between _____ as applicant/tenant, for premises in the building (on the site) know as _____, and located at _____ _____ are listed below.

Name and residence of all persons with beneficial interests:

1. _____
2. _____
3. _____
4. _____
5 _____
6. _____

Signed: _____

Title: _____

Date: _____

ATTACHMENT "C"

REFERENCED STANDARDS AND SPECIFICATIONS

A. Wherever standards or specifications issued by a recognized industry association or regulatory body are referenced in these Specifications, the reference shall be interpreted as incorporating the referenced standard or specification in total into these Specifications as applicable. In the event of a difference between referenced standard or specifications and these Specifications, the latter shall govern.

B. Technical Reference Abbreviations - References are made to recognized standards by use of the acronyms listed below. Addresses are included for convenience, and the accuracy of the addresses is not warranted:

AA The Aluminum Association
900 19th Street NW
Washington, DC 20006

AAR The Association of American Railroads
American Railroads Building
50 F Street NW
Washington, DC 20001

AASHTO American Association of State Highway and Transportation Officials
444 North Capitol Street NW
Suite 249
Washington, DC 20001

ACGIH American Conference of Governmental Industrial Hygienists
1330 Kemper Meadow Drive
Cincinnati, OH 45240

ACI American Concrete Institute
P. O. Box 19150
Detroit, MI 48219

AFPA American Forest and Paper Association
1111 19th Street, NW
Suite 700
Washington, DC 20036

AIA	American Insurance Association 1130 Connecticut Avenue NW Washington, DC 20036
AISC	American Institute of Steel Construction Inc. 1 East Wacker Drive Suite 1300 Chicago, IL 60601
AISI	American Iron and Steel Institute 1101 17th Street NW Suite 1300 Washington, DC 20036-4700
AITC	American Institute of Timber Construction 7012 South Revere Parkway Suite 140 Englewood, CO 80112
ANSI	American National Standards Institute 11 West 42nd Street New York, NY 10036
APA	American Plywood Association P. O. Box 11700 Tacoma, WA 98411
APHA	American Public Health Association 1015 15th Street NW Washington, DC 20005
AREA	American Railway Engineering Association 50 F Street NW Washington, DC 20001
ASCE	American Society of Civil Engineers 345 East 47th Street New York, NY 10017
ASHRAE	American Society of Heating, Refrigerating and Air Conditioning Engineers 1791 Tullie Circle, NE Atlanta, GA 30329
ASME	American Society of Mechanical Engineers 345 East 47th Street New York, NY 10017

ASTM	American Society for Testing and Materials 1916 Race Street Philadelphia, PA 19103
AWPA	American Wood Preservers' Association P. O. Box 286 Woodstock, MD 21163-0286
AWS	American Welding Society 550 NW 42nd Avenue Miami, FL 33126
AWWA	American Water Works Association, Inc. 6666 W. Quincy Avenue Denver, CO 802350
CSI	Construction Specifications Institute 601 Madison Avenue Alexandria, VA 22314-1791
FHA	Federal Highway Administration 400 7th Street SW Washington, DC 20590
FRA	Federal Railroad Administration 403 7th Street SW Washington, DC 20590
ICBO	International Conference of Building Officials 5360 Workman Mill Road Whittler, CA 90601
IIA	Incinerator Institute of America 60 East 42nd Street New York, NY 10017

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

II

MAINTENANCE AND PROTECTION OF RAILROAD TRAFFIC

AUGUST 2014

SECTION 1. GENERAL

1.01 The Contractor should note that these specifications govern proposed work that involves construction on, over, under, within or adjacent to MBTA Railroad Property. Requirements must be strictly observed whenever the tracks, structures, or properties of the MBTA are involved or affected.

1.02 If the tracks or other facilities of the MBTA are endangered, the Contractor shall immediately perform such work as directed by the Railroad Company(s), and upon failure of the Contractor to carry out such orders immediately, the Railroad Company(s) may take whatever steps are necessary to restore safe conditions. The cost and expense to the Railroad Company(s) and/or MBTA of restoring safe conditions or of any damage to the MBTA's trains, tracks, or other facilities caused by the Contractors' or subcontractors' operations, shall be at the sole expense of the Contractor and will be collected as appropriate. This cost shall be paid for by the Contractor and may be deducted from any monies due and that may become due to the Contractor.

1.03 Before entering upon MBTA Railroad Property:

A. The Owner or its Contractor shall be fully informed of all requirements of the MBTA pertaining to the specific project and shall conduct all their work accordingly. Any questions relating to the requirements of the MBTA should be directed to the Director of Engineering for MBTA Railroad Operations or their authorized representative.

B. The Owner or its Contractor shall execute an MBTA License for Entry, and shall provide the MBTA and Railroad Company(s) with the information required in the "Insurance Specifications".

C. The Owner or its Contractor shall take note that if an excavation is to be made within a 2 to 1 slope line commencing 5.5 feet from the centerline of track, they shall be required to submit the proposed method of soil stabilization for approval by the Director of Engineering for MBTA Railroad Operations.

D. The Owner or its Contractor shall furnish detailed plans for falsework, bracing, sheeting, or other supports adjacent to the tracks for approval by the Director of Engineering for MBTA Railroad Operations and the Railroad Company(s), and the work shall be performed in accordance with temporary “Sheeting and Shoring". All plans and calculations shall be stamped by a Registered Professional Engineer.

E. The Owner or its Contractor shall give written notice to the Director of Engineering for MBTA Railroad Operations and the applicable

Railroad Company(s) at least 21 days in advance of starting work or locating equipment at the site.

F. The Owner or its Contractor shall make all necessary arrangements with the MBTA before entering upon MBTA Railroad Property.

1.04 After entering upon MBTA Railroad Property:

A. The Owner or its Contractor shall have, in their possession on the job site, the contract plans and specifications which bear the stamp of approval of the Director of Engineering for MBTA Railroad Operations or Railroad Company(s). The Owner or its Contractor shall conduct all their work according to these plans and specifications.

B. All work shall be performed and completed in a manner fully satisfactory to the MBTA Chief Engineering Officer or authorized representative(s). Railroad Company(s) inspection of the work shall be conducted at any time and the Owner or its Contractor shall cooperate fully with the MBTA and Railroad Company(s) representatives.

C. All equipment used by the Owner or its Contractor on MBTA Railroad Property may be inspected by the Railroad Company(s) and shall not be used if considered unsatisfactory by the Railroad Company(s) representative. Equipment of the Owner or its Contractor to be used adjacent to tracks shall be in first class condition so as to positively prevent any failure that would cause delay in the operation of trains or damage to MBTA or railroad facilities. Equipment shall not be placed or put into operation adjacent to a track without first obtaining the permission of the Railroad Company(s).

D. Operators of such equipment must be properly licensed and may be examined by the Railroad Company(s) representative to determine their fitness. If it is determined that they are unfit to work, then the Owner or its Contractor shall remove them from MBTA Railroad Property.

E. If the Director of Engineering for MBTA Railroad Operations deems it necessary, the Owner or its Contractor shall furnish and erect in close proximity to the site of the work a suitable, furnished shelter with lights, heat, telephone, etc., for use by Railroad Company(s) personnel providing services to the Owner's or Contractor’s work.

F. The Owner or its Contractor's work shall be performed in such manner that the tracks, train operations and appurtenances of the MBTA and the Railroad Company(s) will be safeguarded.

G. Open excavations shall be suitably planked and safeguarded when construction operations are not in progress.

H. Blasting will be permitted under or adjacent to tracks only after proof that blasting is required and all methods have been approved by the Director of Engineering for MBTA Railroad Operations and the Railroad Company(s). All blasting operations must comply with the MBTA's "Blasting Specifications".

I. The Owner or its Contractor shall be fully responsible for all damages arising from their failure to comply with the requirements of these specifications. Failure to comply may result in their removal from MBTA Railroad Property, at the MBTA's sole discretion.

SECTION 2. RULES, REGULATIONS, AND REQUIRMENTS.

2.01 Railroad traffic shall be maintained at all times with safety and continuity, and the Contractor shall conduct all operations on, over, under, within or adjacent to MBTA Railroad Property within the rules, regulations, and requirements of the Railroad Company(s) and/or MBTA. The Contractor shall be responsible for acquainting themselves with such requirements as the Railroad Company(s) and/or MBTA may demand.

2.02 The Contractor shall obtain verification of the time and schedule of track occupancy from the Railroad Company(s) before proceeding with any construction or demolition work on, over, under, within or adjacent to MBTA Railroad Property. The work shall not proceed until the plans and method of procedure have been approved by the Director of Engineering for MBTA Railroad Operations or their authorized representative.

2.03 All work to be done on, over, under, within or adjacent to MBTA Railroad Property shall be performed by the Contractor in a manner satisfactory to the MBTA and the Railroad Company(s), and shall be performed at such times and in such manner, as to not interfere with the movement of trains or operations upon the tracks of the MBTA. The Contractor shall use all necessary care and precaution in order to avoid accidents, delays or interference with the MBTA's trains or other property.

2.04 The Contractor shall give written notice to the Railroad Company(s) at least twenty- one (21) days prior to the commencement of any work, or any portion of the work, by the Contractor or their subcontractors on, over, under, within or adjacent to MBTA Railroad Property, in order that necessary arrangements may be made by the Railroad Company(s) to protect railroad operations.

2.05 If deemed necessary by the Railroad Company(s), it may assign an inspector and/or engineer who will be placed on the work site during the time the Contractor or any subcontractor is performing work on, over, under, within or adjacent to MBTA Railroad Property. The cost and expense will be paid directly by the contracting party with an advance deposit to the Railroad Company(s), unless otherwise approved.

2.06 Before proceeding with any construction or demolition work, on, over, under, within or adjacent to the MBTA's Railroad Property, a pre-construction meeting shall be held at which time the Contractor shall submit for approval of the MBTA and Railroad Company(s), Drawings, computations, and a detailed description of the method for accomplishing the construction work, including methods of protecting railroad operations. Such approval shall not serve in any way to relieve the Contractor of complete responsibility for the adequacy and safety of the referenced methods.

2.07 During any demolition procedure, the Contractor must provide an approved shield to prohibit all debris from falling onto MBTA Railroad Property. A protective fence must be erected at both ends of the project to prohibit trespassers from entering MBTA Railroad Property.

2.08 Cranes, shovels, or any other equipment shall be considered to be fouling the track when located in such position that failure of same with or without load brings the equipment within the fouling limit. The Contractor's employees and equipment will not be permitted to work near overhead wires or apparatus.

2.09 The Contractor shall conduct their work and handle their equipment and materials so that no part of any equipment should foul an operated track or wire line without the written permission of the Railroad Company(s). When it becomes necessary for the Contractor to foul any track, they must give the Railroad Company(s) written notice of their intentions twenty-one (21) days in advance, so that if approved, arrangements may be made for proper protection of the Railroad Company(s).

2.10 The Contractor's equipment shall not be placed or put into operation adjacent to tracks without first obtaining permission from the Railroad Company(s). Under no circumstances shall any equipment or materials be placed or stored within fifteen (15) feet from the centerline of the closest track.

2.11 Materials and equipment belonging to the Contractor shall not be stored on MBTA Railroad Property without first having obtained permission from the Railroad Company(s), and such permission will be on the condition that the MBTA and/or Railroad Company(s) will not be liable for damage to such materials and equipment from any cause. The Contractor shall keep the

tracks adjacent to the site clear of all refuse and debris that may accumulate from construction operations, and shall leave the MBTA Railroad Property in the condition existing before construction commencement. Equipment repair, refueling or extended storage is prohibited on MBTA Railroad Property.

2.12 The Contractor shall consult the Railroad Company(s) in order to determine the type of protection required to insure safety and continuity of railroad operations. The railroad field engineer may assign track foremen, flagmen, signalmen or other employees deemed necessary for protective services by the Railroad Company(s), to insure the safety of trains and MBTA Railroad Property. The cost of same shall be paid directly by the contracting party with an advance deposit to the Railroad Company(s), unless otherwise approved.

2.13 The provision of such protective services, and other precautionary measures, shall not relieve the Contractor from liability for the cost of any and all damages caused by their operations.

2.14 The Railroad Company(s) will require protection during all periods when the Contractor is working on, over, under, within or adjacent to MBTA Railroad Property or as may be deemed necessary. When protection is required, the Contractor shall make the request in writing to the Railroad Company(s) at least twenty-one (21) days before such protection is required.

2.15 The Contractor shall not bill the Railroad Company(s) or MBTA for any work which they are proposing to perform, unless the Railroad Company(s) or MBTA authorizes the said work in writing. This work must be to the benefit of the MBTA or Railroad Company(s).

2.16 The Contractor, subcontractor and respective employees who will come within the limits of the MBTA Railroad Property, must first attend the Railroad Company(s) Safety Orientation Class. They are required to comply with the Railroad Company(s) Safety Requirements throughout the entire construction period. All costs associated with compliance of the Railroad Company(s) Safety Requirements will be at the sole expense of the Contractor and subcontractors.

A. The Contractor for the project must appoint a qualified person who will be designated as a Safety Representative. They must be approved by the Railroad Company(s) Safety Representative. The Contractor's designee will be responsible to give Safety Orientation to the Contractor's/subcontractor's employees who will come onto the MBTA's Railroad Property for short periods of time after the initial Safety Orientation Class has been given by the Railroad Company(s). The Contractor's designee will keep the Railroad Company(s) Safety Representative informed of the temporary employees who received Safety Orientation. The Railroad Company(s)

Safety Orientation Class will be repeated when employee turnover or groups of Contractor's and subcontractor's employees are such that another Railroad Company(s) Safety Orientation Class is justified.

B. All Contractors shall follow established safety procedures and remain 15 feet or more from the closest rail of the closest track. When it becomes necessary for Contractors to encroach on this 15 foot limitation, the proper fouling procedures will be arranged with the Railroad Company(s).

C. Contractors will establish the 15 foot foul line by installing stakes and taping off the area prior to beginning work.

2.17 Upon completion of the work, the Contractor shall remove from the MBTA Railroad Property, all machinery, equipment, surplus materials, falsework, rubbish, temporary buildings and other property of the Contractor, or any subcontractor, and shall leave MBTA Railroad Property in a condition satisfactory to the MBTA and Railroad Company(s). Failure to comply will result in Railroad Company(s) forces restoring MBTA Railroad Property at the Contractor's expense.

2.18 The Contractor will pay the Railroad Company(s) directly, for all protective services unless otherwise approved. The services are performed to insure safe operation of trains when construction work would, in the Railroad Company(s) opinion, be a hazard.

SECTION 3. DEFINITION OF HAZARD

3.01 Protection Services will be required whenever the Contractor is performing work on, over, under, within or adjacent to MBTA Railroad Property. This will include excavating, sheeting, shoring, erection, removal of forms, handling material, using equipment which by swinging or by failure could foul the track, and when any other type of work being performed, in the opinion of the Railroad Company(s), requires such service.

3.02 Railroad operations will be considered subject to hazard when explosives are used in the vicinity of MBTA Railroad Property during the driving or pulling of sheeting for footings adjacent to a track, when erecting structural steel across or adjacent to a track, when operations involve swinging booms or chutes that could in any way come closer than 5 feet to the center line of a track or wire line. None of these or similar operations, shall be carried on without Railroad Company(s) protective services personnel on site.

3.03 A signal line or communication line shall be considered fouled and subject to hazard when any object is brought closer than ten (10) feet to any wire or cable. An electrical supply line shall be considered fouled and subject to hazard when any object is brought closer than ten (10) feet to any

wire of the line.

3.04 As excavation approaches pipes, conduits, or other underground structures on or adjacent to MBTA Railroad Property, digging by machinery shall be discontinued and the excavation shall continue by means of hand tools. All existing pipes, poles, wires, fences, property line markers, and other structures, which the MBTA and/or Railroad Company(s) decides must be preserved in place, shall be carefully protected from damage by the Contractor or its Owner. Should such items be damaged, they shall be restored by the Railroad Company(s), at the Owner's or Contractor's sole expense to the original condition prior to construction commencement. If any excavation is taken beyond the work limit indicated on the approved Drawings or prescribed herein, the Owner or its Contractor shall backfill and compact to the satisfaction of the Railroad Company(s) at the Contractors expense.

SECTION 4. BACKFILL

4.01 Backfilling

A. All backfill material adjacent to any Railroad Company(s) facility shall be approved by the Railroad Company(s). Backfill material shall be free from hard lumps and clods larger than 3 inches in diameter, and free from large rocks or stumps. Uniformly fine material shall be placed next to any pipe liable to dent or break.

B. All backfill material shall be compacted at or near optimum moisture content, in layers not exceeding 6 inches in compacted thickness by pneumatic tampers, vibrator compactors, or other approved means to the base of the railroad subgrade. Material shall be compacted to not less than 95 percent of AASHTO T 99, Method C. The Contractor will be required to supply to the job site, ballast stone (AREA #4) to be installed by the Railroad Company(s).

4.02 Certification

The Owner or its Contractor shall provide testing, through the use of a testing lab or Professional Engineer, to insure that the in place density of the backfill meets or exceeds the requirements of Section 4.01(B). Written certification of the tests shall be given to the Railroad Company(s) immediately upon completion of the test.

4.03 Alternate

In the case of an open cut crossing of the MBTA Railroad Property, the Owner or its Contractor may backfill with concrete having a three-day compressive strength of 1000 psi to the base of the track subgrade. This

may be used in lieu of providing the certification of proper compaction when using gravel backfill. The Owner or its Contractor will be required to supply to the job site, ballast stone (AREA #4) to be installed by the Railroad Company(s).

SECTION 5. CLEARANCES

5.01 Staging falsework or forms shall at all times be maintained with a minimum vertical clearance of 226" above top of the high rail and a minimum horizontal clearance of 15' from the center line of track.

SECTION 6. PROTECTION SERVICES

6.01 The MBTA shall require railroad inspection and may require railroad flagging. Prior to the start of any work on MBTA Railroad Properly, the Owner or its Contractor shall submit a deposit to the amount required by the Railroad Company(s). If Railroad Company(s) expenses are greater than the amount of deposit, the Owner or its Contractor shall reimburse the Railroad Company(s) for the balance when billed, and, if the Railroad Company(s) expenses are less than the amount of deposit, the Railroad Company(s) will refund the balance to the Owner or its Contractor. The Railroad Company(s) reserves the right to request additional deposits as project work progresses.

6.02 If the MBTA or Railroad Company(s) determines that flagmen are necessary, the number required shall be on duty at the site during the hours of hazard described under Section 3. No work shall be performed if flagmen are required but are not on duty.

6.03 It shall be the responsibility of the Owner or its Contractor to keep the MBTA and Railroad Company(s) informed at all times when the Owner or its Contractor shall be working on, over, under, within or adjacent to MBTA Railroad Property and creating the hazards described under Section 3. Failure of the Owner or its Contractor to give the MBTA and Railroad Company(s) suitable advance notice of hazardous operation shall result in the shutdown of the work by the Railroad Company(s), until such time as sufficient numbers of flagmen are on duty at the site. If this becomes a repeat occurrence, the Contractor will be removed from the project.

6.04 The Railroad Company(s) will make its best effort to provide protective services personnel. Should the situation arise where such personnel are not available, Contractor operations must cease. The Railroad Company(s) is not liable for any monetary claims incurred during the absence of protective services personnel.

SECTION 7. INSPECTION

7.01 If deemed necessary by the Director of Engineering for MBTA Railroad Operations, the MBTA will furnish and assign an engineer(s) for inspection and the Railroad Company(s) will furnish an appropriate inspector for general inspection purposes or for general protection of MBTA Railroad Property and operations during construction. All protection services will be at the expense of the Owner or its Contractor.

SECTION 8. EXTRA-CONTRACT SERVICES

8.01 Temporary and permanent changes of tracks and all railroad utilities made necessary by the work of the Contractor, will be made by the MBTA or Railroad Company(s) at the expense of the Owner or its Contractor.

8.02 All other changes made or services furnished by the Railroad Company(s), at the request of the Owner or its Contractor, will be at the Owner's or its Contractor's expense.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

III

INSURANCE SPECIFICATIONS

The insurance outlined in these Specifications is required of the Owner or Contractor, and shall be provided by or in behalf of all subcontractors performing any portion of the work. The Owner or Contractor shall be responsible for any modifications, deviations or omissions of the required insurance as it applies to subcontractors.

All insurance policies, unless otherwise specified under Railroad Protective Liability Insurance, are to be written either on an occurrence basis or, if a claims-made form, applicable renewals must have a date retroactive to the construction start date and shall be maintained in force for one year following the acceptance of the work by the MBTA or its duly authorized representative.

With the exception of Railroad Protective Liability Insurance, all insurance policies must name the MBTA as an additional insured as its interest appears and waive any rights of subrogation against the MBTA.

Certificates of Insurance evidencing (1) either the claims-made or occurrence form coverage, (2) work description/location, (3) Owner or Contractor's corporate name, and (4) individual, company, government agency or municipality for which the work is being performed, are to be furnished to the MBTA prior to work commencement, and within fifteen (15) days of expiration of the insurance coverage, when applicable.

All policies must contain a minimum thirty (30) day written notice of cancellation clause, and provide that the Insurance Company shall notify the Owner, Contractor, MBTA and Railroad Company(s), via registered mail, of any cancellation, change or expiration of the policy.

Original Insurance Certificate(s) shall be received and approved by the MBTA before the Owner or Contractor will be allowed entry upon MBTA Railroad Property. Certificates, including any required endorsements, shall be furnished to the MBTA, c/o Risk Manager, Office of the Treasurer-Controller, Ten Park Plaza, Room 8450, Boston, MA 02116, and shall provide stated coverage and a provision that Notice of Accident (occurrence) and Notice of Claim shall be given to the Insurance Company as soon as practicable after notice to the insured(s).

Original Insurance Binders reflecting Railroad Protective Insurance shall be received and approved by the MBTA and the appropriate Railroad Company(s) prior to entry upon MBTA Railroad Property. Mailing addresses for transmittal of original Insurance Binders to the named insured Railroad Company(s) are contained on Page Four of these Specifications.

The Owner or Contractor shall indemnify, defend and save harmless the MBTA and the appropriate Railroad Company(s) from and against any and all liabilities, losses (including losses of revenue), claims, costs, damages and expenses (including reasonable attorney's fees and expenses) that may be asserted against or incurred by the MBTA and the Railroad Company(s) arising from or as a result of the Owner or Contractor's work, or its use of adjacent land. Said indemnification shall include claims, whether covered by insurance or not, including, but not limited to

Workers Compensation and similar insurance.

The Owner or Contractor shall maintain, during the life of the contract, from company (s} authorized to do business in the Commonwealth of Massachusetts and satisfactory to the MBTA:

A. **COMMERCIAL GENERAL LIABILITY INSURANCE** for personal injury, bodily injury and property damage in an amount not less than $1,000,000 per occurrence and $3,000,000 in the aggregate covering all work performed on over or adjacent to MBTA Railroad Property (the “work"), including:

1. All operations;

2. Contractual liability;

3. Coverage for the so-called "X, C, U" hazards, i.e., collapse of building, blasting, and damage to underground property;

4. Asbestos abatement, when applicable.

B. **AUTOMOBILE LIABILITY INSURANCE** including the use of all vehicles owned, non-owned, leased and hired, in an amount not less than $1,000,000 combined single limit covering all the work.

C. **WORKER'S COMPENSATION INSURANCE** including Employees, Liability Insurance, as provided by Massachusetts General Laws, Chapter 152, as amended, covering all the work.

D. **UMBRELLA LIABILITY COVERAGE** in an amount not less than $10,000,000 per occurrence covering all the work.

E. **HAZARDOUS MATERIALS INSURANCE** if the work involves hazardous materials, the following coverage is required:

1. **Pollution Liability insurance** for sudden and gradual occurrences in an amount not less than $1,000,000 per occurrence and $5,000,000 in the aggregate arising out of the work, including but not limited to all hazardous materials identified in the contract.

2. When applicable, the Owner or Contractor shall designate the disposal site and furnish a Certificate of Insurance from the Disposal Facility for Environmental Impairment Liability Insurance for (a) sudden and accidental occurrences in an amount not less than $3,000,000 per occurrence and $6,000,000 in the aggregate and (b) non-sudden occurrences in an amount not less than $5,000,000 per occurrence and $10,000,000 in the aggregate.

3. Certificates of insurance shall clearly state the hazardous materials exposure work being performed.

F. RAILROAD PROTECTIVE LIABILITY INSURANCE is specifically designed for insuring Railroads, and is purchased by the Owner or Contractor in the name of the MBTA and the Railroad Company(s). **The Railroad Company(s) is the named insured on the policy.** Railroad Protective Liability Insurance is required for any work performed within fifty (50) feet from center line of the nearest railroad track; it is not a substitute for any types of insurance outlined in these Specifications. Required limits are:

Bodily injury: not less than $5,000,000 for all damages arising out of bodily injuries to or death of one person, and subject to that limit for each person, a total limit of $6,000,000 for all damages arising out of bodily injury to or death of two or more persons in any one accident;

Property Damage: not less than $10,000,000 or all damages arising out of injury to or destruction of MBTA property in any one accident, and subject to that limit per accident, a total of $10,000,000 in the aggregate for all damages arising out of injury to or destruction of MBTA property.

Questions regarding insurance should be directed to MBTA's Risk Manager at (617) 222-3064.

Questions regarding train counts and train speeds should be directed to the appropriate Railroad Company(s) listed on Page Four.

PROOF OF INSURANCE

MAILING ADDRESSES:

MBTA	Risk Manager c/o Treasurer-Controller 10 Park Plaza Boston, MA 02116 cc: Massachusetts Realty Group
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MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

IV

PIPELINE OCCUPANCY SPECIFICATIONS

INDEX

SUBJECT		PAGE
SECTION 1. GENERAL REQUIREMENTS		
1.01	Description of Work and Location	1
1.02	License to Enter Railroad Company(s) Property	1
1.03	Work on Railroad Property	1
1.04	Coordination	3
1.05	Layout of Work	3
1.06	Indemnification	3
1.07	Scientific or Historic Artifacts	3
1.08	Record Documents	4
SECTION 2. SUBMITTALS		
2.01	Application for Occupancy	4
2.02	Submission of Construction Drawings and Specifications	4
SECTION 3. TEMPORARY FACILITIES AND CONTROLS		
3.01	Requirements of Regulatory Agencies	7
3.02	Installation and Coordination - General	7
3.03	Sanitary Facilities	8
3.04	Light and Power	8
3.05	Temporary Water	8
3.06	Temporary Traffic Controls	8

SUBJECT		PAGE
3.07	Temporary Work and Storage Areas	8
3.08	Pollution Abatement Controls	9
3.09	Protection of Persons and Properties	10
3.10	Vermin Control	11
3.11	Rubbish and Debris Removal	11
SECTION 4.	PIPELINE OCCUPANCY GENERAL CRITERIA	
4.01	Method of Installation	12
4.02	General Requirements	13
4.03	Inspection and Testing	14
4.04	Cathodic Protection	14
4.05	Soil Investigations	15
4.06	Ground Stabilization	16
4.07	Support of Tracks	16
4.08	Geotechnical Monitoring	17
4.09	Pipelines On Bridges	18
4.10	Bonding and Grounding of Pipelines In Electrified Territory	18
4.11	Abandoned Pipelines or Facilities	19
4.12	Drainage	19
SECTION 5.	CARRIER PIPE	
5.01	Design Criteria - General	20
5.02	General - Products	20

5.03	Oil and Gas Pipes	21
5.04	Cast Iron Pipe	21
5.05	Vitrified Clay Pipe	21
5.06	Corrugated Metal Pipe	21
5.07	Asbestos Cement Pipe	21
5.08	Other	22
5.09	Shut-Off Valve	22
5.10	Signs	22
5.11	Installation - Execution	22

SECTION 6. CASING PIPE

6.01	Design Criteria - General	23
6.02	Protection at Ends of Casing	24
6.03	Vents	24
6.04	Steel Pipe - Products	25
6.05	Cast Iron Pipe	25
6.06	Corrugated Metal Pipe and Corrugated Structural Plate Pipe	25
6.07	Reinforced Concrete Pipe	25
6.08	Tunnel Liner Plates	25
6.09	Depth of Installation - Execution	26
6.10	Method of Installation	26
6.11	Construction	27

PLATES		PAGE
Plate I	Pipe Crossing	33
Plate II	Pipe Crossing	34
Plate III	Longitudinal Occupancy	35
Plate IV	Pipe Crossing Data Sheet	35
Plate V	Table of Minimum Wall Thickness	37

SECTION 1. GENERAL REQUIREMENTS

1.01 DESCRIPTION OF WORK AND LOCATION

These specifications apply to the design and construction of pipelines carrying flammable and non-flammable substances and to casings over 4-inches in diameter containing wires and cables, under, across or along MBTA Railroad Property, facilities and tracks.

1.02 LICENSE TO ENTER RAILROAD PROPERTY

A. Entry upon MBTA Railroad Property for the purpose of conducting surveys, field inspections, obtaining soil information, or any other purpose associated with the design and engineering of the proposed occupancy, will be authorized by an MBTA License for Entry (See "Guidelines and Procedures for Construction on MBTA Railroad Property").

B. Issuance of the License does not constitute authority to proceed with the actual construction.

1.03 WORK ON RAILROAD PROPERTY

A. The safety and continuity of train operations shall be the first priority. The Applicant shall arrange the work so that the trains will be protected and safeguarded at all times. Whenever the work may affect the safety and movement of trains, the method, sequence and time schedule of performing such work shall be submitted to the Director of Engineering for MBTA Railroad Operations or their authorized representative for approval.

B. The Applicant waives all claims against the Railroad Company(s) and/or the MBTA for delays or any interference occasioned by railroad traffic or railroad maintenance.

C. All Applicant-designed temporary construction on MBTA Railroad Property shall be designed in accordance with the appropriate railroad criteria and all construction performed on, over, under, within or adjacent to MBTA Railroad Property will be subject to the inspection and approval of the Railroad Company(s) and/or MBTA.

D. A minimum of fourteen (14) days advance written notice shall be given to the Railroad Company(s) prior to construction related activities.

E. The Railroad Company(s) will furnish such qualified flagmen, signalmen or protection men as may be required to insure complete

protection of train operations and railroad facilities. The need for this type of service will be determined by the Railroad Company(s) on the basis of railroad regulations and the Applicant's approved construction schedule. No work shall proceed without proper protection on the site.

F. All expenses incurred in connection with protection of railroad facilities by Railroad Company(s) employees will be borne by the Applicant. Billings for such service or expense, including labor, materials and equipment will be made directly to the Applicant for payment.

G. During construction, railroad traffic shall be maintained at all times without interruption, except when approved in advance, in writing, by the Director of Engineering for MBTA Railroad Operations or their authorized representative.

H. All construction operations shall be conducted so as not to interfere with, interrupt, or endanger the operation of trains, nor damage, destroy, or endanger the integrity of railroad facilities. All work on or near MBTA Railroad Property shall be conducted in accordance with the Railroad safety rules and regulations. The Applicant shall secure and comply with the Railroad safety rules and shall give written acknowledgment to the Railroad Company(s) that they have been received, read, and understood by the Applicant and their employees. Construction operations will be subject to Railroad Company(s) inspection at any and all times.

I. All cranes, lifts, or other equipment that will be operated in the vicinity of the MBTA's electrification and power transmission facilities shall be electrically grounded as directed by the Railroad Company(s).

J. At all times when the work is progressing, a field supervisor for the work with no less than twelve (12) months experience in the operation of the equipment being used shall be present. Certification of the above must be submitted to the Railroad Company(s).

K. Whenever equipment or personnel are working closer than fifteen (15) feet to the closest rail of an adjacent track, that track shall be considered as being obstructed. As best possible, all construction operations shall be conducted no less than this distance. Construction operations closer than fifteen (15) feet to the closest rail of a track shall be conducted only with the permission of, and as directed by, a qualified Railroad Company(s) employee present at the work site.

L. Crossing of tracks at grade by equipment and personnel is prohibited except by prior arrangement with, and as directed by, the Director of

Engineering for MBTA Railroad Operations or their authorized representative.

M. All tunneling, jacking and boring operations within railroad influence lines will be done on a 24 hour per day basis to minimize Railroad exposure to construction hazards.

1.04 COORDINATION

The Applicant shall coordinate the work with their Contractors, subcontractors, utility companies, governmental units, and any affected Railroad Company(s) with regard to site access, establishment and use of temporary facilities, work schedules, and other elements of the specified work which require interfacing with others.

1.05 LAYOUT OF WORK

The Applicant shall lay out their work true to lines and grades indicated on the Drawings and shall be responsible for all measurements in connection therewith. The Applicant will be held responsible for the execution of the work to such lines and grades indicated on the approved construction Drawings or such other lines and grades as may be directed or established by the Director of Engineering for MBTA Railroad Operations or their authorized representative.

1.06 INDEMNIFICATION AND INSURANCE

See requirements in "Guidelines and Procedures for Construction on MBTA Railroad Property" and "Insurance Specifications."

1.07 SCIENTIFIC OR HISTORIC ARTIFACTS

The Applicant shall immediately notify the Director of Engineering for MBTA Railroad Operations of the discovery of scientific or historical artifacts and shall protect same until identified and removed by the appropriate Authorities exercising jurisdiction.

1.08 RECORD DOCUMENTS

A. The Applicant shall furnish the Railroad Company(s) and the MBTA with one reproducible "As Built" copy of each approved Construction Drawing, marked to indicate all changes and deviations from same.

B. All project record documents shall be received and accepted by the MBTA and the Railroad Company(s) prior to final inspection.

SECTION 2. SUBMITTALS

2.01 APPLICATION FOR OCCUPANCY

The Applicant must agree, upon approval of the construction details by the Director of Engineering for MBTA Railroad Operations, to execute the MBTA Pipeline Occupancy Agreement and pay any required fees and/or rentals outlined therein. Refer to "Guidelines and Procedures for Construction on MBTA Railroad Property" for application policy.

2.02 SUBMISSION OF CONSTRUCTION DRAWINGS AND SPECIFICATIONS

A. Six (6) sets of Drawings and specifications for proposed pipeline occupations shall be submitted to the AGM for Real Estate and Asset Development and meet the approval of the Railroad Company(s) and the MBTA prior to the start of construction. These plans are to be prepared in sizes as small as possible arid are to be folded to an 8-1/2 inch by 11-inch size (folded dimensions) with a 1-1/2 inch margin on the left side and a 1-inch margin on the top.

1. After folding, the title block and other identification of the Drawings shall be visible at the lower right corner, without the necessity of unfolding. Each Drawing shall bear an individually identifying number and an original date, together with subsequent revision dates, clearly identified on the Drawing.
2. All Drawings are to be individually folded or rolled and where more than one Drawing is involved, they shall be assembled into complete sets before submission to the MBTA.

B. Drawings shall be to scale and show the following (see attached Plates).

1. Plan view of proposed pipeline in relation to all railroad facilities.
2. Location of pipe (in feet) from nearest railroad milepost, centerline of a railroad bridge (giving bridge number), or centerline of an existing or former passenger station, or other fixed point. In all cases, the name of the City or Town and County in which the proposed facilities are located must be shown.
3. Profile of ground on centerline of pipe from field survey showing relationship of pipe and casing to ground level, tracks and other facilities. For longitudinal occupations, the profile of adjacent track(s) must be shown.

4. All MBTA property lines. If pipeline is in a public highway, the limits of the right-of-way for the highway shall be clearly indicated with dimensions from centerline.
5. The angle of crossings in relation to centerline of tracks.
6. Location of valves or control stations of the pipeline.
7. "Pipe Crossing Data Sheet" completed and out on Plan.

C. The Drawing must be specific (both on MBTA Railroad Property and under tracks that are not on MBTA Railroad Properly) as to:

1. Method of installations.
2. Size and material of casing pipe.
3. Size and material of carrier pipe.

These items shall not have an alternative.

D. Once an application is approved by the Director of Engineering for MBTA Railroad Operations or their authorized representative, proposed variances from the approved plans, specifications, method of construction, etc., will be resubmitted for approval.

E. Location and dimensions of jacking, boring, or tunneling pits shall be shown with details of their sheeting and shoring. If the bottom of the pit excavation nearest the adjacent track intersects a line from a point 5.5 feet horizontally from center line of adjacent track at the plane of the base of fall drawn on a slope of 2 horizontal to 1 vertical, submit design and details of the pit construction to the MBTA for approval complete with computations prepared by a Registered Professional Engineer. In any event, the face of the pit shall be no less than 25 feet from adjacent track, unless otherwise approved by the Director of Engineering for MBTA Railroad Operations or their authorized representative. Pits shall be fenced, lighted, and otherwise protected as directed by the Railroad Company(s).

F. All Drawings and computations, including those submitted by Contractors, must bear the seal of a Registered Professional Engineer.

G. Computations for all structures involving the support or protection of railroad track, embankment and facilities must be prepared by and bear the seal of a Registered Professional Engineer and shall be submitted within the construction Drawings.

H. When computer calculations are included with design calculations, the following documentation shall be furnished:

1. A synopsis of the computer program(s) stating briefly required input, method of solution, approximations used, second order analysis incorporated, specifications or codes used, cases considered, output generated, extent of previous usage of certification of program(s) and program(s) author.
2. Identification by number, indexing and cross-referencing of all calculation sheets, including supplemental "long-hand" calculation sheets.
3. Fully identified, dimensioned, and annotated diagram of each member or structure being considered.
4. Clear identification and printing of all input and output values, including intermediate values if such values are necessary for orderly review.
5. Identification of the processing unit, input/output devices, storage requirements, etc., if such supplemental information is significant and necessary for evaluation of the submittal.

I. Specifications shall conform to Construction Specifications Institute (CSI) 16 Division, 3-part Section Format.

J. If other than American Railway Engineering Association (AREA), American Society for Testing and Materials (ASTM), or American National Standards Institute (ANSI) specifications are referred to for design, materials or workmanship on the Construction Drawings and specifications for the work, then copies of the applicable sections of such other specifications referred to shall accompany the Construction Drawings and specifications for the work.

SECTION 3. TEMPORARY FACILITIES AND CONTROLS

3.01 REQUIREMENTS OF REGULATORY AGENCIES

Applicant shall:

A. Obtain and pay all costs for required permits for installation and maintenance of temporary facilities and controls.

B. Comply with all applicable Federal, State and local codes, regulations and ordinances.

C. Comply with regulations and requirements of all utility or service companies from which temporary utilities or services are obtained, and pay all costs incurred therewith.

3.02 INSTALLATION AND COORDINATION - GENERAL

Applicant shall:

A. Install all temporary facilities and controls in a neat and orderly manner.

B. Make all temporary facilities structurally and functionally sound throughout.

C. Construct temporary facilities and controls to give continuous service and to provide safe working conditions.

1. Enforce conformance with applicable standards
2. Enforce safe practices.

D. Modify, extend or relocate temporary facilities and controls as work progress requires.

E. Locate temporary facilities and controls to avoid interference with, or hazards to:

1. Work or movement of railroad personnel or traffic.
2. Vehicular traffic.
3. General Public.
4. Work of other contracts.
5. Railroad Passengers.

F. Obtain easements as may be required across non-MBTA Railroad Property.

G. Provide materials for temporary facilities and controls for the purpose intended and shall not violate requirements of applicable codes and shall not create unsafe conditions.

3.03 SANITARY FACILITIES

Prior to the start of work, the Applicant shall furnish necessary toilet conveniences, secluded from public observation. They shall be kept in a clean and sanitary condition and comply with the requirements and regulations of the area in which the work is performed.

3.04 LIGHT AND POWER

Applicant shall make their own arrangements for obtaining temporary light and power as required for the work, and shall maintain such temporary facilities in a proper and safe condition, including compliance with applicable codes.

3.05 TEMPORARY WATER

Applicant shall make their own arrangements for obtaining all temporary water service as required for the work.

3.06 TEMPORARY TRAFFIC CONTROLS

Applicant shall cooperate with the directives of the MBTA and/or Railroad Company(s) regarding vehicular traffic control and provide any temporary controls or devices required to eliminate or minimize congestion or obstruction of vehicular traffic caused by the work, including use of designated routes of ingress and egress from the work area.

3.07 TEMPORARY WORK AND STORAGE AREAS

A. The areas designated by the MBTA as the temporary parking, work and storage area(s) will be provided to the Applicant in accordance with the terms of the MBTA License Agreement.

B. All designated temporary parking, work and storage areas used by the Applicant shall be restored to their original condition prior to completion of the work, subject to inspection and approval of the MBTA and the Railroad Company(s).

3.08 POLLUTION ABATEMENT CONTROLS

Applicant shall:

A. Conduct operations in a manner to minimize pollution of the environment surrounding the area of work by every means possible. Specific controls shall be provided as follows:

1. Vehicles: All vehicles and material transport trucks leaving the site and entering paved public streets shall be cleaned of mud and dirt clinging to the body and wheels of the vehicle. Trucks arriving at or leaving the site with materials shall be loaded in a manner which will prevent dropping of materials or debris on the streets. Spills of materials in public areas shall be removed immediately at no cost to the MBTA or Railroad Company(s).

2. Waste Materials: No waste or erosion materials shall be allowed to enter natural or man-made water or sewage removal systems. Erosion materials from excavations, borrow areas or stockpiled fill shall be contained within the work area. The Applicant shall develop methods for control of waste and erosion which shall include such means as filtration, settlement and manual removal to satisfy the above requirements. Do not dispose of machinery lubricants, fuels, coolants and solvents on the site. If hazardous waste is encountered, the Applicant shall dispose of it in accordance with all federal, state and local codes. Verification of proper disposal must be provided, in writing, to the MBTA and the Railroad Company(s).

3. Burning: No burning of waste shall be allowed without prior written permission. In cases where permission is granted, burning shall be conducted in accordance with the regulations of the appropriate jurisdictional agency.

4. Dust Control: The Applicant shall at all times control the generation of dust by their operations. Control of dust is mandatory and shall be accomplished by water sprinkling or by other methods approved by the MBTA or Railroad Company(s).

5. Noise Control: The Applicant shall take every action possible to minimize the noise caused by their operation. When required by agencies having jurisdiction, noise producing work shall be performed during less sensitive hours of the day or week as directed by the MBTA or Railroad Company(s) or as required by local ordinance.

6. Environmental: All local and state environmental laws will be strictly adhered to. All applications, permits, licenses, approvals, etc., will be the sole responsibility of the Applicant.

B. Submit a program for pollution control with applicable licenses and permits for all piping carrying non-potable liquids, gases or other pollutants.

3.09 PROTECTION OF PERSONS AND PROPERTY

A. Safety Requirements

1. The Applicant must adhere to the most stringent provisions of the applicable statutes and regulations of the political subdivision in which the work is being performed. The Applicant must also observe the Department of Labor-

Occupational Safety, Health Administration provision, pertaining to the safe performance of the work, and further, the methods of performing the work must not involve undue danger to the personnel employed thereon, Railroad Company(s) employees, the public, or to public and private property. Should charges of violation of any of the above be issued to the Applicant in the course of the work, a copy of each charge shall immediately be forwarded to the Railroad Company(s). The Applicant shall pay all fines and penalties levied against him.

2. The Applicant shall erect and maintain, as required by existing conditions and progress of the work, all reasonable safeguards for safety and protection. This includes posting danger signs and other warnings against hazards, promulgating safety regulations and notifying owners and users of adjacent utilities.

B. Safety of Persons and Property - The Applicant shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to:

1. All employees on the work site and all other persons who may be affected.

2. All materials and equipment, whether in storage on or off the site, under the care, custody or control of the Contractor or any of their subcontractors.

3. Other property at the site or adjacent thereto, including walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction. Any damage to such items shall be restored to original condition by the Applicant at no cost to the MBTA or Railroad Company(s).

C. First Aid

The Applicant shall maintain adequate first aid supplies at the site as prescribed by Federal, State or Local codes and regulations.

D. Use of Explosives

Non blasting methods are preferred. See "Blasting Specifications."

E. Site Security

The Applicant shall:

1. Maintain a secure work site protecting the MBTA and the Railroad Company(s) interests and property from claims arising from trespass, theft and vandalism.

2. Permit access to the work site only to employees, Contractors and those persons having business related to the work.

3. Provide security measures as required to protect Contractor or subcontractor's tools, equipment and property from damage, theft or vandalism.

4. Assume all costs for any MBTA and/or local police details required by the work.

3.10 VERMIN CONTROL

A. Do not permit food scraps, lunch bags, food wrappers or other items which would attract rats or other vermin to be left lying around the site. Deposit such items in closed, rat-proof metal containers for disposal on a regular basis.

B. The Applicant must provide vermin control as required by the MBTA or Railroad Company(s).

3.11 RUBBISH AND DEBRIS REMOVAL

A. Rubbish and debris resulting from the work must be neatly piled in a single location and legally disposed of at least once a week. If rubbish or debris interferes with railroad activities, or creates a fire or safety hazard, it must be removed on a more frequent basis.

B. Volatile waste such as mineral spirits, oil, or paint thinner shall not be disposed of in storm or sanitary drains, streams or waterways or any location upon the site.

SECTION 4. PIPELINE OCCUPANCY GENERAL CRITERIA

GENERAL:

4.01 METHOD OF INSTALLATION:

A In a public way:

1. No work shall be done without a Railroad Company(s) Inspector present.

2. Open cuts will not be allowed in or immediately adjacent to an at

grade crossing. Sleeves will be installed by the jerking method, unless otherwise approved by the Director of Engineering for MBTA Railroad Operations.

3. Jerking is the preferred method of installation in or immediately adjacent to and at grade crossing. The sleeve may be installed by the open cut method with the Applicant paying for the complete rebuilding of the crossing, pending approval of the Director of Engineering for MBTA Railroad Operations. Approval will be given only under very unusual circumstances.

4. Jacking is the preferred method of installation in or immediately adjacent to and at grade crossing scheduled for rebuilding. The sleeve may be installed by the open cut method within seven (7) calendar days of the scheduled date of the crossing reconstruction. In the case of any open cut, strict adherence shall be made to the backfill specifications which provide the MBTA with written certification from a testing lab or Professional Engineer, that the backfill density requirements of the MBTA specifications have been met or exceeded.

B. Not within a Public Way:

The preferred method of crossing the railroad is by jacking of a pipe sleeve under the railroad. Only upon written request, will an alternate of open cut be given consideration. The engineering decision shall be based upon, but not limited to, the following: (1) track usage, (2) depth of cut, (3) soil conditions, (4) physical restraints. In the event an open cut is allowed, the following items shall be adhered to, and (5) any other circumstances which may necessitate an open cut.

1. The installation is to be a continuous operation and performed according to an MBTA approved schedule.

2. No work shall be done without a Railroad Company(s) Inspector present.

3. MBTA backfill specifications by the Owner or its Contractor.

4. The Owner or its Contractor may be required to provide a non-refundable lump sum payment for "after the fact maintenance." The determination of this amount is based on the individual situation. No work will be allowed until this payment is received. This payment is not to be confused with payments for Drawings and specification review, flagging, inspection, etc. (also required from the Owner or its Contractor before they enter upon MBTA property.)

4.02 GENERAL REQUIREMENTS

A. Pipelines under or across MBTA tracks on rights-of-way shall be encased in a larger pipe or conduit called the casing pipe as indicated in Plate II.

B. Casing pipe will be required for all pipelines carrying oil, gas, petroleum products, or other flammable, highly volatile substances which, from their nature or pressure, might cause damage if escaping on or near MBTA Railroad Property.

C. For non-pressure sewer or drainage crossings where the installation can be made without interference to railroad operations, the casing pipe may be omitted when the pipe strength is capable of withstanding railroad loading. This type of installation must be approved by the Director of Engineering for MBTA Railroad Operations.

D. The casing pipe shall be laid across the entire width of the right-of-way. Casing pipe shall extend beyond the right-of-way when the right-of-way line on either side of the tracks is less than the minimum length of casing specified in Section 6, Para. 6.01(E).

E. Pipelines laid longitudinally on railroad right-of-way shall be located in accordance with Plate III. If located within 25 feet of the closest rail of any track or closer than 45 feet to nearest point of any bridge, building or other structure, the carrier pipe shall be encased.

F. Where practicable, pipelines shall be located to cross the tracks at approximate right angles, but preferably at not less than 45 degrees.

G. Pipelines shall not be placed within a culvert, under railroad bridges, or closer than 45 feet to any portion of a railroad bridge, building, or other structure, except in special cases, and then by special design, as approved by the Director of Engineering for MBTA Railroad Operations.

H. Pipelines carrying liquefied petroleum gas shall, where practicable, cross the railroad where tracks are carried on embankment.

I. Any replacement or modification of an existing carrier pipe and/or casing shall be considered a new installation, subject to the requirements of these Specifications.

J. Where laws or orders of public authority prescribe a higher degree of protection than specified herein, the higher degree so prescribed shall be deemed a part of these Specifications.

K. Pipelines and casings shall be suitably insulated from underground conduits carrying electric wires on MBTA Railroad Property.

4.03 INSPECTION AND TESTING

For pipelines carrying flammable or hazardous materials, ANSI Codes B 31.8 and B 31.4, current at time of constructing the pipeline, shall govern the inspection and testing of the facility on MBTA Railroad Property, except that proof-testing of strength of carrier pipe shall be in accordance with the requirements of ANSI Code B 31.4, as applicable, for all pipelines carrying all liquefied petroleum gas, natural or manufactured gas, and other flammable substances.

4.04 CATHODIC PROTECTION

A. Cathodic protection shall be applied to all pipelines and casings carrying flammable substances.

B. Where casing and/or carrier pipe is cathodically protected by other than anodes, the Director of Engineering for MBTA Railroad Operations shall be notified and suitable testing shall be made. This testing shall be witnessed by the Railroad Company(s) to insure that other railroad structures and facilities are adequately protected from the cathodic current in accordance with the recommendations of Reports of Correlating Committee on Cathodic Protection, current issue by the National Association of Corrosion Engineers.

4.05 SOIL INVESTIGATIONS

A. Soil borings (or other soil investigations approved by the Railroad Company(s) will be performed to determine the nature of the underlying material for all pipe crossings under tracks. See Test Boring Specifications.

B. Borings shall be made on each side of the tracks, on the centerline of the pipe crossing, and as close to the tracks as practicable.

C. Soil borings shall be in accordance with the current issue of the American Railway Engineering Association Specifications, Chapter 1, Part 1, "Specifications for Test Borings". Soils shall be investigated by the split- spoon and/or thin-walled tube method and rock shall be investigated by the Boring method specified therein.

D. Soil boring logs shall clearly indicate all of the following:

1. Boring number as shown on boring location Drawing.

2. Elevation of ground at boring, using same datum as the pipeline Construction Drawings.

3. Description or soil classification of soils and rock encountered.

4. Elevations or depth from surface for each change in strata.

5. Identification of where samples were taken and percentage of recovery.

6. Location of ground water at time of sampling and, if available, subsequent readings.

7. Natural dry density in lbs./sq.ft. for all strata.

8. Unconfined compressive strength in tons/sq.ft., for all strata.

9. Water content (percent). Liquid limit (percent) and plastic limit (percent).

10. Standard penetration in blows/ft.

E. The location of the carrier pipe and casing shall be superimposed on the boring logs before submission to the Director of Engineering for MBTA Railroad Operations.

F. Soil investigation by auger, wash, or rotary drilling method is not acceptable.

G. Soil boring logs shall be accompanied by a Drawing drawn to scale showing location of borings in relation to the tracks and the proposed pipe location, the elevation of around surface at each boring, and the elevation of the base of rail of the tracks.

4.06 GROUND STABILIZATION

Soil stabilization shall take place prior to the start of jacking. Stabilization shall be achieved by dewatering, grouting or a combination of both to maintain the stability of the face of the heading.

A. The Owner or its Contractor shall lower and maintain the ground water level a minimum of two (2) feet below the invert at all times during construction by well points, vacuum well points, or deep wells to prevent inflow of water and/or soil into the heading. Ground water observation wells shall be installed in the area to be dewatered to demonstrate that the dewatering requirements are being complied with.

B. The grouting Contractor shall be a specialist in the field with a minimum

of five (5) continuous years of successfully grouting soils. All granular soils (silty sands, sand or sand and gravel) shall be stabilized by injection of a cement or chemical grout from the ground surface or from the pipe heading. The stabilization shall extend as far as necessary outside the periphery of the casing pipe in order to maintain a stable face at the heading.

C. Railroad Company(s) forces will survey the crossing prior to, during and after construction. If it is necessary to align or surface the tracks as a result of construction, the Railroad Company(s) will perform the work at the expense of the Owner or the Owner's Contractor.

4.07 SUPPORT OF TRACKS

A. When jacking, boring, or tunneling, temporary track support structures shall be installed. The track support structures shall be provided by the Applicant and installed by the Railroad Company(s) at the Applicant's expense. The Contractors proposed type of temporary track support structures shall be subject to the approval of the Railroad Company(s)'

B. All work involving rail, signals, ties and other track material will be performed by the Railroad Company(s) at the Applicant's expense.

C. The Applicant shall deliver the track support structures to a site approved by the Railroad Company(s). Provisions for unloading shall be provided by the Applicant at no expense to the Railroad Company(s) and the Applicant shall provide the necessary labor to handle the material for pre-installation inventory.

4.08 GEOTECHNICAL MONITORING

THE FOLLOWING SPECIFICATIONS ARE REQUIRED FOR ALL PIPE JACKING OPERATIONS.

A. Jacking shall be performed on a continuous basis, 24 hours per day, and 7 days per week.

B. The monitoring points shall be set up one week before the jacking operation begins. The MBTA and Railroad Company(s) shall be notified. Elevation readings shall begin two days prior to the start of jacking and continue for a minimum of two weeks after the completion of the jacking operation. Initial readings immediately after any surfacing operations shall serve as new baseline figures. All future elevation readings shall be compared to the adjusted baseline. If the

track deviates to a condition not acceptable to the MBTA or Railroad Company(s), corrections shall be made at the proponent's expense.

C. Elevation readings shall be taken from the top rail of each track.

D. Elevation readings shall be taken every four hours or two times per shift, i.e., six times per day. The readings shall be faxed to the MBTA and Railroad Company(s) on a daily basis and all information is to be presented in legible print. Additional readings may be required by the MBTA or Railroad Company(s).

E. Stations shall be spaced at 15-1/2 foot intervals. The number of stations required shall be determined by the depth of the pipe. There shall be a minimum of two stations on either side of the centerline jacking. Additional stations may be required at the discretion of the MBTA or Railroad Company(s),

F. Elevation readings must show the date, time, weather conditions and temperature. Each reading must also provide the following information: track number, compass direction, station number, base elevation (with date), static elevation, change in elevation (recorded in hundredths and in inches), dynamic reading and total deflection in inches. See sample sheet attached.

G. Station "0" shall be located at the centerline of the pipe jacking with Stations 1 and being to the right and Stations -1 and -2 being to the left when standing in the gauge of the near track and looking at the receiving pit. In multiple track areas the stations as determined herein are to be carried across each track perpendicular to the near track.

H. Elevation readings taken from the top of the rail for static measurement and the dynamic readings shall be combined and the sum compared to the adjusted baseline. This reading will demonstrate the difference in elevation caused by the jacking operation.

I. The MBTA requires that the truck be maintained at all times within established criteria for the specific track classification. At the completion of the project the requirement for tamping and realigning the tracks, caused by the settlement from the construction activity, remains with the Contractor for the duration as specified by the MBTA in their initial review of the work plans. This tamping and track realignment will be performed by the MBTA or Railroad Company(s) at the sole expense of the Contractor.

4.09 PIPELINES ON BRIDGES

A. Pipelines carrying flammable or non-flammable substances which by their nature might cause damage if escaping on or near railroad facilities or personnel shall not be installed on bridges over railroad tracks or bridges carting railroad tracks.

B. The Director of Engineering for MBTA Railroad Operations may approve such an installation when it is demonstrated that no practicable alternative is available.

C. When allowed by the Director of Engineering for MBTA Railroad Operations, pipelines on bridges shall be located in a way to minimize the possibility of damage from vehicles, railroad equipment, vandalism and other external causes. Pipelines on bridges may be installed in a utility bay that is constructed between the girders of the bridge. The utility bay shall be protected from the environment by a removable shield bolted to the girders. This will allow utility companies to comply with the Code of Federal Regulations for Periodic Inspection.

D. In the event of pipe relocation due to the reconstruction of a bridge, the installation of the new pipe must comply with the requirements in these Specifications.

4.10 BONDING AND GROUNDING OF PIPELINES IN ELECTRIFIED TERRITORY

A. Carrier pipe shall be enclosed in a metal casing that is isolated from carrier pipe by approved insulators having a dielectric value of not less than 25 kV that provide an air gap between carrier pipe and casing of not less than 2 inches.

B. Carrier pipe supporting hangers, mountings or cradles shall provide an insulation value of not less than 25 kV and an air gap of not less than 2 inches between casing and any portion of mounting assembly.

C. Any grounding or isolation methods used must have a minimum dielectric of 25,000 volts.

4.11 ABANDONED PIPELINES OR FACILITIES

A. For all pipeline occupations on the railroad right-of-way, the owner of the pipeline shall notify the MBTA, in writing, of the intention to abandon the pipeline. Upon abandonment the carrier pipe shall be removed and the casing shall be filled with cement grout, compacted sand or other material approved by the Director of Engineering for

MBTA Railroad Operations. If it is impractical to remove the carrier pipe, then the carrier must be filled along with the annular space between the casing and carrier.

B. Facilities other than pipelines shall be removed or altered at abandonment to the satisfaction of the Director of Engineering for MBTA Railroad Operations.

4.12 DRAINAGE

A. Occupancies shall be designed, and constructed, so that adequate and uninterrupted drainage of railroad right-of-way is maintained. If it becomes necessary to block a ditch, pipe or other drainage facility, the applicant shall install temporary pipes, ditches or other drainage facilities as required to maintain adequate drainage, as approved by the MBTA or Railroad Company(s). Upon completion of the work, the temporary drainage facilities shall be removed and the permanent facilities restored.

B. Water may not be pumped or disposed of onto railroad rights-of-way unless discharged into an existing drainage facility, providing discharge does not cause erosion or leave sediment.

C. When water runoff is disposed of onto MBTA Railroad Property, it must be demonstrated to the Railroad Company(s) that the existing drainage facility can accommodate the increased runoff. Drainage calculations stamped by a Registered Professional Engineer must accompany all requests to use railroad culverts or drainage ditches.

D. If in the estimation of the Director of Engineering for MBTA Railroad Operations or their authorized representative, the railroad culvert or drainage ditch has to be cleaned in order to allow the increased flow to safely pass through the culvert, it must be cleaned at the expense of the applicant.

SECTION 5. CARRIER PIPE

GENERAL:

5.01 DESIGN CRITERIA

A. If the maximum allowable stress in the carrier pipe on either side of the occupancy of MBTA Railroad Property is less than specified herein, the carrier pipe on MBTA Railroad Property shall be designed at the same stress as the adjacent carrier pipe.

B. Requirements for carrier pipe under railroad tracks shall apply for a minimum distance equal to that of the casing pipe.

C. Carrier pipes within a casing shall be designed for railroad live loads as if they were not encased.

D. All pipes, ditches and other structures carrying surface drainage on MBTA Railroad Property and/or crossing under railroad tracks shall be designed to carry the run-off from a one hundred (100) year storm. Computations indicating this design and suitable topographic plans, prepared by a Registered Professional Engineer, shall be submitted to the Director of Engineering for MBTA Railroad Operations, or their authorized representative, for approval. If the drainage is to discharge into an existing drainage channel on railroad right- of-way and/or under railroad tracks, the computations should include the hydraulic analysis of any existing structures. Submitted with the computations should be formal approval of the proposed design by the appropriate governmental agency.

PRODUCTS:

5.02 GENERAL

A. All pipes shall be designed for the external and internal loads to which they will be subjected. The dead load of earth shall be considered 120 pounds per cubic foot. Railroad live loading shall be Cooper's E-8O with 50% added for impact. On railroad right-of-way or where railroad loading will be experienced, the following shall be the minimum requirements for carrier pipes:

1. Reinforced concrete pipe - ASTM Spec. C-76, Class V, Wall C.
2. Ductile Iron Pipe - For Culverts and Gravity Sewers - ASTM Spec, A-142 Extra Heavy.

5.03 OIL AND GAS PIPES

A. Pipelines carrying oil, liquefied petroleum gas, natural or manufactured gas and other flammable products shall conform to the requirements of the current ANSI B 31.4, with Addenda, "Liquefied Petroleum Transportation Piping Systems," ANSI B 31.8, "Gas Transmission and Distribution Piping Systems," and other applicable ANSI codes, except that the minimum allowable stresses for the design of steel pipe shall not exceed the following percentages of the specified minimum yield strength (multiplied by the longitudinal joint factor) of the pipe as defined in the ANSI Codes:

1. Steel pipe within a casing under, across and longitudinally on MBTA Railroad Property. (The following percentages apply to hoop stress):

   a. Seventy-two percent for installation on oil pipelines.

   b. Fifty percent for pipelines carrying liquefied petroleum gas and other flammable Liquids with low flash point.

   c. Sixty percent for installations on gas pipelines.

2. Steel pipe without a casing laid longitudinally on MBTA Railroad Property. (The following percentages apply to hoop stress):

   a. Sixty percent for installations on oil pipelines.

   b. Forty percent for pipelines carrying liquefied petroleum gas and other flammable Liquids with low flash point.

   c. Forty percent for installations on gas pipelines.

B. Design computations showing compliance with the requirements of Paragraph 5.03(A) above, and prepared by a Registered Professional Engineer, shall accompany the application for occupancy.

5.04 CAST IRON PIPE: For water and other materials under pressure shall conform to the current ANSI specifications A-21 Series 21/45 Iron strength with plain end, compression type or mechanical joints. The strength to sustain external railroad and other loadings shall be computed in accordance with the current ANSI A-21.1 “Thickness Design of Cast Iron Pipe."

5.05 VITRIFIED CLAY PIPE: ASTM Spec C-700, Extra Strength.

5.06 CORRUGATED METAL PIPE: AREA Spec Chapter I, Part 4

5.07 ASBESTOS CEMENT PIPE (Non-pressure): ASTM Spec. C-428, C1. 5000 Min. Pressure: AWWA Spec. C400, C1. 150 Min.

5.08 OTHER: Other miscellaneous piping not specified above shall be submitted to approval by the Director of Engineering for MBTA Railroad Operations.

5.09 SHUT-OFF VALVE

A. Provide accessible emergency shut-off valves at each side of the railroad within distances and at locations as directed by the Chief Engineering Officer.

B. Where pipelines are provided with automatic control stations and within distances approved by the Director of Engineering for MBTA Railroad Operations, no additional valves will be required.

5.10 SIGNS

A. Prominently identify all pipelines at rights-of-way by durable, weatherproof signs located over the centerline of the pipe. Mark pipelines at under crossings on both sides of track. Signs shall display the following:

1. Name and address of pipeline Owner.
2. Contents of Pipe.
3. Pressure in Pipe.
4. Depth below grade at point of sign.
5. Emergency telephone in event of pipe rupture.
6. Railroad File Number.

B. For pipelines running longitudinally on MBTA Railroad Property, place signs over the pipe (or offset and appropriately mark) at all changes in direction the pipeline. Locate signs so that when standing at one sign, the next adjacent marker in either direction is visible. In no event shall pipeline identification signs be placed more than 500 feet apart, unless otherwise directed by the Director of Engineering for MBTA Railroad Operations.

C. Submit details of signs (materials, size, methods of support, etc.) to the Director of Engineering for MBTA Railroad Operations for approval.

EXECUTION:

5.11 INSTALLATION:

A. Install carrier pipes in accordance with approved Construction Drawings, requirements of this specification, and all applicable codes and ordinances.

B. Install carrier pipes with sufficient slack so they are not in tension.

SECTION 6. CASING PIPE

GENERAL:

6.01 DESIGN CRITERIA

A. Casing pipe and joints shall be of metal and of leak-proof construction.

B. Casing pipe shall be designed for the earth and/or other pressures present, and for railroad live load. The dead load of earth shall be considered 120 pounds per cubic foot. Railroad Live load shall be Cooper E-80 with 50g added for impact.

C. The inside diameter of the casing pipe shall be such as to allow the carrier pipe to be removed subsequently without disturbing the casing or the roadbed. For carrier pipe less than six (6) inches in diameter, the inside diameter of the casing pipe shall be at least two (2) inches greater than the largest outside diameter of the carrier pipe joints or couplings. For carrier pipe six (6) inches and over in diameter, the inside diameter of the carrier pipe shall be at least four (4) inches greater than the largest outside diameter of the carrier pipe joints or couplings.

D. For flexible casing pipe, a minimum vertical deflection of 3 percent of its diameter, plus 1/2 inch, shall be provided so that no loads from the roadbed, track, traffic or casing pipe itself are transmitted to the carrier pipe. When insulators are used on the carrier pipe, the inside diameter of the flexible casing pipe shall be at least two (2) inches greater than the outside diameter of the carrier pipe for pipe less than eight (8) inches in diameter; at least 3-
1/4 inches greater for pipe 8 to 16 inches in diameter, and at least 4-1/2 inches greater for pipe 18 inches and over in diameter. In no event shall the casing pipe diameter be greater than is necessary to permit the insertion of the carrier pipe.

E. Casing pipe under railroad tracks and across MBTA Railroad Property shall extend the greater of the following distances, measured at right angles to centerline of track:

1. Across the entire width of MBTA Railroad Property.
2. Two (2) feet beyond ditch line.
3. Three (3) feet beyond toe of slope.
4. A minimum distance of 25 feet each side from centerline of outside track when casing is sealed at both ends.
5. A minimum distance of 45 feet from centerline of outside track when casing is open at both ends.

F. If additional tracks are constructed in the future, the casing shall be extended at the expense of the Applicant.

G. Table of Live Loads

LIVE LOADS, INCLUDING IMPACT, FOR VARIOUS HEIGHTS OF COVER FOR COOPER E- 80

COVER (FT) LOAD (PSF)	COVER (FT) LOAD (PSF)	COVER (FT) LOAD (PSF)
2 ….. 3800	10 1100	20 300
5 2400	12 800	30 100
8 1600	15 600	

6.02 PROTECTION AT ENDS OF CASING

A. Casings for carriers of flammable substances shall be sealed to the outside of the carrier pipe. Details of seals shall be shown on the Drawings.

B. Casings for carriers of non-flammable substances shall have both ends of the casing blocked in such a way as to prevent the entrance of foreign material, but allowing leakage to pass in the event of a carrier break.

C. Where ends of casing are at or above ground surface and above high water level, they may be left open, provided drainage is afforded in such a manner that leakage will be conducted away from railroad tracks and structures.

6.03 VENTS

A. Sealed casings for flammable substances shall be properly vented. Vent pipes shall be of sufficient diameter, but in no case less than two (2) inches in diameter, and shall be attached near each end of the casing and project through the ground surface at right-of-way lines or not less than 45 feet (measured at right angles from centerline of nearest track).

B. Vent pipes shall extend at least four (4) feet above the ground surface. Top of vent pipe shall have a down-turned elbow, properly screened, or a relief valve. Vents in locations subject to high water shall be extended above the maximum elevation of high water and shall be supported and protected in a manner approved by the Director of Engineering for MBTA Railroad Operations.

C. Vent pipes shall be at least four (4) feet from the closest aerial electric

wires.

D. When the pipeline is in a public highway, street-type vents shall be installed.

PRODUCTS:

6.04 STEEL PIPE

The minimum yield strength for steel pipe shall be 35,000psi. Smooth wall pipes with a nominal diameter greater than 70 inches require special approval by the Director of Engineering for MBTA Railroad Operations. See Plate V, "Table of Minimal Wall Thickness for Steel Casing Pipe."

6.05 CAST IRON PIPE

May be used for a casing, provided the method of installation is by open trench. Cast iron pipe shall conform to ASTM Specification A-142, Extra Heavy. The pipe shall be of the mechanical joint type or plain end type with compression type couplings.

6.06 CORRUGATED METAL PIPE AND CORRUGATED STRUCTURAL PLATE PIPE

May be used for casing only when emplaced by the open-cut method. Jacking or boring through railroad embankment is not permitted. Pipe shall be bituminous coated and shall conform to AREA Specifications Chapter 1, Part 4.

6.07 REINFORCED CONCRETE PIPE

Shall conform to ASTM Specification C 76, Class V, Wall C. It shall be used only in the open cut and jacking methods of installation. If concrete pipe is to be jacked into place, grout holes tapped for at least 1-1/2 inch pipe spaced at approximately 8 feet around the circumference and approximately 4 feet longitudinally shall be cast into the pipe at manufacture. Immediately upon completion of jacking operations, the installation shall be pressure grouted.

6.08 TUNNEL LINER PLATES

Shall be four flange and otherwise conform to American Railway Engineering Association Specifications Chapter 1, Part 4. In no event shall the liner plate thickness be less than 0.1046 inches. Tunnel liner plates are to be used only to maintain a tunneled opening until the carrier pipe is installed. After installation the annular space between the carrier and liner must be filled

with 1:6 cement grout or lined with 6 inches of concrete, reinforced with 6x6-6/6 wire mesh for tunnels up to 108 inches in diameter. Required thickness of lining for larger tunnels shall be determined by span and structural analysis. Manufacturer's Shop Detail Drawings and manufactures computations showing the ability of the tunnel liner plates to resist the jacking stresses shall be submitted to the Director of Engineering for MBTA Railroad Operations for approval.

EXECUTION:

6.09 DEPTH OF INSTALLATION:

A. Casing pipe under railroad tracks and across MBTA Railroad Property shall be at least 6-1/2 feet from top of rail to top of casing at its closest point. Under secondary or industrial tracks this distance shall be at least 5-1/2 feet. On other portions of MBTA Railroad Property where casing is not directly beneath any track, the depth from ground surface or from bottom of ditches to top of casing shall be at least four (4) feet, unless otherwise specified herein.

B. Pipelines laid longitudinally on MBTA Railroad Property 50 feet or less from centerline of track shall be buried not less than five (5) feet from ground surface to top of pipe. This applies to all pipelines carrying oil, gas, petroleum products, or other flammable or highly volatile substances under pressure, and all non-flammable substances which by their nature or presence in the judgment of the Director of Engineering for MBTA Railroad Operations may be hazardous to life or property. For pipelines carrying water, sewage and non-flammable substances, the distance from surface of ground to top of pipe shall not be less than four (4) feet.

C. Pipelines located within the line of track live load influence (as shown on Plates II and III) are subject to railroad loading and require a casing or are to be of special design approved by the Director of Engineering for MBTA Railroad Operations. All longitudinal occupation locations must be approved by the Chief Engineering Officer.

D. The minimum cover shall be at least three (3) feet when pipeline is laid more than 50 feet from center line of track.

E. Pipelines installed under or adjacent to any overhead structure must be a minimum of 29 feet from the bottom of the structure to the top of the casing. Such installations must comply with the above requirements.

6.10 METHOD OF INSTALLATION

A. The Owner or its Contractor shall submit to the Director of Engineering for MBTA Railroad Operations, data and information demonstrating that the Contractor or their subcontractors have had successful previous experience in jacking, or using the proposed method of installation, in similar situations.

B. Before any work is begun within the limits of jacking, the Owner or its Contractor shall have assembled all tools, materials, and equipment which will be required. When the Owner or its Contractor has started the jacking operation, they shall proceed in a continuous operation without stopping. This will minimize the tendency of the material to freeze around the pipe.

C. A jacking shield shall be used and jacked ahead of the casing pipe. The excavation within the jacking pipe should not advance beyond the head of the pipe shield. If the stability at the face needs to be maintained from raveling or running soil, suitable temporary bulkheads, struts, and bracing shall be required. After completion of the sleeve installation the annular space around it shall be completely grouted with cement grout under pressure.

D. Casing pipe ends shall be beveled with a single V-groove toe field welding. Pipe joints shall be butt welded and shall be a full penetration on the outside circumference of the pipe. The single V-groove butt weld shall conform to the latest A.W.S. Welding Code. All joints of the easing pipe shall be butt welded, by a certified welder, prior to being subject to the jacking operation.

Alternate method: The casing pipe may be jacked without being butt welded through the use of a continuous 1/2"x12" interior collar plate. The collar plate shall be welded completely upon completion of the jacking operation. All welding shall conform to the latest A.W.S. Welding Code, and shall be performed by a certified welder.

6.11 CONSTRUCTION:

A. The casing pipe shall be constructed so as to prevent leakage of any substance from the casing throughout its length, except where the ends are left open, or through vent pipes when the ends are sealed. The casing shall be installed so as to prevent the formation of a waterway under the railroad, shall have an even bearing throughout its length, and shall slope to one end (except for longitudinal occupancy).

B. Casing pipes shall be installed by the following methods:

1. Jacking

   a. This method shall be in accordance with the most current edition of the American Railway Engineering Association Specifications, “Jacking Culvert Pipe Through Fills." This operation shall be conducted without hand mining ahead of the pipe and without the use of any type of boring, auguring, or drilling equipment.

   b. Bracing and backstops shall be designed and jacks of sufficient rating used so that the jacking will be continuous.

2. Drilling

   This method employs the use of an oil field type rock roller bit or a plate bit made up of individual roger cutter units which are welded to the pipe casing being installed and which are turned as it is advanced. The pipe is turned for its entire length from the drilling machine to the ground being drilled. A high density slurry is injected through a small supply line to the head which acts as a cutter lubricant. This slurry is injected at the rear of the cutter units to prevent any jetting action ahead of the pipe. The drilling machine runs on a set of steel rails and is advanced (thus advancing the pipe) by a set of hydraulic jacks. The method is the same whether earth or rock is being drilled. Any other drilling methods shall be submitted to the Director of Engineering for MBTA Railroad Operations for approval.

3. Tunneling

   a. Tunneling operations shall be conducted as approved by the Railroad Company(s). Care shall be exercised in trimming the surface of the excavated section in order that the steel liner plates fit snugly against the undisturbed material. Excavation shall not be advanced ahead of the previously installed liner plates any more than is necessary for the installation of the succeeding liner plate. The vertical face of the excavation shall be supported as necessary to prevent sloughing. At any interruption of the tunneling operation, the heading shall be completely bulkheaded. Tunneling shall be conducted continuously, on a 24 hour basis until the tunnel liners extend at least one foot beyond the railroad line of influence.

   b. When tunneling, tight breasting must be maintained around the entire face. On any shutdowns (under or beyond railroad influence line, see Plate II), the entire

face shall be fully breasted and packed with hay.

c. The tail void shall be filled with pea stone (or other approved material) simultaneously with each advancement of the shield.

d. An ample supply of hay and/or sandbags must be kept at the site to fill any voids caused by the removal of large stones or other obstructions extending outside the shield.

e. A uniform mixture of 1:6 cement grout shall be placed under pressure behind the liner plates, in addition to the previously placed pea stone. Grout holes, tapped for at least 1-1/2 inch pipe and spaced 3 feet around the tunnel liner, shall be placed in every other ring. Grouting shall start at the lowest dole and proceed upwards. A threaded plug shall be installed in each grout hole as the grunting is completed at that hole.

f. Grouting shall be kept as close to the heading as possible, using grout stops behind the liner plates. If necessary, grouting shall proceed as directed by the Railroad Company(s), but in no event shall more than six lineal feet of tunnel be progressed beyond the grouting.

4. Tunneling Shields

a. All pipes 70 inches and larger in diameter shall be emplaced with the use of a tunneling shield, unless otherwise approved by the Director of Engineering for MBTA Railroad Operations. Pipes of smaller diameter may also require a shield when, at the sole discretion of the Director of Engineering for MBTA Railroad Operations, soil, or other conditions indicate its need.

b. The shield shall be of steel construction, designed to support railroad track loading as specified in Paragraph 6.01 B herein, in addition to other loadings it must sustain. The advancing face shall be provided with a hood, extending no less than 20 inches beyond the face and extending around no less than the upper 240 degrees of the total circumference. Installations made with linear plates shall be provided with a full 360 degree shield. It shall be of sufficient length to permit the installation of at least one complete ring of liner plates within the shield before it is advanced for the installation of the next ring of liner plates, It shall conform to and not exceed the outside dimensions of the pipe being emplaced by more than one inch at any point in the periphery.

c. The shield must be adequately braced and provided with necessary appurtenances for completely bulkheading the face with horizontal breastboards, and arrange so that the excavation can be benched as may be necessary. Excavation shall not be advanced beyond the edge of the hood, unless otherwise approved by the Railroad Company(s).

d. Manufacturer's Shop Detail Drawings and computations showing the ability of the tunnel liner plates to resist the jacking stresses shall be submitted to the Director of Engineering for MBTA Railroad Operations for approval.

e. For jacking reinforced concrete pipe, the shield shall be fabricated as a special section of reinforced concrete pipe with the steel cutting edge, hood, breasting attachments, etc., cast into the pipe. The wall thickness and reinforcing shall be designed for the jacking stresses.

f. Grout holes tapped for no less than 1-1/2 inch pipe, spaced at approximately 3 foot centers around the circumference of the shield (or the aforementioned special reinforced concrete section) and no more than 4 foot centers longitudinally shall be provided.

g. Detail Drawings sufficient to determine the adequacy of the shield, accompanied with design calculations prepared by a Registered Professional Engineer, shall be submitted to the Director of Engineering for MBTA Railroad Operations for approval and no work shall proceed until such approval is obtained.

5. Boring

a. This method consists of pushing the pipe into the fill with a boring auger rotating within the pipe to remove the spoil. When augers, or similar devices, are used for pipe emplacement, the front of the pipe shall be provided with mechanical arrangements or devices that will positively prevent the auger and cutting head from leading the pipe so that there will be no unsupported excavation ahead of the pipe. The auger and cutting head arrangement shall be removable from within the pipe in the event an obstruction is encountered. The over-cut by the cutting head shall not exceed the outside diameter of the pipe by more than one-half inch. The face of the cutting head shall be arranged to provide reasonable obstruction to the free flow of soft or poor material.

b. Drawings and descriptions of the auger stop arrangement to be used shall be submitted to the Director of Engineering for MBTA Railroad Operations for approval,

and no work shall proceed until such approval is obtained and the arrangement is inspected in the field by the Railroad Company(s).

c. The use of water or other Liquids to facilitate casing emplacement and/or spoil removal is prohibited.

d. Any method which employs simultaneous boring and jacking or drilling and jacking for pipes over 8 inches in diameter which does not have the above approved arrangement WILL NOT BE PERMITTED. For pipes 8 inches and less in diameter, augering or boring without this arrangement may be considered for use only as approved by the Director of Engineering for MBTA Railroad Operations.

C. If an obstruction is encountered during the installation which stops the forward action of the pipe, and it becomes evident that it is impossible to advance the pipe, operations shall cease and the pipe shall be abandoned in place and filled completely with grout, in accordance with Section 4, Paragraph 4.10.

D. Bored or jacked installations shall have a bored hole essentially the same as the outside diameter of the pipe plus the thickness of the protective coating. If voids should develop or if the bored hole diameter is greater than the outside diameter of the pipe (plus coating) by more than 1 inch, grouting or other methods approved by the Railroad Company(s) shall be employed to fill such voids.

E. Pressure grouting or freezing of the soils before or during jacking, boring, or tunneling may be required at the direction of the Railroad Company(s) to stabilize the soils, control water, prevent loss of material and prevent settlement or displacement of the embankment and/or tracks. Grout shall be cement, chemical or other special injection material selected to accomplish the necessary stabilization.

F. The materials to be used and the method of injection shall be prepared by a Registered Professional Engineer (Geotechnical), or by an experienced and qualified company specializing in this work and submitted for approval to the Railroad Company(s) before the start of work. Proof of experience and competency shall accompany the submission.

G. When water is expected to be encountered, pumps of sufficient capacity shall be provided and maintained at the site, and continually attended on a 24-hour basis, until in the sole judgment of the Railroad Company(s), their operation can be safely halted.

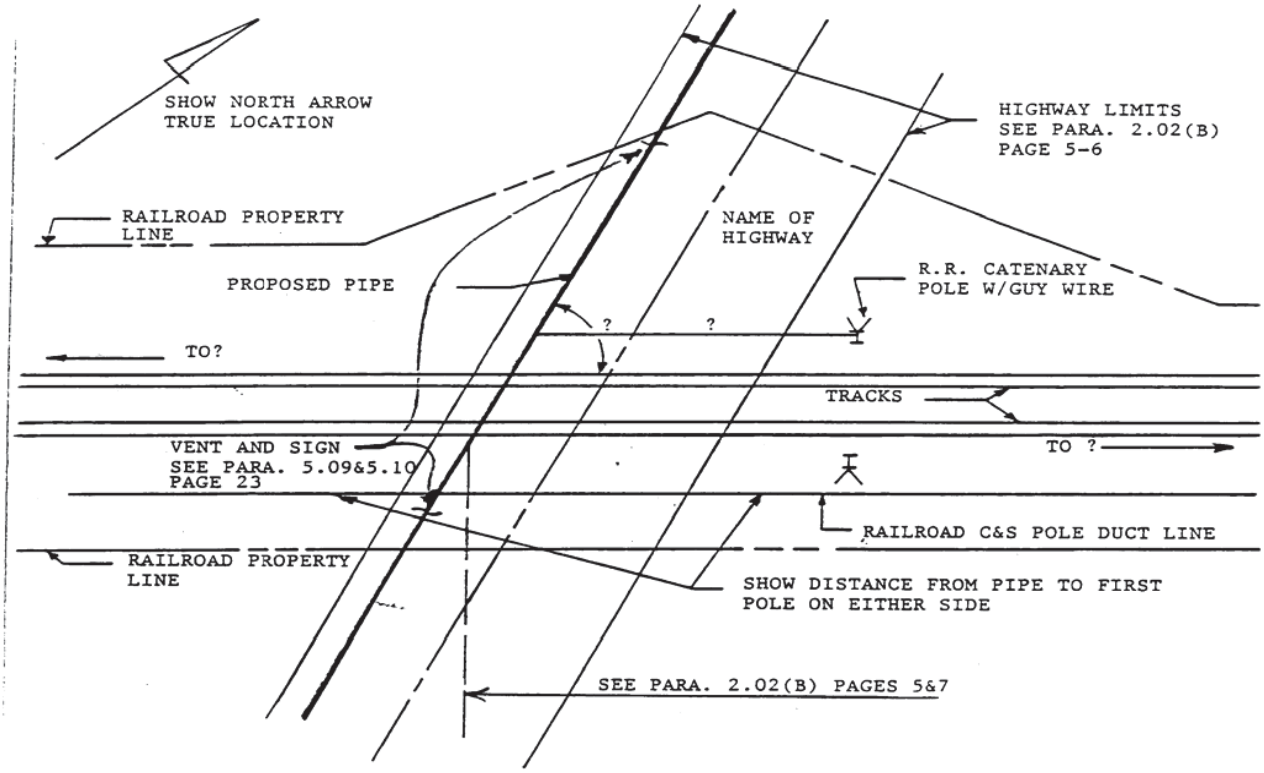
When dewatering, close observation shall be maintained to detect any settlement or displacement of railroad embankment, tracks, and facilities.

H. Proposed methods of dewatering must be submitted to the Railroad Company(s) for approval prior to implementation. The discharge from the dewatering operations in the vicinity of the railroad shall be carefully monitored. If in the opinion of the Railroad Company(s), there is an excessive loss of fine soil particles at any time during the dewatering process, the dewatering shall be halted immediately. The dewatering operation cannot resume until the unsatisfactory condition is remedied to the satisfaction of the Railroad Company(s).

PLATE I

PIPE CROSSING

INFORMATION TO BE SHOWN ON PLAN SECTION OF DRAWING



(SCALE OF DRAWING TO BE SHOWN)

NOTE:

IF MANHOLES ARE PLACED ON MBTA RAILROAD PROPERTY, DETAILS OF SAME, WITH CLEARANCES TO THE CENTERLINE OF THE NEAREST TRACK ARE TO BE SHOWN ON THE DRAWINGS.

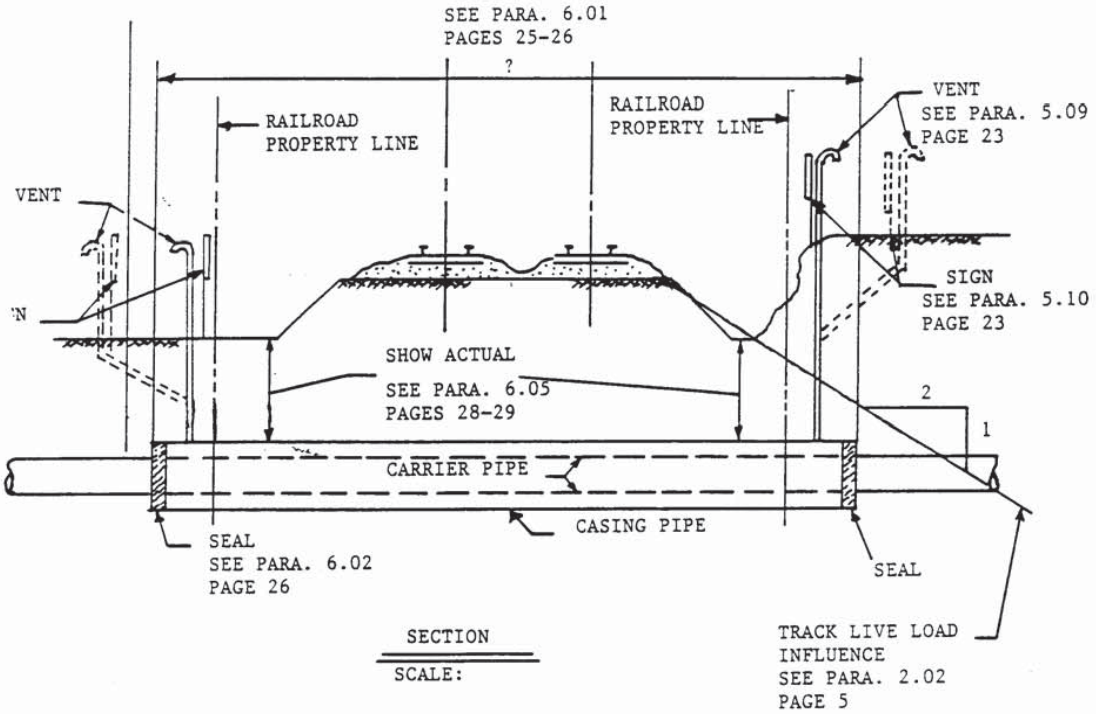
IF THE PROPOSED PIPE IS TO SERVE A NEW DEVELOPMENT, A MAP SHOWING THE AREA IN RELATION TO ESTABLISHED AREAS AND ROADS IS TO BE SENT WITH THE REQUEST.

THE PROPOSED PIPE IS NOT WHOLLY WITHIN HIGHWAY LIMITS, THE SAME INFORMATION IS REQUIRED AS SHOWN ON THIS PLATE.

PLATE II

PIPE CROSSING

INFORMATION TO BE SHOWN ON PROFILE SECTION OF DRAWING

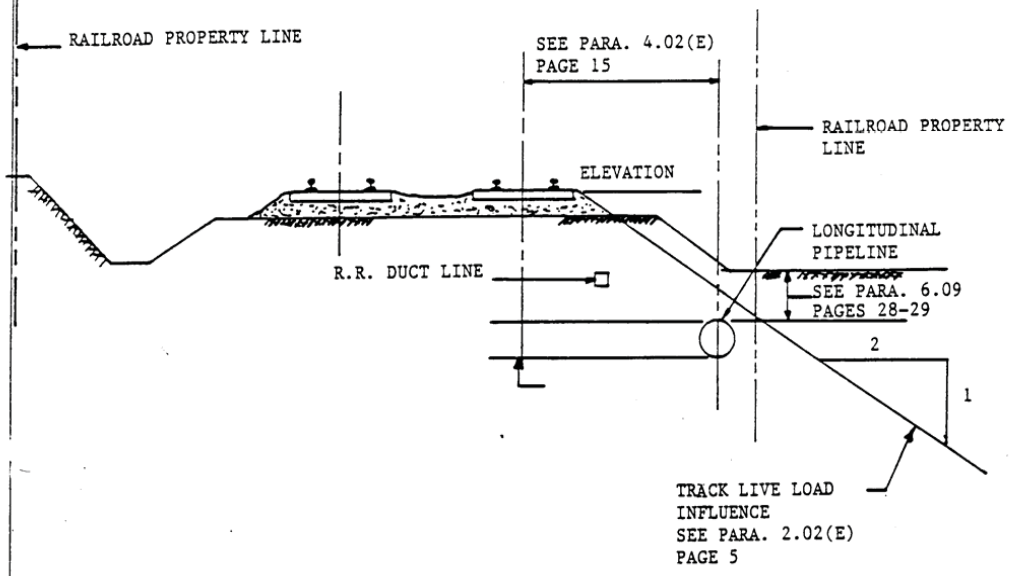


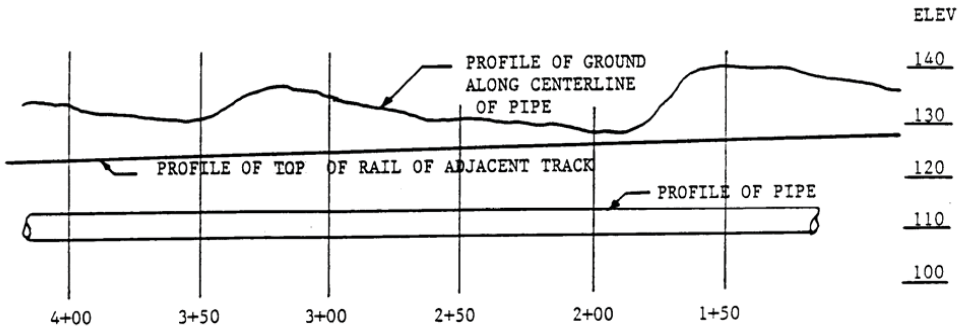
SECTION

SCALE:

PLATE III

LONGITUDINAL OCCUPANCY





STATIONING

PROFILE - SEE PARA. 2.02
PAGES 5-7

SCALE - HOR:
VER:

PIPE CROSSING DATA SHEET

PLATE IV

In addition to plan and profile of crossing, Drawings submitted for the Railroad Company(s) approval shall contain the following information:

	Pipe Date	
	Carrier Pipe	Casing Pipe
Contents To Be Handled		
Normal Operating Pressure		
Normal Size of Pipe		
O.S. Diameter		
I.S. Diameter Wall		
Thickness Weight		
Per Foot Material		
Process of Manufacture		
Specification		
Grade or Class		
Test Pressure		
Type of Joint		
Type of Coating		
Details of Cathodic Protection		
Details of Seal or Protection at Ends of Casing:		
Method of Installation		
Character of Subsurface: Material At the Crossing Location		
Approximate Ground Water Level		
Source of Information on Sub- surface conditions (Test Pits, Borings or Other)		

NOTE: Any soil investigation made on MBTA Railroad Property, or adjacent to tracks shall be carried on under the supervision of the Railroad Company(s).

PLATE V

TABLE OF MINIMUM WALL THICKNESS FOR STEEL CASING PIPE
(FOR INFORMATION ONLY)

PROTECTED WALL THICKNESS

PIPE SIZE (INCHES)	WALL THICKNESS (PROTECTED)
10	0.375
12	0.375
14	0.375
16	0.375
18	0.375
20	0.375
22	0.375
24	0.375
26	0.375
28	0.406
30	0.469
32	0.501
34	0.532
36	0.532
38	0.569
40	0.569
42	0.569
44	0.594
46	0.688
48	0.688
50	0.688
52	0.813
54	0.813
56	0.876
58	0.876
60	0.876
62	0.876
64	0.876
66	0.876
68	0.876
70	0.906

NOTE: FOR UNPROTECTED PIPE 26" AND UNDER ADD 0.032" TO PROTECTED WALL THICKNESS. FOR UNPROTECTED PIPE 28" AND OVER, ADD 0.063" TO PROTECTED WALL THICKNESS.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

V

SPECIFICATIONS FOR WIRE CONDUIT AND CABLE OCCUPATIONS

SECTION 1. SCOPE

1.01 These specifications apply to the design of electric transmission wires and cables (power and communication) which are to be located over, under, across or upon property, facilities, and tracks owned by the MBTA.

SECTION 2. LICENSE TO ENTER MBTA RAILROAD PROPERTY

2.01 Individuals, corporations, or municipalities desiring wire or cable occupations must agree, upon approval of the construction details by the Director of Engineering for MBTA Railroad Operations, to execute an appropriate occupational agreement and pay any required fees and/or rentals outlined therein.

2.02 Application for an occupancy shall be submitted in writing to:

AGM for Real Estate and Asset Development
MBTA, 10 Park Plaza
Boston, Massachusetts 02116

See "Guidelines and Procedures for Construction on MBTA Railroad Property."

2.03 All applications shall be accompanied with six (6) copies of all Construction Drawings, specifications and computations concerning the proposed occupancy.

SECTION 3. APPROVAL OF DRAWINGS

3.01 Entry upon MBTA Railroad Property for the purpose of conducting surveys, field inspections, obtaining soil information, or any other purpose associated with the design and engineering of the proposed occupancy will be permitted only with a proper entry permit prepared by the MBTA Real Estate Department. The issuance of such a permit does not constitute authority to proceed with the actual construction. Construction cannot begin until the proper insurance certificate is received and a formal agreement is executed by the MBTA and permission is received by the Railroad Company(s).

3.02 Drawings shall be drawn to scale and show the following: (See attached plates I -VI)

A. Plan view of crossing or occupation in relation to all Railroad Company(s) facilities. (See Plate 1)

B. Location of wire or cane (in feet) from nearest railroad mile post, center line of a railroad bridge (giving bridge number), or center line of a passenger station. In all cases, the name of the County and City or

Town in which the proposed facilities are located must be shown.

C. Profile of ground on center line of pole or tower line, showing clearances between top of rail and bottom of sag, as well as clearances from bottom wire or cable to top wire or cable of the MBTA's transmission, signal and communication lines and catenary. If none of these facilities are in existence at the point of crossing, the plan should so indicate. Actual under-clearances are to be shown. (See Plate V for the required clearances).

D. Show all known property lines. If wires, cables or conduits are within public highway limits, such limits should be clearly indicated with dimensions from center line.

E. The Drawing must be specific as to:

1. Base diameter, height, class and bury of poles. Poles shall be set no closer than 13' 6" from face of pole to center line of nearest track. When necessary, however, each location will be analyzed by the MBTA to consider speed, traffic, access, etc.

2. Number, size and material of power wires, as well as number of pairs in communication cables.

3. Nominal voltage of line, type of current and frequency.

4. Number, location, size and material of anchors and all guying for poles and arms.

NOTE: Double cross-arms are required on poles adjacent to track. Any tower designs must be accompanied by engineering computations and data.

SECTION 4. CONSTRUCTION REQUIREMENTS

4.01 Power and communication lines shall be constructed in accordance with "Safety Rules for the Installation and Maintenance of Electric Supply and Communication Lines, National Electrical Safety Code Handbook, Part 2" (current issue), with the following exceptions:

A. Item 3 (c), page 2.

B. Casing pipes to contain power or communication wires or cables having an outside diameter of over four (4) inches shall be constructed in accordance with the current issue of MBTA Railroad Operations "Pipeline Occupancy Specifications".

SECTION 5. LONGITUDINAL OCCUPATIONS

5.01 Wires and cables running longitudinally along railroad right-of-way shall be

constructed as close to MBTA property lines as possible in accordance with Plate III. For electrical power lines and cables with voltages of 34,500 or over and communication canes containing over 180 pairs, the following information must be submitted in addition to the detail of the pole top configuration as called for on Plate IV of these specifications:

A. Voltage of circuit(s) or number of pairs. B. Phase of electrical circuit(s).

B. Number of electrical circuits.

C. Size (AWG or CM) and material of wires and cables.

5.02 Any facilities overhanging MBTA Railroad Property must have approval of the MBTA and appropriate rental charges will be applied.

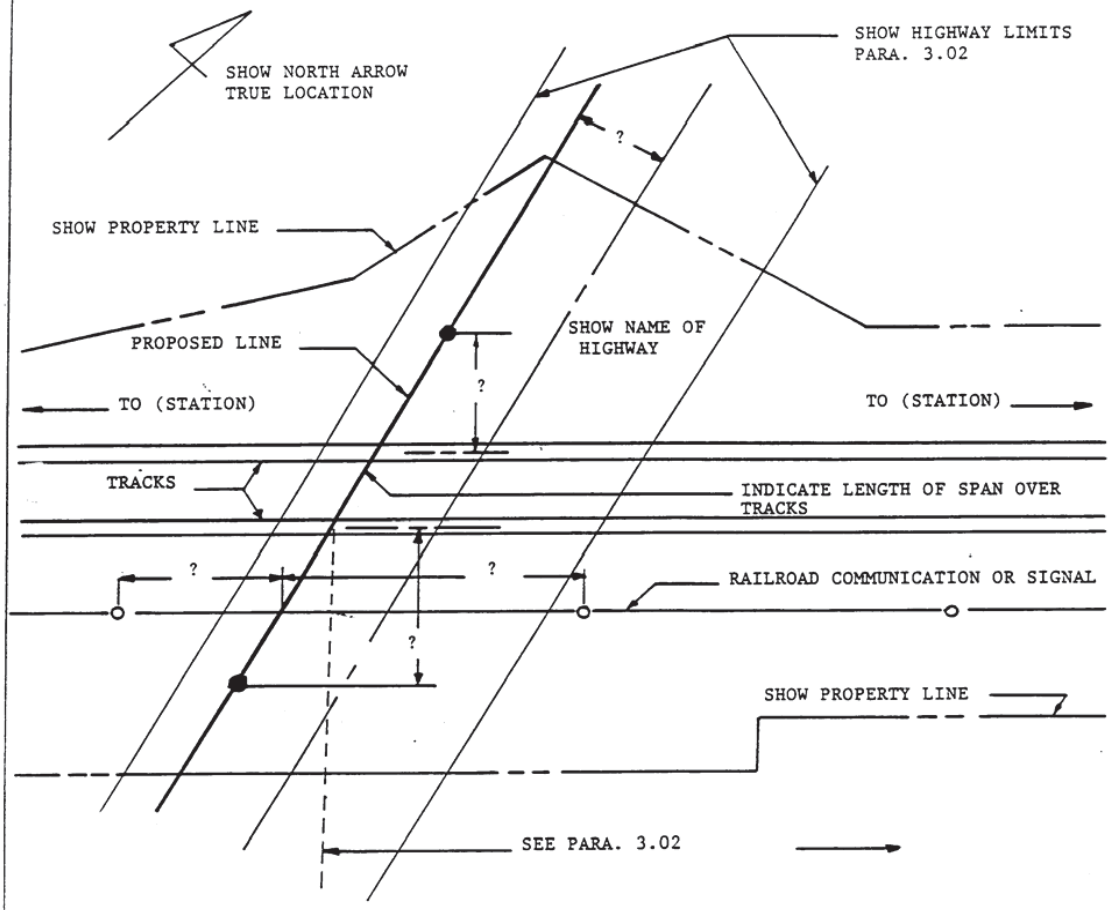
SECTION 6. INDUCTIVE INTERFERENCE

6.01 On agreements covering longitudinal occupations, provisions shall be included that hold the Applicant responsible to provide appropriate remedies, at their own expense, to correct any inductive interference with MBTA facilities.

PLATE I

PLAN VIEW

INFORMATION TO BE SHOWN ON PLAN SECTION OF DRAWINGS
WHEN FACILITY IS A CROSSING



SCALE OF DRAWING TO BE SHOWN

NOTE:

IF THE PROPOSED LINE IS TO SERVE A NEW DEVELOPMENT, A MAP SHOWING THE AREA IN RELATION TO ESTABLISHED AREAS AND ROADS IS TO BE SENT WITH THE REQUEST.

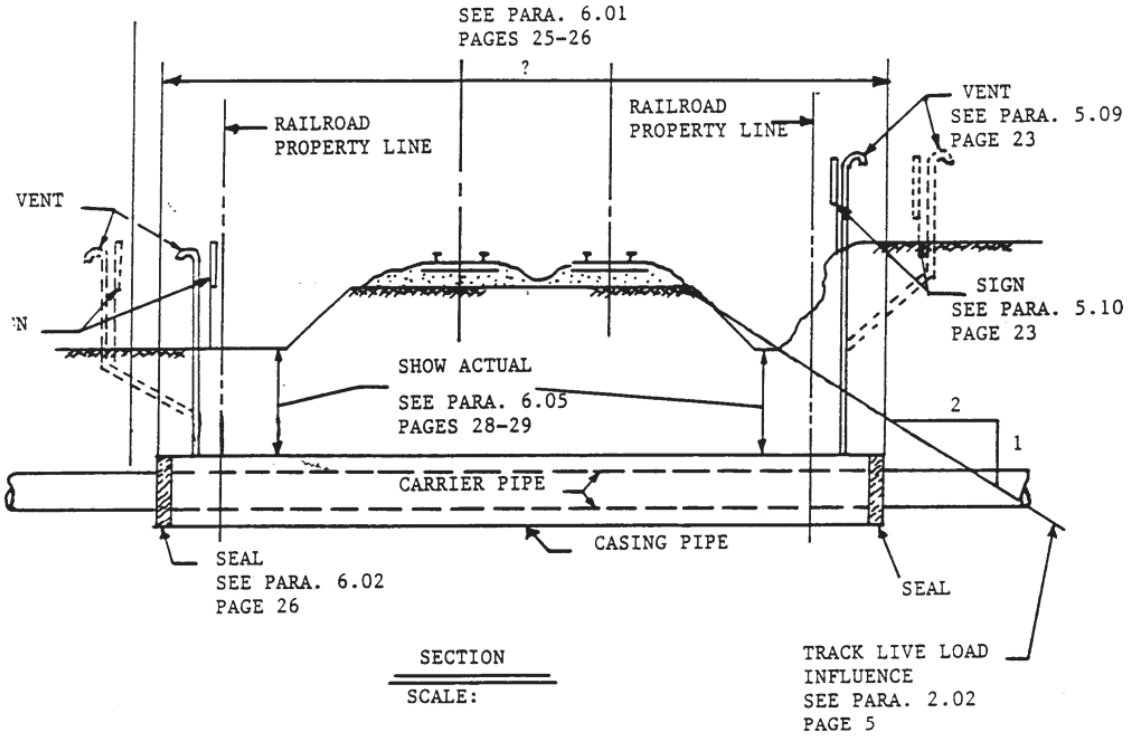
IF THE PROPOSED LINE IS NOT WHOLLY (OR PARTIALLY) WITHIN HIGHWAY LIMITS, THE SAME INFORMATION IS REQUIRED AS SHOWN ON THIS PLATE.

4

PLATE II

PIPE CROSSING

INFORMATION TO BE SHOWN ON PROFILE SECTION OF DRAWING



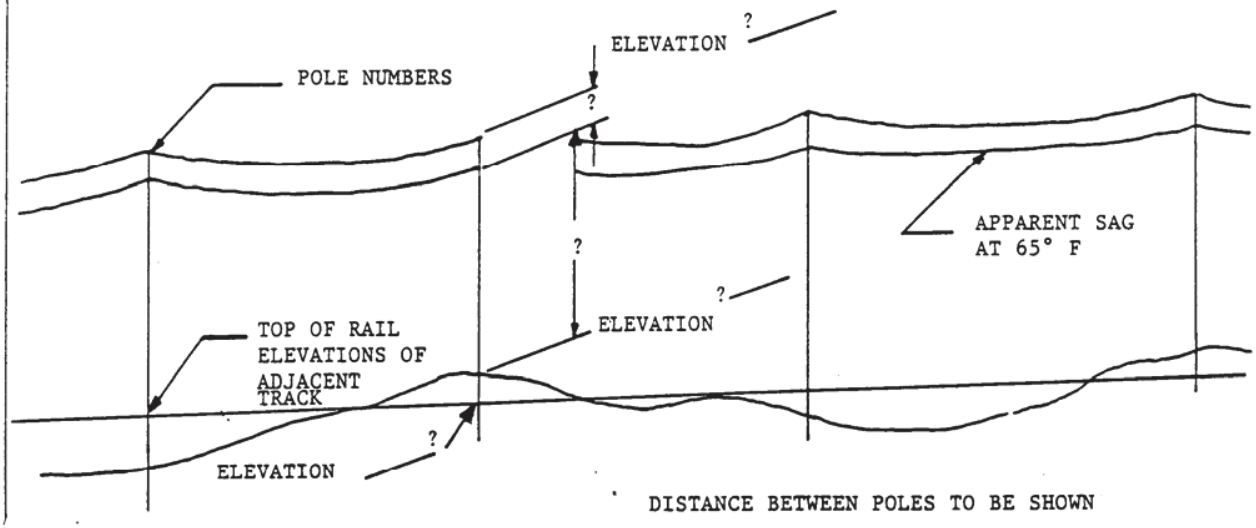
SECTION

SCALE:

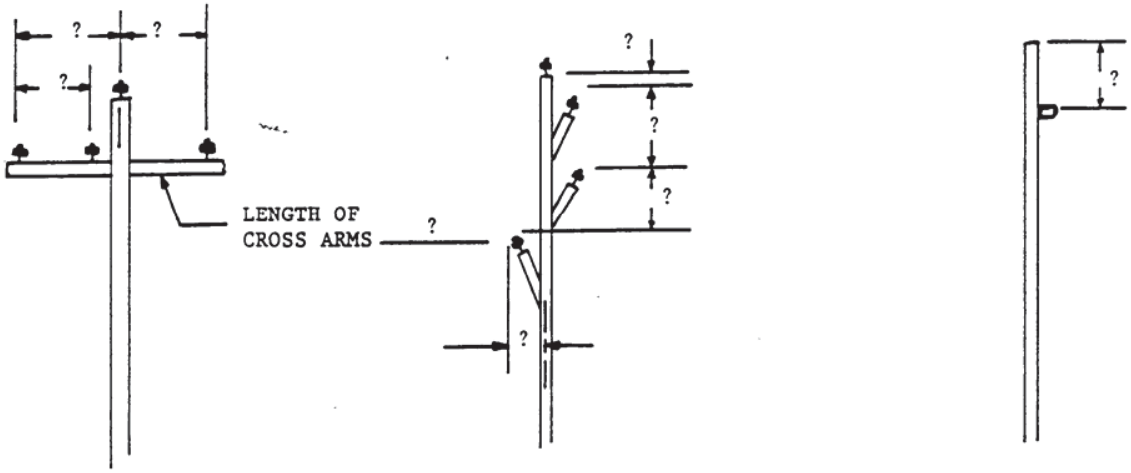
PLATE III

PROFILE VIEW

INFORMATION TO BE SHOWN ON PROFILE SECTION OF DRAWINGS
IN CASES OF LONGITUDINAL OCCUPATIONS



DISTANCE BETWEEN POLES TO BE SHOWN



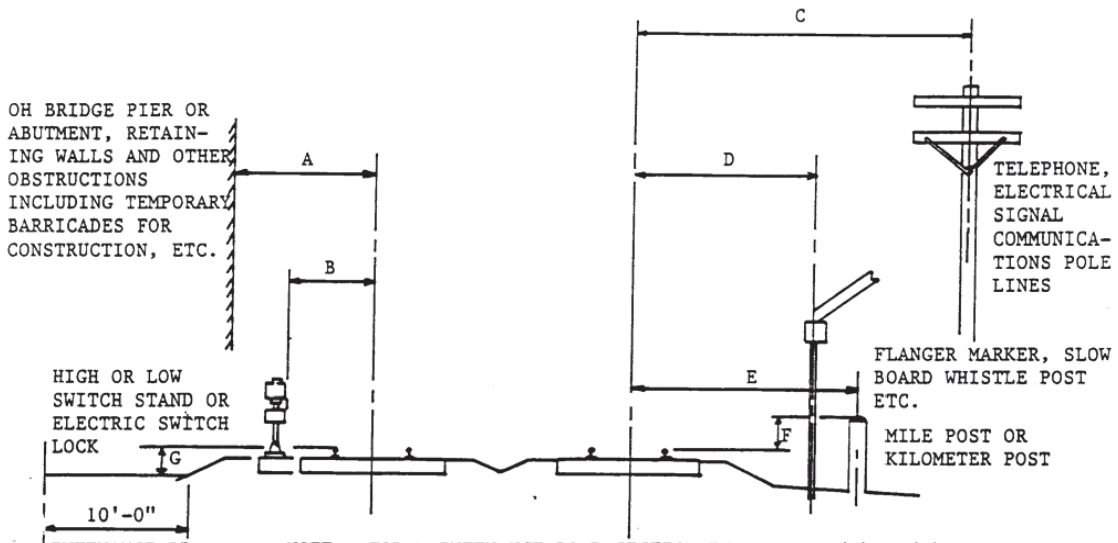
POLE TOP CONFIGURATION TO BE SHOWN SIMILAR TO SAMPLES ABOVE

NOTE: IF POWER LINE CROSSES ANY TRACK, THEN INFORMATION SHOWN ON PLATE II IS ALSO REQUIRED.

PLATE IV

STANDARD SIDE CLEARANCES - TANGENT TRACK

(FOR OBSTRUCTIONS OTHER THAN PASSENGER STATIONS)



NOTE: FOR MAINTENANCE ROAD SECTION DIMENSIONS (A) & (C) TO BE INCREASED ACCORDINGLY - DIMENSIONS (D) & (E) MAY BE REDUCED TO 8'-6" CLEARANCE.

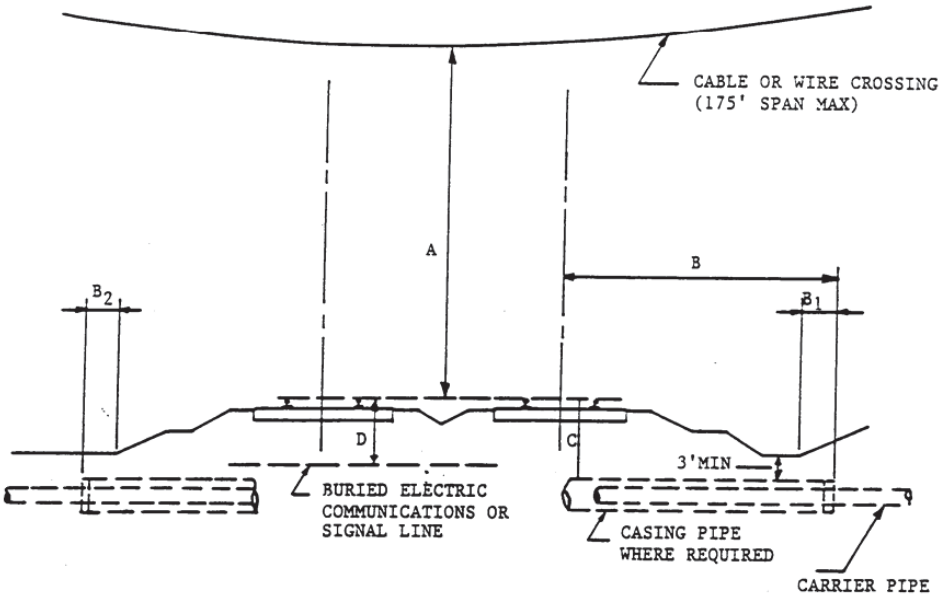
DIMENSION	DESCRIPTION	
A	GENERAL MINIMUM SIDE CLEARANCE	8'-6"
	OVERHEAD BRIDGE PIERS & ABUTMENT, RETAINING WALLS & OTHER EXISTING STRUCTURES	8'-6"
B	LOW SWITCH STANDS (3'-0" MAX HEIGHT)	6'-6"
	HIGH SWITCH STANDS (OVER 3'-0" HEIGHT)	9'-0"
	ELECTRIC SWITCH LOCKS	6'-6"
C	POLE LINES - TELEPHONE, ELECTRIC, SIGNAL COMMUNICATIONS (MIN)	13'-6"
D	CENTERLINE WHISTLE POSTS, FLANGER MARKERS, SLOW OR SPEED BOARDS AND OTHRE WAYSIDE SIGNS	12'-0"
	AUTOMATIC HIGHWAY CROSSING PROTECTION (MIN)	8'-6"
	AUTOMATIC HIGHWAY CROSSING PROTECTION (DESIRED)	15'-0"
E	MILE POSTS - HORIZONTAL	13'-6"
F	MILE POSTS - VERTICAL	7'-0"
G	DEPRESSION OF MAINTENANCE ROAD	

PLATE V

VOLTAGE	OVERHEAD CLEARANCE (Top of Rail to Bottom of Sag)	
0- 750	27'0"	At 120°F Ambient Temperature
750- 15,000	28'0"	
15,000 - 50,000	30'0"	
69,000	30'8"	
115,000	32'2"	
138,000	33'0"	
345,000	39'10"	
500,000	45'0"	
745,000	53'2"	
765,000	53'10"	
Other than power lines	27'0"	

(Calculation is 30'0" + 0.4" per 1,000 volts over 50,000 volts)

CLEARANCES FOR OVERHEAD AND BURIED UTILITY CROSSINGS **PLATE VI**



DIMENSION	DESCRIPTION		
A	POWER LINES 0 TO 750V	27'-0"	At 120°F Ambient Temperature
	POWER LINES 750V to 15,000V	28'-0"	
	POWER LINES 15 to 50KV	30'-0"	
	OTHER THAN POWER LINES	27'-0"	
B	SEALED ENDED CASINGS	25'-0"	
	OPEN ENDED CASINGS	45'-0"	
B_1	END CASING DEYOND DITCH	2'-0"	
B_2	END CASING BEYOND SLOPE	3'-0"	
C	CASING PIPE	4'-6"	
	CARRIER PIPE WITHOUT CASING	6'-6"	
D	BURIED ELECTRIC LINES	6'-6"	
	RAILROAD SIGNAL LINES (220V)	2'-6"	
	COMMUNICATIONS LINES	3'-6"	

9

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

VI

BRIDGE ERECTION, DEMOLITION AND HOISTING OPERATIONS

Submittals for bridge erection, demolition, or other hoisting operations shall be prepared and stamped by a Registered Professional Engineer and must include the following:

1. Plan view showing locations of crane or cranes, operating radii, with delivery or disposal locations shown.

2. Crane rating sheets showing cranes to be adequate for 150% of the lift. Crane and boom nomenclature is to be indicated.

3. Drawings and computations showing weight of picks.

4. Location plan showing obstructions, indicating that the proposed swing is possible.

5. Data sheet listing type and size of slings or other connecting equipment. Include copies of catalog cuts or information sheets of specialized equipment. The method of attachment must be detailed on the erection plan. All lifting components must be adequate for 150% of the lift.

6. A complete procedure indicating the order of lifts and any repositioning or re-hitching of the crane or cranes.

7. Drawings detailing temporary support of any components or intermediate stages.

8. A time schedule (by hour and day) of the various stages, as well as a schedule for the entire lifting procedure.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

VII

TEMPORARY SHEETING AND SHORING

The following items are to be included in the design and construction procedures for all permanent and temporary facilities on, over, under, within or adjacent to MBTA Railroad Property:

1. Footings for all piers, columns, walls or other facilities shall be located and designed so that any temporary sheeting and shoring for support of adjacent track or tracks during construction will not be closer than toe of ballast slope. (See dimensions in the MBTA's Book of Standard Plans, #1000 and #1002 for tangent and curved track). Sheeting shall be required when excavation is inside of a line which extends horizontally from 5.5 feet off center line of adjacent track, then on a 2 (horizontal) to 1 (vertical) slope. This is known as the zone of influence.

2. Where physical condition of design impose insurmountable restrictions requiring the placing of sheeting closer than specified above, the matter must be submitted to the Director of Engineering for MBTA Railroad Operations for approval of any modifications.

3. When support of track or tracks is necessary during construction of above mentioned facilities, interlocking steel sheeting adequately braced and designed to carry E-80 live load plus 50% impact is required. Soldier piles and lagging will be permitted for supporting adjacent track or tracks only when required penetration of steel sheet piling cannot be obtained or when in the opinion of the Director of Engineering for MBTA Railroad Operations, or their authorized representative, steel sheet piling would be impracticable to place.

4. Exploratory trenches, three (3) feet deep and fifteen (15) inches wide in the form of an "H" with outside dimensions matching the outside of sheeting dimensions are to be hand dug, prior to placing and driving steel sheeting, in areas where railroad underground installations are known to exist. These trenches are for exploratory purposes only and are to be backfilled and compacted immediately. This work must be done in the presence of a railroad inspector.

5. Absolute use of track is required white driving sheeting adjacent to any track. Procedure for arranging the use of track shall be through the Railroad Company(s) representative on the project.

6. Cavities adjacent to sheet piling, created by driving of sheet piling, shall be filled with sand and any disturbed ballast must be restored and tamped immediately as required by the Railroad Company(s).

7. Sheet piling shall be cut off at top of tie during construction. After construction and backfilling has been completed, the piling within twelve (12) feet from centerline of track shall be cut off 24" below bottom of tie or 24" below finished grade, whichever is greater. Sheeting, used as a form on a permanent

structure, shall be cut as directed by the Railroad Company(s).

8. The excavation adjacent to the track shall be covered and protected by handrails and barricades, warning lights shall be provided by the Contractor as directed by the Railroad Company(s).

9. Graded backfill material shall be compacted at near optimum moisture content, in layers not exceeding 6 inches in compacted thickness, by pneumatic tampers, vibrator compactors, or other approved means to the base of the railroad subgrade. Material in the vicinity of sheet pile shall be compacted to not less than 95 percent of AASHTO T 99, Method C. The Contractor shall be required to supply, to the job site, ballast stone as prescribed herein to be installed by the Railroad Company(s).

10. The Contractor is to advise the Railroad Company(s) of the time schedule of each operation and obtain approval of the Railroad Company(s) for all work to be performed adjacent to MBTA tracks so that it may be properly supervised by railroad personnel.

11. AII Drawings for temporary sheeting and shoring shall be prepared and stamped by a Registered Professional Engineer and shall be accompanied by complete design computations when submitted for approval.

12. Particular care shall be taken to avoid erosion or filling of the Railroad Company(s) drainage facilities. Erosion and sediment control in the vicinity of the railroad shall be as approved by the Director of Engineering for MBTA Railroad Operations. Correction of disrupted Railroad Company(s) drainage facilities shall be at the Contractor's sole expense.

MBTA REQUIREMENTS FOR GEOTECHNICAL MONITORING

THE FOLLOWING SPECIFICATIONS ARE REQUIRED FOR ALL PILE DRIVING/EXCAVATING OPERATIONS:

1. Pile driving shall be on a continuous basis for each pile driven. Once a pile is started, it shall be driven or cut off at an elevation not to exceed the plane across the top of the rails of any track within 8'-6" plus 2" for each degree of curvature from centerline of track to the closest edge of the edge or excavation.

2. The monitoring points shall be set up one week before the pile driving or excavation operations begin. The MBTA and the Railroad Company(s) shall be notified. Elevation readings to establish the initial baseline reading shall begin two days prior to the start of driving. Readings shall be for a minimum of two weeks after the completion of the driving or backfilling of the excavation, whichever is longer. Initial readings immediately after any surfacing operations shall serve as new baseline figures. All future elevation readings shall be compared to the adjusted baseline. If the track deviates to a condition that is unacceptable to the MBTA or Railroad Company(s), corrections shall be made at the Contractor's expense.

3. Elevation readings shall be taken from the top of each rail of each track within the "zone of influence" the excavation. See Section 1, Page 1 of this specification.

4. Elevation readings will be taken once per eight hour shift. The readings shall be faxed to the MBTA Railroad Company(s) on a daily basis and all information is to be presented in legible print. During excavation within the sheet pile protected area, the top of rail elevations shall be checked every hour. Additional readings may be required by the MBTA or Railroad Company(s).

5. Stations shall be spaced at 15-1/2 foot intervals. The number of distractions required will be determined by the length of the excavation parallel to the tracks. There will be four additional stations on each end of the pile driving/excavation operation along the track. Extra stations may be required by the MBTA or Railroad Company.

6. Elevation readings must show the date, time, weather conditions and temperature. Each reading must also provide the following information: track number, compass direction, station number, base elevation (with date), static elevation, change in elevation (recorded in hundredths and in inches), dynamic reading and total deflection in inches. See sample sheet attached.

7. Station "0" will be located at the centerline of the project with Stations 1, 2. 3, etc., being to the right and Stations -1, -2, -3, etc., being to the left when

standing on the near track and looking at the work. In multiple track areas the stations as determined herein are to be carried across each track located within any part of the zone of influence. See Plate I.

8. At each monitoring station a dynamic load measurement shall be taken. The dynamic load measurement device shall consist of a wooden stake placed firmly in the ballast and in initially in contact with the bottom of the rail. The loaded measurement is the resultant gap between the bottom of the rail and the top of the stake caused by the deflection of the rail under the load of a passing train. Based on field observations of the excavation, and at the option of the MBTA or railroad company(s), this requirement may be reduced.

9. Elevation readings taken from the top of rail for static measurement and the dynamic reading shall be combined and the sum compared to the adjusted baseline. This reading will demonstrate the difference in elevation caused by the excavation.

10. The MBTA requires that the track be maintained at all times within established criteria for the specific track classification. At the completion of the project the requirement for tamping and realigning the tracks, caused by the settlement from the construction activity, remains with the Contractor for the duration as specified by the MBTA in their initial review of the Construction Drawings. This tamping and track realignment will be performed by the MBTA or railroad company(s) at the sole expense of the Contractor.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

VIII

BLASTING SPECIFICATIONS

Blasting on, over, under, within or adjacent to MBTA Railroad Property will be permitted only in special cases where it is demonstrated to the Director of Engineering for MBTA Railroad Operations that there is no practicable alternative to perform the work.

In such cases when blasting is permitted, the Contractor must submit a detailed blasting program to the MBTA and Railroad Company(s) for approval prior to the commencement of any work. The blasting program must contain the following information:

a. Site plan with location of nearest MBTA structure.

b. Plan of each blast showing hole spacing and delay pattern. c. Diameter and depth of each hole.

c. Amount of explosives per hole.

d. Total pounds of explosives per day.

e. Total amount of explosives per blast.

f. Type of non-electric delays to be used. h. Amount of stemming in each hole.

g. Type of explosive to be used.

h. Soil and rock profile in blast zone.

i. Scaled distance to the nearest MBTA facility.

j. Type and location of seismograph to be used. m. Size of blasting mats to be used.

k. Safety precautions to be followed.

The following general requirements are to be adhered to:

a. Obtain the services of a qualified vibration and blasting consultant to monitor the blasting.

b. Use a non-electric detonation system whenever possible. If electric caps are used, a check must be made for stray currents, induced current and radio frequency energy to insure that this hazardous extraneous electricity is at an acceptable safe level.

c. Provide an open face for maximum relief of burden.

d. Limit the maximum peak particle velocity to 1 inch per second. Depending on existing conditions, this may be modified to 2 inches per second.

e. Maintain an initial scale distance of 60 ft. per 1-1/2 lbs. After initial blasting, scale distance may be modified to a minimum of 50 ft. per 1-1/2 lbs., if conditions permit.

Scale distance -- Distance from blast to structure (in feet)

Weight of explosives per delay (in pounds)

The Contractor shall provide for a pre-blast and post blast survey, including photographs. An inspection of all nearby MBTA facilities shall be made to determine any changes that may occur due to blasting operations.

The Contractor shall coordinate all blasting with the MBTA and Railroad Company(s) in advance to determine when the charges may be set. The Contractor is advised that the MBTA and Railroad Company(s) use two way radios for train control. The radios operate in the 160 MHz area. These radios cannot be turned off at any time.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

IX

TEMPORARY PROTECTION SHIELDS FOR DEMOLITION AND CONSTRUCTION

The Railroad Company(s) will determine when and where protection shields are required. The designated construction of temporary protection shields must adhere to the following specifications:

1. The construction of temporary protection shields shall be designed to prevent any dust, debris, concrete, formwork, paint, or tools from falling on MBTA Railroad Property below.
2. The temporary protection shields shall be erected prior to the start of work. The Railroad Company(s) will determine whether or not sufficient protection has been provided to perform the work over any particular area.
3. The temporary protection shields shall remain in place until all work over the railroad has been completed and shall be removed only when ordered by the Railroad Company(s).
4. To minimize the inconvenience to the users of any properties below and adjacent to the project, the Contractor shall be required to complete the actual erection and removal of the temporary shields within time limits acceptable to the Railroad Company(s).
5. The erected temporary protection shields shall not infringe on any existing minimum vertical clearance.
6. The Contractor shall be required to obtain the approval of the Railroad Company(s) before commencing any work beneath the shield. In certain areas, depending on the nature of the work, the Railroad Company(s) may require a specific method of protection.
7. The horizontal shield shall be designed to carry a live load of 100 pounds per square foot and a single concentrated load of 2,000 pounds located to produce maximum stress. The vertical shield shall be designed to carry a wide load of 30 pounds per square foot.
8. Prior to the start of construction, the Contractor shall be required to submit the details of the temporary protection shield to the Railroad Company(s), who will review and approve the details only as to the methods of erection and as to whether or not the proposed installation will provide the level of protection required at the various locations. It is the Contractor's responsibility to design these protections so that they are in conformance with all existing laws, regulations and specifications that govern this type of work. Shield plans must include a material list and shall be designed by a Registered Professional Engineer. The Drawings and calculations must bear their seal when they are submitted to the Railroad Company(s).
9. If during the actual construction, the Railroad Company(s) deems that the shield is not providing the desired level of protection or that the Contractor has failed to properly maintain the shield, all work at the

affected location shall cease until corrective measures acceptable to the Railroad Company(s) are instituted.

10. All temporary shields shall be constructed using new material.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

X

INDUSTRIAL SIDE TRACK SPECIFICATIONS

SECTION 1. GENERAL

1.01 All railroad track construction shall be performed under competent supervision of personnel experienced in railroad construction and shall conform to the standards of the MBTA. The MBTA and Railroad Company(s) will inspect and approve all side tracks prior to being put in service. This specification shall be used for side tracks directly on or within 15 feet of the MBTA property line. Any construction outside of the MBTA property line shall be in compliance with the standards of the serving freight railroad.

SECTION 2. MATERIALS

2.01 MATERIAL

Rails, ties, switches, frogs, etc. shall conform to the standards of the MBTA for various types of turnouts and track installations thereby insuring replacement availability.

2.02 RAIL

The rails shall be 100# ASCE Section or of a heavier rail section in common use, new or relay. Relay rails shall not have more than 1/4" top wear measured vertically along center line of rail and not more than 3/8" side wear measured horizontally 3/4" below the normal top of rail. Rails shall be free from kinks, excessive rust and excessive head flow. Rails having line or surface bends that cannot be spiked will be rejected. Rail shall be free of internal defects. Rail used on the limits of MBTA Railroad Property shall be equal in weight and in section to the attached main line.

2.03 CROSS TIES

Cross ties shall conform to MBTA specifications, minimum size shall be 7" x
8" x 8'6" and shall be treated with creosote in accordance with MBTA specifications. Relay ties may be approved after inspection by the MBTA and Railroad Company(s) prior to installation.

2.04 SWITCH TIMBER

Switch timber shall be new hardwood and conform to MBTA specifications 7" x 9" and of lengths required by MBTA standard turnout bill of materials. All timber shall be creosote treated as specified for cross ties. Relay timber as above.

Tie plates shall be new or relay at least 7-1/2" x 10-3/4", 1/2" thick,

double shoulder and should be canted. Tie plates must conform to MBTA specifications. Damaged plates or plates showing more than 25% reduction in section due to corrosion or wear will be rejected.

2.06 JOINT BARS

Joint bars shall be new or relay, 100% toeless, 24" long or equal and conform to MBTA specifications. Relay bars must be free from appreciable wear. Joint bars shall have a minimum of four holes and the holes are to fit the punching's of the rail. Holes to have a clearance of 1/16". Joint bars that cannot be drawn up to give a tight fit will be rejected. No fewer than 4 bolts per joint will be allowed.

2.07 BOLTS, NUTS AND WASHERS

Bolts and nuts shall be new and of a size to fit the rail punching's. They shall conform to AREA specifications for low carbon steel track bolts and nuts. Washers shall be new spring type of appropriate size and shall conform to MBTA specifications.

2.08 TRACK SPIKES

Track spikes shall be 6" long, 5/8" square with an oval head and conform to MBTA specifications for soft steel track spikes. Tangent track shall have at least 2 rail holding spikes per tie plate and all curves over 3" shall have 3 spikes per tie plate.

2.09 BALLAST

Ballast shall conform to MBTA Material Specification 9248.

2.10 BUMPING POSTS

Bumping posts shall be Hayes type, Durable "D" or equal, unless otherwise specified, and will conform to MBTA Material Specification 9206.

2.11 DERAIL

Type and quality of derail shall be specified for each individual side track requirement. Derail shall be connected into the railroad signal system, which will be performed by the Railroad Company(s) at the Owner's expense. Two pairs of insulated joints shall be installed by the Contractor at a location to be determined by the MBTA. Side tracks with a descending grade toward the main track shall require a split switch type derail.

SECTION 3. INSTALLATION

3.01 The track shall be properly installed with a standard gauge of 4'8-1/2" except on sharp curves. In cases of sharp curves, gauge will be specified by the MBTA or the Railroad Company(s).

3.02 Ballast shall be installed on top of subgrade for a depth of at least 6" below the bottom of tie and brought up to the top of the tie at the center and slope off to 1" below top of tie at the ends. It shall then extend 1' beyond the end of the tie at that height, at which point it shall slope off at a rate of 2:1 to the sub- ballast.

3.03 Cross ties shall be placed not more than 24" on center on tangent track and19 ½ " on center on curved track. When relay rails are used the unworn side shall be placed on the gauge side. Tie plates shall be installed on each cross tie. The center of the joint shall be installed so as to be suspended by two ties.

3.04 It shall be the responsibility of the builder of that portion of track designated as "property line to end" to connect to that portion of track designated as "clearance to property line" and provide the necessary joints or compromise joints with bolts as the weights of rail would dictate.

SECTION 4. BONDING

4.01 Where track bonding is necessary, it will be performed by the Railroad Company(s) in accordance with MBTA standards.

SECTION 5. APPROVAL

5.01 Plans for track installation must be approved by the MBTA and Railroad Company(s) before the design of the facility to receive rail service is finalized.

SECTION 6. CURVATURE OF TRACK

6.01 The recommended curvature shall be 8^{o} or less. The maximum allowable degree of curve is not to exceed 12^{o} 30', unless approved by the Director of Engineering for MBTA Railroad Operations.

SECTION 7. GRADE OF TRACK

7.01 The maximum allowable grade for all tracks shall not exceed 1.5% descending towards mainline or 3% descending from mainline using 100 foot vertical curves.

SECTION 8. ELEVATION

8.01 Super elevation shall not exceed 1 inch.

SECTION 9. SUBGRADE

9.01 Subgrade shall be prepared to a grade 18" - 20" below the proposed top of rail and shall be of a material that is compacted to 95% and provides for adequate drainage.

SECTION 10. ACCEPTANCE

10.01 Before track is placed into service to receive cars, it shall be inspected and approved by a qualified track inspector from the MBTA, the Railroad Company, and the freight carrier.

10.02 No exceptions to these specifications are authorized without the written approval of the Director of Engineering for MBTA Railroad Operations.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

XI

RIGHT OF WAY FENCING SPECIFICATIONS

SECTION 1. GENERAL

1.01 DESCRIPTION

This section specifies the furnishing and installing of new Type I galvanized steel or Type II aluminum coated steel chain link fence. Right of way fence shall be 6', 8' or 10’ as required by site specific conditions.

1.02 SUBMITTALS

Shop Drawings

1. Include cross sectional dimension of posts, braces, rails, fittings, accessories and gate frames, design of gates, and details of gate hardware.
2. Include a layout drawing showing the spacing of posts and location of all gates, abrupt changes in grade, and all corner, gate, anchor, end and pull posts.

SECTION 2. PRODUCTS

2.01 MATERIALS

A. General

1. Steel pipe dimensions and weights: ASTM A-53, Schedule 40 (except the hydrostatic testing requirement is waived). Dimensions specified are outside diameter (O.D.).
2. Provide post with accepted semi-steel or pressed steel tops, so designed as to fit securely over post and carry top rail or spring tension wire; the base of post top fitting shall fit over the outside of post and shall exclude moisture from post. All fittings and accessories shall be hot dipped galvanized in accordance with ASTM A-53.

B. Line Post: For all post heights, unless otherwise noted, Schedule 40, 2.375” O.D. pipe weighing 3.65 lbs./ft. ASTM A-53 with a 2 oz. hot dipped galvanized coating shall be used.

C. Gate post: Furnish post to support single gate leaf, or one leaf of a double gate installation, for the following gate widths:

Leaf Width	Gate Post	Sch. 40
up to 6'	2.875" O.D.	5.79 lb./ft.
6' to 12’	4.000" O.D.	9.11 lb./ft.
12' to 18'	6.625" O,D.	18.97 lb./ft.
18' to 32'	8.625" O.D.	28.55 lb./ft.

D. End, Corner and Intermediate Posts

For all post heights, unless otherwise noted, Schedule 40, 2.875" O.D. pipe weighing 5.79 lbs./ft. ASTM A-53 with a 2 oz. hot dipped galvanized coating shall be used.

E. Top rail and Spring Tension Wire

1. Top Rail

a. Schedule 40, 1.66" O.D, pipe weighing 2.27 lbs./ft. ASTM A-53 with a 2 oz. hot dipped galvanized coating.

b. Couplings and expansion sleeves: Outside sleeve type, minimum six inches long.

2. Spring tension wire: shall be marcelled (spiraled or crimped) #7 gauge (.177 inches) plus or minus 0.005 inches in diameter. ASTM A-824. 1.2 oz. zinc per sq. ft.

F. Braces and Tension Rods

1. Compression braces: Same type and size as top rail.

2. Tension rods: 3/8" round rods with drop forged turnbuckles or other approved type of adjustment.

G. Fence Fabric

1. Type I galvanized steel ASTM A-392 Class 2 coating 2 oz.

a. Typical-2" diamond mesh 6 gauge (192") 2 oz.

b. Hot dipped galvanizing after weaving.

2. Type II aluminum coated steel ASTM A-491 size 2. 3/8" mesh.

3. Selvages: All types

a. Fabric shall be knuckled at both selvages.

b. Fabric over 60 inches high: knuckled at one selvage and twisted and barbed at the other.

H. Fabric Bands, Brace Bands and Stretcher Bars

1. Fabric Bands: 12 gauge pressed steel 7/8 inch wide.

2. Brace Bands: 11 gauge pressed steel 1 inch wide.

3. Stretcher Bars: 3/16" x 3/4" galvanized steel.

I. Tie wire and miscellaneous Items

1. Tie Wire: Galvanized steel 6 gauge (.192") for post and rails.
2. Hog rings: Galvanized steel 6 gauge (.192") for spring tension wire.
3. Rail and Truss Cups: Galvanized semi-steel or pressed steel.

J. Barbed Wire and Extension Arms

1. Barbed Wire; ASTM AI21, 12-1/2 gauge, 4-point round barbs, Class 3 coating.
2. Extension Arms: Projecting at an angle of approximately 45 degrees, fitted with clips or other means of attaching three strands of barbed wire, the top outside wire approximately 12 inches from the fence line and the other wires spaced uniformly between the top outside wire and the fence fabric.

K. Gates

1. General: Furnish gates complete with necessary hinges, latches, and drop bar locking devices; corners shall be welded or fastened and reinforced with suitable fittings.
2. All gates fabricated from 1.90" O.D. Schedule 40 pipe weighing 2.72 lbs./ft. with a 2 oz. hot dipped galvanized coating.

L. Concrete: Class 2500 psi concrete consisting of aggregate passing the No. 8 sieve.

SECTION 3. EXECUTION

3.01 INSTALLATION

A. Place terminal post at each end, corner, gate post, pull post (minimum 500'), or any change in grade or direction greater than 30 degrees.

B. Line posts shall be spaced on a maximum of 10 foot centers. In determining the post spacing, measure parallel to slope of finished grade. All posts to be set plumb and in line. Post spacing on radius as follows:

200'- 500' radius 8' O.C.
100’ - 200' radius 6’ O.C.
less than 100’ radius 5' O.C.

C. When fencing is installed on the top of concrete structures, use galvanized sleeve and grout posts or install with suitable galvanized flange casing and galvanized anchor bolts. Set all other posts permanently in concrete.

D. Excavate post hole footings at least 12" in diameter for line post and I6" for terminal and gate posts up to 4" O.D. Larger gate posts require 18" diameter footings. All footings excavated to a depth of 42" with a minimum post embedment of 36". Crown top of concrete to shed water and allow curing for not less than 72 hours before proceeding with further work on the post.

E. Brace end, corner pull, and gate posts to the nearest line post with diagonal or horizontal brace rails used as compression chambers, and with truss rods with turnbuckles used as tension members. Brace line posts horizontally and truss in both directions as required, at approved intervals.

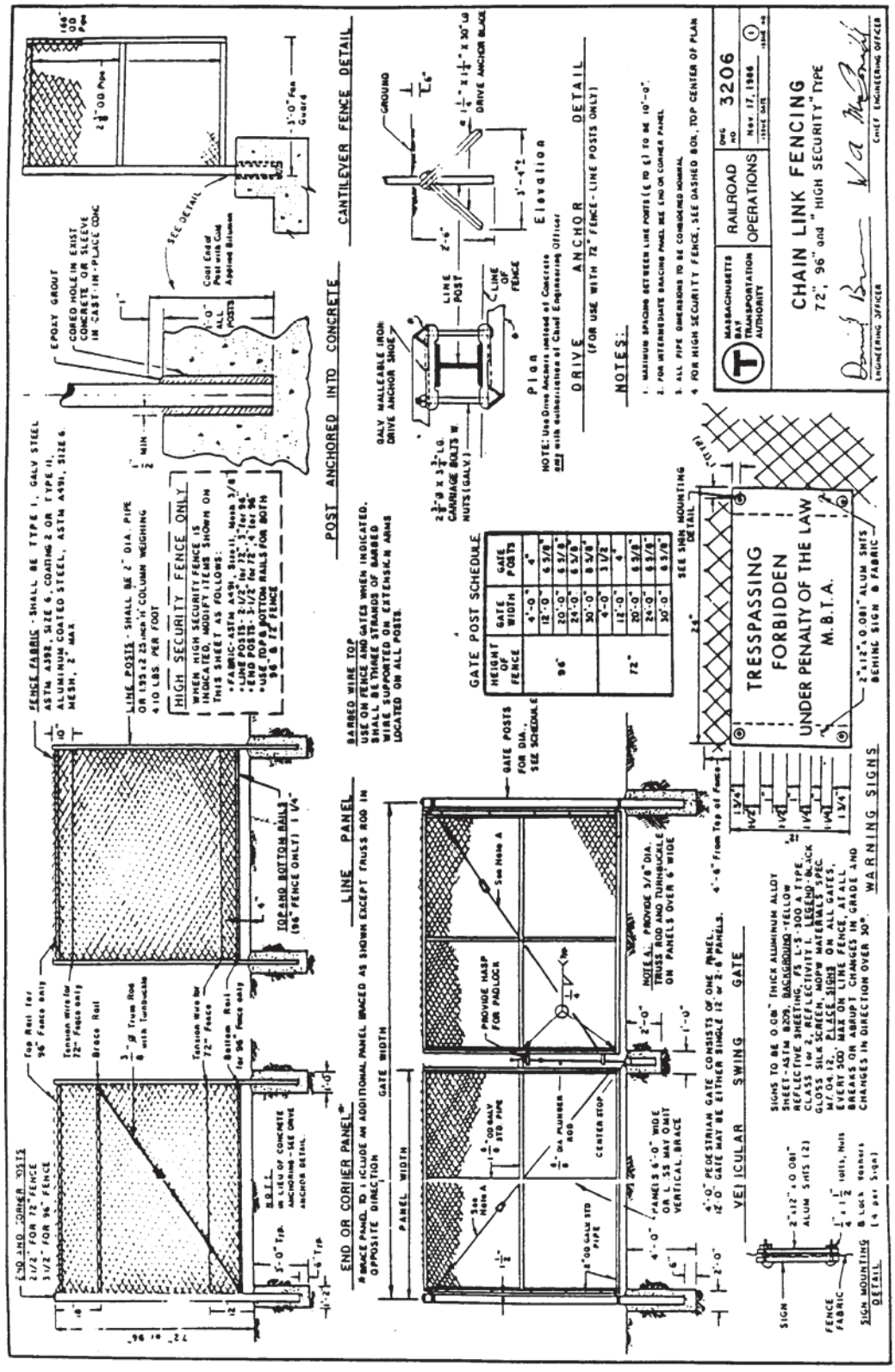
F. Install fabric on post side which best secures MBTA's Railroad Property. Pull fabric taut and tie to all line posts, rails, braces and spring tension wire spacing all ties at 12" intervals. Use hook shaped steel ties confined to the diameter of the pipe to which it is attached, clasping pipe and fabric firmly with both ends twisted at least 2 turns.

G. Barbed wire and tension wire must be taut and properly secured with brace bands at each terminal and gate post.

H. Electric Ground: Where a power line carrying more than 600 volts passes over fence, install ground rod at the nearest point directly below each point of crossing. Ground all substation fences and gates and perform other electrical grounding as indicated.

3.02 TOUCH-UP AND REPAIR WORK

Remove and replace fencing which is improperly located or is not true to line, grade and plumb within tolerances as indicated.


CHAIN LINK FENCING
72", 96" and "HIGH SECURITY" TYPE
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
RAILROAD OPERATIONS
DWG NO 3206
Nov. 17, 1986
POST ANCHORED INTO CONCRETE
CANTILEVER FENCE DETAIL
HIGH SECURITY FENCE ONLY
WHEN HIGH SECURITY FENCE IS INDICATED, MODIFY ITEMS SHOWN ON THIS SHEET AS FOLLOWS:
*FABRIC-ASTM A491, Size 11, Mesh 2 3/8"
*LINE POSTS- 2 1/2" for 72" - 3" for 96"
*END POSTS- 3 1/2" for 72" - 4" for 96"
*USE TOP & BOTTOM RAILS FOR BOTH 96" & 72" FENCE
FENCE FABRIC - SHALL BE TYPE I, GALV STEEL ASTM A392, SIZE 6, COATING 2 OR TYPE II, ALUMINUM COATED STEEL, ASTM A491, SIZE 6 MESH, 2" MAX
LINE POSTS - SHALL BE 2" DIA. PIPE OR 1.95 x 2.25 inch 'H' COLUMN WEIGHING 4.10 LBS PER FOOT
EPOXY GROUT
CORED HOLE IN EXIST CONCRETE OR SLEEVE IN CAST-IN-PLACE CONC
SEE DETAIL
Coat Ended Post with Cold Applied Bitumen
3'-0" Fan Guard
GROUND
DRIVE ANCHOR BLADE
LINE POST
LINE OF FENCE
Elevation
DRIVE ANCHOR DETAIL
(FOR USE WITH 72" FENCE - LINE POSTS ONLY)
NOTE: Use Drive Anchors instead of Concrete only with authorization of Chief Engineering Officer
GALV MALLEABLE IRON DRIVE ANCHOR SHOE
2 1/2" Ø x 3 1/2" LG. CARRIAGE BOLTS W NUTS (GALV.)
NOTES:
1. MAXIMUM SPACING BETWEEN LINE POSTS (C TO C) TO BE 10'-0".
2. FOR INTERMEDIATE BRACING PANEL SEE END OR CORNER PANEL
3. ALL PIPE DIMENSIONS TO BE CONSIDERED NOMINAL
4. FOR HIGH SECURITY FENCE, SEE DASHED BOX, TOP CENTER OF PLAN
GATE POST SCHEDULE
HEIGHT OF FENCE | GATE WIDTH | GATE POSTS
96" | 4'-0" | 4"
12'-0" | 6 5/8"
20'-0" | 6 5/8"
24'-0" | 6 5/8"
30'-0" | 8 5/8"
72" | 4'-0" | 3 1/2"
12'-0" | 4"
20'-0" | 6 5/8"
24'-0" | 6 5/8"
30'-0" | 6 5/8"
GATE POSTS FOR DIA. SEE SCHEDULE
SEE SIGN MOUNTING DETAIL
TRESSPASSING FORBIDDEN UNDER PENALTY OF THE LAW M.B.T.A.
2"x12"x0.081" ALUM SHTS BEHIND SIGN & FABRIC
BARBED WIRE TOP
USE ON FENCE AND GATES WHEN INDICATED. SHALL BE THREE STRANDS OF BARBED WIRE SUPPORTED ON EXTENSION ARMS LOCATED ON ALL POSTS.
END AND CORNER POSTS
96" Fence only
72" Fence only
Top Rail for
Tension Wire for
Brace Rail
3/8" Ø Truss Rod & with Turnbuckle
Bottom Rail
for 96" Fence only
R.R.T. IN LIEU OF CONCRETE ANCHORING - SEE DRIVE ANCHOR DETAIL
5'-0" Typ.
6" Typ.
LINE PANEL
TOP AND BOTTOM RAILS (96" FENCE ONLY) 1 1/4"
END OR CORNER PANEL*
* BRACE PANEL TO INCLUDE AN ADDITIONAL PANEL BRACED AS SHOWN EXCEPT TRUSS ROD IN OPPOSITE DIRECTION
PANEL WIDTH
GATE WIDTH
Saw Horse A
PROVIDE HASP FOR PADLOCK
2 1/2" Ø GALV STD PIPE
3/8" Ø PLUMBER ROD
CENTER STOP
2'-0"
1'-0"
NOTE: PROVIDE 3/8" DIA. TRUSS ROD AND TURNBUCKLE ON PANELS OVER 6' WIDE
4'-0" from Top of Fence
4'-0" PEDESTRIAN GATE CONSISTS OF ONE PANEL. 12'-0" GATE MAY BE EITHER SINGLE 12' or 2-6' PANELS.
4'-0" PANELS 6'-0" WIDE OR L SS MAY OMIT VERTICAL BRACE
VEHICULAR SWING GATE
SIGNS TO BE 0.08" THICK ALUMINUM ALLOY SHEET - ASTM B209, BACKGROUND - YELLOW REFLECTIVE SHEETING, FS L-S-300 A TYPE, CLASS 1 or 2, REFLECTIVITY I. LEGEND - BLACK GLOSS SILK SCREEN, MDPW MATERIALS SPEC. M7.04.12. PLACE SIGNS ON ALL GATES, EVERY 500' MAX ON LINE FENCE, AT ALL BREAKS OR ABRUPT CHANGES IN GRADE AND CHANGES IN DIRECTION OVER 30°.
WARNING SIGNS
2"x12"x0.081" ALUM SHTS (2)
1/4" x 1 1/2" bolts, Nuts & Lock Washers (4 per Sign)
SIGN
FENCE FABRIC
SIGN MOUNTING DETAIL
ENGINEERING OFFICER
CHIEF ENGINEERING OFFICER

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

XII

TEST BORINGS SPECIFICATIONS

SECTION 1. GENERAL

All borings on MBTA Railroad Property are to be performed according to the following requirements:

1.01 Work on MBTA Railroad Property must be performed with a Railroad Company(s) inspector and/or flagman present.

1.02 Where access can only be gained by crossing the tracks, a temporary crossing must be used. This crossing shall adhere to the following:

A. The location and material must be approved in advance by the Chief Engineering Officer or Railroad Company(s).

B. The crossing will be constructed by Railroad Company(s) forces at the Contractor's expense.

C. The crossing must be protected at all times when not in use. Access shall be prohibited through the use of right-of-way gates which will be constructed by Railroad Company(s) forces at the Contractor's expense.

D. No crossing of the track shall be made without a railroad flagman and/or inspector present.

E. The crossing of tracks shall be kept to a minimum.

1.03 Boring locations, including positioning of the boring rig, shall be kept at least 8'-6" from the center line of track.

1.04 All borings must be cased to insure adequate return (of mud and water) and to avoid undermining of the track.

1.05 All holes shall be backfilled with cement grout to fill the voids and protect against an artesian condition.

1.06 The location of all utilities owned or private, shall be located and suitably marked by the Railroad Company(s) and/or the private owner at the Contractor’s expense to avoid damage to the utility and/or track structure.

1.07 Prior to entry upon the MBTA Railroad Property, all necessary contracts, insurance policies and financial obligations shall be provided in a form acceptable to the Railroad Company(s).

1.08 Work within the operating right-of-way that has potential to foul the tracks, shall be restricted to periods of non-peak passenger operations.

1.09 While performing the work, full cooperation with the inspector and flagman is essential. The work will be terminated immediately if the safety of all traffic and personnel is jeopardized in any way.

SECTION 2. TESTING

2.01 Soil borings shall be in accordance with the current issue of the American Railway Engineering Association Specifications, Chapter 1, Part 1, "Specifications for Test Borings". Soils shall be investigated by the split-spoon and/or thin-walled tube method and rock shall be investigated by the Coring method specified therein.

2.02 Soil boring logs shall clearly indicate all of the following:

1. Boring number as shown on boring location plan.
2. Elevation of ground at boring.
3. Description or soil classification of soils and rock encountered.
4. Elevations or depth from surface for each change in strata.
5. Identification of where samples were taken and percentage of recovery.
6. Location of ground water at time of sampling and, if available, subsequent readings.
7. Natural dry density in lbs./sq. ft. for all strata.
8. Unconfined compressive strength in tons/sq. ft. for all strata.
9. Water content (percent). Liquid Limit (percent) and plastic limit (percent).
10. Standard penetration in blows/ft.

2.03 Soil boring logs shall be accompanied by a plan drawn to scale showing location of borings in relation to the tracks, the elevation of ground surface at each boring, and the elevation of the top of rail of the tracks.

2.04 Soil investigation by auger, wash, or rotary drilling method is not acceptable.

2.05 Borings shall be taken no more than two (2) feet from the field stake which marks the boring location. The stake should not be disturbed during boring operations. Lost stakes shall be reinstalled.

2.06 Unless a boring hole is actively being worked, it shall be securely covered or otherwise protected until permanently filled. When work at each boring hole is completed, the hole shall be properly filled.

2.07 Access to the boring locations must be approved by the Railroad

Company(s). When possible, access shall be from public roads. Licenses for Entry, Insurance and Flag Protection must be obtained by the Contractor in accordance with all applicable MBTA Specifications.

2.08 Boring operations shall be confined to each boring location to the extent possible.

The Contractor shall take necessary precautions to prevent damage to structures and facilities. The site shall be restored to a condition satisfactory to the Railroad Company(s).

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

RAILROAD OPERATIONS DIRECTORATE

XIII

FIBER OPTIC CABLE SPECIFICATIONS

SECTION 1. GENERAL

1.01 The purpose of the following standards is to provide basic information about the MBTA's requirements with respect to the design and construction of fiber optic cables on MBTA Railroad Property to fiber optic cable companies and their Contractors.

1.02 All work performed on or affecting MBTA Railroad Property must be designed and constructed in accordance with the Commuter Rail Design Standards (Vol. I and II), MBTA Book of Standards, Railroad Operations Specifications and the following standards. Additional job specific requirements will be contained in the MBTA's Fiber Optic License Agreement and can be obtained by contacting:

AGM for Real Estate and Asset Development
Ten Park Plaza
Boston, MA 02116

The Director of Engineering for MBTA Railroad Operations or their designated representative will be responsible for the approval of all work. No modifications, changes or deletions will be made without their approval.

SECTION 2. PROJECT REVIEW AND COORDINATION

2.01 All Drawings and specifications shall be reviewed and approved by the MBTA and Railroad Company(s) prior to construction. The MBTA must approve the construction schedule and sufficient Railroad Company(s) personnel must be available before work begins.

2.02 If another fiber optic cable company has previous or exclusive rights along the proposed route, the alignment and cable location must be approved in accordance with existing agreements.

2.03 The fiber optic cable companies must coordinate the construction with others to minimize the disruptions to the MBTA railroad operations.

SECTION 3. CONDUCT OF WORK

3.01 In order to minimize the manpower requirements of the Railroad Company(s) and afford better control, supervision, and protection, the Contractor will conduct their work sequentially and minimize the number of crews and their proximity. Crews should be confined geographically to an area that can be covered easily by a minimum number of Railroad Company(s) personnel. This can be accomplished by a block method of construction. A construction block will be used and is a 1-4 mile segment of right of way in which up to 3 fiber optic cable installation crews can work. The crews can work within the construction block, but cannot work outside of it. The construction block

must move as a unit along the right of way. The crews cannot work two blocks concurrently.

SECTION 4. CONSTRUCTION SCHEDULE

4.01 The fiber optic company or its Contractor will submit a schedule of work to the MBTA for approval. The schedule will be based on methods of construction acceptable to the MBTA and Railroad Company(s). No work shall begin prior to approval by the MBTA.

4.02 Any changes or modifications to the schedule proposed by the fiber optic company or its Contractor must be submitted to and approved by the MBTA prior to implementation. The MBTA, however, may be required to change or modify the construction schedule on account of its operations, maintenance requirements, or manpower shortages. In this event, the MBTA will give the fiber optic cable company as much advance notice as possible.

4.03 Construction schedules will be reviewed and updated every two (2) weeks or as required.

SECTION 5. ESTIMATE OF EXPENSES

5.01 An estimate of anticipated expenses will be provided based on durations provided by the fiber optic cable company or their Contractor and construction schedules approved by the Railroad Company(s). Any changes in the schedule will cause the estimate to be revised. The fiber optic cable company or their Contractor will be responsible for all of the costs incurred by the MBTA and Railroad Company(s) in support of the construction activities. This includes design review, engineering support, administration and supervision.

SECTION 6. BILLING

6.01 The fiber optic cable company or its Contractor will be required to pay for railroad protective services in advance of costs incurred.

DOCUMENT A00806

MBTA SAFETY SPECIFICATIONS

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SECTION 01568

CONSTRUCTION SAFETY

PART 1 - GENERAL

1.1 DESCRIPTION

A. This Section specifies requirements to establish a practical, sound, and effective program for the prevention of construction accidents, and to assign specific responsibilities to Contractors for program compliance.

B. Contractors and their supervisors must control hazardous activities and conditions within their respective areas of contract responsibility.

1.2 SUBMITTALS

A. Safety and Health Plan: The contractor shall, within thirty (30) days after receipt of the award of a contract, submit for approval to the MBTA, a detailed operational Safety and Health Plan.

B. Safety Supervisor: The Contractor shall within thirty (30) days after receipt of the award of a contract submit the resume of the qualifications and work experience of the designated Safety Supervisor proposed for assignment to the Project. No construction work shall begin until the project Safety Supervisor has been approved by the MBTA. The Safety Supervisor shall have a minimum of 5 years of experience in construction safety or a related field.

C. Monthly Accident Experience Summary: The Contractor shall submit an Accident Experience Report monthly during the course of construction to the MBTA.

D. Industrial Industry Records: Prior to start of work, the Contractor shall submit their Injury/Illness Record**s** for the previous 3 years. In addition, the Contractor shall submit annually to the MBTA all subsequent Illness/Injury Reports for the duration of the project.

PART 2 - PRODUCTS

None

PART 3 - EXECUTION

3.1 SAFETY AND HEALTH PLAN

A. The Contractor shall submit a project Safety and Health Plan. At a minimum, the plan shall include the following sections:

i. Emergency Action Plan
ii. First Aid Facilities
iii. Serious Accidents
iv. Emergency Telephone Numbers
v. Protection of the Public
vi. Site Visits
vii. Substance Abuse/Prevention/Testing

3.2 SAFETY SUPERVISOR

A. Complete daily safety inspections of the job site and contiguous public areas, and take any corrective actions to eliminate unsafe conditions.

B. Establish and implement a project safety training program for supervisors and employees as applicable to their job.

C. Attend project safety meetings.

D. Review Foreman accident and investigation reports, and initiate corrective action to prevent reoccurrence.

E. Maintain copies of all Contractor Safety Reports.

F. Assist Foremen in accident investigations.

G. Encourage establishment of incentive programs designed to recognize individual employee safety efforts and contributions towards improved safety.

H. Prepare a Safety Audit Checklist and complete the checklist each week during the course of construction. The completed Audit Checklists shall be submitted to the Authority weekly.

I. The Safety Supervisor needs to be on the project site when major work tasks are being performed. During work periods when the Contractor is not performing contract work, the Safety Supervisor can be absent from the project site with permission from the Authority.

3.3 ACCIDENT INVESTIGATION

A. Serious accidents shall be reported immediately to the MBTA Resident Engineer. Contractors shall issue standing orders to all supervisors directly in charge of operations that the scene of the accident shall not be disturbed, except for rescue or other emergency measures, until otherwise directed. Contractor's forces either witnessing or party to the accident shall be detained at the site to provide detailed accounting of facts.

B. All reports shall be submitted to the MBTA. The accident investigation shall generate appropriate recommendations for corrective actions to prevent similar recurrence of similar accidents.

C. The requirements of MBTA Safety Procedure 7.3 Contractor Safety Violation Program shall be followed by the Contractor when completing an accident report.

3.4 FIRST AID FACILITIES

A. In formulating the Health and Safety Plan, the Contractor shall provide for the establishment and staffing of appropriate first aid facilities for the treatment of on the job injuries.

B. Off-site medical treatment of employee injuries shall be performed at medical facilities named in the Contractor's Safety Submittal.

3.5 EMERGENCY TELEPHONE NUMBERS

To ensure that emergency actions are promptly taken, Contractors shall post emergency telephone numbers in conspicuous places.

3.6 ORIENTATION PROGRAM

A. The Contractor shall establish and maintain an orientation program for new employees which shall include:

i. For each individual the hazards present in their work assignment and in the general area in which he will be working.
ii. Personal protective equipment required.
iii. Instruction in the proper procedure for reporting unsafe job conditions which he/she may encounter.

3.7 RIGHT OF WAY SAFETY AWARENESS

A. All Contractor and sub-contractor personnel shall complete either the MBTA Rapid Transit right-of-way safety training or the MBCR Commuter Rail right-of-way safety training prior to entering the project site. ROW safety training will be required on all MBTA property including the RR track, stations, parking garages and maintenance car houses. Personnel will not be allowed on the job site unless they have attended a Right-of-Way Safety Awareness training session. Workers are required to carry their certification card while on site.

3.8 OSHA

A. The Contractor shall comply with the OSHA 1926 Construction Safety Standards that apply to the project work. The Contractor shall meet the reporting requirements, and employers with eleven (11) or more employees must meet recordkeeping requirements.

B. All Contractor and Sub-Contractor personnel shall possess an OSHA 10 Hour Certification card when working on the project site.

C. All fatality cases and/or serious accidents and illness shall be reported to OSHA immediately by phone to an Occupational Safety and Health Area Office. Employers must report immediately all blasting accidents.

D. Part of the OSHA requirements is that each employer must post in a prominent location the "Safety and Health Protection on the Job" poster. The poster briefly states the intent and coverage of the Act. Failure to post this document is a citable offense under the Act.

3.9 PROSECUTION OF THE WORK

A. The Contractor shall take all reasonable precautions in the performance of the work to protect the safety and health of its employees and members of the public and shall comply with all applicable MBTA, Local, State and Federal safety and health regulations and associated reporting requirements.

B. The Contractor Safety Supervisor is charged with sole responsibility of on-site safety management under the direction of the Contractor Project Superintendent. All potential safety hazards identified shall be promptly corrected. The Safety Supervisor shall complete daily reviews of the project site and document then results on the inspection.

C. The MBTA shall notify the Contractor of any non-compliance and of the corrective action required. This notice, when delivered the Contractor or the Contractor's representative at the site of the work, shall be deemed sufficient notice of the non-compliance and corrective action required after receiving the notice, the contractor shall immediately take corrective action. If the contractor fails or refuses to take corrective action promptly, the MBTA may, without prejudice to other legal or contractual rights, issue an order stopping all or part of the work; and may subject contractor to safety violation assessments as deemed appropriate by the MBTA. Resumption **of work** may be issued by the MBTA Safety Department.

D. The Contractor shall maintain an accurate record of exposure data on all accidents and incidents occurring under this contract and report this data in a manner prescribed by the MBTA.

E. The Contractor shall be responsible for all its lower-tier sub-contractor's and vendor's compliance.

F. Contractor management shall make a commitment for accident prevention and fire prevention. Safety shall take precedence over schedule and production. Enforcement action is mandatory.

3.10 WORK AUTHORIZATIONS

A. The following work authorizations will be issued by the MBTA:

i. Excavation

ii. Hot Work

iii. Confined Space Entry

iv. Cranes and Suspended Platforms

3.11 WORKING NEAR THE THIRD RAIL

A. When working on or near the third rail, when the power is off, the contractor must have a third rail high-voltage warning device on the job site approved by the MBTA Power Department. This device will warn work crews if the third rail becomes energized at any time during work activity involving the right-of-way.

3.12 HAZARDOUS SUBSTANCES

A. Any Contractor who uses substances on the hazardous substances list to which workers might be exposed under either normal work conditions or reasonable foreseeable emergency conditions resulting from work place operations must provide those workers with the required hazardous substance information.

3.13 PERSONAL PROTECTIVE EQUIPMENT

A. All Contractor personnel must wear the required personal protective equipment when on the job site. Personal protective equipment includes hard hats, safety vest, safety glasses and proper footwear.

3.14 PROTECTION OF THE PUBLIC

A. All necessary precautions to prevent injury to the public or damage to property of others shall be taken. The public is defined as all persons not employed by or under contract or subcontract to the MBTA. Installation of temporary barriers and/or fencing designated to protect the public shall be reviewed and approved by the MBTA. Precautions shall include but not be limited to the following:

B. Work shall not be performed in any area occupied by the public unless specifically permitted by the contract or in writing by the MBTA.

3.15 SUBSTANCE ABUSE/PREVENTION/TESTING PROGRAM

A. The Contractor shall establish a substance abuse policy and testing program that includes the following elements:

☐ Deterrence

☐ Treatment and Rehabilitation
☐ Detection
☐ Enforcement

The MBTA reserves the right to approve the proposed substance abuse program prior to commencing the contract.

3.16 CONDUCT OF TOURS

A. Group tours must be cleared through the MBTA, allowing maximum advance notice and in compliance with MBTA Policy and Procedures.

B. MBTA will coordinate the tour arrangements and ensure notification to the Contractors Project Manager.

3.17 HOUSEKEEPING

A. A basic concept in any effective accident prevention program is "good housekeeping." No one item has a great impact on the overall success of a safety program for a construction project. The importance of good housekeeping is such that it must be planned from the beginning of the job and carefully supervised through the final cleanup.

B. During the course of construction, work areas, passageways and stairs, in an around buildings and structures, shall be kept clear of debris. Construction materials shall be stored in an orderly manner. Storage areas and walkways on the site shall be maintained free of depressions, obstructions and debris.

PART 4 - MEASUREMENT AND PAYMENT

A. No separate measurement or payment will be made for work required under this Section.

UNITED STATES DEPARTMENT OF LABOR

SEARCH

A to Z Index | En español | Contact Us | FAQs | About OSHA

OSHA QuickTakes Newsletter RSS Feeds Print This Page Text Size

Occupational Safety & Health Administration We Can Help

What's New | Offices OSHA

Home | Workers | Regulations | Enforcement | Data & Statistics | Training | Publications | Newsroom | Small Business | Anti-Retaliation

Regulations (Standards - 29 CFR) - Table of Contents

- **Part Number:** 1926
- **Part Title:** Safety and Health Regulations for Construction
- **Standard Number:** 1926
- **Title:** Table of Contents

PART 1926 -- SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION

Subpart A -- General

Sec.
1926.1 Purpose and scope.
1926.2 Variances from safety and health standards.
1926.3 Inspections - right of entry.
1926.4 Rules of practice for administrative adjudications for enforcement of safety and health standards.
1926.5 OMB control numbers under the Paperwork Reduction Act.
1926.6 Incorporation by reference.

Subpart B -- General Interpretations

1926.10 Scope of subpart.
1926.11 Coverage under section 103 of the act distinguished.
1926.12 Reorganization Plan No. 14 of 1950.
1926.13 Interpretation of statutory terms.
1926.14 Federal contracts for "mixed" types of performance.
1926.15 Relationship to the Service Contract Act; Walsh-Healey Public Contracts Act.
1926.16 Rules of construction.

Subpart C -- General Safety and Health Provisions

1926.20 General safety and health provisions.
1926.21 Safety training and education.
1926.22 Recording and reporting of injuries. [Reserved]
1926.23 First aid and medical attention.
1926.24 Fire protection and prevention.
1926.25 Housekeeping.
1926.26 Illumination.
1926.27 Sanitation.
1926.28 Personal protective equipment.
1926.29 Acceptable certifications.
1926.30 Shipbuilding and ship repairing.
1926.31 Incorporation by reference.
1926.32 Definitions.
1926.33 Access to employee exposure and medical records.
1926.34 Means of egress.
1926.35 Employee emergency action plans.

Subpart D -- Occupational Health and Environmental Controls

1926.50 Medical services and first aid.
1926.51 Sanitation.
1926.52 Occupational noise exposure.
1926.53 Ionizing radiation.
1926.54 Nonionizing radiation.
1926.55 Gases, vapors, fumes, dusts, and mists.
1926.56 Illumination.
1926.57 Ventilation.
1926.58 [Reserved]
1926.59 Hazard communication.
1926.60 Methylenedianiline.
1926.61 Retention of DOT markings, placards and labels.
1926.62 Lead.
1926.64 Process safety management of highly hazardous chemicals.
1926.65 Hazardous waste operations and emergency response.
1926.66 Criteria for design and construction for spray booths.

Subpart E -- Personal Protective and Life Saving Equipment

1926.95 Criteria for personal protective equipment.
1926.96 Occupational foot protection.
1926.97 [Reserved]
1926.98 [Reserved]
1926.99 [Reserved]
1926.100 Head protection.

1926.101 Hearing protection.
1926.102 Eye and face protection.
1926.103 Respiratory protection.
1926.104 Safety belts, lifelines, and lanyards
1926.105 Safety nets
1926.106 Working over or near water.
1926.107 Definitions applicable to this subpart.

Subpart F -- Fire Protection and Prevention

1926.150 Fire protection.
1926.151 Fire prevention.
1926.152 Flammable and combustible liquids.
1926.153 Liquefied petroleum gas (LP-Gas).
1926.154 Temporary heating devices.
1926.155 Definitions applicable to this subpart.
1926.156 Fixed extinguishing systems, general.
1926.157 Fixed extinguishing systems, gaseous agent.
1926.158 Fire detection systems.
1926.159 Employee alarm systems.

Subpart G -- Signs, Signals, and Barricades

1926.200 Accident prevention signs and tags.
1926.201 Signaling.
1926.202 Barricades.
1926.203 Definitions applicable to this subpart.

Subpart H -- Materials Handling, Storage, Use, and Disposal

1926.250 General requirements for storage.
1926.251 Rigging equipment for material handling.
1926.252 Disposal of waste materials.

Subpart I -- Tools -- Hand and Power

1926.300 General requirements.
1926.301 Hand tools.
1926.302 Power operated hand tools.
1926.303 Abrasive wheels and tools.
1926.304 Woodworking tools.
1926.305 Jacks - lever and ratchet, screw and hydraulic.
1926.306 Air Receivers.
1926.307 Mechanical power-transmission apparatus.

Subpart J -- Welding and Cutting

1926.350 Gas welding and cutting.
1926.351 Arc welding and cutting.
1926.352 Fire prevention.
1926.353 Ventilation and protection in welding, cutting, and heating.
1926.354 Welding, cutting and heating in way of preservative coatings.

Subpart K -- Electrical

GENERAL

1926.400 Introduction.
1926.401 [Reserved]

INSTALLATION SAFETY REQUIREMENTS

1926.402 Applicability.
1926.403 General requirements.
1926.404 Wiring design and protection.
1926.405 Wiring methods, components, and equipment for general use.
1926.406 Specific purpose equipment and installations.
1926.407 Hazardous (classified) locations.
1926.408 Special systems.
1926.409-1926.415 [Reserved]

SAFETY-RELATED WORK PRACTICES

1926.416 General requirements.
1926.417 Lockout and tagging of circuits.
1926.418-1926.430 [Reserved]

SAFETY-RELATED MAINTENANCE AND ENVIRONMENTAL CONSIDERATIONS

1926.431 Maintenance of equipment.
1926.432 Environmental deterioration of equipment.
1926.433-1926.440 [Reserved]

SAFETY REQUIREMENTS FOR SPECIAL EQUIPMENT

1926.441 Battery locations and battery charging.
1926.442-1926.448 [Reserved]

DEFINITIONS

1926.449 Definitions applicable to this subpart.

Subpart L -- Scaffolds

1926.450 Scope, application and definitions applicable to this subpart.
1926.451 General requirments.
1926.452 Additional requirements applicable to specific types of scaffolds.
1926.453 Aerial lifts
1926.454 Training requirements.

APPENDIX A TO SUBPART L -- Scaffolds

APPENDIX B TO SUBPART L -- Scaffolds

APPENDIX C TO SUBPART L -- Scaffolds

APPENDIX D TO SUBPART L -- Scaffolds

APPENDIX E TO SUBPART L -- Scaffolds

Subpart M -- Fall Protection

1926.500 Scope, application, and definitions applicable to this subpart.
1926.501 Duty to have fall protection.
1926.502 Fall protection systems criteria and practices.
1926.503 Training requirements.

APPENDIX A TO SUBPART M -- DETERMINING ROOF WIDTHS

APPENDIX B TO SUBPART M -- GUARDRAIL SYSTEMS

APPENDIX C TO SUBPART M -- PERSONAL FALL ARREST SYSTEMS

APPENDIX D TO SUBPART M -- POSITIONING DEVICE SYSTEMS

APPENDIX E TO SUBPART M -- SAMPLE FALL PROTECTION PLANS

Subpart N -- Cranes, Derricks, Hoists, Elevators, and Conveyors

1926.550 [Reserved].
1926.551 Helicopters.
1926.552 Material hoists, personnel hoists and elevators.
1926.553 Base-mounted drum hoists.
1926.554 Overhead hoists.
1926.555 Conveyors.
1926.556 [Removed].

Subpart O -- Motor Vehicles, Mechanized Equipment, and Marine Operations

1926.600 Equipment.
1926.601 Motor vehicles.
1926.602 Material handling equipment.
1926.603 Pile driving equipment.
1926.604 Site clearing.
1926.605 Marine operations and equipment.
1926.606 Definitions applicable to this subpart.

Subpart P -- Excavations

1926.650 Scope, application, and definitions applicable to this subpart.
1926.651 Specific Excavation Requirements.
1926.652 Requirements for protective systems.

APPENDIX A TO SUBPART P -- SOIL CLASSIFICATION

APPENDIX B TO SUBPART P -- SLOPING AND BENCHING

APPENDIX C TO SUBPART P -- TIMBER SHORING FOR TRENCHES

APPENDIX D TO SUBPART P -- ALUMINUM HYDRAULIC SHORING FOR TRENCHES

APPENDIX E TO SUBPART P -- ALTERNATIVES TO TIMBER SHORING

APPENDIX F TO SUBPART P -- SELECTION OF PROTECTIVE SYSTEMS

Subpart Q -- Concrete and Masonry Construction

1926.700 Scope, application, and definitions, applicable to this subpart.
1926.701 General requirements.
1926.702 Requirements for equipment and tools.
1926.703 Requirements for cast-in-place concrete.
1926.704 Requirements for precast concrete.
1926.705 Requirements for lift-slab construction operations.
1926.706 Requirements of masonry construction.

APPENDIX TO SUBPART Q -- REFERENCES TO SUBPART Q OF PART 1926

Subpart R -- Steel Erection

1926.750 Scope.
1926.751 Definitions.
1926.752 Site layout, site-specific erection plan and construction sequence.
1926.753 Hoisting and rigging.
1926.754 Structural steel assembly.
1926.755 Column anchorage.
1926.756 Beams and columns.
1926.757 Open web steel joists.
1926.758 Systems-engineered metal buildings.
1926.759 Falling object protection.
1926.760 Fall protection.
1926.761 Training.

APPENDIX A TO SUBPART R -- GUIDELINES FOR ESTABLISHING THE COMPONENTS OF A SITE-SPECIFIC ERECTION PLAN: NON-MANDATORY GUIDELINES FOR COMPLYING WITH § 1926.752(e)

APPENDIX B TO SUBPART R -- [RESERVED]

APPENDIX C TO SUBPART R -- ILLUSTRATIONS OF BRIDGING TERMINUS POINTS: NON-MANDATORY GUIDLINES FOR COMPLYING WITH § 1926.757(a)(10) and § 1926.757(c)(5)

APPENDIX D TO SUBPART R -- ILLUSTRATION OF THE USE OF CONTROL LINES TO DEMARCATE CONTROLLED DECKING ZONES (CDZs): NON-MANDATORY GUIDELINES FOR COMPLYING WITH § 1926.760(c)(3)

APPENDIX E TO SUBPART R -- TRAINING: NON-MANDATORY GUIDELINES FOR COMPLYING WITH § 1926.761

APPENDIX F TO SUBPART R -- PERIMETER COLUMNS: NON-MANDATORY GUIDELINES FOR COMPLYING WITH § 1926.756(e) TO PROTECT THE UNPROTECTED SIDE OR EDGE OF A WALKING/WORKING SURFACE

APPENDIX G TO SUBPART R -- FALL PROTECTION SYSTEMS CRITERIA AND PRACTICES FROM § 1926.502: NON-MADATORY GUIDELINES FOR COMPLYING WITH § 1926.760(d)

APPENDIX H TO SUBPART R -- DOUBLE CONNECTIONS: ILLUSTRATION OF A CLIPPED END CONNECTION AND A STAGGERED CONNECTION: NON-MADATORY GUIDELINES FOR COMPLYING WITH § 1926.756(c)(1)

Subpart S -- Tunnels and Shafts, Caissons, Cofferdams, and Compressed Air

1926.800 Underground construction.
1926.801 Caissons.
1926.802 Cofferdams.
1926.803 Compressed air.
1926.804 Definitions applicable to this subpart.

APPENDIX A TO SUBPART S -- DECOMPRESSION TABLES

Subpart T -- Demolition

1926.850 Preparatory operations.
1926.851 Stairs, passageways, and ladders.
1926.852 Chutes.
1926.853 Removal of materials through floor openings.
1926.854 Removal of walls, masonry sections, and chimneys.
1926.855 Manual removal of floors.
1926.856 Removal of walls, floors, and material with equipment.
1926.857 Storage.
1926.858 Removal of steel construction.
1926.859 Mechanical demolition.
1926.860 Selective demolition by explosives.

Subpart U -- Blasting and Use of Explosives

1926.900 General provisions.
1926.901 Blaster qualifications.
1926.902 Surface transportation of explosives.
1926.903 Underground transportation of explosives.
1926.904 Storage of explosives and blasting agents.
1926.905 Loading of explosives or blasting agents.
1926.906 Initiation of explosive charges - electric blasting.
1926.907 Use of safety fuse.
1926.908 Use of detonating cord.
1926.909 Firing the blast.
1926.910 Inspection after blasting.
1926.911 Misfires.
1926.912 Underwater blasting.
1926.913 Blasting in excavation work under compressed air.
1926.914 Definitions applicable to this subpart.

Subpart V -- Power Transmission and Distribution

1926.950 General requirements.
1926.951 Tools and protective equipment.
1926.952 Mechanical equipment.
1926.953 Material handling.
1926.954 Grounding for protection of employees.
1926.955 Overhead lines.

1926.956 Underground lines.
1926.957 Construction in energized substations.
1926.958 External load helicopters.
1926.959 Lineman's body belts, safety straps, and lanyards.
1926.960 Definitions applicable to this subpart.

Subpart W -- Rollover Protective Structures; Overhead Protection

1926.1000 Rollover protective structures (ROPS) for material handling equipment.
1926.1001 Minimum performance criteria for rollover protective structures for designated scrapers, loaders, dozers, graders, and crawler tractors.
1926.1002 Protective frames (roll-over protective structures, known as ROPS) for wheel-type agricultural and industrial tractors used in construction.
1926.1003 Overhead protection for operators of agricultural and industrial tractors.

APPENDIX A TO SUBPART W -- Figures W-14 through W-28

Subpart X -- Stairways and Ladders

1926.1050 Scope, application, and definitions applicable to this subpart.
1926.1051 General Requirements.
1926.1052 Stairways.
1926.1053 Ladders.
1926.1054-1926.1059 [Reserved]
1926.1060 Training Requirements

APPENDIX A TO SUBPART X -- Ladders

Subpart Y -- Commercial Diving Operations

GENERAL

1926.1071 Scope and application.
1926.1072 Definitions.

PERSONNELL REQUIREMENTS

1926.1076 Qualifications of dive team.

GENERAL OPERATIONS PROCEDURES

1926.1080 Safe practices manual.
1926.1081 Pre-dive procedures.
1926.1082 Procedures during dive.
1926.1083 Post-dive procedures.

SPECIFIC OPERATIONS PROCEDURES

1926.1084 SCUBA diving.
1926.1085 Surface-supplied air diving.
1926.1086 Mixed-gas diving.
1926.1087 Liveboating.

EQUIPMENT PROCEDURES AND REQUIREMENTS

1926.1090 Equipment

RECORDKEEPING

1926.1091 Recordkeeping requirements.
1926.1092 [Removed]

APPENDIX A TO SUBPART Y -- EXAMPLES OF CONDITIONS WHICH MAY RESTRICT OR LIMIT EXPOSURE TO HYPERBARIC CONDITIONS

APPENDIX B TO SUBPART Y -- GUIDELINES FOR SCIENTIFIC DIVING

Subpart Z -- Toxic and Hazardous Substances

1926.1100 [Reserved]
1926.1101 Asbestos
1926.1102 Coal tar pitch volatiles; interpretation of term.
1926.1103 13 Carcinogens (4-Nitrobiphenyl, etc.).
1926.1104 alpha-Naphthylamine.
1926.1105 [Reserved]
1926.1106 Methyl chloromethyl ether.
1926.1107 3.3'-Dichlorobenzidine (and its salts).
1926.1108 bis-Chloromethyl ether.
1926.1109 beta-Naphthylamine.
1926.1110 Benzidine.
1926.1111 4-Aminodiphenyl.
1926.1112 Ethyleneimine.
1926.1113 beta-Propiolactone.
1926.1114 2-Acetylaminofluorene.
1926.1115 4-Dimethylaminoazobenzene.
1926.1116 N-Nitrosodimethylamine.
1926.1117 Vinyl chloride.
1926.1118 Inorganic arsenic.
1926.1127 Cadmium.

1926.1128 Benzene.
1926.1129 Coke oven emissions.
1926.1144 1,2-dibromo-3-chloropropane.
1926.1145 Acrylonitrile.
1926.1147 Ethylene oxide.
1926.1148 Formaldehyde.
1926.1152 Methylene Chloride.

Subpart AA-BB -- [RESERVED]

Subpart CC -- Cranes and Derricks in Construction

1926.1400 Scope.
1926.1401 Definitions.
1926.1402 Ground conditions.
1926.1403 Assembly/Disassembly--selection of manufacturer or employer procedures.
1926.1404 Assembly/Disassembly--general requirements (applies to all assembly and disassembly operations).
1926.1405 Disassembly--additional requirements for dismantling of booms and jibs (applies to both the use of manufacturer procedures and employer procedures).
1926.1406 Assembly/Disassembly--employer procedures--general requirements.
1926.1407 Power line safety (up to 350 kV)--assembly and disassembly.
1926.1408 Power line safety (up to 350 kV)--equipment operations.
1926.1409 Power line safety (over 350 kV).
1926.1410 Power line safety (all voltages)--equipment operations closer than the Table A zone.
1926.1411 Power line safety--while traveling.
1926.1412 Inspections.
1926.1413 Wire rope--inspection.
1926.1414 Wire rope--selection and installation criteria.
1926.1415 Safety devices.br> 1926.1416 Operational aids.
1926.1417 Operation.
1926.1418 Authority to stop operation.
1926.1419 Signals--general requirements.
1926.1420 Signals--radio, telephone or other electronic transmission of signals.
1926.1421 Signals--voice signals--additional requirements.
1926.1422 Signals--hand signal chart.
1926.1423 Fall protection.
1926.1424 Work area control.
1926.1425 Keeping clear of the load.
1926.1426 Free fall and controlled load lowering.
1926.1427 Operator qualification and certification.
1926.1428 Signal person qualifications.
1926.1429 Qualifications of maintenance & repair employees.
1926.1430 Training.
1926.1431 Hoisting personnel.
1926.1432 Multiple-crane/derrick lifts--supplemental requirements.
1926.1433 Design, construction and testing.
1926.1434 Equipment modifications.
1926.1435 Tower cranes.
1926.1436 Derricks.
1926.1437 Floating cranes/derricks and land cranes/derricks on barges.
1926.1438 Overhead & gantry cranes.
1926.1439 Dedicated pile drivers.
1926.1440 Sideboom cranes.
1926.1441 Equipment with a rated hoisting/lifting capacity of 2,000 pounds or less.
1926.1442 Severability.

Appendix A to Subpart CC of part 1926--Standard Hand Signals

Appendix B to Subpart CC of part 1926--Assembly/Disassembly--Sample Procedures for Minimizing the Risk of Unintended Dangerous Boom Movement

Appendix C to Subpart CC of part 1926--Operator Certification--Written Examination--Technical Knowledge Criteria

APPENDIX A TO PART 1926 -- DESIGNATIONS FOR GENERAL INDUSTRY STANDARDS INCORPORATED INTO BODY OF CONSTRUCTION STANDARDS.

SOURCE: 44 FR 8577, Feb. 9, 1979; 44 FR 20940, Apr. 6, 1979, unless otherwise noted.

EDITORIAL NOTE: At 44 FR 8577, Feb. 9, 1979, and corrected at 44 FR 20940, Apr. 6, 1979, OSHA reprinted without change the entire text of 29 CFR Part 1926 together with certain General Industry Occupational Safety and Health Standards contained in 29 CFR Part 1910, which have been identified as also applicable to construction work. This republication developed a single set of OSHA regulations for both labor and management forces within the construction industry.

Editorial Note: The Federal Register of August 2, 1995, page 39254 issued a Final Rule; correcting amendment. OSHA will maintain the existing fall protection requirements for steel erection activities pending rulemaking that addresses the steel erection industry. This affected 1926.104, 1926.105, 1926.107, 1926.500, and 1926.753.

[55 FR 42328, Oct. 18, 1990; 55 FR 47687, Nov. 14, 1990; 58 FR 26627, May 4, 1993; 58 FR 35077, June 30, 1993; 59 FR 215, Jan. 3, 1994; 59 FR 36695, July 19, 1994; 59 FR 40729, Aug. 9, 1994; 59 FR 40964, Aug. 10, 1994; 60 FR 5131, Jan. 26, 1995; 60 FR 39254, Aug. 2, 1995; 61 FR 5507; Feb. 13, 1996; 61 FR 9227, March 7, 1996; 61 FR 31427, June 20, 1996; 61 FR 46025, Aug. 30, 1996; 62 FR 1493, Jan. 10, 1997; 63 FR 1152, Jan. 8, 1998; 63 FR 1919, Jan. 13, 1998; 63 FR 3813, Jan. 27, 1998; 63 FR 13338, March 19, 1998; 63 FR 17093, April 8, 1998; 63 FR 20098, April 23, 1998; 63 FR 33450, June 18, 1998; 63 FR 35137, June 29, 1998; 64 FR 18810, April 16, 1999; 66 FR 5265, Jan. 18, 2001; 70 FR 76985, Dec. 29, 2005; 71 FR 2885, Jan. 18, 2006; 71 FR 16675, April 3, 2006; 75 48130, Aug. 9, 2010]

Next Standard (1926 Subpart A)

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MBTA SPECIAL INSTRUCTIONS

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MBTA SPECIAL INSTRUCTIONS
April 1, 2003
PAGE 1

APPENDIX M
MBTA SPECIAL INSTRUCTIONS
MARCH 2003

Table of Contents

LETTER OF TRANSMITTAL REGARDING SPECIAL INSTRUCTIONS……..2

1. ACCESS TO AUTHORITY PROPERTY……..... 2

2. INSURANCE REQUIREMENTS…….6

3. SUBMITTAL OF SPECIFICATIONS, DRAWINGS, DESIGN AND METHODS OF CONSTRUCTION…….6
(Applies to non-MBTA Construction Contracts. MBTA Construction Contracts are covered under Division I)

4. OPERATIONAL RESTRICTIONS……..… 7

5. PROTECTION SERVICES……..…….10

6. ANNUAL CERTIFICATION OF HI-RAIL EQUIMPMENT……..……11

MBTA SPECIAL INSTRUCTIONS

APRIL 2003

LETTER OF TRANSMITTAL REGARDING SPECIAL INSTRUCTIONS

The Subway Operations, Bus Operations, Safety, Systemwide Maintenance & Improvements, Operations Support, and the Design and Construction Departments of the MBTA have determined that certain limitations regarding Contractor's activities are required while working on a construction project.

These Supplementary Conditions are included herein to augment the MBTA Standard Specifications, Division I - General Requirements, Section 00700 - General Conditions, Article 6 - Prosecution and Progress, Paragraph 6.04 - Limitations of Operations with additional information, which is applicable to construction projects.

However, for non-MBTA construction projects where Division I does not apply, such as in the case of rights to construct on MBTA property granted under a lease or license agreement, the enclosed Special Instructions are still applicable unless otherwise directed.

Contract drawings and specifications for non-MBTA construction projects, relative to all work that will be performed within or directly adjacent to MBTA property, must be submitted to the Authority's Chief Engineer of Design and Construction, Director of Subway Operations, Director of Bus Operations, Director, of Systemwide Maintenance & Improvements, Director of Operations Support, Director of Safety, and the Director of Real Estate. The addresses and phone numbers are listed on. the next page. The, special instructions contain information to be complied with by the owner, contractors, and others associated with the project.

Applicable provisions of the special instructions plus additional requirements from other MBTA departments must be included in the contract specifications as instructions to the contractor when performing work on or adjacent to MBTA property. Permission to perform work on MBTA property will be granted by the Director of Real Estate only when contract plans and specifications are approved by the MBTA.

The enforcement of any of the following conditions shall not be construed as waiving any of the rights of the Authority in any of the other conditions of an MBTA contract.

A meeting to further discuss MBTA requirements may be arranged by contacting the offices of those listed in Article l.a. and/or b. herein.

1. ACCESS TO AUTHORITY PROPERTY

A. For MBTA Contractors Only: An owner or Contractor who wishes permission to enter upon or perform work over, on, under or adjacent to Authority property shall submit to the offices of the Authority's Chief Engineer of Design and Construction, the Director of Bus Operations, the Director of Subway Operations, Director of Systemwide

Maintenance & Improvements, and the Director of Operations Support, a request in writing, a minimum of forty-two (42) days prior to the owner or the Contractor's planned commencement of any of the above stated activities. Addresses of the above are as follows:

MBTA' s Chief Engineer of Design and Construction
6th Floor
10 Park Plaza
Boston, MA 02116
617 222-3116

Director of Systemwide Maintenance & Improvements
500 Arborway
Jamaica Plain, MA 02130
617 222-5454

Director of Subway Operations
10th Floor
45 High Street
Boston, MA 02110
617 222-4554

Director of Bus Operations
10th Floor
45 High Street
Boston, MA 02110
617 222-3368

Director of Operations Support
10th Floor
45 High Street
Boston, MA Q2110
617 222-5460

Director of Safety
2nd Floor
21 Arlington Avenue
Charlestown, MA 02129
617 222-4244

B. Non-MBTA Construction Contractors For Lessees or Licenses of the MBTA Only: An owner or Contractor who wishes permission to enter upon or perform work over, on, under or adjacent to Authority property shall submit to the offices of the MBTA's designated representative for real estate listed below, a request in writing, a minimum of forty-two (42) days prior to the owner or the Contractor's planned commencement of any of the above stated activities. The designated representative will distribute plan sets to the above MBTA departments and will coordinate departmental approvals. Application forms and instructions for obtaining access to MBTA property

can be obtained by visiting the designated representative's website listed below and selecting "MBTA" and "Licensing."

License Administrator
Massachusetts Realty Group
20 Park Plaza, Suite 1120
Boston, MA 02116
617-316-1654
www.mbtarealty.com

The designated representative reports directly to:

MBTA Director of Real Estate
5th Floor
10 Park Plaza
Boston, MA 02116
617 222-3255

C. Requests shall specify the name of the owner or the contractor, the reasons for entering the property, where the property will be entered, each individual location where work of a different nature is to be performed, the nature of such work, and the number of days, including time schedule, the owner or the contractor intends to remain on the property at each location. The Authority will process such requests and meet with the owner or contractor to work out a schedule and phasing .for the work plus other arrangements including financial. The Authority shall request a list of the names of each individual who will enter upon or perform work on Authority property.

D. The owner or contractor shall. notify the representative of the Design and Construction Department and the appropriate Operations Director at least seventy-two (72) hours prior to entering the property as agreed upon earlier with the Authority. The owner or contractor shall notify the Design and Construction, and Operations Departments immediately if the job is to be closed down unexpectedly and shall again notify the Authority as specified above when work will commence.

E. The owner or contractor shall make all necessary arrangements with the Authority before entering upon the property and perform the work in accordance with an MBTA approved work schedule. The owner or contractor shall not enter MBTA property or perform any work on Authority property without the presence of an assigned MBTA representative from the Design and Construction Department or the Operations Department who is responsible for monitoring the work of that owner or contractor for the Authority. Working on Authority property without an assigned MBTA representative present shall be cause for immediate eviction from the property.

F. The owner or contractor must have in place a method of payment for all Authority support services such as flagging, work trains, power shut offs, etc., prior to commencement of any work. This will be processed through a written force account agreement between the Authority and the owner or contractor prior to commencement of work. Direct billing to contractors for Authority support services requires the contractor's authorized representative to agree in writing that the company will reimburse the Authority for those support services, including overhead and fringe benefits. Once the Authority receives the signed statement from the contractor, the General Accounting

Office will open a reimbursable account for specific Authority department(s) to charge costs, and the contractor will be billed directly.

G. The work associated with this project, except as hereinafter expressly provided, will be done without interruption of or change in the regular work or operation of vehicles of the Authority. No work shall be done affecting the operations of vehicles or operations of stations until the contractor has submitted details of his procedures to the Design and Construction and the applicable Operations representatives thirty (30) working days prior to start of work and has secured written permission to proceed.

H. The Authority reserves the right to require work affecting the safety of the operations to be performed at prescheduled non-operating periods from approximately 1:30 a.m. to 5:00 a.m. daily (1:30 a.m. - 4:30 a.m. effective); 1:30 a.m. to 6:00 a.m. Sunday (1:30 a.m.-5:30 a.m. effective). The contractor will not be permitted to remain within the track right-of-way after 5:00 am. (6:00 a.m. Sunday). The Authority may, during emergencies or at times when the Authority work forces are required to work in the area of the contractors work, order the contractor to cease work and remove his work forces and equipment from the property leaving the right-of-way in a safe operating condition. The Authority also reserves the right to stop or postpone any contractor's previously approved work if, in the Authority's opinion, such work is being performed in a manner that will endanger and/or delay the Authority's regular work or operations.

I. The owner or contractor shall make their own provisions for electric power, compressed air, water, ventilation, and disposal of seepage water. No use of existing MBTA utilities will be permitted unless approved in advance by the Authority.

J. The owner or the contractor's attention is directed to other projects that will be ongoing simultaneously in the work area. The Authority will determine priorities for site access between this project and others.

K. The Authority reserves the right to deny the contractor access to the right of way because of operational requirements, adverse weather conditions or emergency track, signal, and power repairs. The contractor shall reasonably expect to be denied access to the site a total of 10 (ten) days per calendar year, this does not include the following holidays; New Year's Day, President's Day, Patriot's Day, Memorial Day, Bunker Hill Day, Independence Day, Labor Day, Columbus Day, Veteran's Day, Thanksgiving Day, and Christmas Day. In addition, right of way access may be denied on days when various Special Events impact service as well as during Red Sox home games on the Green Line.

Furthermore, the contractor shall also expect to have his access to the site delayed a total of 4 (four) times per month. Each delay shall be 60 (sixty) minutes or less. The contractor shall make allowances for these possible events in their bid. Due to increased stopping distances associated with slippery rail conditions, non-emergency access will not be allowed within ten (10) feet of the centerline of the track under adverse weather conditions.

L. The contractor shall perform his work at all times so as to cause no interruption of service during operating hours and shall at all times after performing work during either operating hours or non-operating hours leave the Authority's property in a clean and safe operating condition.

M. On occasion, the Authority will operate work cars, test trains, security trains, and/or hirait Vehicles in, the area of the work. At no time during these occurrences will the contractor be allowed to work on the right-of-way, except with the approval of the Authority or the Authority personnel providing protection services as defined in Protection Services.

2. INSURANCE REOUIREMENTS

A. The owner or Contractor's for MBTA Construction Contracts insurance requirements shall conform to the latest version of MBTA Standard Specifications, Division 1 - General Requirements, Section 00700 - General Conditions, Article *5* - Legal Relations and Responsibility to the Public, Paragraph *5.04* - Insurance Requirements. Owners or Contractors under a lease or license agreement with the MBTA shall provide insurance in accordance with the requirements of said agreement.

3. SUBMITTAL OF SPECIFICATIONS DRAWINGS. DESIGN AND METHODS OF CONSTRUCTION

(Applies to non-MBTA Construction Contracts. MBTA Construction Contracts are covered under Division I)

A. An owner or contractor or others performing a non-MBTA construction contract that requires performing construction over, on, under or adjacent to the Authority's property shall submit to both the Design and Construction Department and to the appropriate Operations Department two (2) sets each of contract drawings and specifications at the 30%, 60%, 90% and 100% phases of design of the project. 100% drawings and specifications must be submitted forty-two (42) days prior to the planned commencement of any work.

B. The contractor's drawings and specifications shall define the work in detail and a Professional Engineer registered in the Commonwealth of Massachusetts shall stamp the final drawings. The contractor or owner shall also submit a crane or heavy equipment location, if used, with dimensions to the face of abutments and structures and calculations of crane equipment loading on Authority structures showing no adverse effect on any structures. All calculations shall be stamped by a Professional Engineer registered in the Commonwealth of Massachusetts. The drawings must include any excavation support systems, shoring, underpinning, protective shielding, or any work required for the protection of MBTA property.

C. Unless otherwise agreed to in advance, the owner or contractor's structures shall not attach to, be placed against, pass through, or impose any loads upon any structures or facilities owned by the MBTA.

D. All construction work shall be performed in strict conformity with final plans and specifications that have been reviewed and approved by the MBTA. Any changes requested by the owner or contractor which affect MBTA property or operations must be submitted to the MBTA for review and approval at least 30 days prior to the planned commencement of the work. Approvals or rejections shall be submitted by the MBTA within thirty (30) days following submission to the MBTA for review.

E. The owner or the contractor performing construction work over, on, under, or adjacent to Authority property shall submit to the Director of Design four (4) sets each of the design, drawings and specifications of any earth support system, shoring, underpinning, protective shielding, or any work required for the protection of the Authority's facilities and property, a minimum of forty-two (42) working days prior to the planned commencement of any of the above work. The design, drawings and specifications shall define in detail the methods of construction and materials to be used. The design and drawings shall be stamped and signed by a Professional Engineer registered in the Commonwealth of Massachusetts.

F. Unless otherwise agreed to in advance, earth support structures or shoring systems shall not be attached to any structure owned by the MBTA, nor shall MBTA structures be use to support loadings or be used for excavation support.

G. Engineering drawings of MBTA structures are available for reference or duplication at the MBTA Plan Room, 500 Arborway, Jamaica Plain, MA 02130. For information call the Technical Librarian at 617-222-5285.

4. OPERATIONAL RESTRICTIONS

A. The owner or contractor is made aware that the work will be performed adjacent to or over operating tracks, signal lines, communication lines, power lines, cables and other facilities belonging to the Authority. The owner or contractor is to take all due precautions to protect the Authority's facilities, utilities, and operations during the course of his work. When in the opinion of the Authority's Chief Engineer of Design and Construction, Director of Subway Operations, Director of Systemwide Maintenance & Improvements, Director of Operations Support, or their representatives, the contractor's work would cause hazard to the Authority's facilities, infrastructure, or to the safe operation of the transit system, the Authority will assign qualified personnel deemed necessary to protect the property, facilities and operations, all at the expense of the contractor.

B. The contractor is specifically prohibited from conducting any operations next to or over the right-of-way that have the potential to adversely impact the operations of Authority revenue service during normal operating hours (approximately 5:00 a.m. to 1:30 a.m.). Certain work adjacent to the right-of-way, described below as hazardous work, may take place during restricted revenue hours at the discretion of the Chief of Orange, Red, Green, or Blue Line Operations as applicable and require flagmen present.

C. Access to the MBTA right-of-way, which encompasses all MBTA property (fence to fence, wall to wall, and property line to property line over which Authority vehicles operate, including sidings and yards), is. contingent upon Owner or Contractor compliance with the "MBTA Right-of-Way Safety Rulebook" that outlines Right-of-Way Safe Practices for Access on or Near the Right-Of-Way.

As specified in the Right of Way Safety Rulebook, all persons who access the MBTA right of way must attend a one-day, eight-hour training class conducted by Subway Operations Training and the Safety Department Attendees must successfully complete the Right of Way Safety Training in order to

receive a Right of Way license. The license is valid for a two-year period after which the person must attend the Authority's Right of Way re-certification class. To register for the "Right of Way Safety" class, contact:

Supervisor and Chief Rules Examiner of Training
Cabot RTL Training
275 Dorchester Avenue, 2nd floor
South Boston, MA 02127
Telephone: (617) 222-5377

D. The Authority will consider the property; facilities and operations fouled or subject to hazard when the following occurs:

1. When any object or operation is or can be brought nearer than ten (10) feet to the centerline of operating track.
2. When an object or excavation is brought nearer than four (4) feet to a signal or communication line.
3. When an object or excavation is brought nearer than ten (10) feet to a power line or cable.
4. When explosives are used in the vicinity of the premises. Explosives shall not be used on or adjacent to the Authority's property or facilities without written consent of the Authority's Chief Engineer of Design and Construction and then shall be used only by a licensed blaster, licensed in the Commonwealth of Massachusetts, at times and under conditions acceptable to the Authority.
5. When cranes, trucks, power shovels, pile driver or any other equipment are working in positions that failure with or without load could occur nearer than 10 feet to the centerline of an operating track.

It shall be the responsibility of the contractor to inform the Chief of Orange, Red, Green, or Blue Line Operations as applicable in writing thirty (30) working days prior to all times when they intend to perform hazardous work as described above. Submittal must include a site plan, the reasons for entering the property, where the property will be entered, each individual location where work of a different nature is to be performed, the nature of such work, and number of days, including time schedule, the contractor intends to remain on the property at each location. Failure of the contractor to provide the appropriate Line Chief with the specified advanced notice of hazardous work will result in the stoppage of work by the Authority.

D. The Contractor will be allowed on the right-of-way only after normal revenue service (approximately 1:30 a.m. to 5:00 a.m.). On occasion, the Authority will operate work cars in the area of the project work during non-revenue hours. At no time during these occurrences will the contractor be allowed to work on the right-of-way except with the approval of the Authority. The contractor shall coordinate their schedule at least twenty-four (24) hours in advance with the Authority.

E. No weekday/weekend transit service interruptions will be allowed on this project. The contractor must schedule all work requiring a shutdown of revenue service and/or station and/or platform operations during non-revenue hours.

F. Prior to the contractor leaving any work site, at the completion of each workday, the contractor shall ensure that the site is in proper condition to permit normal transit operations to resume. If, in the opinion of the Authority, the site is not suitable for normal transit operations due to conditions caused by the contractor, the Authority will allocate a suitable number of personnel to rectify the site. The owner or his contractor shall be charged full costs of such personnel and necessary equipment, including the full cost of replacement services during the cleanup period.

G. In the event that the contractor does not adhere to the work period limitations of the special conditions and causes delay in returning the right-of-way to revenue service at the end of any work period, the owner or his contractor shall pay the Authority for substitute bus service a sum not to exceed $120.00 per hour per bus for the entire duration of the delay and including mobilization and demobilization of the bus service. The minimum charge shall be (3) hours per bus per delay... The owner or the 'contractor will reimburse the Authority for the hourly costs of personnel used during such delays (egg., supervisors, officials, gatepersons, flagpersons, and automotive). The required number of buses to adequately accommodate all Authority customers who are inconvenienced by the delay shall be at the sole discretion of the Authority's Bus Operations Department. Whatever sum of money may become due and payable to the Authority by the owner or his contractor under this article may be retained out of money belonging to the contractor in the hand and possession of the Authority. This article shall be construed and treated by the parties to the contract not as imposing a penalty upon the contractor for failing fully to complete the work within the periods as specified herein, but as liquidation damages to compensate the Authority for additional costs incurred by the Authority because of the failure of the contractor to fully complete said work within the work periods specified.

H. The contractor shall assume full responsibility for the safety of all their work. They shall perform the work in a manner that will ensure the safety of both personnel and property. The contractor shall prevent against safety hazards, and the exposure of persons and equipment to hazardous and/or potentially hazardous conditions. All, work in the construction of the project shall comply with the requirements of the Authority, Department of Labor, Occupational Safety and Health Administration (OSHA) provisions, as well as those of state and local regulations. Safe breathing levels must conform to the Massachusetts Department of Environmental Protection (DEP) standards. In the case of conflict of regulations, the most stringent will apply. If the standards are not met, the Authority has the right to stop the work until such time as the contractor is in compliance with standards.

5. PROTECTION SERVICES

A. When the contractor is performing work in the vicinity of Authority rights-of-way or public areas, the Authority will require the contractor to have at the site such authorized and qualified personnel as may be required to adequately protect the Authority's customers, employees, property, facilities and operations from hazardous conditions.

B. The need for protection services is outlined and described in the Authority's Right-of-Way Safety Rulebook. The appropriate Line Chief, or their representative, shall determine what protection services are required and assign flagging personnel, officials, supervisors, coordinators or any other such personnel as may be required to ensure the safety of the Authority's operations. Personnel shall be provided from the Authority's workforce in such numbers as the Line Chief determines.

Costs for all protection services and supplies shall be the responsibility of the owner or contractor. No work will be allowed if flagmen are required, but not on duty.

C. When it is determined that protection services are required, the contractor must notify the Authority twenty-four (24) hours in advance and before 10.00 a.m. on the workday preceding the day that protection services will be required. Requests for protection services for weekends and/or holidays, must be made on the preceding Friday before 10.00 a.m., or before 10.00 a.m. on the workday preceding the holiday.

Requests for protection services for Non-Operating hours 1.30 *a.m.—5.00* a.m. and in order for the work to be included on the Night Orders you must contact the:

Planning and Scheduling Coordinator
Maintenance of Way
617-222-5419.

Requests for protection services for Operating hours 5.00 a.m.-l.30 a.m. and in order for the work to be included on the Day Orders, you must contact:

Orange, Red, Green, or Blue Line Superintendent as applicable.
617-222-5844 (Orange); 617-222-5099(Red);
617-222-5982 (Green); 617-222-5532 (Blue).

It will be at the sole discretion of the Authority whether the contractor will be allowed to perform work on any particular day or night.

D. The contractor will be required to provide each flagperson on duty with properly functioning safety equipment as approved by the Authority's Safety Department. This equipment includes but is not limited to: orange safety cones, red, yellow, and green flags, airhoms, hardhats, safety goggles, and hearing protection. The contractor will not be allowed on or adjacent to the right-of-way if flagging personnel are not equipped with required safety personal protective equipment.

E. The contractor will supply properly functioning Authority-frequency portable radios to each flagperson on duty on a daily basis.. The contractor will be responsible for storing and maintaining radios throughout the life of the contract.

F. All workers employed by the contractor who are to work within the Authority's stations, track area, right-of-way or adjacent to the traction power system or any high voltage electrical cables, shall be required to attend a safety awareness course at the Authority's Subway Operations Training School. The course is to make the contractor's personnel aware of the particular hazards related to the Authority's operations.

G. All personnel working on the project site in the immediate vicinity of, or within the right-of-way, are required to wear orange reflective safety vests, similar to standard Authority equipment as specified in the Right-of-Way safety Rulebook.

H. Work activities necessitating the traction power system (third rail and catenary) deenergization will require the services of an Authority power lineperson on site at all times and the contractor is responsible for any. costs incurred by the Authority as. a result of this action.

I. Prior to the implementation of the contracted work, and throughout the life of the contract, the contractor will be required to supply professionally rendered signs, as directed by the Authority's Marketing Department. These signs will include, but are not limited to, the following:

1. Informational signs for revenue service diversion.
2. Station directional and stairway, platform, exit closing signs.
3. General project informational signs for Authority customers.

J. Upon the direction of the Authority's Chief Engineer of Design and Construction, Director of Safety, and or Director of Subway Operations or their representatives, the contractor will be required to supply and install partitions and wooden barricades to cordon off the work site; such partitions and barricades shall be maintained and remain graffiti free by the contractor for the duration of the project.

K. Upon direction from the Authority's Chief Engineer of Design and Construction and / or Director of Subway Operations or their representatives, the contractor will supply the following when site conditions warrant:

1. Emergency and temporary lighting.
2. Exhaust fans of sufficient size and numbers to adequately ventilate the work site, tunnel and or adjacent stations.
3. Fire and / or garden hose for the purpose of dust control.

L. It shall be the responsibility of the contractor to keep the Authority informed prior to all times when they intend to perform hazardous work. Failure of the contractor to provide the Authority with suitable advance notice of hazardous work will result in the stoppage of the work by the Authority until such time as sufficient numbers of protection personnel are on duty at the site.

6. ANNUAL CERTIFICATION OF HI-RAIL EQUIPMENT

A. All equipment used by the contractor on Authority property shall be inspected by the Maintenance of Way engineer and/or the MBTA Safety Department for clearance and safety standards, and shall not be used if considered unsafe. All contractor/ subcontractor equipment (including hi-rail) operators must be trained, certified, and properly licensed. Documentation of same must be readily available and provided to the Authority upon request. If the contractor equipment is involved in a derailment or near miss incident or an accident, which caused injury or exposed personnel to injury and or caused damage to Authority property, that equipment will be subject to the Impound Policy Procedure.

B. Contractor equipment to be .used on or in the vicinity of the track shall be in first class condition, so as to positively prevent any failure that would cause delay in Authority operations or damage to its property or compromise the health and safety of personnel working on the project. Equipment shall not be placed or operated within the fouling distance of track without first obtaining the permission of the Authority.

C. The contractor shall not, at any time, operate equipment or machinery over Authority's right-of-

way without the use of hi-rail gear. All equipment that the contractor proposes to operate shall 'be modified to operate over the Authority's track and special work (e.g., switches, crossover frogs third rail, and restraining rail). Qualified Authority personnel shall control the movement of all hi-rail equipment at all times while operating on the Authority right-of-way. The contractor shall supply a portable radio for each hi-rail vehicle entering the Authority's right-of-way. No hi-rail equipment will be allowed on Authority's property without a functioning portable radio tuned to an Authority frequency.

D. The contractor shall furnish hi-rail equipment capable of operating within the strict confines of the right-of-way. No Authority owned equipment is available for the contractor's use. In addition to equipment necessary to complete the work on a regular basis, the contractor shall be required to have on site sufficient standby equipment capable of: a) removing disabled equipment from the right-of way, and b) replacing disabled equipment in order to return the right-of-way to normal operating status by the end of the designated work period. As part of the pre-qualification statement, the contractor shall furnish an itemized list of all equipment to be used on the project, including:

1. Type of equipment (e.g., pickup, flatbed or dump trucks, excavator, cranes, etc.).
2. Make, model and date of manufacture.
3. Ownership.
4. Present use and date of availability.
5. Location where equipment may be inspected by Authority personnel during the prequalification period.

E. The contractor shall have proof of competency for hi-rail operators (e.g., documentation, that the operator of hi-rail equipment is certified to operate that specific piece of equipment). The Authority reserves the right to review the lesson plan and audit the training class. The hi-rail operator will be responsible for ensuring and documenting that the vehicle is safe for operation and that all required equipment is present and properly secured. This must be done on a daily basis prior to operating the equipment.

F. The contractor is required to have an Annual Certification of hi-rail equipment (separate form the Registry Inspection) signed by a competent person (e.g. Manufacturer's representative) asserting to the fact that the equipment is Original Equipment Manufacturer (OEM), that it conforms to the latest standards, was installed per the manufacturer's specification, and is functioning properly.

G. The contractor must keep a copy of the Manufacturer's Operating Manual or instructions onboard the hi-rail equipment at all times.

H. The operator shall operate the hi-rail equipment at a reasonable speed for the existing conditions, being alert for another vehicle (or any other obstruction along the right of way).
In addition, said operator must maintain a safe spacing of traveling equipment.

I. The contractor's hi-rail vehicles must be equipped with a horn (warning device), and an exhaust gas purifier.

J. All equipment when used in tunnels and or darkness must conform to the Authority's standards for

headlights and marker lights. In addition, when vehicles are operating in tandem such as rail carts; flat cars, etc., such vehicles must be equipped with a flashing/strobe light when the lead vehicle is other than the operating vehicle. Diesel powered equipment only will be allowed in the tunnel and shall be removed from the tunnel each night unless otherwise permitted by the Director of Subway Operations.

K. Contractors must comply with the Authority's Propane Gas policy.

L. Contractor's doing "hot work" must have appropriate permits and follow all applicable rules and procedures for same.

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MBTA FLAGGING REQUEST FORM

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Massachusetts Bay Transportation Authority

massDOT Massachusetts Department of Transportation Rail & Transit Division

Flagging Request

Date:_____

Company/Agency: _____

Project Name: _____

Project Location: _____

Point of Contact: _____

Email: _____ Phone: _____

Project Number: _____ Funding Source: _____

RAILROAD OPERATIONS TRACKING NUMBER _____

Date Needed: _____

Start/Finish: _____

Flaggers Required: _____

Scope of Work:

(Attach additional SOW, if necessary.)

Schedule:

(Attach additional info, if necessary.)

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DOCUMENT A00813

LEASE BETWEEN MBTA AND THE TOWN OF LYNNFIELD

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LEASE AGREEMENT

This LEASE AGREEMENT (the "***Lease***") is entered into this _____ day of _____, 2026 (the "***Commencement Date***") by and between the **MASSACHUSETTS BAY TRANSPORTATION AUTHORITY**, a body politic and corporate, and a political subdivision of the Commonwealth of Massachusetts duly established and existing pursuant to Massachusetts General Laws, Chapter 161A ("***Landlord***" or "***MBTA***") and the **TOWN OF LYNNFIELD**, a municipal corporation and a body politic and corporate having an address of 55 Summer Street, Lynnfield, MA 01940 ("***Tenant***" or "***Town***").

WHEREAS, Town is requesting to lease a parcel of land in Lynnfield, Massachusetts, for use as an Alternative Transportation Corridor ("***ATC***" or "***Multi-Use Path***").

WHEREAS, MBTA owns the Premises (as defined herein) upon which a portion of the Multi-Use Path will be located and desires to lease the Premises to the Tenant for the purposes set forth herein;

WHEREAS, the Federal Highway Administration (the "***FHWA***") has provided or will provide Massachusetts Department of Transportation ("***MassDOT***") with funds (the "***Appropriation***") in an amount sufficient to pay for eighty percent (80%) of the costs associated with the design and construction of the Multi-Use Path.

WHEREAS, as a condition of providing the Appropriation, the FHWA requires, among other things, that Tenant coordinate and oversee the design of the Multi-Use Path and that MassDOT coordinate and oversee the construction of the Multi-Use Path.

WHEREAS, Tenant has completed, and the FHWA has approved, the final design plans and specifications for the Multi-Use Path.

WHEREAS, as a further condition of Appropriation, the FHWA requires that the Town obtain possession of the Premises prior to the solicitation of bids for the construction of the Multi-Use Path.

NOW, THEREFORE, FOR CONSIDERATION PAID, the receipt and sufficiency of which is hereby acknowledged, Landlord and Tenant hereby agree as follows:

ARTICLE I
FUNDAMENTAL LEASE PROVISIONS

1.1 Reference Subjects

Each reference in this Lease to any of the following subjects shall incorporate the following information:

Commencement Date:	As defined above.
Premises:	The parcel of land owned by Massachusetts Bay Transportation Authority, of approximately 628,302 square feet, in the Town of Lynnfield, MA, as shown on Exhibit A.
Landlord:	Massachusetts Bay Transportation Authority
Tenant:	Town of Lynnfield
Term:	Ninety-nine (99) years, commencing on the Commencement Date (subject to Section 2.2 hereof).
Rent:	Ten and 00/100 Dollars ($10.00).
Permitted Uses:	Subject to Article II below, the Premises shall be used for the operation, maintenance and repair of a transportation path for pedestrians, bicycles, and other non-motorized vehicles, and for no other uses except those specifically approved in writing by MBTA.
Design Plans:	The plans and specifications for the Multi-Use Path approved by the FHWA, identified as ***Exhibit B*** and incorporated herein by this reference.

1.2 Exhibits

The Exhibits listed below are attached hereto and incorporated into this Lease:

Exhibit A – Plan of the Premises
Exhibit B – Design Plans
Exhibit C – Certificates of Insurance
Exhibit D – Tenant's Beneficial Disclosure Statement
Exhibit E – Evidence of Authority
Exhibit F – Notice of Lease

ARTICLE II
PREMISES, TERM AND USE

2.1 Premises

Landlord leases the Premises to Tenant and Tenant leases the Premises from Landlord for the Term, subject to matters of record existing as of the Commencement Date and matters referred to herein, to all of which Tenant shall conform.

Notwithstanding any provision of this Lease to the contrary, this Lease is not intended to transfer land or easements for purposes protected by or to create a perpetual right to any use that may be subject to protection by Article XCVII (97) of the Amendments to the Constitution of the Commonwealth of Massachusetts or by legislation enacted pursuant thereto.

2.2 Term

The term of this Lease shall be for a period of ninety-nine (99) years (the "***Term***"). The Term shall commence on the Commencement Date and shall terminate on the ninety-ninth (99th) anniversary of the day immediately preceding the Commencement Date (the "***Term Expiration Date***"), unless terminated sooner as hereinafter provided.

2.3 Landlord Reservation of Rights

Notwithstanding anything to the contrary contained herein, Landlord hereby reserves and retains the following rights and easements in and with respect to the Premises:

a. Landlord reserves the right to enter upon any portion of the Premises for any purpose deemed necessary by the Landlord in connection with the construction, reconstruction, or maintenance of any Landlord-owned conduits, inner ducts, manholes, hand holes or other installations appurtenant thereto, or in connection with the construction, reconstruction, or maintenance of any property of Landlord adjacent to the Premises, or in connection with rights granted to third parties to use and occupy portions of the Premises as further set forth herein. Throughout any such entry, Landlord shall maintain and/or require its contractors to maintain insurance as required by, and in accordance with, the terms and conditions of Section 9.6 herein, and Landlord may require its contractors to maintain such additional coverages deemed necessary by Landlord.

b. Landlord reserves the right to use, or to allow any party to use the Premises, or to grant and relocate licenses, leases or easements for any use so long as such use does not materially interfere with the Permitted Uses of the Premises. Tenant shall cooperate with Landlord in this regard to accommodate any such use by Landlord or such other party, provided Tenant shall incur no monetary obligations with respect thereto. Without limitation, such other uses may include utilities, wireless telephone facilities (including, without limitation, cellular and PCS), fiber optic lines and communications facilities, microwave and other antennas, and all types of cable communications, and any other uses that do not materially interfere with the Permitted Uses of the Premises. Without limitation, the foregoing reservation by Landlord includes, whether the same now exist or are hereafter installed or used after the date of this Lease, the right

to locate any or all such facilities (including, without limitation, towers, antennas, cables, fiber, above-ground, below-ground, indoor and outdoor equipment) and other improvements on and within the Premises so long as such use does not materially interfere with the Permitted Uses of the Premises. All rights (including, without limitation, revenue therefrom) pertaining to all such other uses are specifically reserved to, and shall be the sole property of, Landlord. Tenant agrees to cooperate with Landlord and any designated party in connection with any exercise by Landlord of its rights hereunder. Throughout any such use, Landlord shall maintain and/or require its grantees and their contractors to maintain insurance as required by, and in accordance with, the terms and conditions of Section 9.6 herein, and Landlord may require its grantees and their contractors to maintain such additional coverages deemed necessary by Landlord.

2.4 Early Termination

If the Premises shall cease to be used for the Permitted Uses or shall be used for any other purposes, this Lease shall terminate upon notice from Landlord and the Tenant's leasehold estate in the Premises shall revert to Landlord.

If at any time during the Term, Landlord determines, in its sole discretion but subject to any provisions or conditions of the Appropriation, that all or any portion of the Premises are needed for highway, railroad or transportation-related purposes, this Lease may be terminated by Landlord by giving Tenant eighteen (18) months' prior written notice of Landlord's intention to terminate this Lease. If such notice is given by Landlord, then the Term shall end on the date set forth in such notice with respect to all or such portion of the Premises designated in such notice, all with the same force and effect as though the Term had originally been scheduled to expire on such date. Landlord may likewise terminate the Lease as to any portion of the Premises Landlord determines, in its sole discretion is needed for highway, railroad or other transportation-related purposes.

Where termination or modification of this Lease for any reason requires permanent or temporary total or partial displacement to Tenant prior to or at the expiration of the Lease Term, Tenant waives any benefits that Tenant may be deemed entitled to under the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended, and Tenant shall thereafter be excluded from any relocation benefits available under said act or amendment.

2.5 Uses of Premises

Tenant agrees that the Premises shall be used and occupied by Tenant only for the Permitted Uses.

a) Tenant shall maintain the Premises in good repair and in clean condition, in compliance with all applicable laws and regulations, including, without limitation, making all necessary repairs and maintenance. Such maintenance shall be at no cost, expense, or liability to Landlord.

b) Except as otherwise expressly set forth in this Lease, it shall be the responsibility of the Tenant to obtain any and all necessary permits and approvals for the Permitted Uses, at the Tenant's sole cost and expense. Landlord will cooperate in

all reasonable respects, but at no expense to Landlord, with the Tenant in connection with obtaining such permits and approvals as Tenant reasonably wishes to seek for the Permitted Uses, and Landlord shall sign such permits and applications as reasonably necessary, provided that (i) the Landlord incurs no obligation or liability in connection therewith, (ii) no such permit or approval shall materially adversely affect any of Landlord's adjacent or proximate real property or otherwise, in Landlord's reasonable determination, adversely affect or interfere in a material way with any of Landlord's operations or obligations.

c) Tenant shall not perform any act or any practice which may injure the Premises. Tenant shall, in its use of the Premises, comply with the requirements of all applicable governmental laws, rules and regulations. Tenant shall not cause or permit any unlawful conduct, unreasonable annoyance or nuisance to exist or arise at the Premises or otherwise on account of the exercise of the rights granted to Tenant hereunder. The Premises shall be open to the public, and Tenant shall establish reasonable policies governing access to the Premises by the public. Such policies shall be subject to review and approval by Landlord. Tenant shall not charge any fee or other consideration, or receive any other benefit for the use of the Premises.

2.6 Construction Period Restrictions

Notwithstanding any provision of this Agreement to the contrary, Tenant's right to use or occupy the Premises for the Permitted Uses shall be suspended prior to the Substantial Completion Date (as hereinafter defined), and Tenant shall not enter upon the Premises for any purpose prior to the Substantial Completion Date without the prior written consent of Landlord, which consent shall not be unreasonably withheld, conditioned or delayed provided that such entry or purpose will not interfere with MassDOT's Work (as hereinafter defined).

ARTICLE III
CONDITION OF PREMISES

3.1 Acceptance of Premises by Tenant

Landlord shall have no obligation with respect to the condition of the Premises except as expressly set forth in this Lease. Tenant's occupancy shall be deemed an acknowledgement that the condition of the Premises is fully satisfactory and suitable for the Permitted Uses and Tenant's purposes under this Lease. Tenant has leased the Premises after a full and complete examination of the Premises and appurtenant areas, as well as title thereto, and accepts the same in their present condition. Tenant further acknowledges that neither Landlord nor any officer, agent, employee or other person acting under Landlord, disclosed or undisclosed, has made or implied any representations or warranties other than those expressly set forth in this Lease concerning the Premises, their condition, title thereto, future plans of Landlord with respect to the Premises or appurtenant areas, or this Lease.

Tenant's rights herein are granted subject to existing easements, leases, licenses and other rights to the extent that such rights are still in effect and applicable. Landlord shall use reasonable efforts to provide Tenant with copies of the documents that establish the

location and term of existing easements, leases, licenses and other rights (if any) of record to the extent that such easements, leases, licenses and other rights are still in effect and applicable.

Tenant expressly agrees that if there is any encroachment onto the Premises by a third-party, Landlord will have the sole right to cure said encroachment and to obtain revenue from such cure or to permit such encroachment, provided that such cure does not materially interfere with Tenant's use of the Premises.

Tenant acknowledges that there may be surface and subsurface utilities on and adjacent to the Premises and agrees to exercise extreme caution in performance of the Permitted Uses. Tenant shall comply with Massachusetts General Laws, Chapter 82, Section 40 (said statute also known as the "Dig Safe" law) and the regulations promulgated pursuant thereto including but not limited to the Code of Massachusetts Regulations, more particularly, 220 CMR 99.00 et seq. Any damage to any such utilities caused by Tenant shall be the sole responsibility of Tenant. If Tenant does not immediately repair any utilities it has damaged, Landlord may, but shall not be required to repair any utilities damaged by Tenant immediately and without notice in case of emergency. In the event Landlord exercises such right, Tenant shall pay to Landlord immediately upon demand all of Landlord's cost of performing such repairs plus a fee equal to five percent of the Landlord's cost of performing such repairs to reimburse Landlord for its administrative costs.

ARTICLE IV
RENT AND ADDITIONAL CONSIDERATION

4.1 Amount of Rent

Tenant covenants and agrees to pay Landlord rent in the amount of Ten and 00/100 Dollars ($10.00) upon the execution of this Lease. The parties acknowledge and agree that the mutual promises and covenants contained herein constitute additional consideration hereunder, the receipt and sufficiency of which are hereby acknowledged.

ARTICLE V
MASSDOT AND TENANT IMPROVEMENTS

5.1 MassDOT Improvements

Subject to Section 5.2 below, the parties acknowledge that the Multi-Use Path is anticipated to be constructed by MassDOT using the Appropriation to the extent available on the Premises in accordance with the Design Plans and the terms and conditions of the Appropriation ("MassDOT Work"). The parties further acknowledge that MassDOT's anticipated role includes procuring the contractor and subcontractors for MassDOT's work, and for managing and overseeing said Work. Tenant shall pay for any and all applicable federal, state and local permits, inspections, and approvals necessary to construct and perform MassDOT's Work. Prior to the Substantial Completion Date, Landlord reserves the right to remove any rail infrastructure or other materials located or existing on the Premises as of the date hereof.

5.2 MassDOT Work Subject to Appropriation

Notwithstanding any provision of this Lease to the contrary, the parties acknowledge that MassDOT's Work is anticipated to be funded from the Appropriation to the extent available. In the event that MassDOT fails to receive all or any portion of the Appropriation, reasonably determines that the Appropriation will not be available to reimburse MassDOT for any construction costs, or is unable to lawfully use all of any portion of the Appropriation to pay for any construction costs, then upon notification by MassDOT, Tenant shall have the option, but not the obligation, to terminate this Lease upon ten (10) days' prior written notice to Landlord, and (c) Tenant shall after consultation with MassDOT as to whether the construction of the affected portion of the Multi-Use Path will be commenced and completed within a reasonable time thereafter, have the option (upon thirty (30) days' prior written notice to Landlord), but not the obligation, to terminate this Lease as to any portion of the Premises upon which the construction of the Multi-Use Path has not been, and based on said consultation with MassDOT, will not be commenced and completed by MassDOT within a reasonable time thereafter.

5.3 Tenant's Permitted Improvements

Except as set forth in this section or in Article VI and Article XI below, Tenant shall not construct any improvements on, or make any modifications or alterations to the Premises without the prior written consent of Landlord, which consent may be granted or withheld in Landlord's sole discretion. Tenant may add minor amenities to the Multi-Use Path such as signage, benches, pavement markings, and landscaping without the Landlord's prior written consent, provided that the installation of such amenities conforms to any applicable FHWA, MassDOT, or MBTA regulations, guidance, or standards for a Multi-Use Path ("**Permitted Amenities**").

5.4 Tenants Election for MassDOT to Perform Tenant's Non-Participating Improvements

Tenant may in writing request, prior to the Substantial Completion Date set forth in Section 5.1, that MassDOT have its contractor perform for the benefit of the Tenant certain work that is outside the scope of the MassDOT's Work under Section 5.1 ("Tenant's Non-Participating Improvements"). If MassDOT agrees to have its contractor perform the Tenant's Non-Participating Improvements, MassDOT and Tenant will memorialize in a separate written agreement the scope of that work, its price, and other material terms concerning the Tenant's Non-Participating Improvements, and Tenant shall timely pay the cost of the Tenant's Non-Participating Improvements in cash or its equivalent. so that both Landlords' and Tenant's interests in the Premises shall always be free of liens for labor and materials. If any lien relating to the Tenant's Non-Participating Improvements constructed pursuant to said agreement is filed against the Premises, then Tenant shall discharge the same by payment or by filling any necessary bond within thirty (30) days after Tenant has notice from any source of such lien. Tenant's Non-Participating Improvements shall not include any of MassDOT's Work; and Tenant shall remain responsible for the cost of MassDOT's Work to the extent not covered by the Appropriation, as set forth in Section 5.1 and 5.2.

ARTICLE VI
TENANT'S PERMITTED IMPROVEMENTS

6.1 Design Guidelines

Any improvements to the Premises which, pursuant to this Lease, Tenant is required or permitted to make (hereafter referred to as "**Tenant's Permitted Improvements**") shall be in conformity with this Lease, all applicable federal, state and local laws, ordinances, regulations and codes, including, without limitation, the Americans With Disabilities Act of 1990, 42 U.S.C. section 12101, et seq., the Massachusetts Environmental Policy Act, applicable rules and regulations of MassDOT, MBTA, and Tenant's insurance policies.

6.2 Design Approval and MBTA Coordination Requirements

Tenant shall not commence construction of any Tenant's Permitted Improvements until Landlord has approved in writing the plans and specifications for the proposed work in writing, including all related Work Plans, schedules, safety plans, and construction submittals required by Landlord.

Prior to commencement of any work within or adjacent to the Premises, Tenant shall submit to Landlord for review and acceptance a Work Plan, project schedule, Site Safety Plan, Job Hazard Assessment, and related construction submittals not less than five (5) weeks prior to the commencement of work.

No work shall be permitted on or abutting MBTA property without an accepted Work Plan.

All comments provided by Landlord regarding the Work Plan and related submittals shall be incorporated into revised submittals or otherwise resolved in writing to the satisfaction of Landlord prior to commencement of work.

Tenant shall coordinate with MBTA Capital Delivery, the MBTA Transit Oriented Development Group, and other applicable MBTA, Keolis, and AMTRAK departments regarding scheduling, access, safety protocols, railroad worker protection requirements, flagging services, and any required power shutdowns prior to commencement of work.

Tenant shall conduct all work in a manner that minimizes interruption to trail users and public access, except where temporary closures are approved in writing by Landlord. Landlord reserves the right to stop work at any time if Landlord determines that work poses unacceptable risk to MBTA customers, employees, operations, or infrastructure.

Prior to commencing construction of any Tenant's Permitted Improvements, Tenant shall submit to Landlord a certificate of an architect or engineer licensed in the Commonwealth of Massachusetts or an opinion of an attorney licensed in the Commonwealth of Massachusetts, stating that all applicable local, state and federal permits have been obtained for the proposed work, and that the proposed work, if constructed in accordance with the plans and specifications submitted to Landlord pursuant to the preceding paragraph, will comply with all applicable laws, codes and regulations. Said certificate or opinion shall be in form reasonably acceptable to Landlord and shall state that Landlord may rely without further investigation on such certificate or opinion.

Tenant shall reimburse Landlord for all reasonable costs incurred by Landlord in connection with review, coordination, inspection, flagging, safety oversight, and support services associated with the work, including costs incurred by MBTA personnel and consultants. Landlord may require Tenant to enter into a separate Force Account Agreement prior to commencement of work.

6.3 Permits

It shall be the Tenant's responsibility to obtain and pay for any and all applicable federal, state and local permits, inspections, and approvals necessary to construct any Tenant's Permitted Improvements.

Prior to commencing construction of any Tenant's Permitted Improvements, Tenant shall provide Landlord with a written statement addressed to Landlord from Tenant's attorney, licensed architect or engineer containing the following: (i) a list of all permits and approvals required for the construction of the Tenant's Permitted Improvements, and (ii) a statement confirming that all such permits and approvals have been obtained.

6.4 Changes in Plans

If Tenant desires to make any material change in the plans and specifications after approval by Landlord, Tenant shall submit the proposed change to Landlord for its approval.

6.5 Contracts for Construction of Tenant's Permitted Improvements

As used in this Article, the term "contractor" shall mean any person or entity that provides labor and/or materials for the construction, repair, restoration or rehabilitation of any portion of the Premises, whether or not paid by Tenant, but excluding third-party materials suppliers.

Tenant shall select and propose to Landlord one or more qualified contractors to construct the Tenant's Permitted Improvements. Tenant agrees that it shall not select any contractor who is then debarred from public contracting pursuant to M.G.L. Chapter 29, § 29E. Said selection(s) shall be subject to Landlord's approval. Tenant shall enter into written contracts for all construction services to be provided by its contractor(s). Said contracts shall obligate Tenant to pay all fees and costs related to the constructions of the Tenant's Permitted Improvements. Upon request of Landlord, a complete copy of each such contract shall be furnished to Landlord.

6.6 General Provisions Governing Construction of Tenant's Permitted Improvements

A. No contractor shall commence construction of any Tenant's Permitted Improvements until all permits, certificates, and approvals required by law for the commencement of such construction have been issued.

B. Once commenced, the construction of each Permitted Improvement shall be diligently and continuously prosecuted.

C. Each contractor shall warrant to the Tenant and Landlord that all materials and fixtures furnished by such contractor will be new and of recent manufacture, except as may otherwise be required by the plans and specifications as approved by Landlord, and that all construction work will be of good quality, free from

faults and defects. Construction work not conforming to these requirements may be considered defective and not in conformity with the terms of this Lease.

D. Each contractor shall be obligated to confine its operations to the portion of the Premises within which its construction work is to be performed, and shall not store materials or equipment elsewhere on the Premises unless permitted by Landlord. Storage of materials or equipment shall be limited to what is reasonably necessary for the construction of the Tenant's Permitted Improvements.

E. Each contractor shall be obligated at all times to keep the Premises reasonably free from accumulation of waste materials or rubbish caused by its operations. At the completion of the contractor's work, the contractor shall remove all waste materials and rubbish from the Premises as well as all tools, construction equipment, and surplus materials. If any contractor fails to comply with these provisions, it shall be the responsibility of Tenant to cause such compliance and to immediately remedy any non-compliance. All construction waste shall be disposed of in a lawful manner.

F. Each contractor under a contract with Tenant shall be required to furnish and keep in force a performance bond and a labor and material payment bond in an amount sufficient to guarantee the faithful performance of its obligations under such contract and to pay all obligations arising in connection therewith. Such bonds shall be in a form and with such sureties as Landlord may approve.

G. When any construction of Tenant's Permitted Improvements is in progress, Tenant shall require its general contractor to maintain insurance as required by, and in accordance with, the terms and conditions of Section 9.1 herein, and may require Tenant and/or its general contractor to maintain such additional or different coverages deemed necessary by Landlord which may include, without limitation, so-called "Builders Risk Insurance."

6.7 Payment for Tenant's Permitted Improvements

In no event shall any work related to the Tenant's Permitted Improvements, or any other improvements constructed by, on behalf of or under Tenants or Landlord's approval thereof, give rise to any lien on Landlord's interest in the Premises. Tenant shall pay the entire cost of all Tenant's Permitted Improvements promptly so that both Landlord's and Tenant's interests in the Premises shall always be free of liens for labor and materials. If any lien relating to Tenant's Permitted Improvements constructed by, on behalf of or under Tenant is filed against the Premises, then Tenant shall discharge the same by payment or by filing any necessary bond within thirty (30) days after Tenant has notice from any source of such lien. Tenant's Permitted Improvements shall not include MassDOT's Work; and Tenant shall be responsible for the cost of the Multi-Use Path not paid from the Appropriation, as set forth in Sections 5.1 and 5.2.

6.8 Nonconforming Improvements

In its construction of the Tenant's Permitted Improvements, Tenant shall insure that there is no material deviation from the plans and specifications as approved by Landlord, except and only to the extent that changes have been requested in writing and have been approved in writing by Landlord. Landlord's representatives may enter upon the Premises from time

to time on reasonable notice to Tenant for the purpose of inspecting the work being performed by Tenant, and such entry shall not be construed to be a violation of the Tenant's right to use and occupancy of the Premises.

In the event Tenant shall fail to comply with the foregoing requirements in proceeding with construction or modification of all or any part of the Tenant's Permitted Improvements, the Landlord may, within a reasonable time after discovery thereof, direct in writing that the Tenant modify or reconstruct such portion or portions of the Tenant's Permitted Improvements as deviate from the approved plans and specifications, or any change with respect to same, in order to bring them into conformance therewith. Tenant shall promptly comply with such a directive. In addition to any other remedies available to it under law or under this Lease, Landlord may enforce the provisions of this paragraph by an action in a court of appropriate jurisdiction to compel specific performance.

6.9 As Built Drawings

Tenant shall provide Landlord with a complete set of "as built" plans and specifications for the Tenant's Permitted Improvements constructed by Tenant for which plans and specifications are required by this Lease, together with copies of all final permits and approvals issued by federal, state or local agencies and state or local plumbing gas, electrical, building and other inspectors.

In addition, Tenant shall advise Landlord in writing whenever Tenant permanently relocates or modifies in any material respect any utility services within the Premises, including, but not limited to, the addition or rerouting of any electric, gas, water or sewer service or line.

6.10 Mechanics' Liens

No mechanics', materialmen's or similar liens shall ever attach against Landlord's interests in and to the Premises by reason of any work performed by Tenant on or to the Premises. If any such lien shall be put on record, Tenant agrees promptly (but in any event, within thirty (30) days of the date that such lien is put on record) to arrange for the discharge of said lien by payment, bonding or otherwise as may be required to discharge said lien of record.

ARTICLE VII
UTILITIES

7.1 Utilities

Tenant shall pay the appropriate suppliers for all water, gas, fuel oil, electricity, telephone and any other utilities and communications services used by Tenant on the Premises, and Tenant shall instruct said suppliers to bill Tenant directly therefore. Upon request, Tenant shall supply Landlord with such documentation as Landlord may reasonably request to verify compliance with the foregoing. Tenant shall also pay all costs associated with the installation, repair and maintenance of the wires, pipes, conduits, and other equipment needed to deliver utilities to the Premises, and shall procure, without cost to Landlord, any and all necessary permits, licenses, or other authorizations required for the lawful and proper installation and maintenance of such utility systems. Landlord agrees to cooperate

and, if necessary, join with Tenant in any application required for obtaining or continuing such services.

Landlord makes no warranty or representation as to the availability of water, gas, or any other utility service, and Landlord shall not be in default hereunder or be liable for any damages directly or indirectly, resulting from Tenant's inability to obtain such services or from the limitation, curtailment, rationing or restriction on use of water, electricity, gas or any other form of energy or utility service.

ARTICLE VIII
TAXES

8.1 Tenant to Pay All Taxes

In the event real estate taxes or property taxes shall be levied on the Premises or any part thereof for any reason, Tenant agrees to pay any such taxes when and as due. Tenant shall also be responsible for payment of all taxes levied on any good or services sold on the Premises, and any other taxes arising out of Tenant's occupancy, use, sub-leasing, alterations, maintenance, improvement, or operation of the Premises.

ARTICLE IX
INSURANCE

9.1 Required Liability Insurance

Prior to entry hereunder, and during the Term hereof, the Tenant and its consultants and contractors shall provide the MBTA insurance for the activities permitted hereunder, with companies that are reasonably acceptable to the MBTA, as stated below, and which provide minimum liability coverage as follows:

(a) Commercial General Liability Insurance
Insuring the MBTA, the Premises and all activities allowed hereunder, with a minimum liability coverage for personal injury, bodily injury and property damage with limits not less than One Million Dollars ($1,000,000.00) per occurrence and Three Million Dollars ($3,000,000.00) in aggregate. Umbrella liability coverage with limits of not less than Ten Million Dollars ($10,000,000.00) covering all work performed must also be provided. Such insurance shall be written on an occurrence basis (as opposed to a claims-made basis) and name the Tenant and the MBTA as additional insureds as their interests may appear.

(b) Workers' Compensation Insurance
For all municipal contractors, insuring all persons employed by the Tenant in connection with any work done on or about the Premises with respect to which claims for death or bodily injury could be asserted against the MBTA or the Premises with limits of liability of not less than those required by Massachusetts General Laws Chapter 152, as amended. The policy shall contain a clause waiving the company's right to subrogation against the

MBTA. In addition, the Tenant shall provide evidence of an active workers' compensation program for all municipal employees/workers funded by the Tenant, substantially in the form attached as **Exhibit C**.

(c) Automobile Liability Insurance
Automobile liability insurance with limits of not less than One Million Dollars ($1,000,000.00) covering all owned, non-owned, hired, rented or leased vehicles or the Tenant.

(d) Railroad Protective Liability Insurance
While performing any work within fifty feet (50') of the railroad right-of-way, insuring the MBTA and the Railroad Companies as named insureds with limits of not less than Five Million Dollars ($5,000,000.00) per occurrence and Ten Million Dollars ($10,000,000.00) in aggregate combined bodily injury property damage. The Railroad Companies shall be provided with an original policy of Railroad Protective Liability Insurance and the MBTA shall be provided with certificates of insurance.

(e) Environmental Liability Insurance
The Tenant shall maintain a policy of Environmental Liability Insurance insuring against any and all claims arising out of or connect with the presence of any Hazardous Materials at the Premises, with coverage in an amount not less than Three Million Dollars ($3,000,000) per incident, and a deductible of not more than Fifty Thousand Dollars ($50,000) per incident, which policy shall be noncancelable for a period of at least five (5) years and shall name MBTA as additional insured.

The required insurance coverages herein specified shall be placed with insurance companies licensed by the Massachusetts Division of Insurance to do business in the Commonwealth of Massachusetts and having a Best's rating of A- or better; shall be taken out by the Tenant before the Lease is commenced and be kept in full force and effect throughout the term of the Lease; shall be primary to and non-contributory to any coverages maintained by the MBTA; and shall require the MBTA be given at least thirty (30) days' advance notice in the event of any cancellation or materially adverse change in coverage. Prior to the inception date of the Lease and throughout the term, the MBTA shall be provided with certificates of insurance evidencing that such insurance policies are in place and provide coverage as required. The required insurance coverages herein specified may be increased from time to time upon notice by the MBTA to such coverages as the MBTA may then customarily require for similar circumstances. Each of the Tenant's contractors and agents whose employees enter onto the Premises shall have similar policies covering their employees. The Tenant shall be responsible for seeing that its contractors and consultants are properly covered by insurance.

In the event of the cancellation of any policy during the term of this Lease, or the failure to keep in effect the insurance required by this section, the MBTA may, without further notice and at its option, procure or renew such insurance on account of the Tenant. The Tenant agrees to repay such expenses incurred by the MBTA.,

with interest thereon at the rate of eighteen (18%) percent annually as an additional fee.

The Tenant (but not the Tenant's contractors or consultants) may self-insure for its obligations under this Section 9.1, subject to the Tenant providing to the MBTA a letter in a form acceptable to the MBTA, on corporate letterhead and signed by a duly authorized representative of the Tenant, which addresses (1) comparable insurance coverage for each type of insurance required in this Section 9.1 which the Tenant will provide through a program of self-insurance, and (2) excess insurance policies (i.e. Excess Liability and excess Workers' Compensation insurance policies) ("Tenant Self-Insurance Statement"). In addition, the Tenant shall acknowledge and affirm in the Tenant Self-Insurance Statement both its obligations to defend, hold harmless, and indemnify the MBTA to the extent permitted by law, and to provide insurance protection in accordance with and to the extent required by the terms and conditions of this Lease. Further, where insurance policies are in place providing coverage in excess of the underlying insurance or self-insurance programs addressed pursuant to this paragraph, the Tenant shall provide a certificate or certificates of liability insurance to the MBTA, which shall be attached to the Tenant Self-Insurance Statement and be made a part thereof.

Notwithstanding any other provision of this Section 9.1, the Tenant reserves the right to propose to meet the requirement by adding such insurance coverage to existing policies subject to the terms and conditions of those existing policies or to obtain new policies containing terms and conditions generally included in policies provided to municipalities in Massachusetts.

9.2 Required Property Insurance

From and after the Substantial Completion Date, if and to the extent there are any buildings constructed by, for or on behalf of the Tenant on the Premises, Tenant, at its sole cost and expense, shall keep in full force and effect property insurance on the Premises, all improvements thereon and equipment and property installed or used in, on or about the Premises, naming Landlord and Tenant as their respective interests may appear, in amounts sufficient at all times to prevent Landlord from becoming a co-insurer under the provisions of applicable policies of insurance, but, in any event, at least equal to the full replacement cost thereof, without deduction for depreciation, against all risks of direct physical loss or damage as may from time to time be included within the definition of an "All Risk" or "Broad Form" property insurance policy and extended to include coverage against earthquake, earth movement, flood (including back-up of sewers and drains), sprinkler leakage, breakdown of boilers, machinery and electrical equipment, war risk, nuclear reaction, lightning, wind storm, hail, explosion, riot, civil commotion, aircraft, vehicles, smoke, demolition and such other risks as Landlord may reasonably designate. The insurance also shall cover increased cost of construction, demolition and debris removal coverage, and contingent liability arising out of the enforcement of building laws and ordinances governing repair and reconstruction and shall include an agreed amount provision. The replacement cost of all improvements and of any other property installed or used in, on or about the Premises shall be determined at least once every thirty-six (36) months by Landlord. The Town may self-insure subject to approval by Landlord.

9.3 Other Insurance Policy Requirements

Through the Massachusetts Interlocal Insurance Association, Inc. ("MIIA"), the non-profit member-based corporation serving the insurance needs of Massachusetts cities and towns, or through its successor or through another provider or providers, Tenant's insurance will comply with the following provisions, unless commercially unavailable to Tenant:

A. Duly executed certificate of insurance evidencing all insurance policies specified above, shall be submitted to Landlord prior to Landlord's execution of this Lease, which certificates shall be attached hereto as ***Exhibit C***. At least thirty (30) days prior to the expiration of each such insurance policy, Tenant shall furnish Landlord with the re-issuance of a policy continuing the insurance in force as required hereunder. Tenant's contractor(s) performing work or conducting activities under this Lease shall submit certificates of insurance within ten (10) days of the award of their subject contract or license. Certificates shall be addressed to Landlord. Landlord is entitled to rely upon the information provided in the certificates. Tenant agrees that, if any certificate of insurance required hereunder does not conform with the requirements set forth in this Article IX, that said certificate does not confer rights to the certificate holder, or otherwise disclaims responsibility for Landlord's reliance thereon, Tenant must deliver to Landlord endorsements demonstrating the specified additional insured status of Landlord and/or providing substantially and unequivocally that Landlord may, but shall not be obligated to, make premium payments to prevent such cancellation for non-payment of premiums and that such payments shall be accepted by the insurer.

B. All insurance to be provided hereunder shall be with insurance companies licensed or approved by the Commonwealth of Massachusetts and shall have a Best's Rating of not less than "A-minus", Financial Size Code IX.

C. All insurance to be provided hereunder shall provide Landlord with a minimum of thirty (30) days prior notice of cancellation or nonrenewable or ten (10) days prior notice in case of cancellation due to the nonpayment of any premium.

D. Except for Workers' Compensation and Automobile Liability insurance policies, all insurance policies specified above shall be endorsed to name Landlord as an additional insured. This provision must be specifically stated as being endorsed to each required insurance policy on the certificate of insurance evidencing such coverage.

E. All insurance maintained by the Tenant's contractor(s), except Worker's Compensation and Automobile Liability insurance policies, shall provide that insurance for the benefit of Landlord shall be primary and non-contributory. This provision must be specifically stated as applying to each required policy on the certificate of insurance evidencing such coverage.

Landlord hereby retains the right to periodically review the types and amounts of insurance being maintained by Tenant and to require additional insurance or higher coverage limits to the extent that such additional insurance is commercially available and reasonably prudent under the then existing circumstances.

If Tenant fails either to acquire the insurance required by this Article IX, or to pay the premium for such insurance, Landlord may, in addition to any other rights or remedies available to Landlord, and notwithstanding any other provisions of this Lease concerning notice and cure of defaults, acquire such insurance and pay the requisite premiums for them. Such premiums will be payable by Tenant to Landlord immediately upon demand.

In proof of any damages which Landlord may claim against Tenant arising out of Tenant's failure to maintain insurance, Landlord will not be limited to the amount of unpaid insurance premium but rather Landlord will also be entitled to recover as damages for such breach, the amount of any uninsured loss (to the extent of any deficiency in the insurance required by the provisions of this Lease), damages, costs and expenses of suits, including attorneys' fees arising out of damage to, or destruction of, the Premises occurring during any period for which Tenant has failed to provide such insurance.

9.4 Personal Property at Tenant's Risk

All of the furnishings, fixtures, equipment, effects, improvements and property of every kind, nature and description of Tenant shall be at the sole risk and hazard of Tenant, and if the whole or any part thereof shall be destroyed or damaged by fire, water or otherwise, or by the leakage or bursting of water pipes, no part of said loss or damage is to be charged to or to be borne by Landlord or the Federal Highway Administration, except that Landlord shall in no event be indemnified or held harmless or exonerated from any liability to Tenant or to any other person, for any injury, loss, damage or liability to the extent caused by the gross negligence or willful misconduct of Landlord, or its agents, servants, or employees acting within the scope of their agency, service or employment.

9.5 Application of Insurance Proceeds

In the event of any partial or total damage to or destruction of an insured building, structure, or other improvement, Tenant shall: (i) give immediate notice thereof to Landlord, (ii) proceed immediately to establish and collect all valid claims which may have arisen against insurers based upon any such damage or destruction, and (iii) promptly repair or reconstruct the damaged building, structure or other improvement upon the same general plan and dimensions and to the same general quality as before the damage or destruction. Such repair or reconstruction shall be performed in accordance with the requirements of Article VI hereof. All proceeds of any insurance claim shall be held in trust and applied only for the purpose of repairing or reconstructing the buildings, structures or other improvements which have been destroyed or damaged.

9.6 Landlord's Required Insurance

Throughout Landlord's entry onto the Premises under Section 2.3 (a), Landlord's or its grantees' use of the Premises under Section 2.3(b), and MassDOT's Work under Section 5.1, and for a reasonable time thereafter at least equaling any applicable statute of limitations period where necessary to provide coverage for claims asserted based on events

occurring during such entry, use or work, Landlord and/or MassDOT (applicable) shall cause each of its contractors and grantees that will enter upon the Premises to obtain and keep in force and effect adequate insurance coverage which in no event shall be less than the types and amounts of coverage specified in Sections 9.1 (a) through 9.1 (c).

9.7 Self-Insurance by the Town

Notwithstanding any provision hereof to the contrary, all insurance requirements concerning the Tenant may be covered by the insurance program of the Town of Lynnfield, in accordance with the terms of such insurance program, which may include or solely rely on self-insurance.

ARTICLE X
INDEMNIFICATION

10.1 Assumption of Risk

Tenant, without waiving or abridging any defenses or immunity from liability it may be able to assert against a party other than the Landlord, assumes all risk of damage or injury to any person or property located in, on or about the Premises from any cause except to the extent that: (a) such damage or injury occurs prior to the Substantial Completion Date as a result of MassDOT's Work, (b) such damage or injury is caused by the gross negligence or willful misconduct of Landlord or its agents, employees, or contractors acting within the scope of their agency, employment or contract, (c) such damage or injury is caused by any person using or occupying all or any portion of the Premises pursuant to Landlord Reservation of Rights set forth in Section 2.3 hereof, or (d) such damage or injury is caused by any person using or occupying all or any portion of the Premises pursuant to an existing easement, lease, license or other right to the extent that such rights are still in effect and applicable as of the Commencement Date.

10.2 Release of Landlord

Except for matters set forth in Sections 10.1(a) through 10.1(d), Tenant hereby releases Landlord from any responsibility for Tenant's losses or damages related to the condition of the Premises and Tenant covenants and agrees that it will not assert or bring, nor cause any third party to assert or bring, any claim, demand, lawsuit or cause of action (whether by way of original claim, cross claim, counterclaim, contribution claim, indemnification claim, third-party claim or fourth-party claim) (hereinafter "***Claims***") against Landlord including, without limitation, claims for response actions, response costs, assessments, containment, removal and remedial costs, governmental oversight charges, including any overhead or response action costs incurred or assessed by the Massachusetts Department of Environmental Protection, fines and penalties, permit and annual compliance fees, reasonable attorney and expert fees, natural resource damages, property damages, including diminution in property value claims, and personal injury damages and damages related to a person's illness or death relating to, or arising from, Tenant's use of the Premises (or the use of the Premises by those permitted onto the Premises by Tenant) pursuant to this Lease.

10.3 Indemnification of Landlord by Tenant

If and to the extent permitted by law, Tenant hereby covenants and agrees to indemnify and hold harmless the Commonwealth of Massachusetts and the Landlord and their respective bond trustees and mortgagees, directors, officers, agents, and employees (collectively, the "***Indemnitee***") from any and all claims, actions at law, suits in equity, losses, damage, costs (including reasonable attorney's fees) or injury of whatever kind and nature, whether direct or indirect, arising out of the acts, omissions or negligence of Tenant, its agents, employees, contractors, or licensees during the Term in or about the Premises, or caused by any act, neglect, fault, work, improper conduct, omission, or breach of any covenant or condition of this Lease during the Term by Tenant, its agents, employees, contractors, or licensees. Tenant's liability hereunder extends to the acts or omissions during the Term of any sub-tenant, and any agent, employee, contractor, or licensee of any sub-tenant.

Tenant agrees, if and to the extent permitted by law, to indemnify and hold Indemnitee harmless from and against all bills for labor performed and equipment, fixtures and materials furnished to Tenant, and applicable sales taxes thereon as required by Massachusetts law, and from and against any and all liens, bills or claims therefor against the Premises, and from and against all losses, damages, costs, expenses, suits, and claims whatsoever in connection with any improvements or alterations made by Tenant during the Term.

Notwithstanding any provision of this Lease to the contrary, if either of the indemnifications set forth in this Section 10.3 proves ineffective for any reason, except by virtue of the operation of law including without limitation M.G.L. c. 23A, § 3I, Landlord shall have the right to immediately terminate this Lease by written notice to Tenant.

10.4 Legal Proceedings

Landlord shall, as soon as reasonably possible, notify the Tenant in a timely manner by telephone and in writing (pursuant to Section 19.7 hereof) of any Claims against an Indemnitee that potentially fall within the scope of Sections 10.1 through 10.3 above. In the event Tenant is prejudiced by the Landlord's failure to provide such notice in a timely manner, the Tenant shall have no obligation to defend or indemnify the Indemnitee with respect thereto. Subject to the preceding sentence and to the limitations set forth in Sections 10.1 through 10.3 above, during the Term, Tenant, at Tenant's sole cost and expense, will defend by counsel satisfactory to Indemnitee, any and all suits which may be brought and claims which may be made against Indemnitee, or in which Indemnitee may be impleaded with others, whether Indemnitee shall be liable or not, upon any such above-mentioned liability, loss, damages, expenses, costs of action, suits, interests, fines, penalties, claims, judgments and shall satisfy, pay and discharge any all judgments that may be recovered against Indemnitee in any such action or actions in which Indemnitee may be a party defendant, or that may be filed against the Premises, or any interests therein. Landlord will reasonably cooperate in and Tenant will have control over the defense and settlement of any such suits and claims defended by Tenant pursuant to Article X; provided, however, that Landlord's consent shall be required with respect to any settlement affecting the Landlord, and Landlord's consent with respect thereto shall not be unreasonably withheld. In the event of the failure of the Tenant to pay the sum or sums for which Tenant shall be liable as aforesaid, then Landlord may pay such sum or sums, with all interests and charges

which may have accrued thereon, and such amount if so paid by Landlord shall be additional rent payable by Tenant to Landlord within thirty (30) days following the date on which demand therefor shall be made by Landlord. The foregoing indemnity shall survive the expiration or termination of this Lease and/or any transfer of all or any portion of the Premises, or of any interest in this Lease.

ARTICLE XI
MAINTENANCE, REPAIRS, SAFE OPERATION

11.1 Buildings, Structures and Grounds

On and after the Substantial Completion Date, Landlord will cooperate with Tenant to cause each contractor that performed all or any portion of MassDOT's Work to make good on any warranty provided by the contractor to the Landlord with respect to materials, fixtures, construction work, or otherwise, such that any faults and defects covered by any such warranty and not conforming thereto are addressed by the contractor pursuant to the warranty.

Otherwise, on and after the Substantial Completion Date, Tenant shall, at its sole cost and expense, maintain the Premises, the Multi-Use Path and any and all Tenant's Permitted Improvements, buildings, structures, and equipment located upon the Premises and make repairs, restorations, and replacements to any Tenant's Permitted Improvements and when needed to preserve them in good working order and condition, and of good appearance, regardless of whether the repairs, restorations and replacements are ordinary or extraordinary, foreseeable or unforeseeable, capital or non-capital, or the responsibility or not the responsibility of the Tenant, its agents, employees, contractors, invitees, or licensees (unless caused solely by the gross negligence or willful misconduct of Landlord, or its agents, servants or employees acting within the scope of their agency, service or employment).

Tenant shall, at its sole cost and expense, maintain any and all bridges, culverts, drainage systems, roads, private crossings, paths and sidewalks located upon or within the Premises, and/or that comprise the Multi-Use Path or any Tenant's Permitted Improvements, in good repair and shall promptly remove all accumulations of snow and ice therefrom in the ordinary course of Tenant's operation of the Multi-Use Path. Tenant shall, at its sole cost and expense, perform any and all capital improvement or repairs to all bridges, culverts, drainage systems, roads, private crossings, paths and sidewalks located upon or within the Premises, and/or that comprise the Multi-Use Path. Landlord agrees to use good faith efforts to assist Tenant with finding and securing funding for the costs of said capital improvement or repairs. Tenant shall maintain, and if necessary replace, lawns, shrubbery, trees and ground discharge of substances in concentrations which will result in harm to water supply, fish and wildlife. All activities of Tenant shall preclude the discharge of substances in concentrations which will result in harm to water supply, fish and wildlife. Chemicals may not be used to control undesirable vegetation, insects or rodents without prior written approval of Landlord. Only those materials approved and registered by the U.S. Environmental Protection Agency for the specific purpose planned will be considered for use on the Premises. Tenant shall follow label instructions in the preparation and applications of pesticides and disposal of excess materials and containers.

All work performed by Tenant shall be accomplished in a manner so as to cause no unreasonable interference with any State highway.

11.2 Sanitation

Tenant, at its sole cost and expense, shall keep the Premises in a clean and sanitary condition at all times. Tenant shall be responsible for all litter pickup, trash disposal, cleaning and sanitation. Tenant shall strictly comply with all state and local laws and regulations regarding sanitation and public health.

11.3 Safe Operation of Facilities: Compliance with Laws

Tenant shall periodically inspect all areas of the Premises for the presence of unsafe and hazardous conditions and shall promptly remedy such conditions when found.

Unless expressly authorized by Landlord, Tenant shall not permit the sale or consumption of alcoholic beverages on the Premises.

This Lease shall be absolutely net to Landlord. Without in any way limiting Tenant's other obligations under this Article XI, Tenant shall, at Tenant's sole cost and expense, maintain the Premises and all buildings and improvements thereon in accordance with all applicable laws, rules, ordinances, requirements, and regulations of any board, bureau, commission, agency, body, or other entity of any municipal, county, state, federal or other governmental body now or hereafter having or acquiring jurisdiction over the Premises or the use or the improvement thereof (each a "***Governmental Authority***") over all or any part of the Premises and of all insurance companies insuring Tenant's interest in all or any part of the Premises.

ARTICLE XII
HAZARDOUS MATERIALS

12.1 Hazardous Materials Activities

Tenant shall not cause any hazardous materials or toxic wastes, hazardous or toxic substances or hazardous or toxic materials (collectively, "***Hazardous Materials***") to be used, generated, stored, released or disposed of in, on, under or about, or transported to or from the Premises (collectively, "***Hazardous Materials Activities***") without first receiving Landlord's prior written consent, which may be withheld for any reason or revoked at any time. If Landlord consents to any such Hazardous Materials Activities, Tenant shall conduct them in strict compliance with all applicable Hazardous Waste Laws, as hereinafter defined, using all necessary and appropriate precautions, and shall not cause or permit any release or threat of release of Hazardous Materials. In the event of a release or threat of release of any (i) Hazardous Materials on account of any Hazardous Materials Activities of Tenant or its employees, agents, contractors, licensees or invitees, or (ii) any release or migration of Hazardous Materials within, onto or under the Premises from adjoining property owned by parties other than Landlord, Tenant shall, at its sole cost and expense, conduct and complete all investigations, studies, sampling and testing, and all remediation, removal and other actions necessary to clean up the release or eliminate the threat of release in accordance with all applicable legal requirements. Landlord shall not be liable to Tenant under this Lease for any Hazardous Materials Activities by Tenant,

Tenant's employees, agents, contractors, licensees or invitees or any other third-party, whether or not consented to by Landlord.

For purposes of this Lease, "Hazardous Materials" shall include, but not be limited to, gasoline of all types and all substances defined as "hazardous substances", "toxic substances", "oil", "asbestos", "solid waste", "hazardous materials" or "hazardous wastes" in any federal, state or applicable local statute, law, ordinance, code, rule, regulation, order, decree, notice or policy now or hereafter enacted or promulgated concerning hazardous materials (collectively, "***Hazardous Waste Laws***").

Prior to using, storing or maintaining any Hazardous Materials on or about the Premises, Tenant shall provide Landlord with a list of the types and quantities thereof, and shall update such list as necessary for continued accuracy. Tenant shall also provide Landlord with a copy of any Hazardous Materials inventory statement required by any applicable Hazardous Waste Laws, and any update filed in accordance with any applicable Hazardous Waste Laws. If Tenant's activities violate or create a risk of violation of any Hazardous Waste Laws, Tenant shall cease such activities immediately upon notice from Landlord. Tenant shall notify all government agencies required by law and Landlord, immediately by telephone and in writing of any release or discharge of Hazardous Materials or of any condition constituting a threat of release of Hazardous Materials.

Landlord and officers, employees, contractors or agents of Landlord may (but shall not be obligated to) enter upon the Premises at any time during the Term of inspect Tenant's compliance herewith or to determine whether Tenant or occupants of adjacent properties are complying with all applicable Hazardous Waste Laws, and may disclose any violation of any Hazardous Waste Laws to any governmental agency. Landlord shall also have the right to establish test wells on or near the Premises to monitor whether any chemical levels are increasing on or near the Premises because of the activities of Tenant or other occupants of the Premises or adjacent properties. Landlord shall use its best efforts to minimize interference with the Tenant's business or that of other occupants of the Premises or adjacent properties, but shall not be liable for any interference caused thereby.

12.2 Indemnification for Hazardous Materials Activities

If and to the extent permitted by law, and except as provided by M.G.L. c. 23A, §31, and except for matters identified in the Phase 1 ESA and Hazardous Materials required to be remediated as part of Landlord's Work under Section 5.1, and except as to Hazardous Materials Activities of any person using or occupying all or any portion of the Premises pursuant to Landlord Reservation of Rights in Section 2.3 hereof or pursuant to an existing easement, lease, license or other right to the extent that such rights are still in effect and applicable as of the Commencement Date, Tenant hereby agrees to indemnify, hold harmless, and defend Indemnitee from and against all losses, damages, claims, liens, encumbrances, obligations, liabilities, actions, causes of action, response costs and expenses including reasonable attorney's, engineer's, and other costs and expenses and fees actually and reasonably incurred in connection therewith, suffered by, asserted or assessed against the Indemnitee, which arise during the Term from (i) Hazardous Materials Activities during the Term of Tenant or its agents, employees, contractors, or licensees, (ii) the Hazardous Materials Activities on the Premises during the Term of any persons other than those of Landlord or its agents, employees, or contractors,(iii) any currently existing Hazardous Materials or related conditions during the Term at, under, on, or in the Premises

except to the extent such Hazardous Materials or related conditions were released, exacerbated or addressed by Landlord or its agents, employees, or contractors during the MassDOT's Work or from property off the Premises, and (iv) any release or migration of Hazardous Materials at, under, on, in, over or affecting the Premises during the Term unless caused by Landlord or its agents, employees, or contractors during the Term. The indemnification provided in this Section 12.2 shall also specifically cover, without limitation, costs incurred in connection with any investigation of site conditions or any cleanup, remediation, removal or restoration work required during the Term by any board, bureau, commission or body of any municipal, county, state, federal or other governmental body, now or hereafter having or acquiring jurisdiction over the Premises or the use of the improvement thereof (each a "***Governmental Authority***") because of the presence or suspected presence of Hazardous Materials at, under, on, in, over or affecting the Premises, or any allegation thereof, whether such claim proves to be true or false, and additional costs necessary to protect against the release or threat of release of Hazardous Materials at, on, in, under, over or affecting the Premises, into the air, any body of water or any adjacent and surrounding areas. Those costs may include, but are not limited to, diminution in the value of the Premises, damages for the loss of restriction on use of rentable or usable space or of any amenity of the Premises, sums paid in settlement of claims, attorney's fees, consultants' fees and experts' fees, and the enforcement of Tenant's obligations hereunder. Landlord will reasonably cooperate in and Tenant will have control over the defense and settlement of any such suits and claims defended by Tenant pursuant to Article X; provided, however, that Landlord's consent shall be required with respect to any settlement affecting the Landlord, and Landlord's consent with respect thereto shall not be unreasonably withheld.

Except with respect to any known Hazardous Materials or related conditions at, under, on, or in the Premises as of the Effective Date of this Lease, this indemnification shall survive the expiration or earlier termination of this Lease and any transfer of all of any portion of the Premises, or of any interest in the Lease. Notwithstanding any provision of this Lease to the contrary, if the indemnification set forth in this Section 12.2 proves ineffective for any reason, except by virtue of the operation of law including without limitation M.G.L. c. 23A, §31, Landlord shall have the right to immediately terminate this Lease by written notice to Tenant.

12.3 Notices of a Release of Hazardous Materials

Landlord and Tenant shall promptly notify the other by telephone and in writing (such notice to be given pursuant to Section 19.7 hereof) of all spills, releases or discharges of any Hazardous Materials; any condition constituting a threat of such spill, release or discharge; all failures to comply with any federal, state or local law, or with any regulation or ordinance; all inspections of the Premises by any regulatory entity concerning the same; all notices, orders, fines or communications of any kind from any Governmental Authority or third party that relate to the presence or suspected presence of any Hazardous Materials on the Premises or the migration or suspected migration of any Hazardous Materials from other property onto or beneath the Premises or to other property from the Premises; and all responses to interim cleanup action taken by or proposed to be taken by any government entity or private party on the Premises. Landlord and Tenant shall provide the other with copies of all notices with respect to any of the foregoing received from any federal, state or local authority or official or from any other third party. In the event Tenant is prejudiced

by the Landlord's failure to provide timely notice, the Tenant shall have no obligation to defend or indemnify the Indemnitee under Article XII with respect thereto.

12.4 Remedial Work

If and to the extent covered by the Indemnification for Hazardous Materials Activities set forth in Section 12.2 and except as provided in Section 12.3, if any investigation, site monitoring, containment, cleanup, removal, restoration or other remedial work (the "***Remedial Work***") of any kind is necessary under any applicable local, state or federal laws or regulations, or is required by any Governmental Authority because of or in connection with the presence or suspected presence of Hazardous Materials on or under the Premises, Tenant shall have sole responsibility for all such Remedial Work and all costs and expenses of such Remedial Work shall be paid by Tenant.

Landlord shall have the right to contest the assertion by any Governmental Authority or any third party of any obligation or liability affecting Tenant, Landlord, or all or any portion of the Premises for performance of any Remedial Work. Landlord shall have the right to perform any Remedial Work, and if and to the extent covered by the Indemnification for Hazardous Materials Activities set forth in Section 12.2, Tenant shall reimburse Landlord for all costs and expenses incurred by Landlord in connection therewith as set forth above.

Failure by Landlord to object to any actions taken by Tenant shall not be construed to be an approval by Landlord of such actions. Nothing contained herein shall be construed as creating any obligation for Landlord to review any plans for Remedial Work, or to perform, or review Tenant's or any other party's performance of any Remedial Work. However, in the event that Remedial Work is required, and Landlord elects to perform such Remedial Work, Tenant shall provide Landlord and its agents and employees with such access to the Premises as shall be required in connection therewith. Landlord shall have the right, in its sole discretion, to undertake such Remedial Work, and Landlord shall not be liable for any loss sustained by Tenant resulting from any Remedial Work undertaken by Landlord or from any other act or omission of Landlord in connection therewith except to the extent such loss is caused by the gross negligence or willful misconduct of Landlord, or its agents, servants, or employees acting within the scope of their agency, service or employment.

12.5 Remediation Obligation of the Tenant

During the design, construction and operation of the Rail Trail Project and/or Corridor, the Tenant shall follow the provisions of MA DEP's then-current *BMPs for Controlling Exposure to Soil during the Development of Rail Trails*.

Whenever the Tenant is responsible for the remediation of Hazardous Materials on or below the Premises by law or pursuant to this Lease, the Tenant, upon
written demand of the MBTA, shall conduct at its sole cost and expense (or, at the MBTA's election, reimburse the MBTA for the cost and expense incurred by the MBTA in connection with the MBTA's conduct of), all response actions required by Chapter 21E and the MCP with respect to the Hazardous Materials (including, but not limited to, hiring of a Massachusetts Licensed Site Professional ("LSP").

Any such response action, if performed by the Tenant, shall be performed in accordance with Chapter 21E, the MCP, any other applicable statutes and regulations, and in accordance with plans and specifications approved by the MBTA, shall be completed in a timely manner to the reasonable satisfaction of the MBTA, and shall allow the MBTA to use the Premises, and/or adjacent or contiguous property, for its present use and/or any future use that the MBTA deems appropriate. The Tenant shall also be responsible for the reasonable costs incurred by the MBTA in hiring consultants to review, supervise and inspect any plans, specifications, proposed method of work, installation, operation and results. Such costs shall be presumed to be reasonable if the MBTA: (1) provides the Tenant with a notice that it intends to hire a consultant, a scope of work and a budget and (2) solicits three (3) price proposals from three (3) eligible consultants. For purposes of this Section 12.5, the term "MBTA" shall include the MBTA, and its directors, officers, employees, agents and any entity that may succeed the MBTA."

ARTICLE XIII
INSPECTION AND ACCESS

13.1 Landlord's Right to Inspect Premises

Throughout the Term, Landlord and its representatives, including, without limitation, representatives of the Federal Highway Administration, shall have the right, but not the duty, to inspect the Premises for the purpose of ascertaining Tenant's compliance with the terms of this Lease. If requested by Landlord, Tenant shall provide a representative to accompany Landlord on each such inspection. Landlord shall also have the right to establish tests wells on or near the Premises to monitor chemical levels on or near the Premises.

13.2 Landlord's Access

Throughout the Term, Landlord and its representatives shall have the right to pass in, on and over the Premises for the purpose of maintenance, repair and/or replacement of Landlords' adjacent facilities.

Tenant shall allow any public or private utility holding an easement, license or permit regarding the Premises or any portion thereof, to enter the Premises and perform routine and emergency repairs and maintenance work.

ARTICLE XIV
ACCOUNTING AND REPORTING

14.1 Repair and Maintenance Records

In addition to any other books and records maintained by Tenant which pertain to the Premises, the Multi-Use Path or any Tenant's Permitted Improvements or to the performance of the provisions and obligations of this Lease, Tenant shall maintain proper

records of all repairs and maintenance made to the Premises, the Multi-Use Path and any Tenant's Permitted Improvements and shall make these available to Landlord for review, audit and analysis upon request. Tenant shall preserve all such books and records pertaining to the Premises, the Multi-Use Path or any Tenant's Permitted Improvements for a period of six (6) years following the close of each fiscal year of the Tenant.

ARTICLE XV
ASSIGNMENT AND SUBLETTING

15.1 Limitations

Tenant shall not assign, transfer, convey, sublet, encumber or dispose of its right, title or interest in the whole or any part of the Premises or in this Lease, nor enter into any agreement with any entity or person, except for employees of the Tenant, to exercise substantial management responsibilities for the operations authorized hereunder or any part thereof, without the prior written consent of Landlord, which may be withheld for any reason whatsoever.

The failure of a transferee or any other successor in interest to Tenant to assume the obligations of Tenant hereunder or to obtain the approval of Landlord as herein required shall not relieve such transferee or successor of such obligations or limit Landlord with respect to any rights, remedies or controls it may have under this Lease.

Any transfer by operation of law or otherwise of Tenant's interest in this Lease or of a controlling interest in Tenant's ownership so as to permit the exercise of substantial managerial influence over the operations of Tenant by such transferee shall be deemed a transfer of Tenant's interests in the Premises for the purposes of this Article XV. Tenant agrees to comply with the requirements of Massachusetts General Laws, Chapter 7C, Section 38, regarding the filing of updated beneficial interest disclosure statements.

ARTICLE XVI
EMINENT DOMAIN

16.1 Taking by Eminent Domain

If a substantial part of the Premises shall be taken for any public or quasi-public use under governmental law or by right of eminent domain and such taking would materially interfere with the use of the Premises by Tenant for the purposes contemplated by this Lease, then the Lease may be terminated by either Landlord or Tenant. Landlord or Tenant shall make such election by giving the other party written notice within sixty (60) days after the event giving rise to a right to terminate. Any such termination shall be effective thirty (30) days after the date of notice thereof.

Landlord reserves all rights to damages payable by reason of anything lawfully done in pursuance of any public or other authority and, by way of confirmation, Tenant grants to Landlord all of Tenant's rights to such damages and agrees to execute and deliver such further instruments of assignment thereof as Landlord may from time to time request.

Where, as the result of a taking by eminent domain or for any other reason, the Lease is terminated or modified so as to require the permanent or temporary, total or partial displacement of Tenant from the Premises prior to or at the expiration of the Term, Tenant waives any benefits to which Tenant may be entitled under the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended, and Tenant shall be excluded from any relocation benefits available under said Act or any amendments thereto.

ARTICLE XVII
RIGHT OF LANDLORD TO PERFORM

17.1 Landlord's Right to Perform Tenant's Obligations

If Tenant fails to pay when due amounts payable under this Lease, except for payments of Rent, or to perform any of its other obligations under this Lease within the time permitted for its performance, then Landlord, after thirty (30) days' prior written notice to Tenant (or, in the case of any emergency, upon such notice or without notice, as may be reasonable under the circumstances) and without waiving any of its right under this Lease, may, but shall not be required to, pay such amount or perform such obligations.

All amounts paid by Landlord and all costs and expenses incurred by Landlord in connection with the performance of any such obligations (together with interest at the statutory rate) per annum from the date of Landlord's payment of such amount until the date of full repayment by Tenant) will be payable by Tenant to Landlord as additional rent on demand.

ARTICLE XVIII
DEFAULTS AND REMEDIES

18.1 Events of Default by Tenant

The following events shall be deemed to be events of default by Tenant under this Lease:

(a) Tenant shall fail to pay when due any sum of money due Landlord hereunder or any other payment or reimbursement due Landlord by the terms of this Lease, and such failure shall continue for a period of ten (10) days from the date when such payment was due.

(b) Tenant shall fail to comply with any term, provision or covenant of this Lease, other than the failure to pay a sum of money due Landlord, and shall not cure such failure within thirty (30) days after written notice thereof to Tenant or, in the case of failures that cannot be cured within thirty (30) days, commence to cure such failure within thirty (30) days and thereafter diligently pursue such cure to completion.

(c) Tenant shall attempt to assign, transfer, convey, sublet, encumber or dispose of any of its right, title or interest in the whole or any part of the Premises without the prior approval of Landlord.

(d) Tenant shall abandon any substantial portion of the Premises or cease to use a substantial portion of the Premises for the Permitted Uses.

(e) This Lease or the Premises or any part of the Premises are taken upon execution or by other process of law directed against Tenant, or are taken upon and subjected to any attachment by any creditor of Tenant or claimant against Tenant, and such attachment is not discharged within thirty (30) days after its levy.

(f) Tenant shall fail to contest diligently the validity of any lien or claimed lien and give sufficient security to Landlord to insure payment thereof or shall fail to satisfy any judgement rendered thereon and have the same released within ten (10) days after Tenant has notice from any source of such lien.

(g) Tenant shall file a petition in bankruptcy or insolvency or for reorganization or arrangement under the bankruptcy law of the United States, or is dissolved, or makes an assignment for the benefit of creditors.

(h) Involuntary proceedings under any such bankruptcy laws or for the dissolution of Tenant are instituted against Tenant, or a receiver or trustee is appointed for all or substantially all of Tenant's property, and such proceeding is not dismissed or such receivership or trusteeship is not vacated within ninety (90) days after such institution or appointment.

(i) Tenant shall fail to use the Premises for the Permitted Uses or shall use the Premises for any other uses.

(j) Tenant shall fail to maintain the Premises in a safe, orderly and clean condition, and as otherwise required by this Lease.

18.2 Remedies of Landlord

Upon the occurrence of any of the events of default in Section 18.1, Landlord shall have, in addition to the rights set forth in Article XVII of this Lease and any other remedies available to Landlord at law or equity, the immediate option, or the option at any time thereafter, to terminate this Lease and all rights of Tenant hereunder by sixty (60) day written notice to Tenant and this Lease will come to an end on the date in such notice as fully and completely as if the Term had expired. Upon the termination of this Lease, Tenant shall immediately quit and surrender the Premises to Landlord in accordance with the terms of Section 19.2 herein, but Tenant shall remain liable for damages as hereinafter provided. In the event Tenant fails to quit and surrender the Premises, Landlord may re-enter and repossess the Premises and any improvements or any part thereof and remove Tenant and those claiming through Tenant from the Premises without being deemed guilty or liable in any manner of trespass and without prejudice to any remedies for arrears of rent or other default. Termination under this paragraph shall not relieve Tenant from the payment of any sum then due to Landlord, or from any claim for damages previously accrued against Tenant. Tenant hereby waives all statutory and equitable rights to its leasehold after termination of this Lease by Landlord under this paragraph, including, without limitation, rights in the nature of further cure or redemption, if any.

18.3 Termination Damages

If this Lease is terminated for default, then Tenant covenants as an additional cumulative obligation after such termination, to pay all of Landlord's reasonable costs and expenses, including attorney's fees, related to (i) the termination of this Lease, (ii) the recovery of

the Premises from Tenant, and (iii) the collection of the amounts due hereunder; all of said costs and expenses collectively referred to as "***Landlord's Termination Expenses***." Landlord's Termination Expenses shall be due and payable immediately from time to time upon notice from Landlord.

18.4 Remedies Cumulative

The specific remedies to which Landlord or Tenant may resort under this Lease, and all other rights and remedies of Landlord and Tenant are cumulative, and any two or more may be exercised at the same time. Nothing in this Lease shall limit the right of Landlord to prove and obtain in proceedings for bankruptcy or insolvency an amount equal to the maximum allowed by any statute or rule of law in effect at that time.

18.5 Waiver of Relocation Assistance

Where termination or modification of this Lease for any reason requires permanent or temporary, total or partial, displacement to Tenant, prior to or at the expiration of this Lease, Tenant waives any benefit that Tenant may be deemed entitled to under the Uniform Relocation Assistance and Real Property Acquisition Act of 1970, as amended, and Tenant shall thereafter by excluded from any relocation benefits available under said act or amendments thereto.

ARTICLE XIX
MISCELLANEOUS

19.1 Quiet Enjoyment

Landlord agrees that, except as otherwise provided in this Lease, and so long as Tenant performs and observes the agreements, conditions and covenants of this Lease on its part to be performed and observed, Tenant's use and enjoyment of the Premises will not be disturbed by Landlord or anyone claiming by, through or under Landlord.

19.2 Surrender of Premises

At the end of the Term, or any extension or renewal thereof, or other sooner termination of this Lease, the Tenant peaceably will deliver to the Landlord possession of the Premises, together with the Multi-Use Path, all Tenant's Permitted Improvements, Permitted Amenities, and any other improvements or additions thereto, (unless Landlord has requested removal as a condition to approving construction of same) in the condition in which Tenant is required to maintain them under the terms of this Lease. Tenant may, upon termination of this Lease, remove all moveable furniture, trade fixtures, equipment, and other personal property belonging to Tenant, and Tenant shall repair any damage caused by such removal. Property not so removed shall be deemed abandoned by the Tenant, and Landlord may at its option, keep the same for its use or remove and dispose of the same in any manner as Landlord shall choose, and Tenant shall pay on demand any and all expenses incurred in such removal and disposal.

19.3 Holding Over

Tenant has no right to hold over at the end of the Term. If Tenant retains possession of the Premises or any part thereof after expiration of the Term or earlier termination of the Lease,

Landlord may at its option, serve written notice upon Tenant that such holding over consists creation of tenancy at will, upon the terms and conditions set forth in this Lease, except for the rental rate, which shall be at market rent for comparable Multi-Use Paths in the Commonwealth at that time. If no such notice is given, then a tenancy at sufferance shall be deemed to be created and the rental described in the preceding sentence shall apply. The provisions of this paragraph shall not constitute a waiver by Landlord of any right of re-entry or any other remedy given by this Lease or otherwise available at law or equity; nor shall the acceptance of Rent operate as a waiver of Landlord's right to terminate this Lease for a default by Tenant hereunder.

19.4 Status Report

Recognizing that both Landlord and Tenant may find it necessary or desirable to establish to third parties, such as accountants, lenders, government agencies, or the like, the then current status of performance hereunder, either party, upon the written request of the other made from time to time, will promptly furnish a written statement on the status of any matter pertaining to this Lease. Without limiting the foregoing, Tenant shall at any time and from time to time, but only after ten (10) days' prior written notice from Landlord, execute, acknowledge and deliver a written statement certifying that this Lease is in full force and effect subject only to such modification as may be set out; that Tenant is in possession of the Premises and is paying rent as provided in this Lease or specifying the amount of any unpaid rent; and that there are not any uncured defaults on the part of the Landlord, or specifying such defaults if they are claimed. If Tenant fails to deliver such statement in a timely manner, Tenant shall be deemed to have acknowledged that this Lease is in full force and effect, without modifications except as may be represented by Landlord, and that there are no uncured defaults in Landlord's performance. Any statement provided by either Landlord or Tenant hereunder may be relied upon by the other or any other party to whom Landlord or Tenant requests the statement be addressed.

19.5 Waiver

If either Landlord or Tenant waives the performance of any term, covenant or condition contained in this Lease, such waiver shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant or condition herein. Furthermore, the acceptance of rent by Landlord shall not constitute a waiver of any preceding breach of this Lease by Tenant, regardless of Landlord's knowledge of such preceding breach at the time Landlord accepted such rent. Failure by either Landlord or Tenant to enforce any of the terms, covenants or conditions of this Lease for any length of time shall not be deemed to waive or to diminish the right of such party to insist upon strict performance in the future. No provision of this Lease shall be deemed to have been waived by either Landlord or Tenant unless such waiver is in writing and signed by a duly authorized representative of the party to be bound thereby.

19.6 No Brokerage

Landlord and Tenant each represents and warrants that no broker, agent, commission salesman or other person has represented it in connection with the procurement or consummation of this Lease. In the event any brokerage claims are asserted against Landlord predicated upon prior dealings with the Tenant, Tenant agrees, if and to the extent permitted by law to indemnify and hold Landlord harmless against any such claim.

19.7 Notices: Time of Essence

All notices and other communications require or permitted to be given under this Lease shall, unless otherwise expressly permitted hereunder, be in writing, signed by a duly authorized representative of the party giving notice and shall be deemed delivered when given: (a) upon hand delivery, (b) one (1) business day after being deposited with Federal Express or another reliable overnight courier service for next day delivery, or (c) three (3) business days after being deposited in the United States mail, certified, return receipt requested, postage prepaid; and addressed as follows:

If to Landlord:

Massachusetts Bay Transportation Authority
10 Park Plaza
Boston, Massachusetts 02116
Attn: Chief of Real Estate

and

Greystone Real Estate Advisory Group
20 Park Plaza
Suite 1120
Boston, Massachusetts 02116
Attn: Tenant Management

If to Tenant:

Town of Lynnfield
55 Summer Street
Lynnfield, MA 01940
Attn: Town Administrator

and

Town of Lynnfield
55 Summer Street
Lynnfield, MA 01940
Attn: Select Board

Landlord or Tenant may, by notice given hereunder, at any time and from time to time, designate a different address to which notices shall be sent.

19.8 Landlord's and Tenant's Consent

MBTA's consent required by this Lease may be provided by the Chief Real Estate Officer.

Tenant's consent required by this Lease may be provided by the Mayor as authorized.

19.9 Status of Parties

Landlord reserves no control whatsoever over the employment, discharge, compensation of or services rendered by Tenant's employees, agents or contractors. Tenant covenants and agrees that it will neither hold itself out as, nor claim to be, a partner, agent, joint venturer, officer or employee of the Landlord by reason of this Lease, and that it will not, by reason of this Lease, make any claim, demand or application to or for any right or privilege applicable to an employee or officer of the Commonwealth of Massachusetts. Nothing contained in this Lease shall create or be construed as creating a partnership or joint venture between Landlord and Tenant or constitute Tenant as an agent of Landlord.

19.10 Governing Law

This Lease will be governed by and construed in accordance with the law of the Commonwealth of Massachusetts, and all legal actions brought in connection with this Lease shall be brought in courts within the Commonwealth of Massachusetts.

19.11 Entire Agreement

This Lease, together with its Exhibits, whether physically appended to this document or incorporated by reference without being so appended, contains all of the agreements of the parties and supersedes any previous negotiations. There are no agreements between Landlord and Tenant with respect to the subject matter of this Lease other than those set forth in this Lease and its Exhibits.

19.12 Headings

The headings herein are for convenience of reference only and shall in no way define, increase or limit the scope or intent of any provision of this Lease.

19.13 Partial Invalidity

If any term or provision of this Lease, or the application thereof to any person or circumstance, shall to any extent be deemed invalid or unenforceable, the remainder of this Lease, or the application of such term to persons or circumstances other than those to which it is invalid or unenforceable, shall not be affected thereby, and each other term and provision of this Lease shall remain valid and enforceable to the fullest extent permitted by law.

19.14 Force Majeure

In any case where either Landlord or Tenant is required to perform any act pursuant to this Lease, delays caused by or resulting from war, fire, flood, unusually severe weather, strikes or other causes beyond such party's reasonable control shall not be counted in determining the time during which such act shall be completed, whether such time be designated by a fixed date, a fixed time or a "reasonable" time, and such time shall be deemed to be extended by the period of the delay.

19.15 Recording

Landlord and Tenant agree not to record this Lease. Both parties will, at the request of either party, execute, acknowledge and deliver a Notice of Lease in recordable form. Such

notice shall contain only the information required by law for recording. Tenant shall be responsible for the preparation of any plans required for the recording of any such notice and the recording costs thereof.

19.16 No Agreement Until Signed

No legal obligations shall arise with respect to the Premises or other matters herein until this Lease is executed and delivered by Landlord and Tenant, with all required signatures.

19.17 Accord and Satisfaction

No acceptance by Landlord of a lesser sum than any charge due hereunder shall be deemed to be other than an acceptance of the earliest installment of such charge due, nor shall any endorsement or statement on any check or any letter accompanying any check or payment as rent or other charge be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such installment or pursue any other remedy provided in this Lease.

19.18 Successors and Assigns

This Lease and the covenants and conditions herein contained shall inure to the benefit of and be binding upon Landlord, its successors and assigns, and shall be binding upon Tenant, its successors and assigns, and shall inure to the benefit of Tenant and only such transferees of Tenant as are permitted hereunder.

19.19 State Employees Barred from Interest

No official, employee or consultant of the Commonwealth of Massachusetts or Landlord shall have any personal interest, direct or indirect, in this Lease, nor shall any such official, employee or consultant participate in any decision relating to this Lease which affects their personal interest or the interests of any corporation, partnership, or association in which they are directly or indirectly interested. Tenant has on or prior to the date hereof delivered to Landlord and to the Commonwealth of Massachusetts Division of Capital Asset Maintenance and Management ("***DCAMM***") Tenant's Beneficial Interest Disclosure Statement, a copy of which is attached hereto as ***Exhibit D***. Tenant agrees in case of any change of Tenant's interest in the Premises during the Term, that it shall deliver to Landlord and to DCAMM a new Beneficial Interest Disclosure Statement within (30) days of such change.

19.20 Limitation of Liability

No official, employee, agent, officer or consultant of the Commonwealth of Massachusetts or Landlord shall be personally liable to Tenant or to any partner or shareholder thereof, or to any successor in interest of person claiming by, through, or under Tenant or any partner or shareholder thereof, in the event of any default or breach of this Lease, or for any amount which may become due or on any claim, cause or obligation whatsoever under the terms of this Lease.

No official, employee, agent, officer, or consultant of the Town of Lynnfield or Tenant shall be personally liable to Landlord or to any partner or shareholder thereof, or to any successor in interest of person claiming by, through, or under Landlord or any partner or shareholder thereof, in the event of any default or breach of this Lease, or for any amount

which may become due or on any claim, cause or obligation whatsoever under the terms of this Lease.

All claims against Landlord and Tenant shall be governed by the provisions of this Lease and Chapter 258 of the Massachusetts General Laws.

Except as between Landlord and Tenant under the terms and conditions of this Lease, nothing herein shall be construed, act, and/or operate to alter, limit, waive, eliminate, terminate, or otherwise modify statutory provisions, exemptions, exceptions, limits, and/or defenses available to either party under any applicable statutes and/or regulations relating to any claims or causes of actions asserted against either party.

19.21 Non-discrimination

Tenant agrees that it shall not, because of race, color, national origin, ancestry, age, sex, religion, physical or mental handicap, or sexual orientation, discriminate against any qualified employee, applicant for employment, subcontractor, or person or firm seeking to provide goods or services to Tenant, or deny any person access to the Premises or to any activities or programs carried out upon the Premises. Tenant shall comply with all applicable federal and state statutes, rules, and regulations prohibiting discrimination in employment or public accommodation. Tenant shall use the Premises in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation-Effectuation of Title VI of the Civil Rights Act of 1964, as said Regulations may be amended. In the event of material and uncured breach of any of the above nondiscrimination covenants, Landlord shall have the right to terminate this Lease and reenter and repossess the Premises and hold the same as if this Lease had never been made or issued.

19.22 Counterparts

This Lease may be executed in any number of counterparts and each of such counterparts shall, for all purposes, be deemed to be an original and all such counterparts shall together constitute but one and the same Lease.

19.23 Tenant's Due Authority and Compliance with Laws

Tenant has on or prior to the date hereof delivered to Landlord: (i) Agent Authorization Form, a copy of which is attached hereto as Exhibit E; and (ii) the categorical exclusion dated June 16, 2020, a copy of which is attached hereto as Exhibit F, confirming there is little or no potential for significant impact from this project.

19.24 Executive Order 526

By signing this Lease, the Tenant hereby certifies under the pains and penalties of perjury that the Tenant currently complies with and will continue to comply with all federal and state laws, rules and regulations promoting fair employment practices or prohibiting employment discrimination and unfair labor practices and shall not discriminate in the hiring of any applicant for employment nor shall any qualified employee be demoted, discharged or otherwise subject to discrimination in the tenure, position, promotional

opportunities, wages, benefits or terms and conditions of their employment because of race, color, national origin, ancestry, age, sex, religion, disability, handicap, sexual orientation or for exercising any rights afforded by law.

19.25 Minority-, Women-, and Service Disabled Veteran-Owned Business Enterprises

Landlord encourages to the greatest extent possible, the active and meaningful equity participation of Minority-Owned Business Enterprises (MBEs), Women-Owned Business Enterprises (WBEs) and Service Disabled Veteran-Owned Business Enterprises (SDVBE), as certified by the Commonwealth of Massachusetts Supplier Diversity Office. Landlord also encourages Tenant to use, to the greatest extent possible, MBEs, WBEs and SDVBEs to provide services and materials. Tenant agrees, to the greatest extend possible, to purchase supplies and services concerning this Lease from certified MBEs, WBEs and SDVBEs.

[Signature page of this Lease follows.]

IN WITNESS WHEREOF, Landlord and Tenant have caused this Lease to be signed and delivered as an instrument under seal by their duly authorized officers or representatives as of the date first set forth above.

MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

By: _____
Erin McCabe
Chief of Real Estate and Asset Management

TOWN OF LYNNFIELD,
By its Select Board

_____
Alexis Leahy, Chair

_____
Richard Dalton, Vice Chair

_____
Joseph Gallagher, Clerk

EXHIBIT A

PLAN OF PREMISES

EXHIBIT B

DESIGN PLANS

EXHIBIT C

CERTIFICATES OF INSURANCE

EXHIBIT D

TENANT'S BENEFICIAL DISCLOSURE STATEMENT

EXHIBIT E

EVIDENCE OF AUTHORITY

EXHIBIT F

NOTICE OF LEASE

In accordance with G.L. c.183, §4, notice is hereby given of a Lease dated as of _____, 202__ (the "Lease"), by and between the **Massachusetts Bay Transportation Authority**, a body politic and corporate, having its usual place of business at Ten Park Plaza, Boston, Massachusetts 02116 (the "Landlord") and the **Town of Lynnfield**, having an address of 55 Summer Street, Lynnfield, MA 01940 (the "Tenant").

The premises leased to the Tenant consist of the parcel or parcels of land shown on the plans attached hereto as Exhibit A, consisting generally of that certain railroad right of way (_____) in Lynnfield, extending _____ including a certain segment of railroad right of way owned by the MBTA located along the abandoned railroad right of way known as the _____, so called which premises are a portion of the property described in the deed recorded with the Middlesex South Registry of Deeds in Book _____, Page _____.

The term of the Lease is ninety-nine (99) years, commencing on _____, 202__.

[Remainder of Page Intentionally Blank]

IN WITNESS WHEREOF, the Parties have executed this Norice of Lease.

LESSEE:

TOWN OF LYNNFIELD,
By its Select Board

_____
Alexis Leahy, Chair

_____
Richard Dalton, Vice Chair

_____
Joseph Gallagher, Clerk

LESSOR:

MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY

By: _____
Erin McCabe
Chief of Real Estate and Asset
Management

COMMONWEALTH OF MASSACHUSETTS

Middlesex South, ss.

On this _____ day of _____, 202___, before me, the undersigned Notary Public, personally appeared _____, member of the Select Board of the Town of Lynnfield, who proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she/they signed it voluntarily for its stated purpose on behalf of the Town of Lynnfield.

_____
Notary Public
My Commission Expires:

COMMONWEALTH OF MASSACHUSETTS

Suffolk, ss.

On this _____ day of _____, 202___, before me, the undersigned Notary Public, personally appeared Erin McCabe, who proved to me through satisfactory evidence of identification, which was _____, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose, as Chief of Real Estate and Asset Management of the Massachusetts Bay Transportation Authority.

_____
Notary Public
My Commission Expires:

DOCUMENT A00820

Massachusetts Department of Transportation
Conditions of Custody

REQUEST FOR RELEASE OF MASSDOT AUTOCAD FILES FORM
(Only to be used following award of contract)

City/Town: LYNNFIELD Project File Number: 613163

Contract Number: 135786

Project Description: Rail Trail Construction, from Ford Avenue to the Peabody City Line

All AutoCAD files are provided solely as a courtesy to facilitate public access to information. MassDOT attempts to provide current and accurate information but cannot guarantee so. MassDOT provides such documents, files or other data "as is" without any warranty of any kind, either expressed or implied, including but not limited to, accuracy, reliability, omissions, completeness and currentness. The Commonwealth of Massachusetts and its Consultants shall not be liable for any claim for damages, including lost profits or other consequential, exemplary, incidental, indirect or special damages, relating in any way to the documents, files or other data accessible from this file, including, but not limited to, claims arising out of or related to electronic access or transmission of data or viruses. Because data stored on electronic media can deteriorate undetected or be modified without our knowledge, MassDOT cannot be held liable for its completeness or correctness. MassDOT makes no representation as to the compatibility of these files beyond the version of the stated CAD software.

By signing this form, I agree that it shall be my responsibility to reconcile this electronic data with the conformed contract documents, and that only the conformed contract documents shall be regarded as legal documents for this Project. I understand that this authorization does not give me the right to distribute the files. I agree to the terms above and wish to receive the AutoCAD files.

This signed form shall be emailed to the Highway Design Engineer at the MassDOT -Highway Division at the following email address:

DOTHighwayDesign@dot.state.ma.us
Attn: AutoCAD Files

Name of person requesting AutoCAD files: _____

Affiliation/Company: _____

Address: _____

_____

Telephone number: _____

Email address: _____

Signature/Date: _____

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DOCUMENT A00830

ARMY CORPS OF ENGINEERS

Self-Verification Notification

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U.S. Army Corps of Engineers (USACE)

SELF-VERIFICATION NOTIFICATION (SVN)

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose This information will be used in evaluating activities under Self-Verification procedures within Massachusetts.

Routine Uses Routine uses will include: (1) Documenting compliance with the terms and conditions of the General Permit (GP) for activities that may require authorization pursuant to one or more of USACE's Regulatory authorities. (2) Records may be referred to other Federal, State, and local agencies for evaluation and enforcement purposes.

Disclosure Failure to fully comply and abide by the GP terms and conditions prior to commencing work and after completion project may result in formal enforcement action, up to and including monetary penalties and/or legal action, pursuant to 33 CFR Part 326.

Instructions The permittee must complete ALL required sections of this document before commencing USACE-regulated activities. A copy of this completed SVN must be kept on site during construction and be made available for review by USACE and other Federal, State, & Local regulatory authorities at any time. Within 30 days of initiating project construction, the permittee shall submit the completed SVN to USACE. The SVN shall be submitted to USACE as **ONE signed document** that includes project plans and documentation that supports each field (e.g., emails, letters, description, phone calls, surveys). Electronic submissions to the following address are strongly preferred: cenae-r-ma-sv@usace.army.mil. The email subject line shall contain the following: GP #, SVN, City/Town, and date submitted.

(ITEMS 1 THRU 3 TO BE FILLED BY USACE)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED

APPLICANT AND AGENT INFORMATION

4. APPLICANT'S NAME	7. AGENT'S ADDRESS:
First - John Middle - V. Last - Scenna	First - Dan Middle - Last - Wells
Company - Lynnfield Center Water District	Company - LEC Environmental Consultants, Inc.
E-mail Address - scennaj@lcwd.us	E-mail Address - dwells@lecenvironmental.com
5. APPLICANT'S ADDRESS:	8. AGENT'S ADDRESS:
Address- 83 Phillips Road	Address- 380 Lowell Street, Suite 101 (zip 01880)
City - Lynnfield State - MA Zip - 01940 Country - USA	City - Wakefield State - MA Zip - Country -
6. APPLICANT'S PHONE NOs. w/AREA CODE	9. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business c. Fax	a. Residence b. Business c. Fax
(781) 334-4374	(781) 245-2500

NAME, LOCATION, AND DESCRIPTION OF PROJECT SITE

10. PROJECT NAME OR TITLE
Lynnfield Rail Trail - Phase 1

11. FILE NUMBER(S) OF PREVIOUS USACE ACTIONS ON THE SITE (if applicable)	12. NAME OF WATERBODY
	no waterbody impacted
13. PROJECT COORDINATES (in decimal degrees)	14. PROJECT STREET ADDRESS (if applicable)
Latitude: ◦N Longitude: ◦W	Address Ford Ave., Lynnfield to Nichols Ln., Peabody
from 42.53375 / -71.05129 to 42.53554 / -71.01659	City - State - MA Zip -

ACTIVITY TYPE, PROJECT IMPACTS, AVOIDANCE & MINIMIZATION

15. GENERAL PERMIT ACTIVITIES (CHECK ALL THAT APPLY)

1 ☐	6 ☐	11 ☐	16 ☐	21 ☐
2 ☐	7 ☐	12 ☐	17 ☑	22 ☐
3 ☐	8 ☐	13 ☐	18 ☐	23 ☑
4 ☐	9 ☐	14 ☐	19 ☐	24 ☐
5 ☐	10 ☐	15 ☐	20 ☐	25 ☐

16. SUMMARY OF PROJECT IMPACTS (*see instructions*)

Area (square feet)	Length (linear feet)	Volume (cubic yards)	Duration
4,086	wetlands	(isolated)	permanent
3,092	replication	for largest	impact area

17. PROJECT PLANS (BY CHECKING THE BOXES BELOW, YOU CERTIFY THESE ITEMS ARE COMPLETE) (*see instructions*)

- [x] a. Plans shall at least contain the following: Vicinity Map, Plan View, and Typical Cross Section View of the proposed activity.
- [x] b. All direct, indirect and secondary impacts from USACE regulated activities are shown on the project plans.
- [x] c. The size of the impact area for each activity (acre, square feet, linear feet) are shown on the project plans.
- [x] d. For discharges of fill material (§404), the volume of fill material is identified on the project plans.
- [x] e. The duration of each impact, permanent or temporary (X days), is identified on the project plans.
- [x] f. Do activities with permanent impacts result in the loss of waters? If so, this is identified on the project plans.
- [x] g. All aquatic resources in the vicinity of the USACE regulated activities are delineated on the project plans.

18. AVOIDANCE & MINIMIZATION (BY CHECKING THE BOXES BELOW, YOU CERTIFY THESE CRITERIA ARE MET) (*see instructions*)

- [x] a. The project has been designed to avoid and minimize impacts to aquatic resources.
- [x] b. The footprint of activities in waters of the U.S. has been reduced to only what is necessary to achieve the overall project purpose.
- [x] c. All practicable measures have been taken to avoid and minimize impacts to aquatic resources through construction techniques and site access (e.g., Best Management Practices, Time of Year Restrictions).
- [x] d. All temporary impacts from USACE regulated activities will be restored upon completion of construction and the project area will be returned to pre-construction contours and conditions.

COMPLIANCE WITH FEDERAL REGULATIONS & SUPPLEMENTAL INFORMATION

19. DUE DILIGENCE (*see instructions*)

Complete the entries below to document compliance with the following Federal requirements. Construction may NOT begin if a PCN is/may be required, and you must contact USACE to determine permitting requirements. Documentation that demonstrates how the activity complies with each field below shall be submitted to the USACE as noted in the instructions block. See each General Condition (GC) in the GP for how to comply with each requirement.

a. State Historic Preservation Officer	Per Appendix A, SHPO was notified and they did not respond with concerns within 30 days.
b. Massachusetts BUAR	Per Appendix A, the activity has no potential to affect historic properties.
c. Tribal Historic Preservation Officers	The Tribe(s) were notified and they didn't respond with concerns within 30 days.
d. Endangered Species Act - NOAA	The activity is not located within the ESA-listed Species Range.
e. Endangered Species Act - USFWS	The activity is not located within the ESA-listed Species Range.
f. Northern Long Eared Bat (ESA)	NLAA determination reached with the Rangewide D-Key. See Instructions below.*
g. Essential Fish Habitat	The project footprint does not contain EFH (see EFH definition in the MA GP).
h. Wild & Scenic Rivers	There are no WSR's within 0.25 miles of the project area.
i. 401 Water Quality Certification 401	The activity qualifies under the general 401 WQC for the 2023 MA GPs.
	401 WQC/OOC File Number: DEP File # 209-0694 OOC issued: 401 issued:
j. Section 408 Permission	Not Required per GC 15a-f, no Federal Projects are within the project vicinity.
k. Coastal Zone	The project is not located within the coastal zone.
l. Construction Mats	N/A, the activity does not require the installation of construction mats.
m.Time of Year Restrictions	N/A, the project is not located in a waterbody that has TOY restrictions.
n. Vernal Pools	Per GC 28, the project is not located in a vernal pool.
o. Sediment & Erosion Controls	Per GC 25, the activity uses BMPs to avoid/minimize sedimentation & erosion.
p. Stream/Wetland Crossings	The activity does not require a stream/wetland crossing.

20. AQUACULTURE ACTIVITIES - GP 18 (*see instructions*)

- [ ] a. If required, an Aquaculture Certification from the Massachusetts Division of Marine Fisheries was obtained prior to commencing work.
- [ ] b. Coordination with the U.S. Coast Guard pursuant to Private Aids to Navigation has occurred prior to commencing work.
- [ ] c. If required, a MEPA Certificate was obtained from the Massachusetts Environmental Protection Agency prior to commencing work. Select Option
- [ ] d. The prospective permittee contacted local authorities (e.g. harbormaster, select board, shellfish constable) for authorization of their facility prior to commencing work.

21. ADDITIONAL INFORMATION/ATTACHMENTS (*see instructions*)

- [x] a. The project plans are enclosed in this SVN submittal (see block 17).
- [x] b. The activity IS NOT funded through the Bipartisan Infrastructure Bill (also known as the Infrastructure Investment and Jobs Act).
- [x] c. All required state, local and federal approvals were acquired prior to starting construction in USACE jurisdiction.
- [x] d. After construction of the activity is completed, a complete Certificate of Compliance will be submitted to USACE.

22. IS THERE ANOTHER LEAD FEDERAL AGENCY:

[x] YES [ ] NO Federal Highway

23. STATEMENT OF AUTHORIZATION *(see instructions)*

I certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

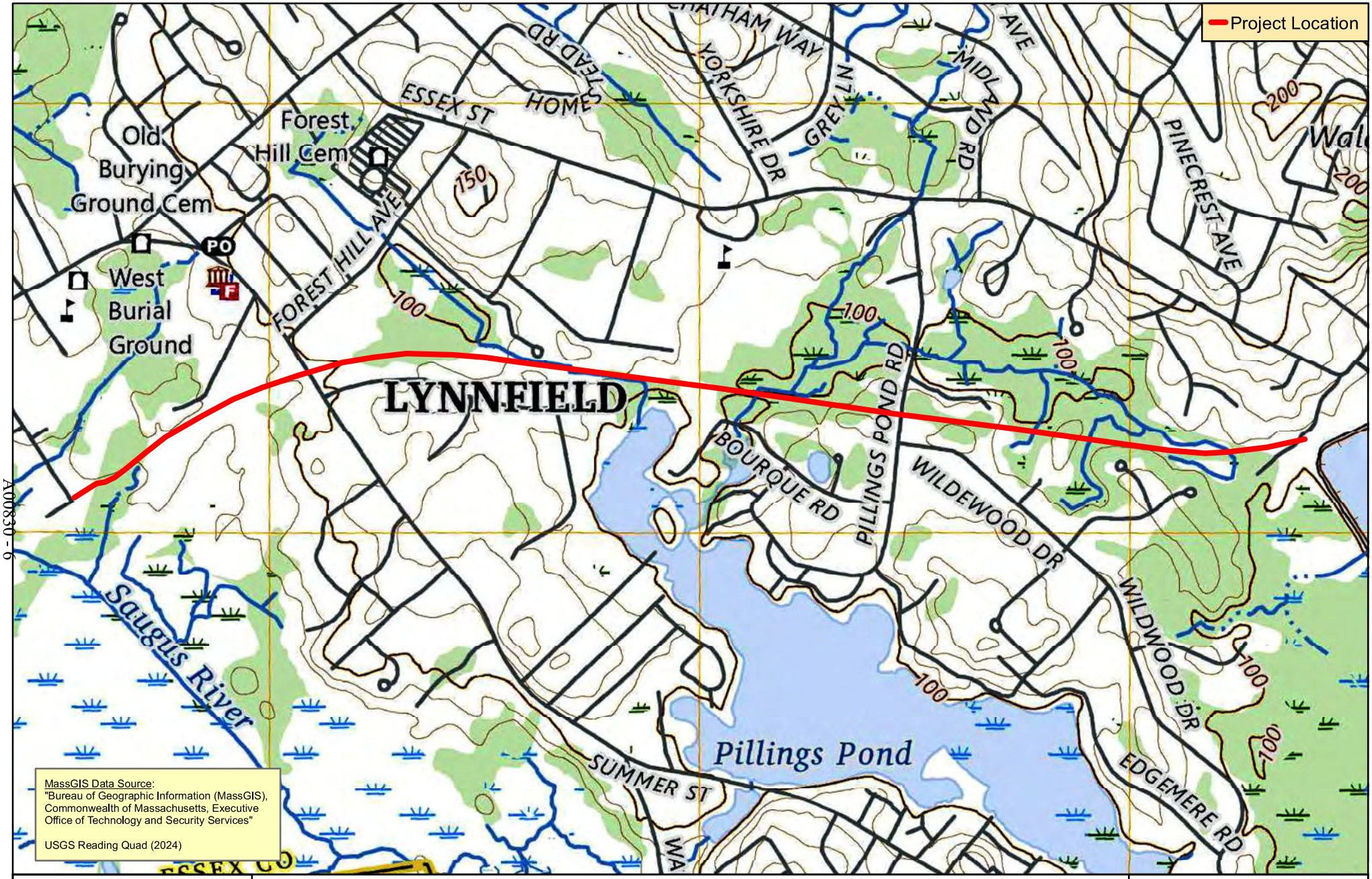
Erica N. Larner Digitally signed by Erica N. Larner Date: 2025.05.05 13:08:14 -04'00'		Dan Wells Digitally signed by Dan Wells Date: 2025.05.06 08:18:33 -04'00'	
SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

24. SIGNATURES *(see instructions)*

I hereby certify that the information in this Self-Verification Notification is complete and accurate. As the applicant or their duly authorized agent, I certify the activity was completed in accordance with the terms and conditions of the GP. This includes all applicable terms, general conditions, and activity-specific GP criteria. I agree to allow the duly authorized representatives of the Corps of Engineers Regulatory Program and other regulatory or advisory agencies to enter upon the premises of the project site at reasonable times to evaluate inspect and photograph site conditions. This consent to enter the property is superior to, takes precedence over, and waives any communication to the contrary. For example, if the property is posted as “no trespassing” this consent specifically supersedes and waives that prohibition and grants permission to enter the property despite such posting.

Erica N. Larner Digitally signed by Erica N. Larner Date: 2025.05.05 13:12:52 -04'00'		Dan Wells Digitally signed by Dan Wells Date: 2025.05.06 08:19:23 -04'00'	
SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.



A00830 - 6

Proposal No. 613163-135786

LEC Environmental Consultants, Inc.
Wakefield, MA 781.245.2500
www.lecenvironmental.com

Figure 1-A
USGS Topographic Map with Reading, MA Quad (2024)

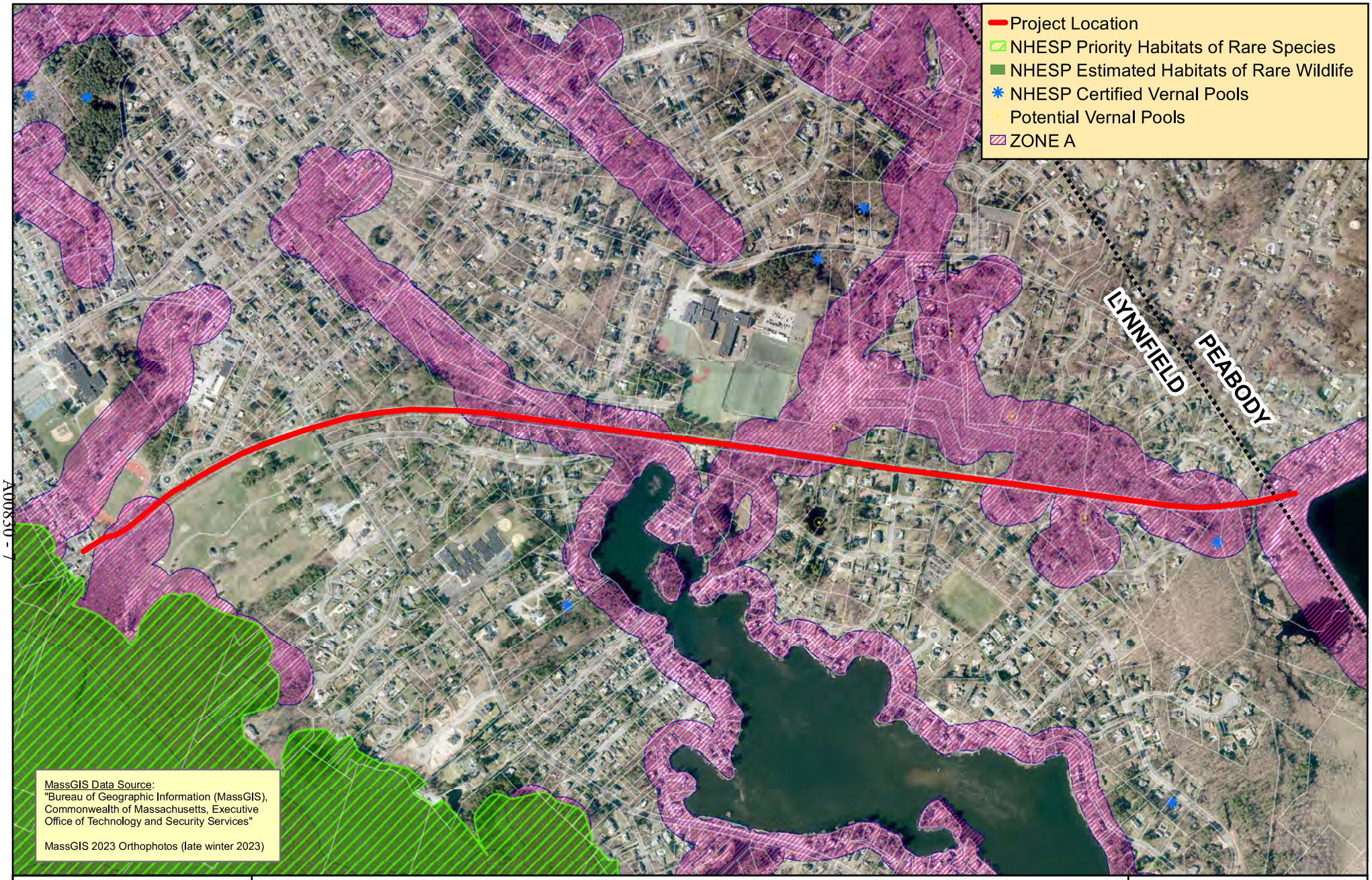
Lynnfield Rail Trail - Phase 1

Date: 12/23/2024

N

1 inch = 985 feet

0 250 500 1,000 Feet



A00830 - 7

Proposal No. 613163-135786

LEC Environmental Consultants, Inc.
Wakefield, MA 781.245.2500
www.lecenvironmental.com

Figure 2
Orthophoto Map

Lynnfield Rail Trail - Phase 1

Date: 12/23/2024

N

1 inch = 1,000 feet

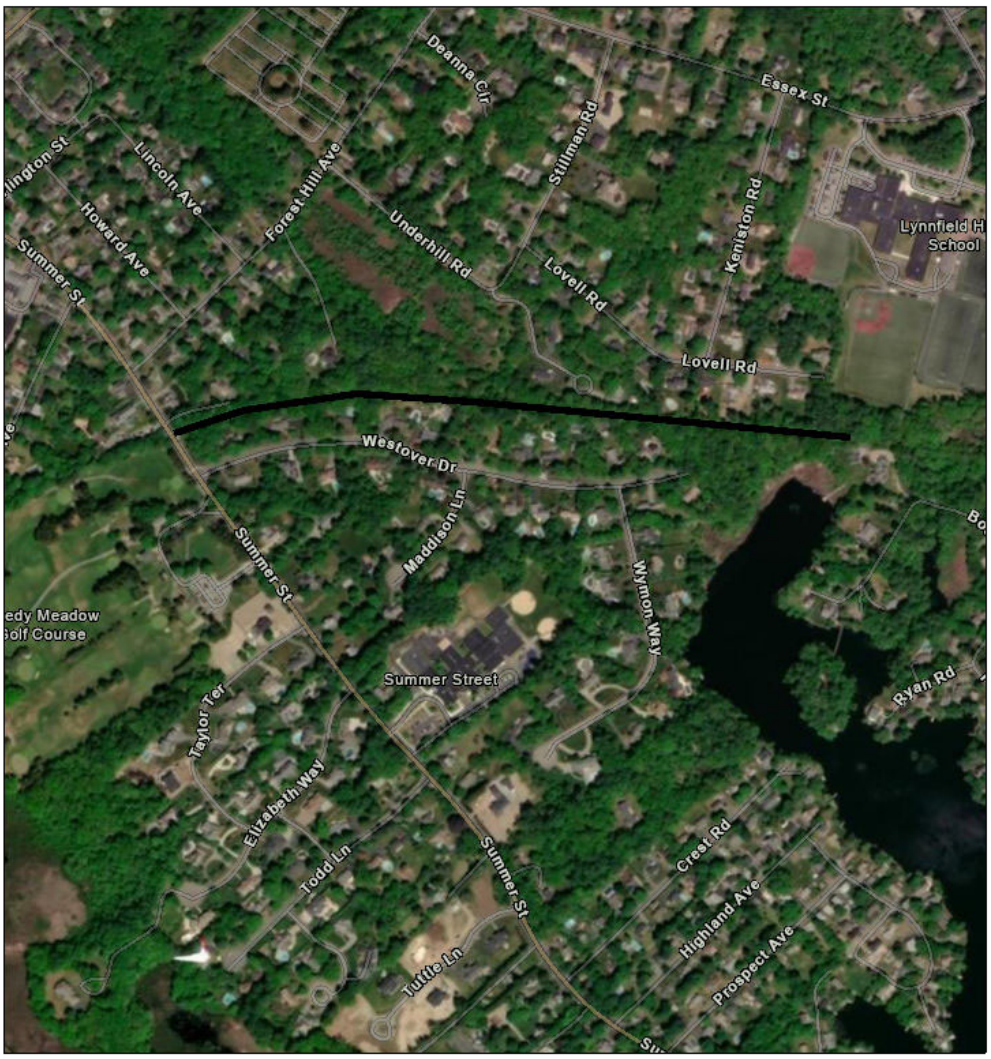
0 250 500 1,000 Feet

Drawn Action Area & Overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 2,710.66 acres

Jan 15 2025 11:45:09 Eastern Standard Time



1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

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Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	0	0	N/A
Shortnose Sturgeon	0	0	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	0	0	N/A
Atlantic Large Whales	0	0	N/A
In or Near Critical Habitat	0	0	N/A

EFH Mapper Report

EFH Data Notice

Essential Fish Habitat (EFH) is defined by textual descriptions contained in the fishery management plans developed by the regional fishery management councils. In most cases mapping data can not fully represent the complexity of the habitats that make up EFH. This report should be used for general interest queries only and should not be interpreted as a definitive evaluation of EFH at this location. A location-specific evaluation of EFH for any official purposes must be performed by a regional expert. Please refer to the following links for the appropriate regional resources.

Greater Atlantic Regional Office
Atlantic Highly Migratory Species Management Division

*** W A R N I N G ***

Please note under "Life Stage(s) Found at Location" the category "ALL" indicates that all life stages of that species share the same map and are designated at the queried location.

EFH

No additional Essential Fish Habitats (EFH) were identified at the report location.

Pacific Salmon EFH

No Pacific Salmon Essential Fish Habitat (EFH) were identified at the report location.

Atlantic Salmon

No Atlantic Salmon were identified at the report location.

HAPCs

No Habitat Areas of Particular Concern (HAPC) were identified at the report location.

EFH Areas Protected from Fishing

No EFH Areas Protected from Fishing (EFHA) were identified at the report location.

Spatial data does not currently exist for all the managed species in this area. The following is a list of species or management units for which there is no spatial data. ****For links to all EFH text descriptions see the complete data inventory: open data inventory -->**
All EFH species have been mapped for the Greater Atlantic region, **Atlantic Highly Migratory Species EFH**, Bigeye Sand Tiger Shark, Bigeye Sixgill Shark, Caribbean Sharpnose Shark, Galapagos Shark, Narrowtooth Shark, Sevengill Shark, Sixgill Shark, Smooth Hammerhead Shark, Smalltail Shark

CONTRACT LANGUAGE FOR "PUT-IN" SECTION OF SPECIAL PROVISIONS

NORTHERN LONG-EARED BAT AND TRICOLORED BAT PROTECTION

The northern long-eared bat (*Myotis septentrionalis*; NLEB) and tricolored bat (*Perimyotis subflavus*; TCB) are listed as federally endangered or proposed endangered, respectfully, under the Endangered Species Act (ESA). The U.S. Fish and Wildlife Service (USFWS) developed this guidance to address ESA compliance and promote conservation of NLEB and TCB. MassDOT, on behalf of FHWA, submitted a Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key Consultation through Information for Planning and Consultation (IPaC) and generated a May Affect, Not Likely to Adversely Affect (NLAA) determination (see **Document USFWS NLAA**). Subsequently, the project has completed Section 7 consultation under the ESA.

In advance of the uplisting of the TCB to endangered under the ESA, the following Avoidance and Minimization Measures (AMMs) must be strictly adhered to in order to protect NLEB and TCB and to be in compliance with the ESA. Contact MassDOT Environmental Services - Wildlife Unit Supervisor for questions about project limits, restrictions, or conservation measures.

General AMMs

- The Contractor shall ensure all personnel working in on the project site are aware of all environmental commitments related to NLEB and TCB, including all applicable AMMs. NLEB and TCB information (https://www.fws.gov/midwest/endangered/mammals/nleb/ and https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus) shall be made available to all personnel.
-

Lighting AMMs

- Direct temporary lighting away from suitable habitat during the active season: **April 15 to October 31**

Tree Removal AMMs

- *If additional cutting is proposed by the Contractor that is outside the scope of this contract, additional review is required by the MassDOT Highway Division's Environmental Services Section, and additional review and restrictions may be required by the USFWS.*
- Ensure tree removal is limited to that specified in project plans and ensure that contractors understand clearing limits and how they are marked in the field (e.g., install bright colored flagging/fencing prior to any tree clearing to ensure contractors stay within clearing limits).
- No tree cutting, trimming, or removal of trees and/or woody vegetation >3-inch in diameter shall be conducted between **April 15 to October 31** The Contractor shall ensure all personnel working in on the project site are aware of all environmental commitments related to NLEB and/or TCB, including the **TOY** restriction. If this restriction needs to be waived at any location(s) the Resident Engineer shall send a locus map of the proposed work to MassDOT Highway Division's Environmental Services Section for review and a determination if the restriction can be waived.

Bridge AMMs

- On April 30, 2025, MassDOT Highway Division Environmental Services, conducted a northern long-eared bat bridge/structure bat assessment, in accordance with the USFWS guidelines. The assessment

did not find presence of, or evidence of use by bats, and as stated within the guidelines, the assessment is valid for two years. If bridge work is not complete before April 30, 2027, assessment of the bridge for the presence of, or evidence of use by, bats shall be completed by the MassDOT Wildlife Unit prior to continuing bridge work. The Contractor shall notify the MassDOT Wildlife Unit no later than fourteen (14) days prior to April 30, 2027, to provide adequate time for inspection. If bats are found to be present, or, if there is evidence of bat usage, work at the bridge shall not commence until after the MassDOT Wildlife Unit has completed coordination with the US Fish and Wildlife Service to determine the appropriate follow up or mitigation actions.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: 04/30/2025 21:34:03 UTC
Project code: 2025-0085188
Project Name: 613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)

Federal Nexus: yes
Federal Action Agency (if applicable): Federal Highway Administration

Subject: Federal agency coordination under the Endangered Species Act, Section 7 for '613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)'

Dear Trevor Burns:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on April 30, 2025, for '613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)' (here forward, Project). This project has been assigned Project Code 2025-0085188 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements may not be complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (DKey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid. Note that conservation measures for northern long-eared bat and tricolored bat may differ. If both bat species are present in the action area and the key suggests more conservative measures for one of the species for your Project, the Project may need to apply***

the most conservative measures in order to avoid adverse effects. If unsure which conservation measures should be applied, please contact the appropriate Ecological Services Field Office.

Determination for the Northern Long-Eared Bat and Tricolored Bat

Based on your IPaC submission and a standing analysis completed by the Service, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Northern Long-eared Bat (*Myotis septentrionalis*)	Endangered	NLAA
Tricolored Bat (*Perimyotis subflavus*)	Proposed Endangered	NLAA

Federal agencies must consult with U.S. Fish and Wildlife Service under section 7(a)(2) of the Endangered Species Act (ESA) when an action *may affect* a listed species. Tricolored bat is proposed for listing as endangered under the ESA, but not yet listed. For actions that may affect a proposed species, agencies cannot consult, but they can *confer* under the authority of section 7(a)(4) of the ESA. Such conferences can follow the procedures for a consultation and be adopted as such if and when the proposed species is listed. Should the tricolored bat be listed, agencies must review projects that are not yet complete, or projects with ongoing effects within the tricolored bat range that previously received a NE or NLAA determination from the key to confirm that the determination is still accurate.

Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that consultation on the Action is complete for northern long-eared bat and/or tricolored bat and no further action is necessary unless either of the following occurs:

- new information reveals effects of the action that may affect the northern long-eared bat or tricolored bat in a manner or to an extent not previously considered; or,
- the identified action is subsequently modified in a manner that causes an effect to the northern long-eared bat or tricolored bat that was not considered when completing the determination key.

15-Day Review Period

As indicated above, the Service will notify you within 15 calendar days if we determine that this proposed Action does not meet the criteria for a “may affect, not likely to adversely affect” (NLAA) determination for the northern long-eared bat and/or tricolored bat. If we do not notify you within that timeframe, you may proceed with the Action under the terms of the NLAA concurrence provided here. This verification period allows the identified Ecological Services Field Office to apply local knowledge to evaluation of the Action, as we may identify a small subset of actions having impacts that we did not anticipate when developing the key. In such cases, the identified Ecological Services Field Office may request additional information to verify the effects determination reached through the Northern Long-eared Bat and Tricolored Bat DKey.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Proposed Threatened

You may coordinate with our Office to determine whether the Action may affect the species and/or critical habitat listed above. Note that reinitiation of consultation would be necessary if a new species is listed or critical habitat designated that may be affected by the identified action before it is complete.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference Project Code 2025-0085188 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)

2. Description

The following description was provided for the project '613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)':

> 613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)
> Phase 1 consists of about 1.8 miles of shared-use path, extending from Ford Avenue in Lynnfield to Nichols Lane in Peabody with two roadway crossings at Summer Street and Pillings Pond Road. The path is 12 feet wide with 2-foot-wide grass shoulders constructed mostly on the former railroad track bed. The project scope also includes minor landscaping, trail amenities (benches, interpretive signage, bicycle racks, etc.), wetland replication, removal of former railroad structures, ADA compliant pedestrian curb ramps at crossings, a pedestrian activated warning beacon, traffic signage, and pavement markings.
> Monarch Butterfly: Proposed Species only. The project action will not jeopardize the continued existence of a proposed species.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.535377499999996,-71.0190773608063,14z

DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for a least one species covered by this determination key.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   Yes

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

10. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

11. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

    No

12. Does the action area contain (1) talus or (2) anthropogenic or naturally formed rock shelters or crevices in rocky outcrops, rock faces or cliffs?

    No

13. Will the action cause effects to a bridge?

    Note: Covered bridges should be considered as bridges in this question.

    Yes

14. Has a site-specific bridge assessment following USFWS guidelines been completed?

    Note: For information on conducting a bridge/structure assessment, please see Appendix K in the USFWS' Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines at:https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines Additional resources can be found at: https://www.fws.gov/media/bats-and-transportation-structures-references-and-additional-resources and a training video is located at: https://www.youtube.com/watch?v=iuFwkT7q8Ws.

    Yes

15. Was evidence of bat use found during the bridge assessment?

    No

    SUBMITTED DOCUMENTS

    - *613163 Lynnfield Culvert Inspection Final.pdf* *https://ipac.ecosphere.fws.gov/project/EBFJPKMMOZCVJMVLMQK357OQ4Y/projectDocuments/161548583*

16. Did you coordinate with your local Ecological Services Field Office (ESFO) and receive approval of the bridge assessment results? If NO, please contact the appropriate local ESFO before completing this determination key.

    Yes

17. Will the action result in effects to a culvert or tunnel at any time of year?

    No

18. Are trees present within 1000 feet of the action area?

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

19. Does the action include the intentional exclusion of bats from a building or structure?

    Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

    No

20. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats?**

    No

21. Will the action cause construction of one or more new roads open to the public?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

22. Will the action include or cause any construction or other activity that is reasonably certain to increase average night-time traffic permanently or temporarily on one or more existing roads? **Note:** For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

    No

23. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

24. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

    Note: For information regarding NSF/ANSI 60 please visit https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects

    No

25. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

    No

26. Will the action include drilling or blasting?

    No

27. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

    No

28. Will the proposed action involve the use of herbicides or other pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

    No

29. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season?

    Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining.

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

30. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable northern long-eared bat or tricolored bat roosting habitat?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

31. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

    Yes

32. Will the proposed action occur exclusively in an already established and currently maintained utility right-of-way?

    No

33. Does the action include emergency cutting or trimming of hazard trees in order to remove an imminent threat to human safety or property? See hazard tree note at the bottom of the key for text that will be added to response letters

    Note: A "hazard tree" is a tree that is an immediate threat to lives, public health and safety, or improved property.

    No

34. Does the project intersect with the 0- 9.9% forest density category?

    Automatically answered
    No

35. Does the project intersect with the 10.0- 19.9% forest density category map?

    Automatically answered
    No

36. Does the project intersect with the 20.0- 29.9% forest density category map?

    Automatically answered
    No

37. Does the project intersect with the 30.0- 100% forest density category map?

    Automatically answered
    Yes

38. Will the action cause trees to be cut, knocked down, or otherwise brought down across an area greater than 100 acres in total extent?

    No

39. Will the proposed action result in the use of prescribed fire?

    Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

    No

40. Does the action area intersect the northern long-eared bat species list area?

    Automatically answered
    Yes

41. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

    Automatically answered
    No

42. [Semantic] Is the action area located within 150 feet of a documented northern long-eared bat roost site?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

43. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?
    If unsure, answer "Yes."

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

44. Are any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming suitable for northern long-eared bat roosting (i.e., live trees and/or snags ≥3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities)?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

45. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Fall Swarming season** for northern long-eared bats in the action area?

    Note: Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines

    No

46. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Spring Staging** season for northern long-eared bats in the action area?

    Note: Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

    No

47. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Summer Occupancy season** for northern long-eared bats in the action area? **Note:** Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

    No

48. Does the action area intersect the tricolored bat species list area?

    Automatically answered
    Yes

49. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

50. Is suitable summer habitat for the tricolored bat present within 1000 feet of project activities?
(If unsure, answer ""Yes."")

Note: If there are trees within the action area that may provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (Tillandsia usneoides), clusters of dead pine needles of large live pines) answer ""Yes."" For a complete definition of suitable summer habitat for the tricolored bat, please see Appendix A in the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

Yes

51. Do any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pine trees)?

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

Yes

52. Will any tree cutting/trimming or other knocking or bringing down of trees be conducted during the Pup Season for tricolored bat?
Note: Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

No

53. Do you have any documents that you want to include with this submission?

No

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

7.8

IPAC USER CONTACT INFORMATION

Agency: Massachusetts Department of Transportation
Name: Trevor Burns
Address: 10 Park Plaza
City: Boston
State: MA
Zip: 02116
Email trevor.b.burns@dot.state.ma.us
Phone: 8573010759

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

MassDOT - Cultural Resources Unit (Project #613163)

Section 106 Notification Checklist for USACOE Section 404 Permit - Project Notification Forms (PNF)

1. State Historic Preservation Office (SHPO)

- ☐ PNF submitted by certified mail (receipt attached)
- ☒ SHPO stamped PNF received (attached)
- ☐ No comments received within 30-day review period
- ☐ No PNF submitted in accordance with 2013 letter from USACOE, MassDOT in-house Section 106 clearance attached
- ☐ Section 106 No Adverse Effect or Adverse Effect documentation attached

2. Board of Underwater Archaeological Resources (BUAR)

- ☒ PNF submitted by e-mail with delivery receipt (attached)
- ☐ Comments received within 30-day review period (attached)
- ☐ No comments received within 30-day review period

3. Mashpee Wampanoag Tribe (MTHPO)

- ☒ PNF submitted by e-mail with delivery receipt (attached)
- ☐ Comments received within 30-day review period (attached)
- ☐ No comments received within 30-day review period

4. Wampanoag Tribe of Gay Head Aquinnah (ATHPO)

- ☒ PNF submitted by e-mail with delivery receipt (attached)
- ☐ Comments received within 30-day review period (attached)
- ☐ No comments received within 30-day review period

5. Stockbridge-Munsee Community (SMTHPO)

- ☐ PNF submitted by e-mail with delivery receipt (attached)
- ☐ Comments received within 30-day review period (attached)
- ☐ No comments received within 30-day review period
- ☒ N/A (Project not within tribe's area of interest)

6. Narragansett Indian Tribe (NTHPO)

- ☒ PNF submitted by e-mail with delivery receipt (attached)
- ☐ Comments received within 30-day review period (attached)
- ☐ No comments received within 30-day review period

RECEIVED
JAN 17 2025
MASS. HIST. COMM
RC.76084

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A

MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

Project Name: Lynnfield Rail Trail Construction (MassDOT #613163)

Location /Address: Ford Avenue to Nichols Lane (Phase 1)

City/Town: Lynnfield & Peabody

After review of MHC files and the materials you submitted, it has been determined that this project is unlikely to affect significant historic or archaeological resources.

Caitriona Parker 1/31/25
Caitriona Parker RC.76084 Date
Preservation Planner
Massachusetts Historical Commission

Project Proponent

Name: Massachusetts Department of Transportation

Address: 10 Park Plaza

City/Town/Zip/Telephone: Boston, MA 02116

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name	Type of License or funding (specify)
FHWA	Federal funding (Lead Federal Agency)
Corps	404 permit

Project Description (narrative):

The Massachusetts Department of Transportation, Highway Division (MassDOT) in cooperation with the Town of Lynnfield and City of Peabody proposes to expend federal funds to construct a shared-use path along the former Boston & Maine Railroad corridor. The 1.84 mile shared-use path begins at Ford Avenue, behind the Lynnfield Middle School, and travels easterly to Nichols Lane in Peabody, which is just beyond the Lynnfield/Peabody Town Line. The proposed shared-use path will eventually connect with the Border to Boston Trail, which will be a 70-mile trail linking the New Hampshire/Massachusetts border to Boston.

The existing railroad tracks will be removed and a proposed 10' to 12'-wide hot-mix asphalt or stone dust trail will be constructed in its place. Related work will include providing slope stabilization and sedimentation control barriers, installing new wood railings and signage, planting loan and seed, landscaping, and completing other related construction activities. A new path connecting the shared-use path to the middle school will be provided as part of this project.

There will be two new trailheads with landscaping, granite seating walls and ADA seating options, bicycle racks, and an interpretive panel on both sides of the shared-use path's approaches to Summer Street. There will also be parking spaces on the southeast side of the intersection along Summer Street, and new rapid flashing beacon signals and a crosswalk will be installed at the roadway crossing.

All project work will take place within or directly adjacent to the existing railroad layout, and temporary and/or permanent easements will be required for trail construction and grading.

A 3,092 SF wetland replication area will be installed to the southeast of the shared-use path's intersection with Summer Street. An Army Corps 404 permit is required for the wetlands work, and this PNF is being submitted per the Corps Section 106 notification requirements.

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

n/a

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

n/a

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

n/a

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

A review of MACRIS revealed no National Register-listed properties or districts within or adjacent to the project's area of potential effect (APE).

A review of MACRIS revealed that the project's APE is adjacent to the mid-twentieth century, Colonial Revival style, Saint Paul's Episcopal Church (LNF.119) at 135 Summer Street. MassDOT CRU staff completed a site visit to the project area in October 2024, and it is the opinion of MassDOT CRU staff that the church does not rise to the architectural or historical significance necessary for listing in the NR. It is also the opinion of MassDOT CRU staff that the church does not appear to contribute to the NR-listed Meetinghouse Common Historic District (LNF.A), which is located over 1,000' to the north of the building and is separated by in-fill and altered buildings.

The Lynnfield Public School Administration Office (LNF.50), inventoried at 505 Main Street, was razed to facilitate the construction of the circa 2003 middle school. The Deacon Nathaniel Bancroft House (LNF.33), inventoried at 165 Summer Street, was razed in December 2024.

A review of the archaeological maps in MACRIS revealed no recorded pre-contact or historic sites in the vicinity of the project area. It is the opinion of the MassDOT Archaeologist that low sensitivity can be ascribed to the project's direct APE based on the impacts of past railroad, roadway, and utility construction, and drainage work and roadside development. The project work will be confined to disturbed areas within and adjacent to the existing railroad corridor layout. Soil borings at various locations within the railroad corridor revealed that the tracks were constructed on 3.5' to 7' of fill. A site visit by the MassDOT Archaeologist revealed that the location of the proposed path connecting Ford Avenue to the middle school and the location of the proposed Summer Street parking area and wetland replication area contain compact, disturbed soils.

What is the total acreage of the project area?

			Productive Resources:		
Woodland		acres			
Wetland		acres	Agriculture		acres
Floodplain		acres	Forestry		acres
Open Space		acres	Mining/Extraction		acres

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APPENDIX A (continued)

Developed _____ acres Total Project Acreage _____ acres

What is the acreage of the proposed new construction? _____ acres

What is the present land use of the project area?

The project area runs along the Boston & Maine Railroad corridor.

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of person submitting this form: MHH **Date:** 1/15/2025

Name: Mary Hafferty, Cultural Resources Specialist MassDOT

Address: 10 Park Plaza, Room 4260

City/Town/Zip: Boston, MA 02717

Telephone: 857-368-8799

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

CC:

From:	Hafferty, Mary H. (DOT)
To:	thpo@wampanoagtribe-nsn.gov
Cc:	Harwood, Jameson (DOT)
Subject:	Lynnfield Rail Trail - 613163
Date:	Wednesday, January 15, 2025 10:43:00 AM
Attachments:	Locus & Topo Maps.pdf Lynnfield -Tribal PNF.pdf Lynnfield & Peabody -75% Tribal HWY Plans, Phase 1.pdf

Dear Ms. Washington,

MassDOT is submitting the enclosed information regarding the above-noted project to the Wampanoag Tribe of Gay Head (Aquinnah) to meet the Section 106 consultation requirements of the Federal Highway Administration (FHWA) and the US Army Corps of Engineers. As the project will be supported in part with federal funds, FHWA is the lead federal agency. Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Carrie Lavallee, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jameson Harwood.

Best regards,

Mary

Mary Hafferty (Stadalnick)
Cultural Resources Specialist
MassDOT -Highway Division
Environmental Services
10 Park Plaza, Room 7130
Boston, MA 02116-3973

From:	Microsoft Outlook
To:	thpo@wampanoagtribe-nsn.gov
Subject:	Relayed: Lynnfield Rail Trail - 613163
Date:	Wednesday, January 15, 2025 10:46:15 AM
Attachments:	Lynnfield Rail Trail - 613163.msg

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:
thpo@wampanoagtribe-nsn.gov (thpo@wampanoagtribe-nsn.gov) <mailto:thpo@wampanoagtribe-nsn.gov>
Subject: Lynnfield Rail Trail - 613163

From:	Hafferty, Mary H. (DOT)
To:	David.Weeden@mwtribe-nsn.gov
Cc:	Harwood, Jameson (DOT)
Subject:	Lynnfield Rail Trail - 613163
Date:	Wednesday, January 15, 2025 10:43:00 AM
Attachments:	Locus & Topo Maps.pdf Lynnfield -Tribal PNF.pdf Lynnfield & Peabody -75% Tribal HWY Plans, Phase 1.pdf

---

Dear Mr. Weeden,

MassDOT is submitting the enclosed project information to the Tribal Historic Preservation Officer to meet the Section 106 consultation requirements of the Federal Highway Administration (FHWA) and the US Army Corps of Engineers. As the project will be supported in part with federal funds, FHWA is the lead federal agency. Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Carrie Lavallee, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jameson Harwood.

Best regards,

Mary

Mary Hafferty (Stadalnick)
Cultural Resources Specialist
MassDOT -Highway Division
Environmental Services
10 Park Plaza, Room 7130
Boston, MA 02116-3973

From:	Microsoft Outlook
To:	David.Weeden@mwtribe-nsn.gov
Subject:	Relayed: Lynnfield Rail Trail - 613163
Date:	Wednesday, January 15, 2025 10:43:37 AM
Attachments:	Lynnfield Rail Trail - 613163.msg

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:
David.Weeden@mwtribe-nsn.gov (David.Weeden@mwtribe-nsn.gov) <mailto:David.Weeden@mwtribe-nsn.gov>
Subject: Lynnfield Rail Trail - 613163

From:	Hafferty, Mary H. (DOT)
To:	tashtesook@aol.com
Cc:	Harwood, Jameson (DOT); markandrews0563@outlook.com
Subject:	Lynnfield Rail Trail - 613163
Date:	Wednesday, January 15, 2025 10:44:00 AM
Attachments:	Lynnfield -Tribal PNF.pdf Lynnfield & Peabody -75% Tribal HWY Plans, Phase 1.pdf Locus & Topo Maps.pdf

Dear Mr. Brown,

MassDOT is submitting the enclosed information regarding the above-noted project to the Narragansett Tribe to meet the Section 106 consultation requirements of the Federal Highway Administration (FHWA) and the US Army Corps of Engineers. As the project will be supported in part with federal funds, FHWA is the lead federal agency. Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Carrie Lavallee, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jameson Harwood.

Best regards,

Mary

Mary Hafferty (Stadalnick)
Cultural Resources Specialist
MassDOT -Highway Division
Environmental Services
10 Park Plaza, Room 7130
Boston, MA 02116-3973

From:	Microsoft Outlook
To:	tashtesook@aol.com; markandrews0563@outlook.com
Subject:	Relayed: Lynnfield Rail Trail - 613163
Date:	Wednesday, January 15, 2025 10:46:20 AM
Attachments:	Lynnfield Rail Trail - 613163.msg

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:
tashtesook@aol.com (Tashtesook@aol.com) <mailto:Tashtesook@aol.com>
markandrews0563@outlook.com (markandrews0563@outlook.com) <mailto:markandrews0563@outlook.com>
Subject: Lynnfield Rail Trail - 613163

From:	Hafferty, Mary H. (DOT)
To:	Robinson, David S (EEA)
Cc:	Harwood, Jameson (DOT)
Subject:	Lynnfield Rail Trail - 613163
Date:	Wednesday, January 15, 2025 10:43:00 AM
Attachments:	Lynnfield -Tribal PNF.pdf Lynnfield & Peabody -75% Tribal HWY Plans, Phase 1.pdf Locus & Topo Maps.pdf

Dear Mr. Robinson,

MassDOT is submitting the enclosed information regarding the above-noted project to the BUAR to meet the Section 106 consultation requirements of the Federal Highway Administration (FHWA) and the US Army Corps of Engineers. As the project will be supported in part with federal funds, FHWA is the lead federal agency. Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Carrie Lavallee, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jameson Harwood.

Best regards,

Mary

Mary Hafferty (Stadalnick)
Cultural Resources Specialist
MassDOT -Highway Division
Environmental Services
10 Park Plaza, Room 7130
Boston, MA 02116-3973

From:	Microsoft Outlook
To:	Robinson, David S (EEA)
Subject:	Delivered: Lynnfield Rail Trail - 613163
Date:	Wednesday, January 15, 2025 10:46:07 AM
Attachments:	Lynnfield Rail Trail - 613163.msg

Your message has been delivered to the following recipients:
Robinson, David S (EEA) (David.S.Robinson@mass.gov) <mailto:David.S.Robinson@mass.gov>
Subject: Lynnfield Rail Trail - 613163

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A
MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

Project Name: Lynnfield Rail Trail Construction (MassDOT #613163)

Location /Address: Ford Avenue to Nichols Lane (Phase 1)

City/Town: Lynnfield & Peabody

Project Proponent

Name: Massachusetts Department of Transportation

Address: 10 Park Plaza

City/Town/Zip/Telephone: Boston, MA 02116

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name	Type of License or funding (specify)
FHWA	Federal funding (Lead Federal Agency)
Corps	404 permit

Project Description (narrative):

The Massachusetts Department of Transportation, Highway Division (MassDOT) in cooperation with the Town of Lynnfield and City of Peabody proposes to expend federal funds to construct a shared-use path along the former Boston & Maine Railroad corridor. The 1.84 mile shared-use path begins at Ford Avenue, behind the Lynnfield Middle School, and travels easterly to Nichols Lane in Peabody, which is just beyond the Lynnfield/Peabody Town Line. The proposed shared-use path will eventually connect with the Border to Boston Trail, which will be a 70-mile trail linking the New Hampshire/Massachusetts border to Boston.

The existing railroad tracks will be removed and a proposed 10’ to 12’-wide hot-mix asphalt or stone dust trail will be constructed in its place. Related work will include providing slope stabilization and sedimentation control barriers, installing new wood railings and signage, planting loan and seed, landscaping, and completing other related construction activities. A new path connecting the shared-use path to the middle school will be provided as part of this project.

There will be two new trailheads with landscaping, granite seating walls and ADA seating options, bicycle racks, and an interpretive panel on both sides of the shared-use path’s approaches to Summer Street. There will also be parking spaces on the southeast side of the intersection along Summer Street, and new rapid flashing beacon signals and a crosswalk will be installed at the roadway crossing.

All project work will take place within or directly adjacent to the existing railroad layout, and temporary and/or permanent easements will be required for trail construction and grading.

A 3,092 SF wetland replication area will be installed to the southeast of the shared-use path’s intersection with Summer Street, and an Army Corps 404 permit is required for this work.

APPENDIX A (continued)

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

n/a

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

n/a

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

n/a

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

A review of MACRIS revealed no National Register-listed properties or districts within or adjacent to the project's area of potential effect (APE).

A review of MACRIS revealed that the project's APE is adjacent to the mid-twentieth century, Colonial Revival style, Saint Paul's Episcopal Church (LNF.119) at 135 Summer Street. MassDOT CRU staff completed a site visit to the project area in October 2024, and it is the opinion of MassDOT CRU staff that the church does not rise to the architectural or historical significance necessary for listing in the NR. It is also the opinion of MassDOT CRU staff that the church does not appear to contribute to the NR-listed Meetinghouse Common Historic District (LNF.A), which is located over 1,000' to the north of the building and is separated by in-fill and altered buildings.

The Lynnfield Public School Administration Office (LNF.50), inventoried at 505 Main Street, was razed to facilitate the construction of the circa 2003 middle school. The Deacon Nathaniel Bancroft House (LNF.33), inventoried at 165 Summer Street, was razed in December 2024.

A review of the archaeological maps in MACRIS revealed no recorded pre-contact or historic sites in the vicinity of the project area. It is the opinion of the MassDOT Archaeologist that low sensitivity can be ascribed to the project's direct APE based on the impacts of past railroad, roadway, and utility construction, and drainage work and roadside development. The project work will be confined to disturbed areas within and adjacent to the existing railroad corridor layout. Soil borings at various locations within the railroad corridor revealed that the tracks were constructed on 3.5' to 7' of fill. A site visit by the MassDOT Archaeologist revealed that the location of the proposed path connecting Ford Avenue to the middle school and the location of the proposed Summer Street parking area and wetland replication area contain compact, disturbed soils.

What is the total acreage of the project area?

Woodland		acres	Productive Resources:		
Wetland		acres	Agriculture		acres
Floodplain		acres	Forestry		acres
Open Space		acres	Mining/Extraction		acres
Developed		acres	Total Project Acreage		acres

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A (continued)

What is the acreage of the proposed new construction? _____ acres

What is the present land use of the project area?

The project area runs along the Boston & Maine Railroad corridor.

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of person submitting this form: MHH **Date:** 1/15/2025

Name: Mary Hafferty, Cultural Resources Specialist MassDOT

Address: 10 Park Plaza, Room 4260

City/Town/Zip: Boston, MA 02717

Telephone: 857-368-8799

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

CC:

CULTURAL RESOURCES PROJECT RECORD

City/Town: Lynnfield | Project # 613163 | Date Cleared 2/14/2025

Project Name: Rail Trail Construction -Ford Avenue to Nichols Lane (Ph. 1) | Date Filed 1/15/2025 | Finding Under Review ☐

FHWA to MHC

Project Type: Bikeway/Bike Path Construction | Early Coord. Letter Sent: ☑

Review: Section 106 (PA) | Comment Received: ☐ MHC ☐ LHC | Reviewer: MHH

Finding: Stip VB - No historic properties affected | Consultant

Comments: PNF's emailed to the Aquinnah, Mashpee, and Narragansett Tribes and BUAR on 1/15/2025. The MHC PNF was mailed on 1/15/2025, for Corps permitting, and date-stamped appoved 1/31/2025. (MHH)

Determination based on: ☑ Scope of Work ☑ Plan ☑ Inventory ☑ Site Visit ☐ Archaeological Survey

Attach appropriate documentation for checked items

Projects Requiring No Massachusetts SHPO Review

Programmatic Agreement, Appendix 1 (check all that apply) :

- ☐ 1) Interstate bridge or roadway projects
- ☐ 2) Resurfacing, repair existing roadways
- * ☐ 3) Reconstruction on existing roadway
- * ☐ 4) Roadway geometrics, intersections
- * ☐ 5) Curbs and sidewalks
- ☐ 6) Pavement markings, rumble strips, etc
- ☐ 7) Curbs, sidewalks (MAAB, ADA)
- * ☐ 8) Removal of trees
- ☐ 9) Landscaping
- ☐ 10) Utilities
- ☐ 11) Railroad crossing
- ☐ 12) Stream stabilization and restoration
- ☐ 13) Wetland mitigation area
- * ☐ 14) Bridge (NR "Not Eligible" or "Conditionally Not Eligible")
- * ☐ 15) Bridge (concrete slab post 1900, steel stringer)
- ☐ 16) Bridge (less than 20' span)
- * ☐ 17) Highway safety improvement
- ☐ 18) Drainage system element
- * ☐ 19) Traffic signal, safety improvement
- * ☐ 20) Intelligent Transportation System project
- ☐ 21) Rest area, maintenance facility
- * ☐ 22) Bicycle, pedestrian lane, path or facility
- ☐ 23) Lighting system
- ☐ 24) Sign
- ☐ 25) Hazardous waste
- ☐ 26) Highway fencing
- ☐ 27) Emergency repair
- ☐ 28) Erosion control
- ☐ 29) Noise barrier

* National Register eligibility evaluation required

-OR-

No Historic Properties Affected
Programmatic Agreement Stipulation V.B. (check one):

- ☑ No NR listed or -eligible properties within Area of Potential Effect
- ☐ No effect on National Register listed or -eligible properties

Reviewer's Initials: MHH JMH

CULTURAL RESOURCES PROJECT RECORD

Summary of MassDOT Highway Division Finding
(Appendix 1 and Section V.B. Projects only)

Project Description
The Massachusetts Department of Transportation, Highway Division (MassDOT) in cooperation with the Town of Lynnfield and City of Peabody proposes to expend federal funds to construct a shared-use path along the former Boston & Maine Railroad corridor. The 1.84 mile shared-use path begins at Ford Avenue, behind the Lynnfield Middle School, and travels easterly to Nichols Lane in Peabody, which is just beyond the Lynnfield/Peabody Town Line. The proposed shared-use path will eventually connect with the Border to Boston Trail, which will be a 70-mile trail linking the New Hampshire/Massachusetts border to Boston.

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A 3,092 SF wetland replication area will be installed to the southeast of the shared-use path's intersection with Summer Street, and an Army Corps 404 permit is required for this work.

Recorded/Identified Cultural Resources Within/Adjacent to Project Area
A review of MACRIS revealed no National Register-listed properties or districts within or adjacent to the project's area of potential effect (APE).

A review of MACRIS revealed that the project's APE is adjacent to the mid-twentieth century, Colonial Revival style, Saint Paul's Episcopal Church (LNF.119) at 135 Summer Street. MassDOT CRU staff completed a site visit to the project area in October 2024, and it is the opinion of MassDOT CRU staff that the church does not rise to the architectural or historical significance necessary for listing in the NR. It is also the opinion of MassDOT CRU staff that the church does not appear to contribute to the NR-listed Meetinghouse Common Historic District (LNF.A), which is located over 1,000' to the north of the building and is separated by in-fill and altered buildings.

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On behalf of MassDOT, Stantec Consulting Services, sent early coordination letters (dated December 3, 2024) to the Lynnfield and Peabody Historical Commissions. The MHC was sent copies of these letters on December 18, 2024. No response has been received to date from the Commissions, but any future responses received will be seriously considered.

MassDOT's CRU staff has determined that this project satisfies the conditions outlined in Stipulation V.B. -no NR-eligible or-listed resources within the APE. No further review is required, and all documentation in support of this

Reviewer's Initials: _____

finding has been placed on file at MassDOT.

Reviewer's Initials: _____

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN AND PROFILE OF

LYNNFIELD RAIL TRAIL

CONSTRUCTION - PHASE 1

IN THE TOWN & CITY OF

LYNNFIELD & PEABODY

ESSEX COUNTY

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	37
PROJECT FILE NO. 613163			

ACOE SVN
TITLE SHEET & INDEX

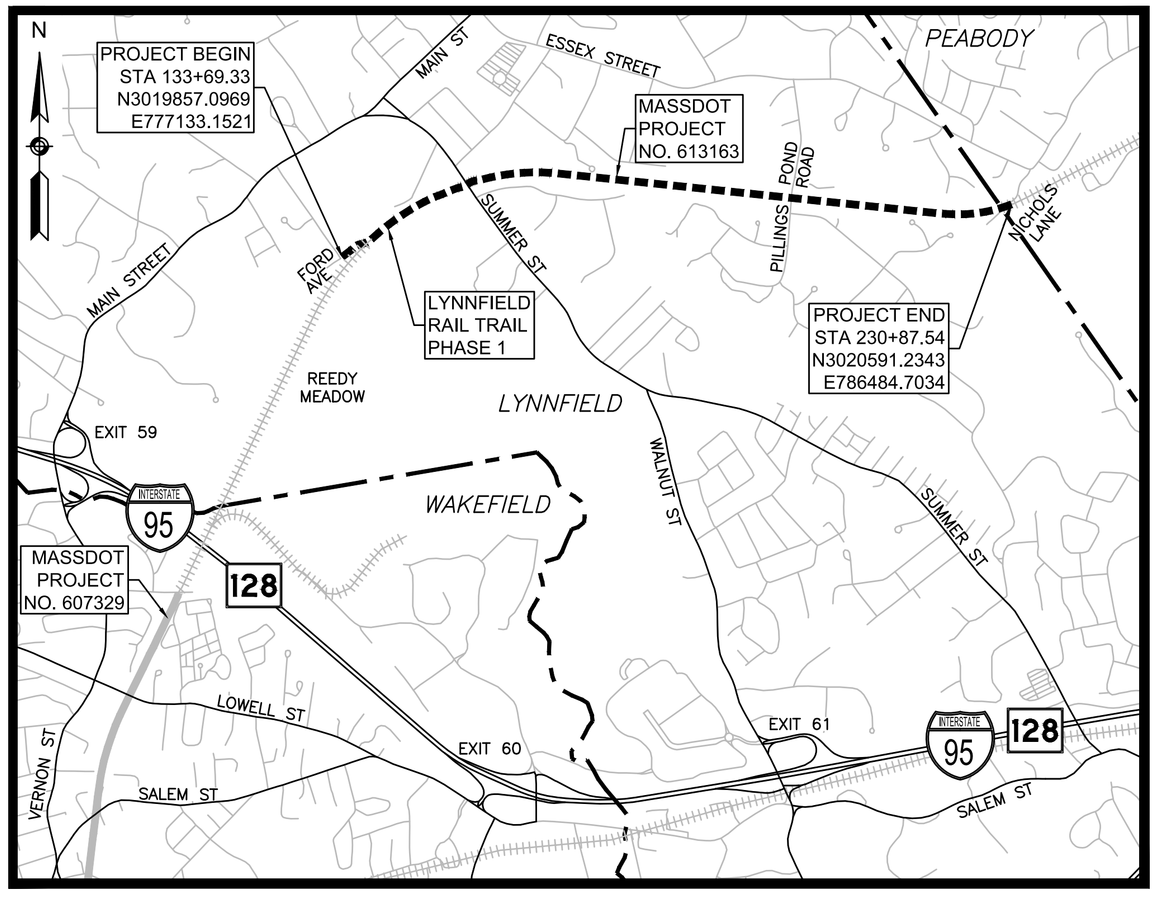
613163_HD(TITLE)_SVN.DWG Plotted on 18-Apr-2025 4:22 PM

Proposal No. 613163-135786

A00830 -45

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	GENERAL NOTES
4 - 5	KEY PLANS
6 - 7	TYPICAL SECTIONS
8 - 17	CONSTRUCTION PLANS
18 - 27	PROFILES
28 - 30	TRAIL AMENITY PLANS
31 - 32	TRAIL AMENITY DETAILS
33	WETLAND REPLICATION AREA
34 - 37	CONSTRUCTION DETAILS



0 1,500 3,000 4,500 6,000

SCALE: 1" = 1,500'

LENGTH OF PROJECT = 9,718.21 FEET = 1.841 MILES

SELF-VERIFICATION NOTIFICATION PLANS

APRIL 21, 2025

NOT FOR CONSTRUCTION

DATE	DESCRIPTION	REV #
2025-04-21	REVISED ACOE SVN PLANS	0
2025-03-11	REVISED ACOE SVN PLANS	0
2025-02-28	DRAFT ACOE SVN PLANS	0

massDOT
Massachusetts Department of Transportation
Highway Division

APPROVED

CHIEF ENGINEER DATE

Stantec
45 BLUE SKY DRIVE | THIRD FLOOR | BURLINGTON, MA 01803

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
		CATCH BASIN CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
		LIGHT POLE
CO.BD.		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
HTP		TRANSMISSION POLE
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W / 1 LIGHT
UPL	UPL	UTILITY POLE
		BUSH
SIZE & TYPE		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
99		CONTOURS (ON-THE-GROUND SURVEY DATA)
100 99		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT CONTROL BARRIER
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
1	1	CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		MICROWAVE DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
	*	EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
RRSG	RRSG	RAILROAD SIGNAL
OR		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
20'	20'	MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
	20'	MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
	SL	STOP LINE
	CW	CROSSWALK
	SWL	SOLID WHITE LINE
	SYL	SOLID YELLOW LINE
	BWL	BROKEN WHITE LINE
	BYL	BROKEN YELLOW LINE
	DWL	DOTTED WHITE LINE
	DYL	DOTTED YELLOW LINE
	DWLEx	DOTTED WHITE LINE EXTENSION
	DYLEx	DOTTED YELLOW LINE EXTENSION
	DBWL	DOUBLE WHITE LINE
	DBYL	DOUBLE YELLOW LINE

ABBREVIATIONS

GENERAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	37
PROJECT FILE NO. 613163			

ACOE SVN
LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL

R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL ABBREVIATIONS

CAB	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY UPRAISED HAND
FDW	FLASHING UPRAISED HAND
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
FYL	FLASHING YELLOW LEFT ARROW
FYR	FLASHING YELLOW RIGHT ARROW
G	STEADY CIRCULAR GREEN
GL	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALKING PERSON
Y	STEADY CIRCULAR YELLOW
YL	STEADY YELLOW LEFT ARROW

613163_HD(TITLE)_SVN.DWG Plotted on 17-Apr-2025 12:13 PM
Proposal No. 613163-135786
A00830 - 46

GENERAL NOTES

1. EXISTING GROUND SURFACES SHOWN ON PLANS, PROFILES AND CROSS SECTIONS ARE BASED UPON DATA OBTAINED BY FIELD SURVEYS.

2. THE LOCATIONS OF EXISTING SUBSURFACE STRUCTURES, SUCH AS SEWERS, WATER MAINS, DRAINS AND OTHER UTILITIES ARE APPROXIMATE ONLY AND THE ENGINEER DOES NOT GUARANTEE THEIR NUMBER OR LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE EXCAVATING.

3. ALL GAS GATES, ELECTRIC MANHOLES, AND TELEPHONE MANHOLES WITHIN THE LIMITS OF WORK SHALL BE ADJUSTED BY THE OWNING AGENCY. ALL GAS, ELECTRIC, TELEPHONE AND CATV WORK SHALL BE DONE BY THE OWNING AGENCY. THE CONTRACTOR SHALL NOTIFY THE OWNING AGENCIES TO ADJUST AND/OR RELOCATE THESE STRUCTURES TO AVOID IMPACTING THE CONTRACTOR'S SCHEDULE OF OPERATIONS.

4. ANY CLEANING OF CATCH BASINS OR DRAIN PIPES NECESSARY FOR THE PROPOSED WORK SHALL BE COMPLETED BY THE RESPECTIVE MUNICIPALITY INVOLVED.

5. ANY DRAINAGE / SEWER / WATER CASTINGS BROKEN THROUGH NO FAULT OF THE CONTRACTOR SHALL BE SUPPLIED BY THE RESPECTIVE MUNICIPALITY FOR ADJUSTMENT UNDER THE CONTRACT ITEMS.

6. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE UTILITY COMPANIES DOING WORK IN THE SAME AREA. THE CONTRACTOR SHALL ALLOW THE UTILITY COMPANIES AND THEIR REPRESENTATIVES TO ADJUST AND/OR INSTALL THEIR SYSTEMS WITHIN CITY/ STATE OWNED STREETS AND EASEMENTS.

7. CURB SHALL BE FURNISHED AND SET AT LOCATIONS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.

8. CONSTRUCT DRIVEWAYS AND WALKS AS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.

9. EXISTING GRANITE CURB AND EDGING SUITABLE FOR REUSE WITHIN THE PROJECT SITE SHALL BE REMOVED AND RESET IN ACCORDANCE WITH THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.

10. SAWCUT EXISTING ASPHALT ROADWAYS, CEMENT CONCRETE SIDEWALKS, AND ASPHALT DRIVEWAYS AS SHOWN ON THE PLANS AND AT THE PROPOSED MATCH LINE.

11. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

12. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.

13. ALL ACCESSIBLE ROUTES, WALKWAYS, CURB CUTS, RAMPS, SIDEWALKS, DRIVEWAY OPENINGS, CLEARANCES AND SLOPE TOLERANCES SHALL CONFORM WITH THE ARCHITECTURAL ACCESS BOARD (AAB), 521 CMR AND MASSDOT CONSTRUCTION AND TRAFFIC STANDARD DRAWINGS.

14. ITEMS LABELED "REM" SHALL BE REMOVED AND DISCARDED BY CONTRACTOR.

15. THE CONTRACTOR SHALL PROTECT EXISTING SURVEY MONUMENTS AND SHALL RESET ANY MONUMENTATION DISTURBED BY THEIR OPERATIONS.

16. THE CONTRACTOR SHALL INSTALL OTHER NECESSARY TEMPORARY REGULATORY AND WARNING SIGNS DURING CONSTRUCTION AS REQUIRED BY THE ENGINEER FOR OTHER INCIDENTAL CONSTRUCTION ACTIVITIES. ALL SIGNAGE AND TRAFFIC CONTROL DEVICES USED MUST CONFORM TO THE LATEST "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD)

17. THE CONTRACTOR SHALL PERFORM HIS WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT INTERFERENCE WITH AND INCONVENIENCE TO BUSINESS CONCERNS AND ABUTTERS, ON ACCOUNT OF THE CONSTRUCTION WORK, IS KEPT TO A MINIMUM.

18. THE CONTRACTOR SHALL NOT BE ALLOWED TO PARK EQUIPMENT OR STOCKPILE EQUIPMENT OR MATERIAL ON THE TRAVELED WAYS OVERNIGHT OR WHEN NOT IN USE.

19. THE CONTRACTOR SHALL MAINTAIN SAFE AND REASONABLE ACCESS TO AND FROM ABUTTING PROPERTY, PRIVATE WAYS, DRIVEWAYS AND ALL ALLEYS DURING THE CONSTRUCTION PERIOD.

20. ALL DETECTABLE WARNING PANELS SHALL BE MOUNTED IN CEMENT CONCRETE AND INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARD DETAIL E107.6.5.

SURVEY NOTES

1. COORDINATES, IN U.S. SURVEY FEET, ARE IN THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (MCS), MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983, (NAD 83/2011, EPOCH 2010.00), BASED ON THE KeyNetGPS VIRTUAL REFERENCE SYSTEM (VRS).

2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) BASED ON THE KeyNetGPS VIRTUAL REFERENCE SYSTEM (VRS)

3. SUBSURFACE UTILITY LINES AND FEATURES, AS SHOWN HEREIN, WERE COMPILED FROM FIELD EVIDENCE AND/OR AVAILABLE RECORD INFORMATION (SEE REFERENCES), AND THEIR LOCATIONS ARE ONLY APPROXIMATE. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.

   DAWOOD ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.

   BEFORE DESIGNING FUTURE CONNECTIONS, THE APPROPRIATE UTILITIES MUST BE CONSULTED.

   BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED (SEE MASSACHUSETTS GENERAL LAWS, CHAPTER 82 SECTION 40).

   CALL "DIG SAFE" 1-888-DIG-SAFE. (888-344-7233).

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	37
PROJECT FILE NO. 613163			

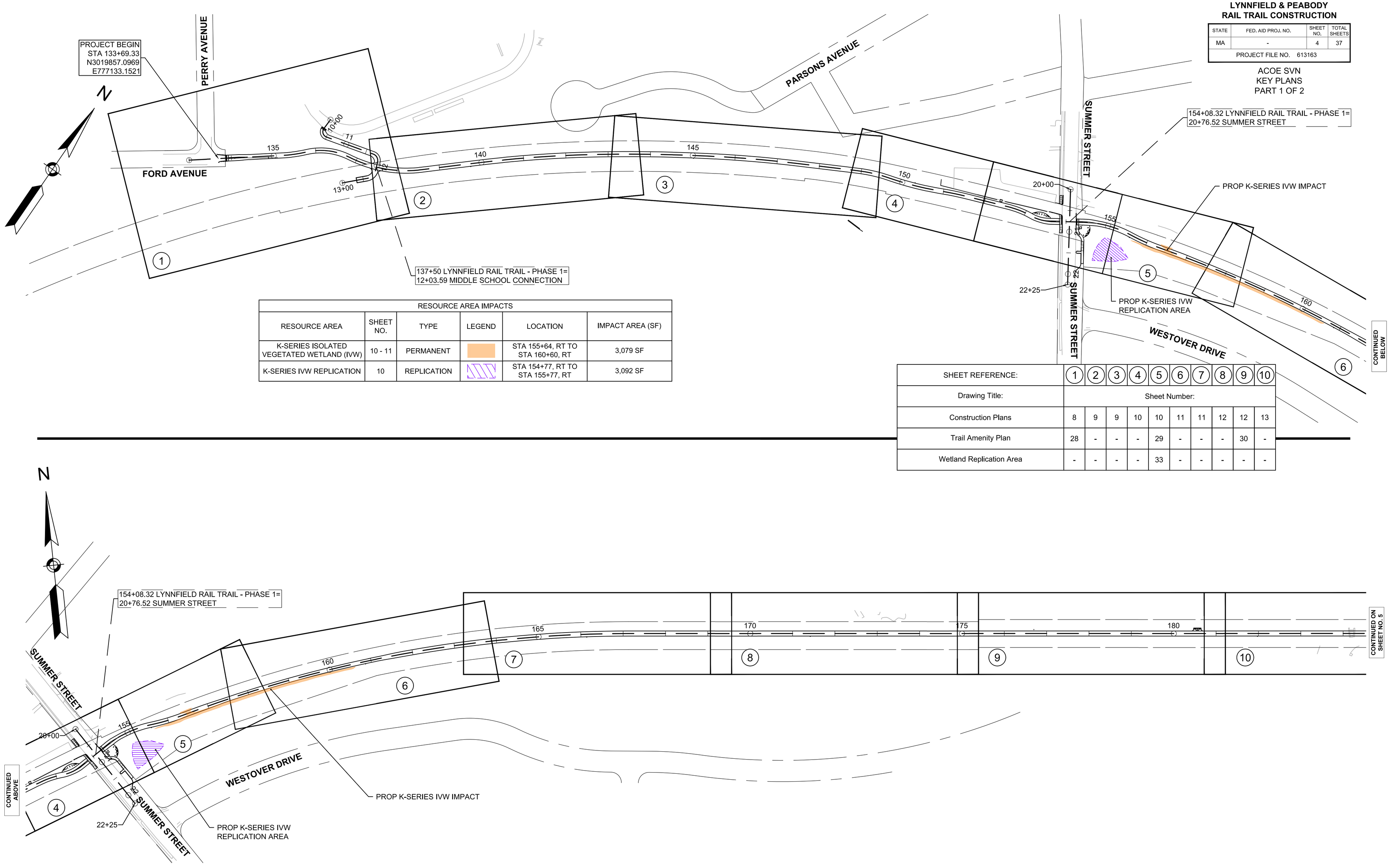
ACOE SVN
GENERAL NOTES

613163_HD(TITLE)_SVN.DWG Plotted on 17-Apr-2025 12:13 PM
Proposal No. 613163-135786
A00830 -47

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	37
PROJECT FILE NO. 613163			

ACOE SVN
KEY PLANS
PART 1 OF 2



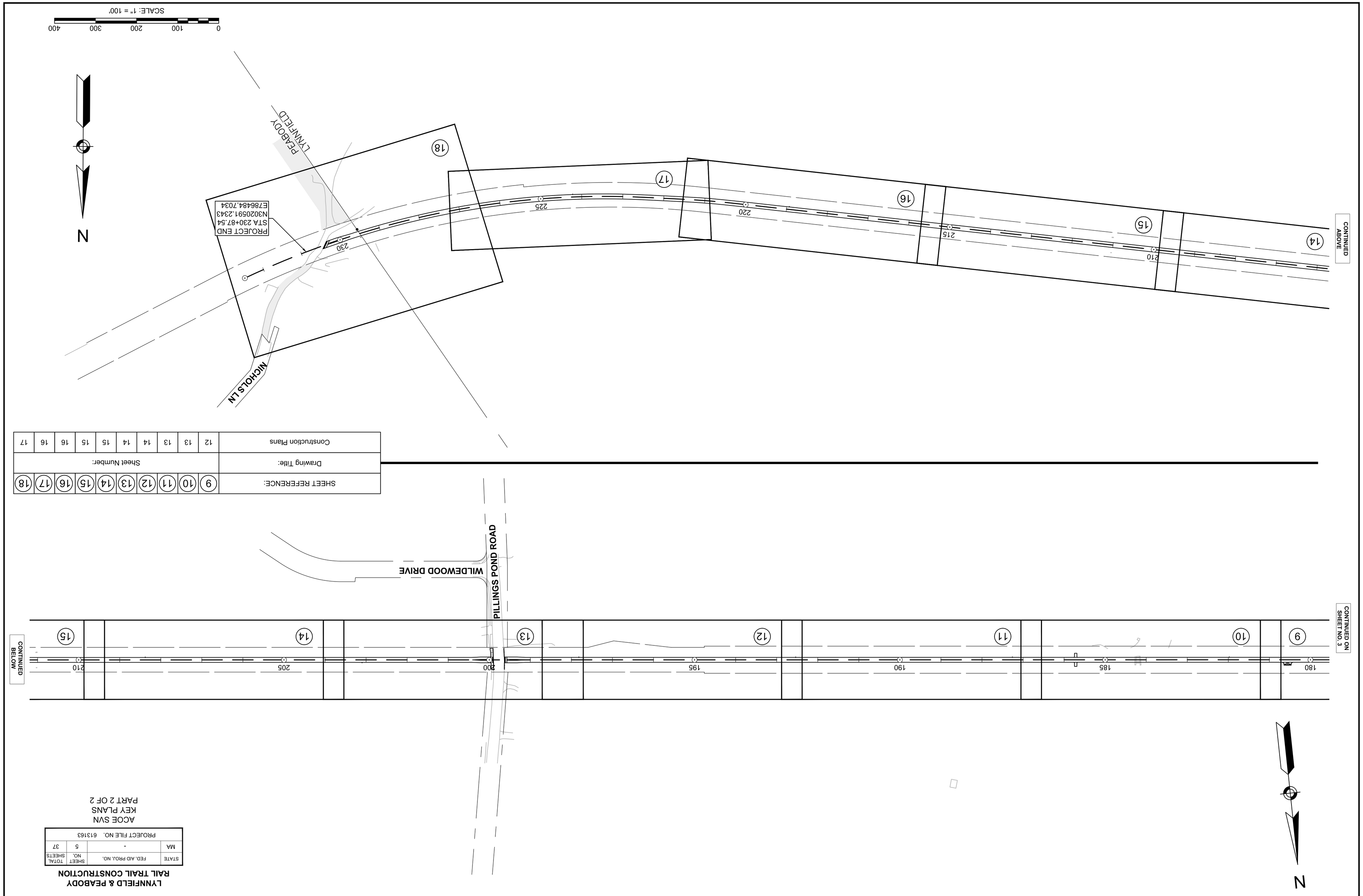
RESOURCE AREA IMPACTS					
RESOURCE AREA	SHEET NO.	TYPE	LEGEND	LOCATION	IMPACT AREA (SF)
K-SERIES ISOLATED VEGETATED WETLAND (IVW)	10 - 11	PERMANENT		STA 155+64, RT TO STA 160+60, RT	3,079 SF
K-SERIES IVW REPLICATION	10	REPLICATION		STA 154+77, RT TO STA 155+77, RT	3,092 SF

SHEET REFERENCE:	1	2	3	4	5	6	7	8	9	10
Drawing Title:	Sheet Number:									
Construction Plans	8	9	9	10	10	11	11	12	12	13
Trail Amenity Plan	28	-	-	-	29	-	-	-	30	-
Wetland Replication Area	-	-	-	-	33	-	-	-	-	-

0 100 200 300 400
SCALE: 1" = 100'

613163_HDI\KEY PLAN_SVN.DWG Plotted on 17-Apr-2025 12:22 PM
Proposal No. 613163-135786
A00830 -48

Proposal No. 613163-135786



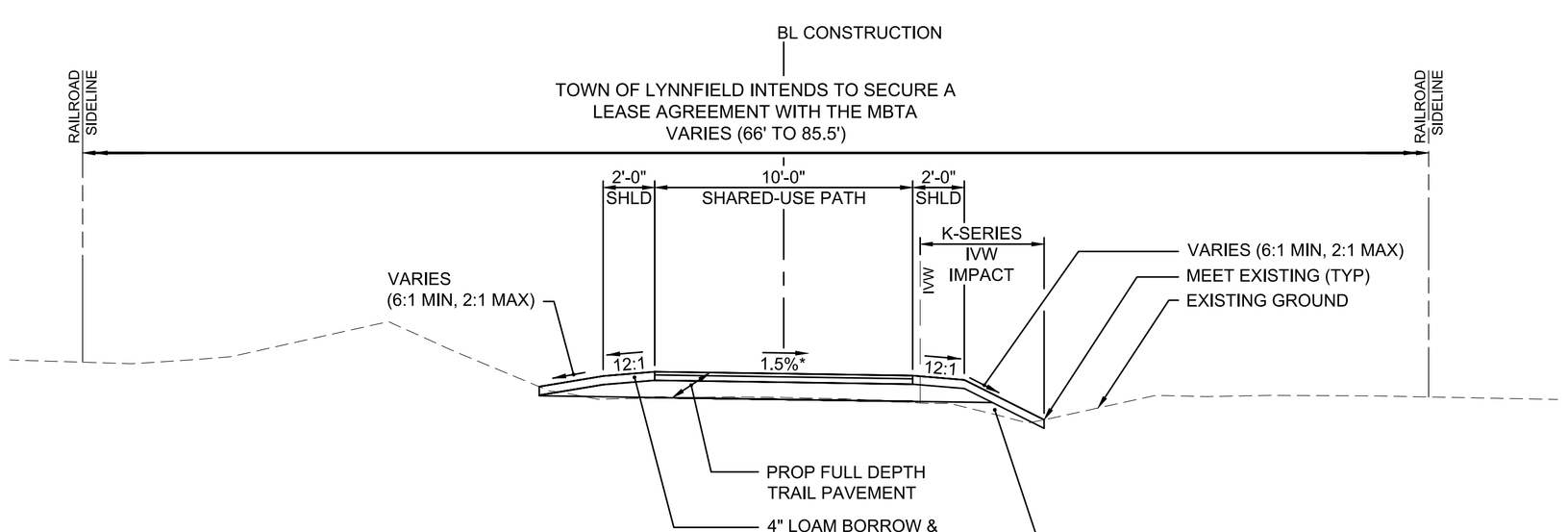
SHEET REFERENCE:	9	10	11	12	13	14	15	16	17	18
Drawing Title:	Sheet Number:									
Construction Plans	12	13	13	14	14	15	15	16	16	17

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	37
PROJECT FILE NO. 613163			

ACOE SVN
KEY PLANS
PART 2 OF 2

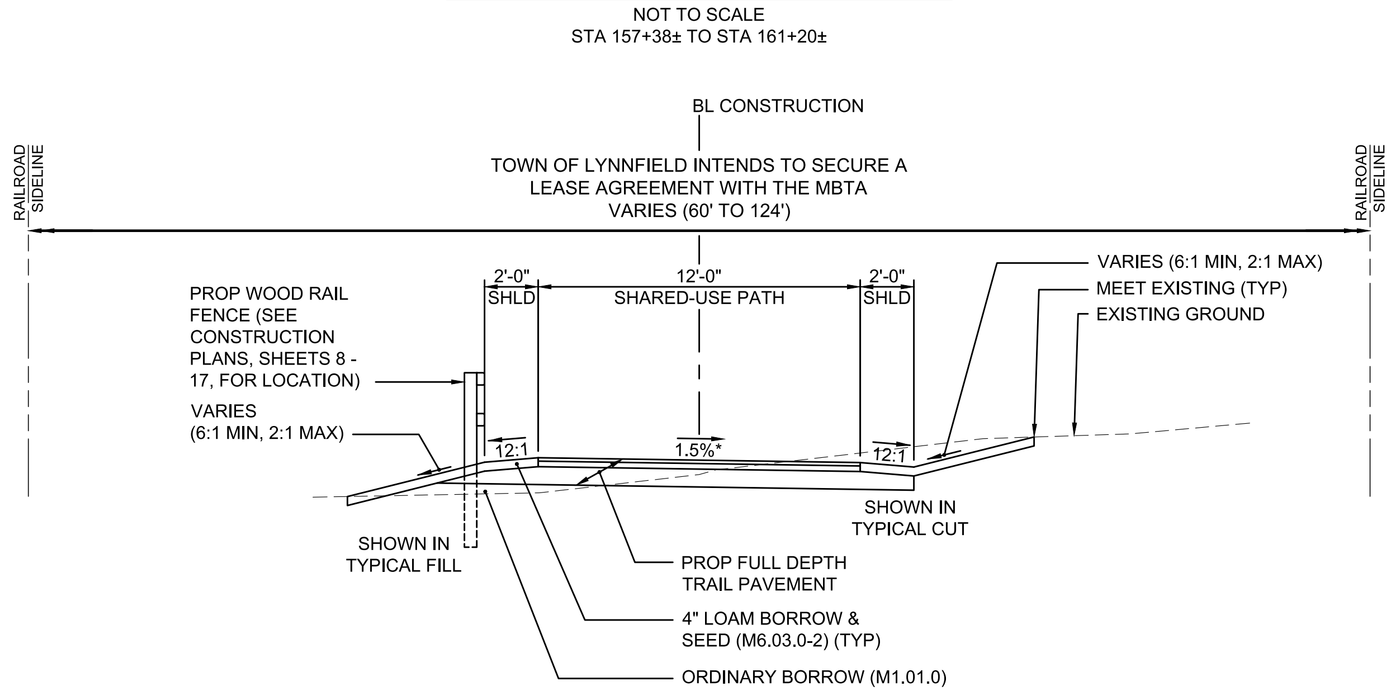
LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

613163_HDKEY PLAN1_SVN.DWG Plotted on 17-Apr-2025 12:23 PM



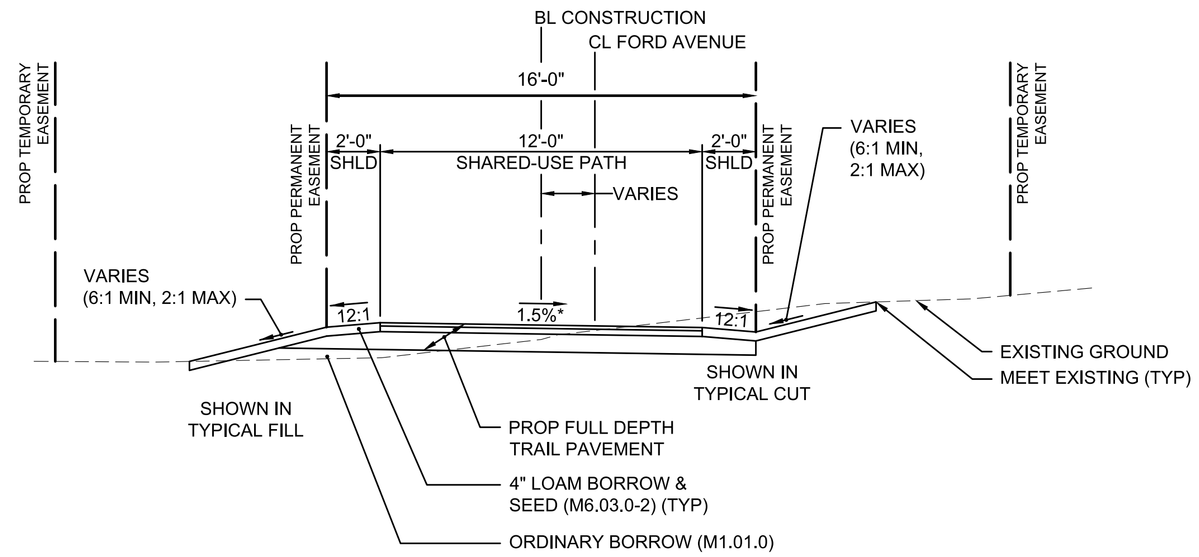
TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 157+38± TO STA 161+20±



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 137+25± (RR CORRIDOR) TO STA 153+85± (SUMMER ST)
STA 154+24± (SUMMER ST) TO STA 157+38±
STA 161+20± TO STA 182+50±



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 133+87± (FORD AVE) TO STA 137+25± (RR CORRIDOR)

* - TOLERANCE FOR CONSTRUCTION ±0.5% (TYP)

PAVEMENT NOTES

PROPOSED FULL DEPTH TRAIL PAVEMENT SECTIONS

SURFACE: 1-1/2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5)

INTERMEDIATE: 2-1/2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH ROADWAY PAVEMENT SECTIONS (SUMMER STREET PARKING AREA)

SURFACE: 2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)

INTERMEDIATE: 2-1/2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)

BASE: 4" SUPERPAVE BASE COURSE 37.5 (SBC-37.5)
4" DENSE GRADED CRUSHED STONE FOR SUBBASE
8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH STABILIZED STONEDUST SECTIONS

SURFACE: 4" STABILIZED STONEDUST

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH CEMENT CONCRETE SIDEWALK SECTIONS

SURFACE: 4" CEMENT CONCRETE
(4,000 PSI, 3/4", 610 LBS. AIR ENTRAINED)

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH CEMENT CONCRETE PEDESTRIAN CURB RAMP SECTIONS
PROPOSED FULL DEPTH CEMENT CONCRETE DRIVEWAY SECTIONS

SURFACE: 6" CEMENT CONCRETE
(4,000 PSI, 3/4", 610 LBS. AIR ENTRAINED)

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH CURB SETTING PAVEMENT SECTIONS

SEE METHOD OF SETTING GRANITE CURB
(AGAINST EXISTING PAVEMENT)

SURFACE: 1-1/2" HOT MIX ASPHALT FOR PATCHING

INTERMEDIATE: 3" HOT MIX ASPHALT FOR PATCHING

BASE: 7.5"± CEMENT CONCRETE
6" (MIN) GRAVEL BORROW, TYPE b

TACK COAT SHALL BE APPLIED BETWEEN ALL PAVEMENT COURSES IN ACCORDANCE WITH SUBSECTION 450.43G2 AND NOTES BELOW.

TACK COAT NOTE:
ASPHALT EMULSION FOR TACK COAT SHALL BE GRADE RS-1H, PER THE SPECIFICATIONS. TACK COAT SHALL BE SPRAY APPLIED AT THE RATE OF:

- 0.06 TO 0.08 GAL/SY OVER NEW HMA SURFACES, NOT OPENED TO TRAFFIC
- 0.06 TO 0.08 GAL/SY OVER EXISTING TIGHT SMOOTH PAVEMENT
- 0.07 TO 0.09 GAL/SY OVER MILLED SURFACES
- 0.06 TO 0.09 GAL/SY OVER NEW HMA PATCHES

ANCILLARY WORK NOTE:
PREPARATION OF UNDERLYING SURFACE, ASPHALT EMULSION FOR TACK COAT, HMA FOR PATCHING, AND HMA JOINT SEALANT SHALL BE IN ACCORDANCE WITH SECTION 450.

THE EMBANKMENT SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES SECTION 100 EARTHWORK.

WOOD RAIL FENCE NOTE:
REFERENCE CONSTRUCTION PLANS (SHEETS 8 - 17) FOR LOCATIONS OF WOOD RAIL FENCE.

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	37
PROJECT FILE NO. 613163			

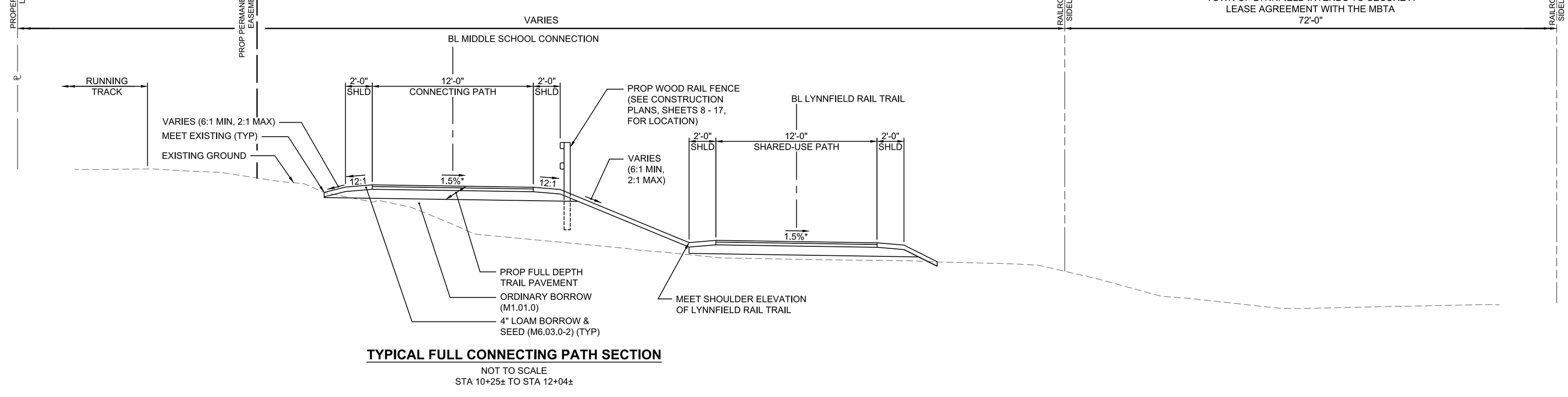
ACOE SVN
TYPICAL SECTIONS
PART 1 OF 2

613163_HD(TYPICAL SECTIONS)_SVN.DWG Plotted on 17-Apr-2025 12:26 PM
Proposal No. 613163-135786
A00830 50

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

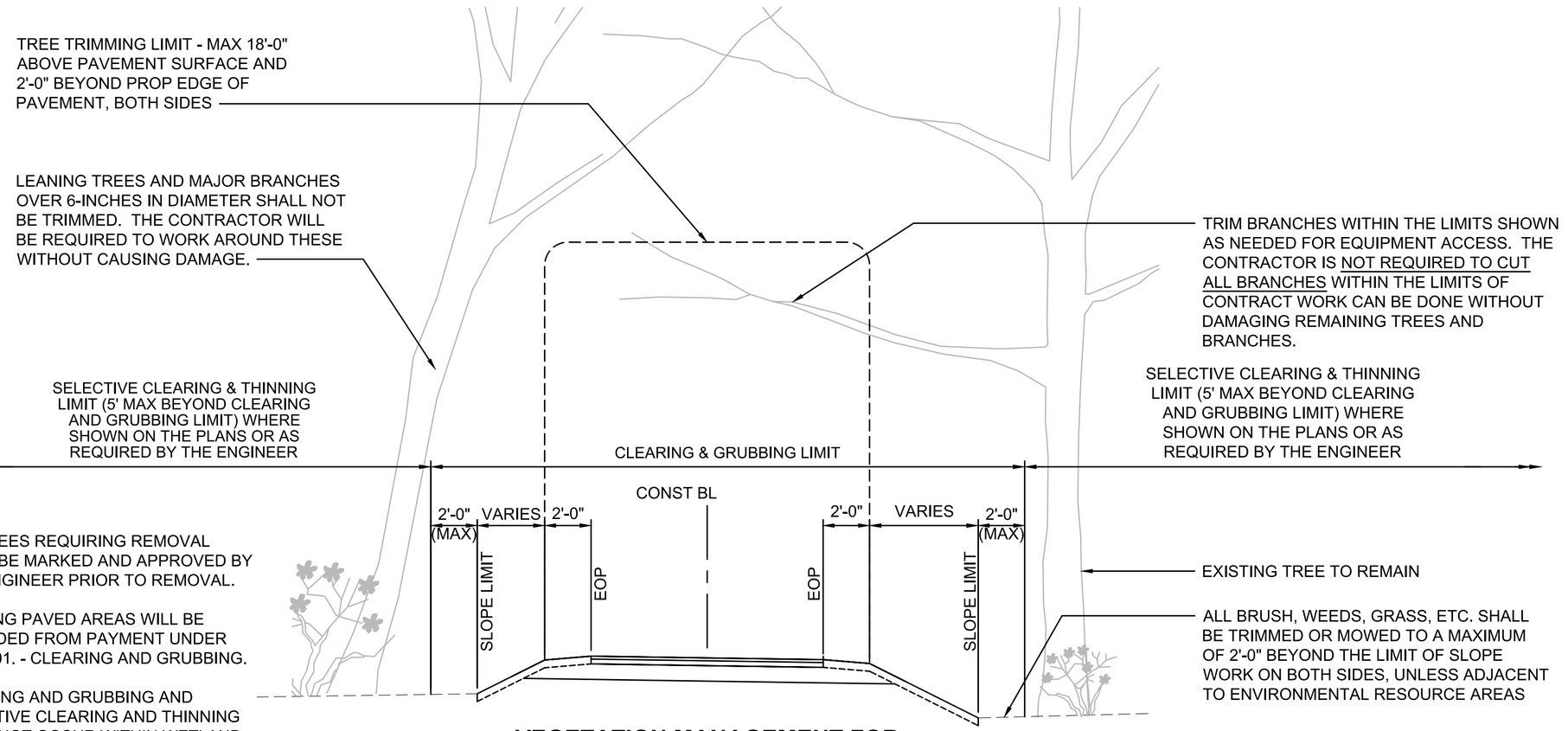
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	37
PROJECT FILE NO. 613163			

ACOE SVN
TYPICAL SECTIONS
PART 2 OF 2



TYPICAL FULL CONNECTING PATH SECTION

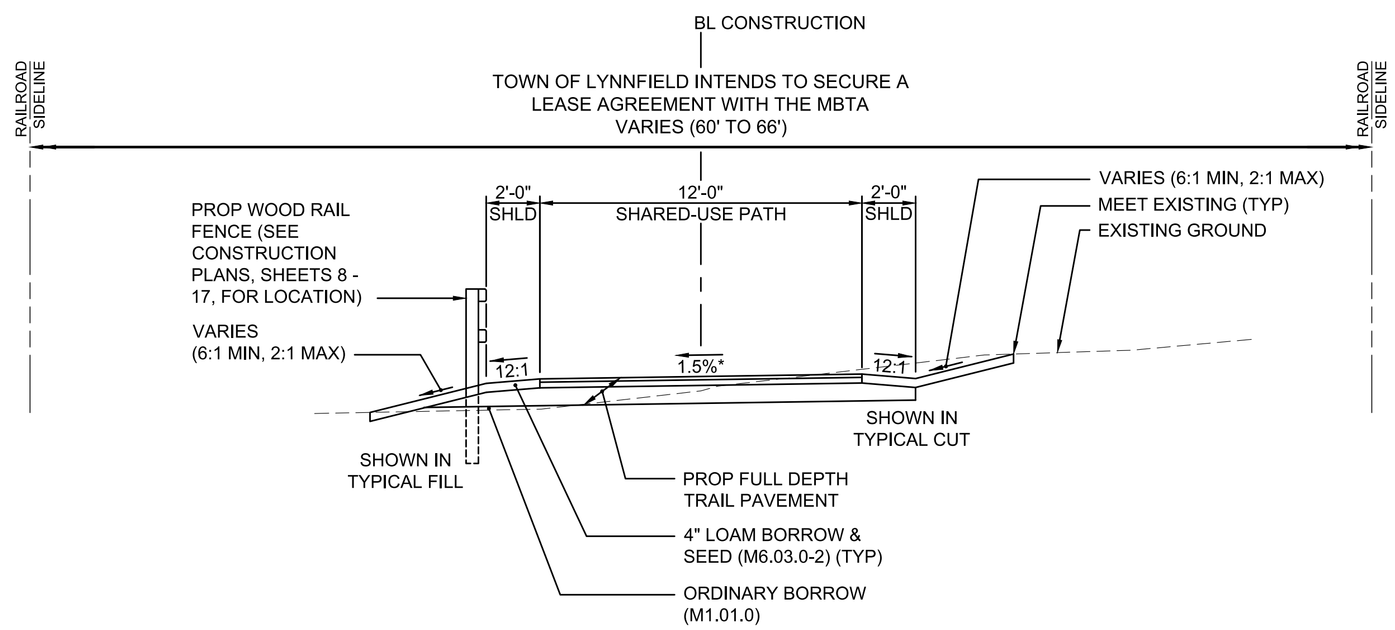
NOT TO SCALE
STA 10+25± TO STA 12+04±



NOTES:
1. ALL TREES REQUIRING REMOVAL SHALL BE MARKED AND APPROVED BY THE ENGINEER PRIOR TO REMOVAL.
2. EXISTING PAVED AREAS WILL BE EXCLUDED FROM PAYMENT UNDER ITEM 101. - CLEARING AND GRUBBING.
3. CLEARING AND GRUBBING AND SELECTIVE CLEARING AND THINNING SHALL NOT OCCUR WITHIN WETLAND RESOURCE AREAS.

VEGETATION MANAGEMENT FOR CONSTRUCTION ACCESS

NOT TO SCALE



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 182+50± TO STA 199+57± (PILLINGS POND RD)
STA 199+96± (PILLINGS POND RD) TO STA 230+30± (NICHOLS LN)

*** - TOLERANCE FOR CONSTRUCTION ±0.5% (TYP)**

613163_HD(TYPICAL SECTIONS)_SVN.DWG Plotted on 17-Apr-2025 12:27 PM
Proposal No. 613163-135786
A00830 - 51

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 1 OF 10

613163_HD(CONST PLANS)_SVN.DWG Plotted on 17-Apr-2025 12:30 PM

Proposal No. 613163-135786

A00830 - 52

PERRY AVENUE (PUBLIC - 40' WIDE)

FORD AVENUE (PUBLIC - 40' WIDE)

FORD AVENUE (UNACCEPTED - 40' WIDE)

1953 TOWN LAYOUT

N/F JAMES C. DAVIE BK/PG 28898/575 85 PERRY AVENUE MAP 28 PARCEL 2857

N/F DEBRA LACONTE BK/PG 13696/9 86 PERRY AVENUE MAP 28 PARCEL 2861 TOTAL PROPERTY AREA=15,300 SQ. FT.

NOTE: THE TOWN OF LYNNFIELD PLANS TO ACCEPT THE REMAINDER OF FORD AVENUE IN THEIR APRIL, 2025 TOWN MEETING.

TOWN OF LYNNFIELD MIDDLE SCHOOL BK/PG 3853/583 505 MAIN STREET MAP/LOT 28/1455

N/F CARD DANIEL M & CARD, TERI L BOTICELLI BK/PG 36370/584 3 FORD AVENUE MAP 28 PARCEL 2888

N/F MCQUEEN PHILIP J. MCQUEEN DEANNA M. BK/PG 27917/562 1 FORD AVENUE MAP 28 PARCEL 2831 TOTAL PROPERTY AREA=15,000 SQ. FT.

TOWN OF LYNNFIELD MIDDLE SCHOOL BK/PG 36442/302 PB/PL 447/91 (PARCEL A) 59 PARSONS AVENUE TOTAL PROPERTY AREA= 6,073 SQ. FT.

N/F MASSACHUSETTS BAY TRANSPORTATION AUTHORITY BK/PG 13117/113 (SOUTH MIDDLESEX REGISTRY OF DEEDS)

TOWN OF LYNNFIELD – LYNNFIELD CENTER BK/PG 24679/171 165 SUMMER STREET MAP/LOT 29/2414

PROJECT BEGIN
STA 133+69.33
N3019857.0969
E777133.1521

PROP SAWCUT LINE

RET EXIST GUY WIRE

R&D EXIST CURB

PROP GRAN CURB (TYPE VB)

PROP CEM CONC PCR

PROP 2' WIDE IMPRINT SYSTEM MEDIAN

PROP TRAFFIC SIGN (TYP)

REM EXIST SUMP PUMP OUTLET (BY OTHERS)

PROP CONST BL

APPROX SLOPE LIMITS

PROP 12' HMA TRAIL

PROP LOAM AND SEED (TYP)

PROP INDIVIDUAL TREE PROTECTION (TYP)

RET EXIST FENCE

R&S EXIST FENCE

PROP CLF END POST

PROP FULL DEPTH ROADWAY CONSTRUCTION

R&D EXIST CURB

RET EXIST UP

RET EXIST FENCE

PROP TEMPORARY TREE PROTECTION FENCE

R&D EXIST WELL, SHED & UP (WORK BO)

PROP INDIVIDUAL TREE PROTECTION (SEE NOTE 1)

PROP CLF END POST

PROP TEMPORARY TREE PROTECTION FENCE

PROP PERMANENT EASEMENT

RET EXIST HMA PATH

RET EXIST CLF

PROP CEM CONC PCR

PROP MIDDLE SCHOOL CONNECTION BL

PROP 8' HMA TRAIL

APPROX SLOPE LIMITS

PROP LOAM AND SEED (TYP)

PROP WOOD RAIL FENCE (STA 10+30± TO 11+54±)

PROP CLF END POST

R&D 105' EXIST FENCE

R&D 100' EXIST STONE WALL

PROP TEMPORARY TREE PROTECTION FENCE

PROP SEDIMENT CONTROL BARRIER

APPROX SLOPE LIMITS

PROP LOAM AND SEED (TYP)

BORDERING LAND SUBJECT TO FLOODING (EL 75.1) (TYP)

PROP 12' STONEDUST PATH

R&S EXIST RR TRACKS

MBTA ROW (VAL V.7.3/4)

MATCH LINE STA 137+75

CONTINUED ON SHEET NO. 9

RESOURCE AREA LEGEND:

WF#XXXX — VEGETATED WETLAND LINE

MAHW#XXXX — MAHW / OHW / BANK LINE

100-FT WETLAND BUFFER

100-YEAR FLOODPLAIN

K-SERIES IVW IMPACT

OTHER IVW IMPACT

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

0 20 50 100

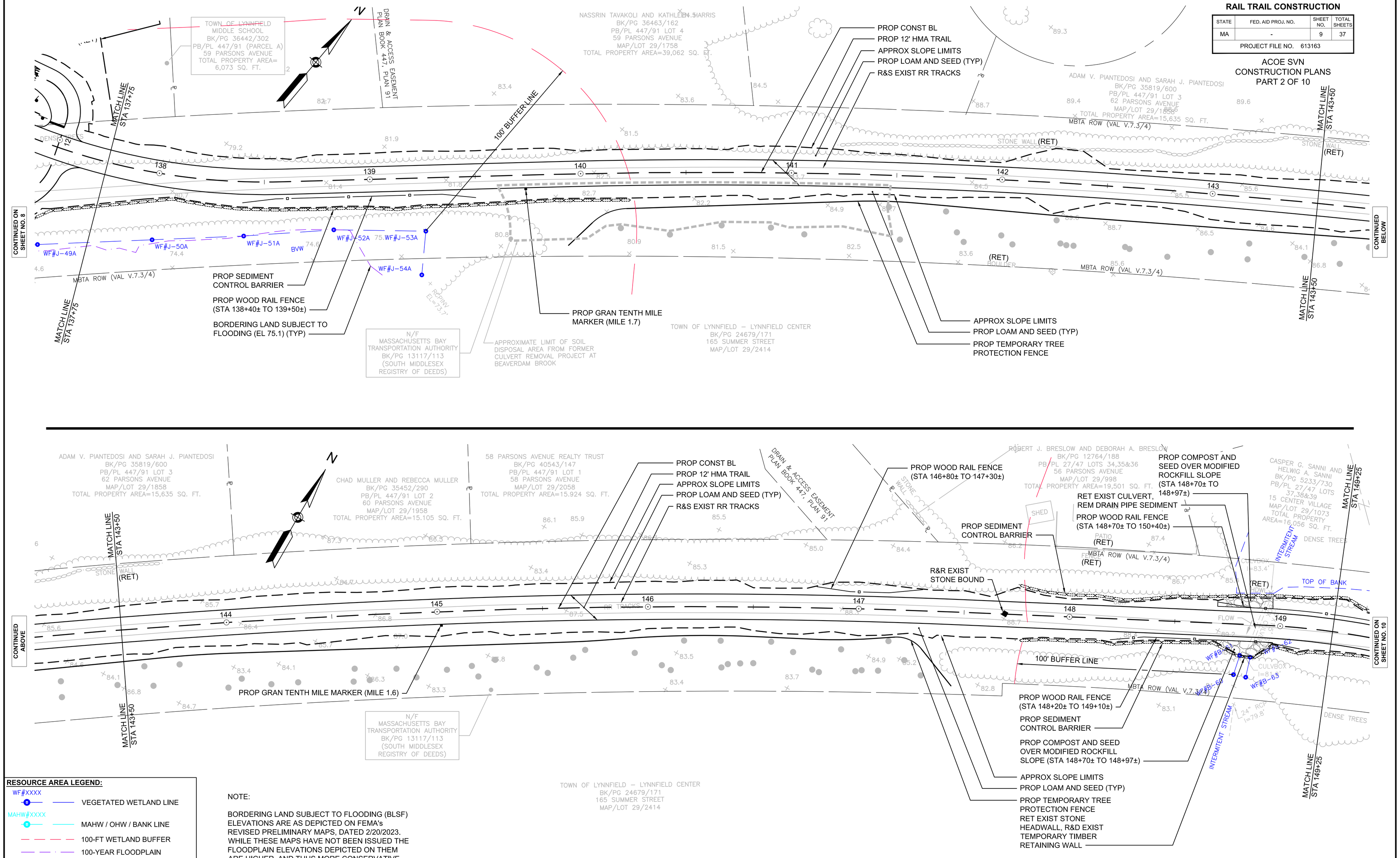
SCALE: 1" = 20'

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 2 OF 10

613163_HD(CONST PLANS)_SVN.DWG Plotted on 17-Apr-2025 12:34 PM
Proposal No. 613163-135786
A00830 - 53



RESOURCE AREA LEGEND:

- WF#XXXX — VEGETATED WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

0 20 50 100

SCALE: 1" = 20'

RESOURCE AREA IMPACTS					
RESOURCE AREA	SHEET NO.	TYPE	LEGEND	LOCATION	IMPACT AREA (SF)
K-SERIES ISOLATED VEGETATED WETLAND (IVW)	10 - 11	PERMANENT		STA 155+64, RT TO STA 160+60, RT	3,079 SF
K-SERIES IVW REPLICATION	10	REPLICATION		STA 154+77, RT TO STA 155+77, RT	3,092 SF

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	37
PROJECT FILE NO. 613163			

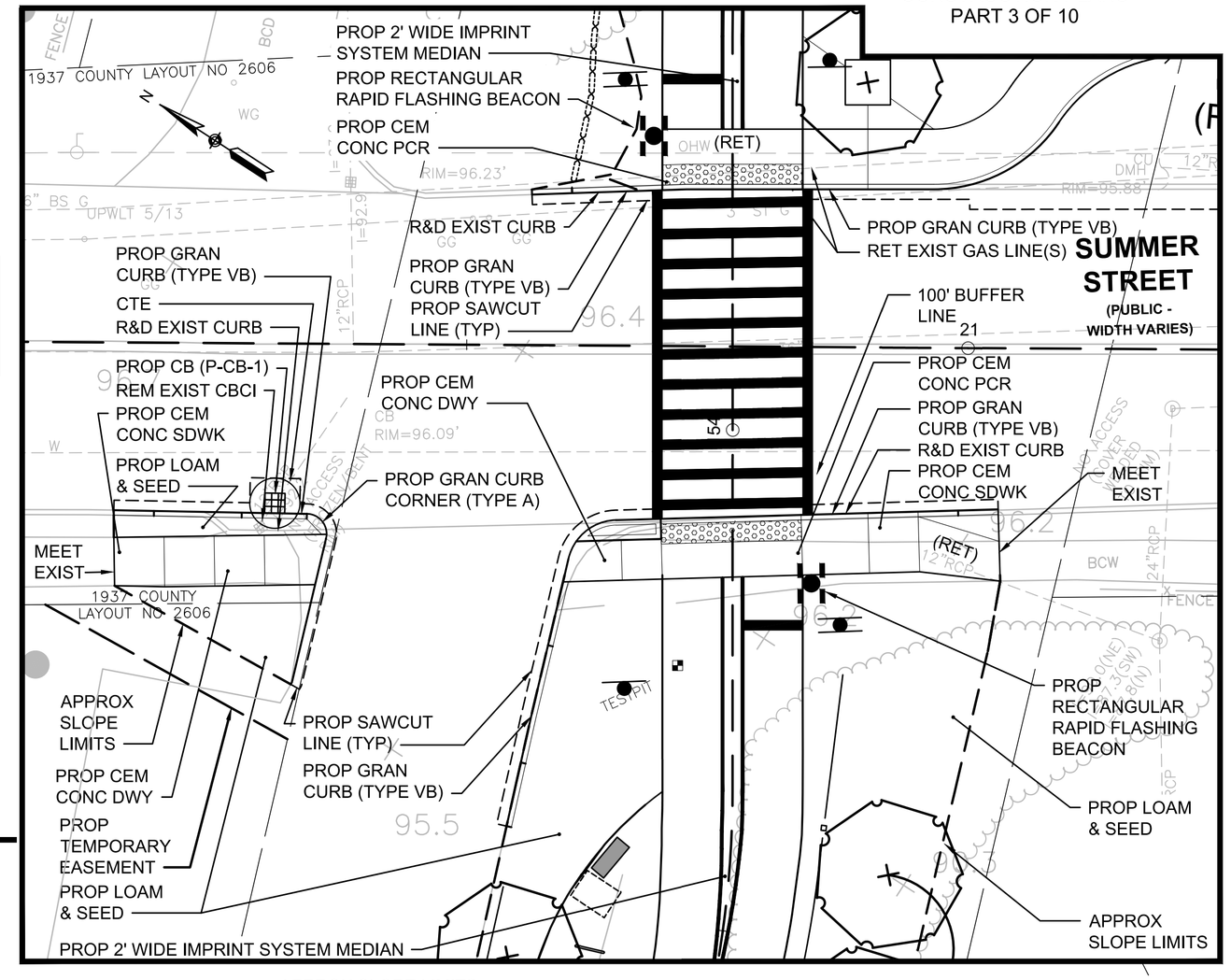
ACOE SVN
CONSTRUCTION PLANS
PART 3 OF 10

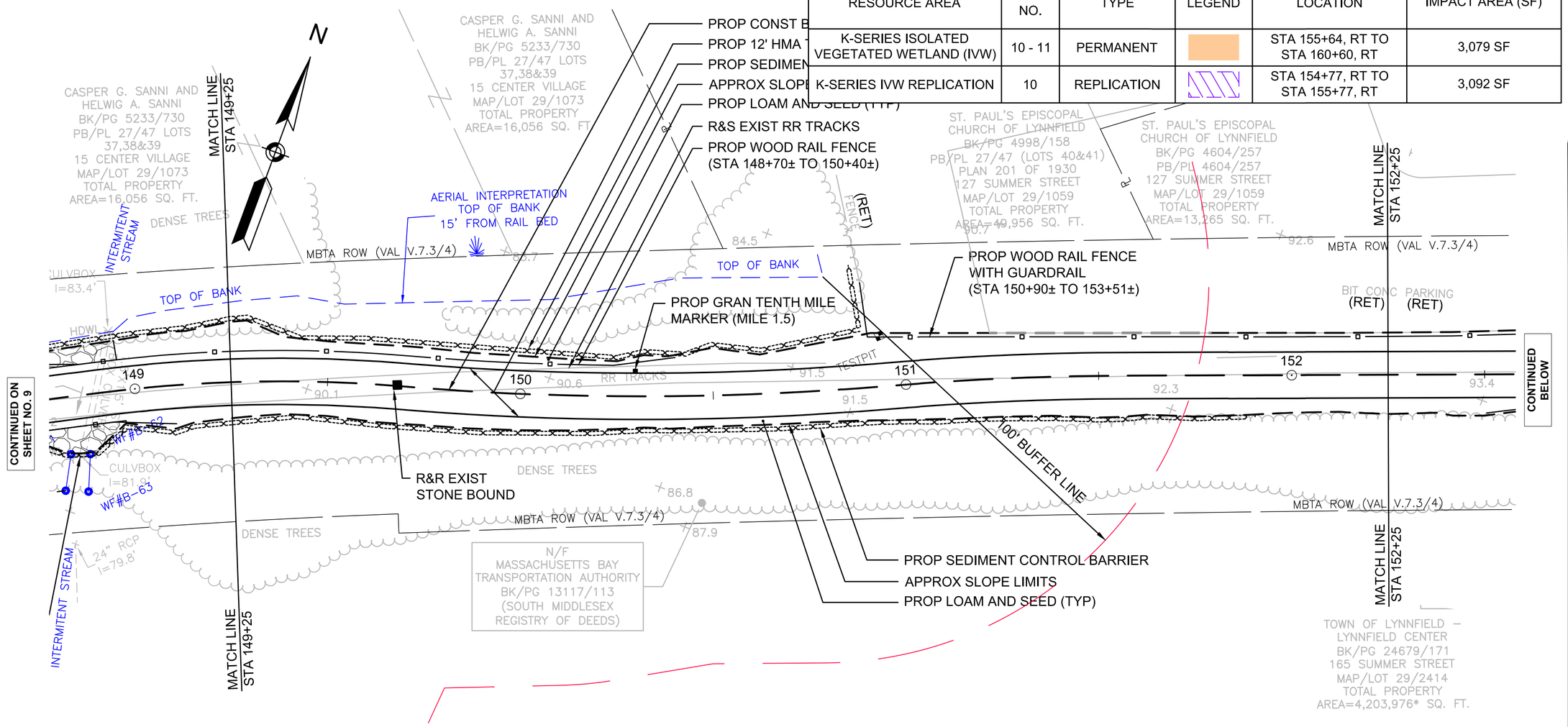
SUMMER STREET INSET

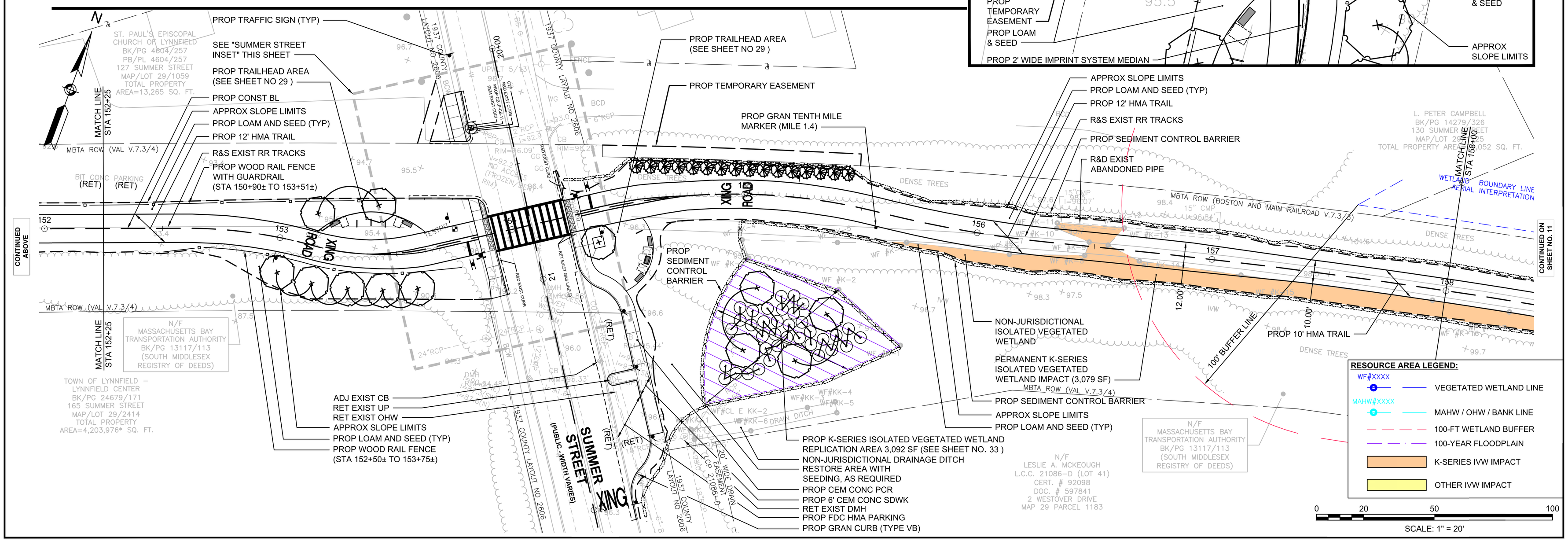
SCALE: 1" = 10'

0 10 20 30 40

SCALE: 1" = 10'







RESOURCE AREA LEGEND:

- WF#XXXX — VEGETATED WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

0 20 50 100

SCALE: 1" = 20'

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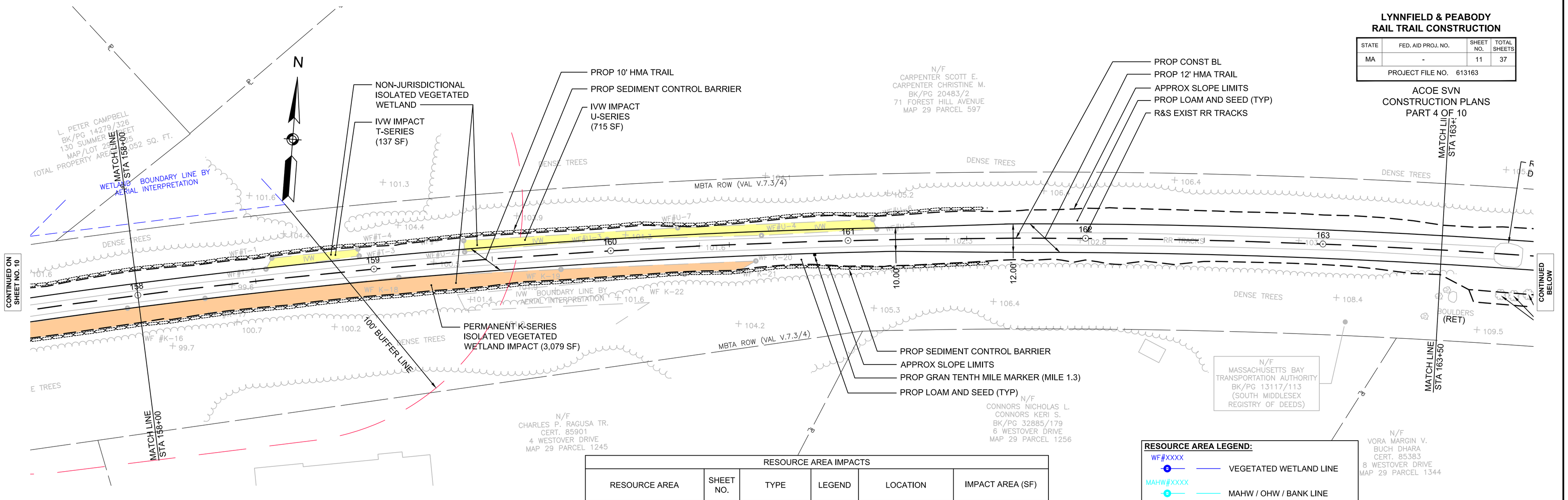
Proposal No. 613163-138766

AV0830-54

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 4 OF 10

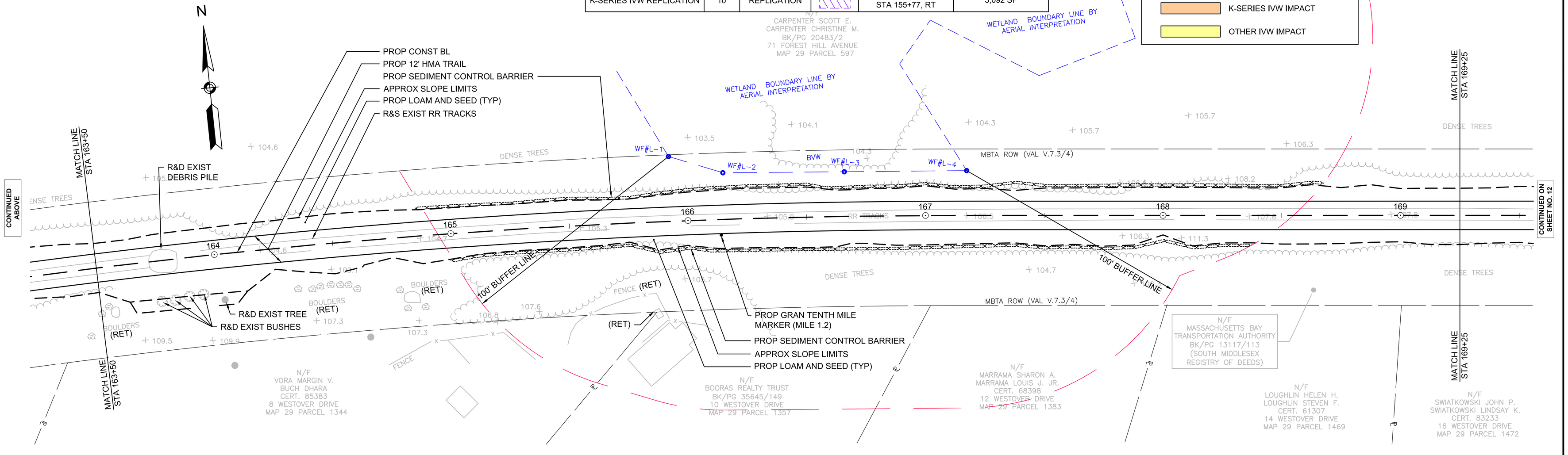


RESOURCE AREA LEGEND:

- WF#XXXX — VEGETATED WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

RESOURCE AREA IMPACTS

RESOURCE AREA	SHEET NO.	TYPE	LEGEND	LOCATION	IMPACT AREA (SF)
K-SERIES ISOLATED VEGETATED WETLAND (IVW)	10 - 11	PERMANENT		STA 155+64, RT TO STA 160+60, RT	3,079 SF
K-SERIES IVW REPLICATION	10	REPLICATION		STA 154+77, RT TO STA 155+77, RT	3,092 SF



0 20 50 100

SCALE: 1" = 20'

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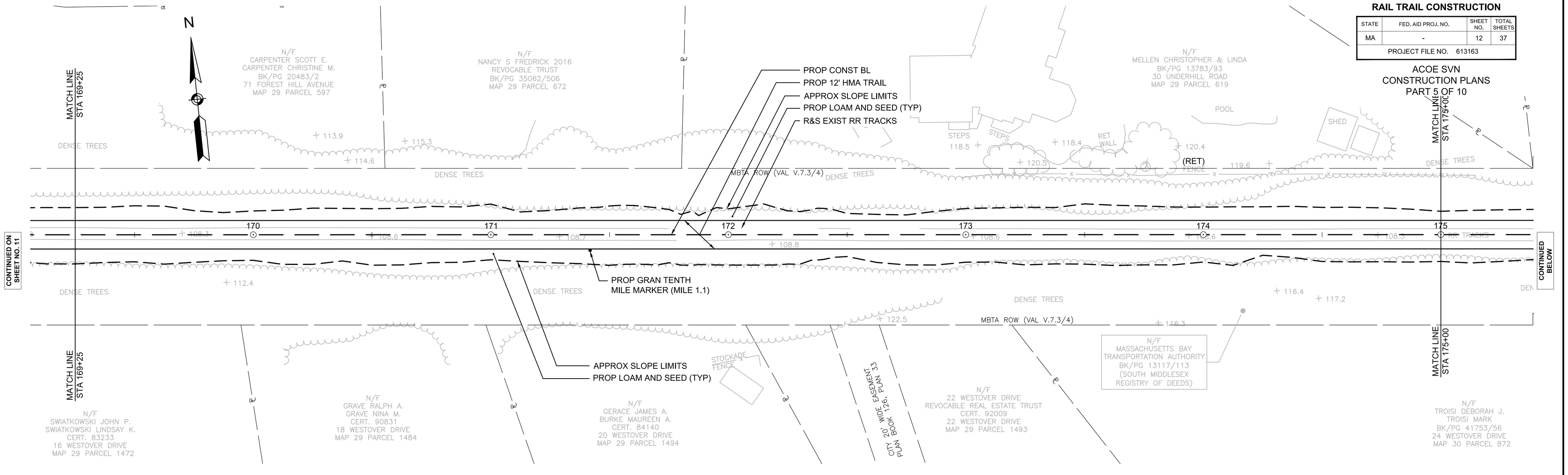
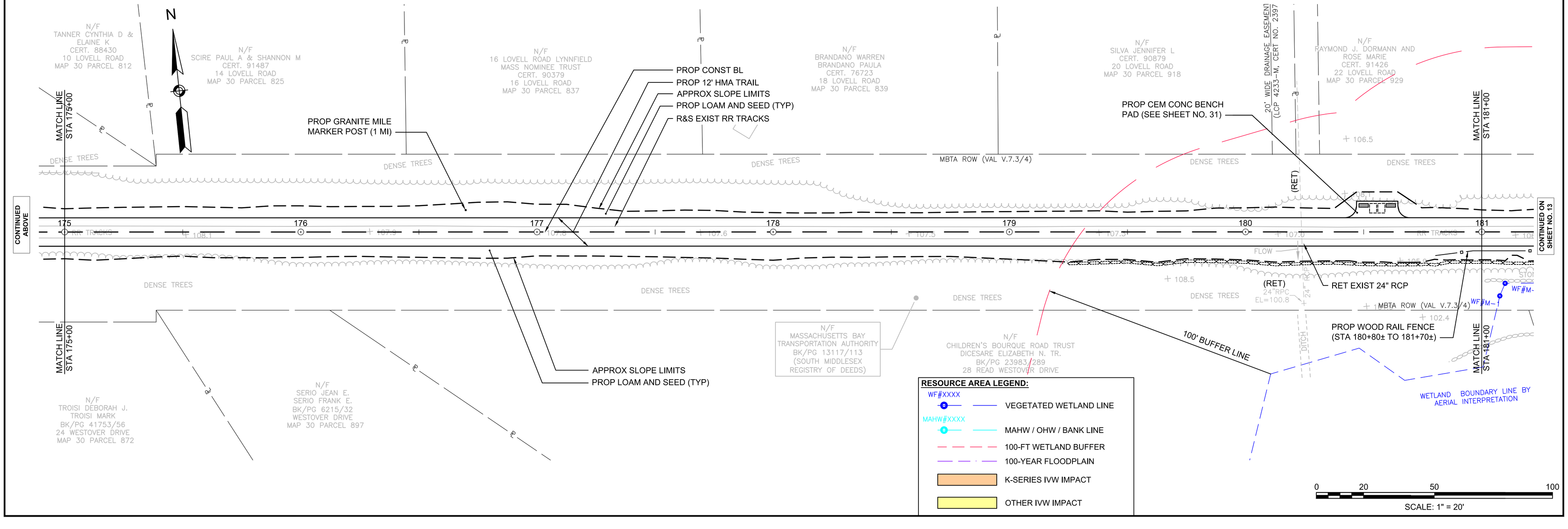
Proposal No. 613163-135786
A00830 - 55

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 1 OF 10





RESOURCE AREA LEGEND:

- WF#XXXX — VEGETATED WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

WETLAND BOUNDARY LINE BY AERIAL INTERPRETATION

0 20 50 100
SCALE: 1" = 20'

613163_HD(CONST PLANS)_SVN.DWG Plotted on 17-Apr-2025 12:45 PM

Proposal No. 613163-135786

A00830 - 56

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

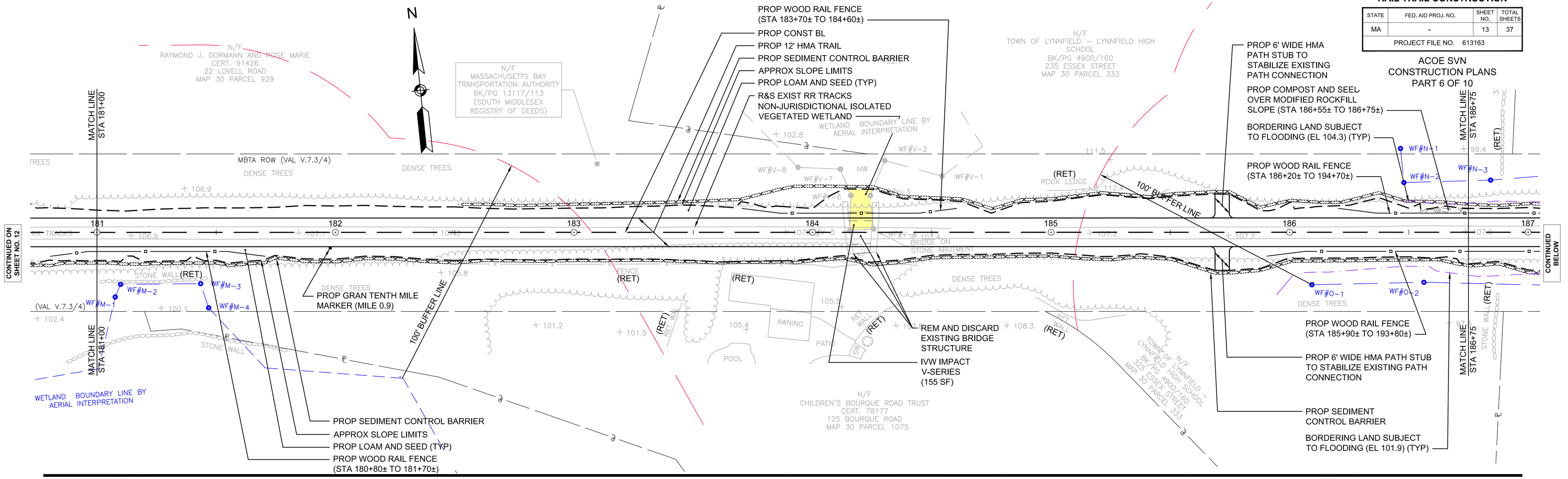
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 6 OF 10

613163_HD(CONST PLANS)_SVN.DWG Plotted on 18-Apr-2025 4:23 PM

Proposal No. 613163-138786

A00830 - 57



NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 7 OF 10

N

N/F
TOWN OF LYNNFIELD
BK/PG 5378/660
66 REAR BOURQUE ROAD
MAP 30 PARCEL 1165

MATCH LINE
STA 192+50

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
PROP SEDIMENT CONTROL BARRIER
PROP WOOD RAIL FENCE (STA 186+20± TO 194+70±)
WF#N-15
WF#N-16
WF#N-17
WF#N-18
WF#N-19
WF#N-20
DENSE TREES
7.6
98.5
99.7
106.7
110.4
112.8
MBTA ROW (VAL V.7.3/5)

N/F
TOWN OF LYNNFIELD
CONSERVATION COMM.
REAR BOURQUE ROAD
MAP 30 PARCEL 1257

PROP CONST BL
PROP 12' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS

N/F
YAN STANLEY K & SEOLKI
CERT. 94671
25 PILLINGS POND ROAD
MAP 30 PARCEL 1293

MATCH LINE
STA 198+00

193 194 195 196 197 198

107.8 108.1 108.4 108.7 109.1 109.5 110.1
108.5
RR TRACKS

CONTINUED ON SHEET NO. 13

CONTINUED BELOW

100' BUFFER LINE

PROP GRAN TENTH MILE MARKER (MILE 0.6)

WF#O-16
WF#O-17
9.0
102.2
103.2
PROP WOOD RAIL FENCE (STA 185+90± TO 193+80±)
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)

MATCH LINE
STA 192+50

PROP GRAN TENTH MILE MARKER (MILE 0.7)
BORDERING LAND SUBJECT TO FLOODING (EL 101.9) (TYP)

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F
BOURQUE ROAD R.T.
MARCHIONDA SHARON TR.
USO 646958
70 BOURQUE ROAD
MAP 30 PARCEL 1944

N/F
GEMMELL IAN JAMES &
MELISSA ANNE
CERT. 87925
66 BOURQUE ROAD
MAP 30 PARCEL 1829

N/F
LOWELL SCOTT
LOWELL MELANIE R.
CERT. 89292
68 BOURQUE ROAD
MAP 30 PARCEL 1862

N/F
MOREIRA BRIAN J & KAREN L
CERT. 89296
72 BOURQUE ROAD
MAP 30 PARCEL 1951

N/F
SHEA JOHN M.
BK/PG 15073/562
27 PILLINGS POND ROAD
MAP 30 PARCEL 1935

118.7

RESOURCE AREA LEGEND:

- WF#XXXX — VEGETATED WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

N

PROP CONST BL
PROP 12' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS

N/F
YAN STANLEY K & SEOLKI
CERT. 94671
25 PILLINGS POND ROAD
MAP 30 PARCEL 1293

MATCH LINE
STA 198+00

PROP GRAN CURB (TYPE VB) (TYP)
PROP CEM CONC PCR
PROP 2' WIDE IMPRINT SYSTEM MEDIAN
DENSE TREES
110.2
110.8
111.6
BCD

1974 TOWN LAYOUT (LCP 1885-B) (ARTICLE 38)

RET EXIST OHW
MEET EXIST
PROP CEM CONC SDWK
PROP CEM CONC PCR
PROP 2' WIDE IMPRINT SYSTEM MEDIAN

N/F
LYNCH MARGARET A.
CERT. 95633
1 MESERVEY LANE
MAP 30 PARCEL 1381

PROP 12' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS

N/F
CHANG GREGORY & FRIEDICH LESLIE
CERT. 94692
2 MESERVEY LANE
MAP 30 PARCEL 1361

PROP GRAN TENTH MILE MARKER (MILE 0.5)

N/F
J-S REALTY TRUST
CERT. 95309
3 MESERVEY LANE
MAP 30 PARCEL 1339

MATCH LINE
STA 203+75

SHED
BOULDERS
(RET)
OPEN STORAGE
MBTA ROW (VAL V.7.3/5)

198 199 200 201 202 203 204

110.1 111.1 111.4 111.3 111.7
RR TRACKS

CONTINUED ABOVE

CONTINUED ON SHEET NO. 15

XING ROAD

PILLINGS POND ROAD
(PUBLIC WAY)

PROP SAWCUT LINE
R&D EXIST CURB
GUYPOLE
DENSE TREES

R&R EXIST STONE BOUND

MATCH LINE
STA 198+00

PROP TRAFFIC SIGN (TYP)
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)

1947 TOWN LAYOUT (ARTICLE 37)

R&D EXIST GUY POLE (PREVIOUSLY ABANDONED) (PAID UNDER ITEM 120.1)
RET EXIST WATER LINE
PROP CEM CONC SDWK
MEET EXIST

N/F
SHEA JOHN M.
BK/PG 15073/562
27 PILLINGS POND ROAD
MAP 30 PARCEL 1935

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F
DAVIS DANIEL B III & KIM NANCY
BK/PG 35267/493
28 PILLINGS POND ROAD
MAP 30 PARCEL 2026

N/F
MACNICHOL PATRICIA M.
MACNICHOL STEPHEN F.
BK/PG 14183/95
2 WILDEWOOD DRIVE
MAP 30 PARCEL 2118

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

0 20 50 100
SCALE: 1" = 20'

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Proposal No. 613163-135786
A00830 - 58

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 8 OF 10

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

N

PROP CONST BL
PROP 12' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS

N/F
J-S REALTY TRUST
CERT. 95309
3 MESERVEY LANE
MAP 30 PARCEL 1339

N/F
ROSBERG FAMILY IRREVOCABLE TRUST
ROSBERG JOSEPH B. JR. TR.
CERT. 86101
4 MESERVEY LANE
MAP 30 PARCEL 1458

N/F
TOWN OF LYNNFIELD
CERT. 67068
483 REAR ESSEX STREET
MAP 31 PARCEL 891

PROP SEDIMENT CONTROL BARRIER
PROP COMPOST AND SEED OVER MODIFIED ROCKFILL SLOPE (STA 209+00± TO 209+30±)
PROP WOOD RAIL FENCE (STA 207+50± TO 211+50±)
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

MATCH LINE STA 203+75
MATCH LINE STA 209+50
BOULDERS
DENSE TREES
100' BUFFER LINE
WF#P-1
WF#P-2
WF#P-3
WF#P-4
WF#
BVW
(RET)
204
205
206
207
208
209
R TRACKS
CONTINUED ON SHEET NO. 14
CONTINUED BELOW
STOCKADE FENCE
PROP WOOD RAIL FENCE (STA 207+50± TO 211+30±)
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
PROP GRAN TENTH MILE MARKER (MILE 0.4)
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
TOE OF SLOI
(NOT FLAGGE
AERIAL INTERPRE

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F
MACNICHOL PATRICIA M.
MACNICHOL STEPHEN F.
BK/PG 14183/95
2 WILDEWOOD DRIVE
MAP 30 PARCEL 2118

N/F
ROSATONE ANTONIO & MARIA
BK/PG 10735/294
4 WILDEWOOD DRIVE
MAP 30 PARCEL 2152

N/F
VACCARO LISA M.
VACCARO STEVEN C.
BK/PG 24778/289
6 WILDEWOOD DRIVE
MAP 30 PARCEL 2168

N/F
GUIGLIANO CHILDREN REALTY TR.
BK/PG 9659/275
1 GUIGLIANO TERRACE
MAP 31 PARCEL 1555

N

N/F
TOWN OF LYNNFIELD
CERT. 67068
483 REAR ESSEX STREET
MAP 31 PARCEL 891

ESSEX STREET CONSERVATION AREA

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
PROP WOOD RAIL FENCE (STA 207+50± TO 211+50±)
PROP CONST BL
PROP 12' HMA TRAIL
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS
PROP GRAN TENTH MILE MARKER (MILE 0.3)
RET EXIST CULVERT, REM DRAIN PIPE SEDIMENT

N/F
TOWN OF LYNNFIELD – CONSERVATION COMMISSION
REAR ESSEX STREET
MAP 31 PARCEL 992

MATCH LINE STA 209+50
MATCH LINE STA 215+50
BVW
WF#P-5
WF#P-6
WF#P-7
WF#P-8
WF#P-9
MBTA ROW (VAL V.7.3/5)
CULVERT EL=99.7
DENSE TREES
100' BUFFER LINE
210
211
212
213
214
215
CONTINUED ABOVE
CONTINUED ON SHEET NO. 16
FLOW
CULVERT EL=100.4
STONE WALL
CAZEBO
POOL
PATIO
TOE OF SLOPE (NOT FLAGGED) AERIAL INTERPRETATION
RET EXIST CULVERT, REM DRAIN PIPE SEDIMENT
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
PROP WOOD RAIL FENCE (STA 207+50± TO 211+30±)
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
PROP WOOD RAIL FENCE (STA 213+90± TO 214+50±)
SPACE FENCE POSTS TO AVOID CULVERT
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
WF#R-1
WF#R-2
WF#R-3
WF#R-4
WF#R-5
WF#R-6
WF#R-7
WF#R-8
WF#R-9
WF#R-11
WF#Q-1
WF#Q-1A
WF#Q-2
WF#Q-3
WF#Q-4
WF#Q-5
WF#Q-6
RCP/W EL=103.5
STONE WALL

N/F
THE 4 NORTHWAY REALTY TRUST
HAN ILKYO TR.
BK/PG 32675/387
4 NORTHWAY
MAP 31 PARCEL 1685

N/F
DELEO ANTHONY C. & ALANA N
BK/PG 30658/187
5 NORTHWAY
MAP 31 PARCEL 1665

RESOURCE AREA LEGEND:

- WF#XXXX — VEGETATED WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

0 20 50 100
SCALE: 1" = 20'

613163_HD(CONST PLANS)_SVN.DWG Plotted on 17-Apr-2025 12:52 PM

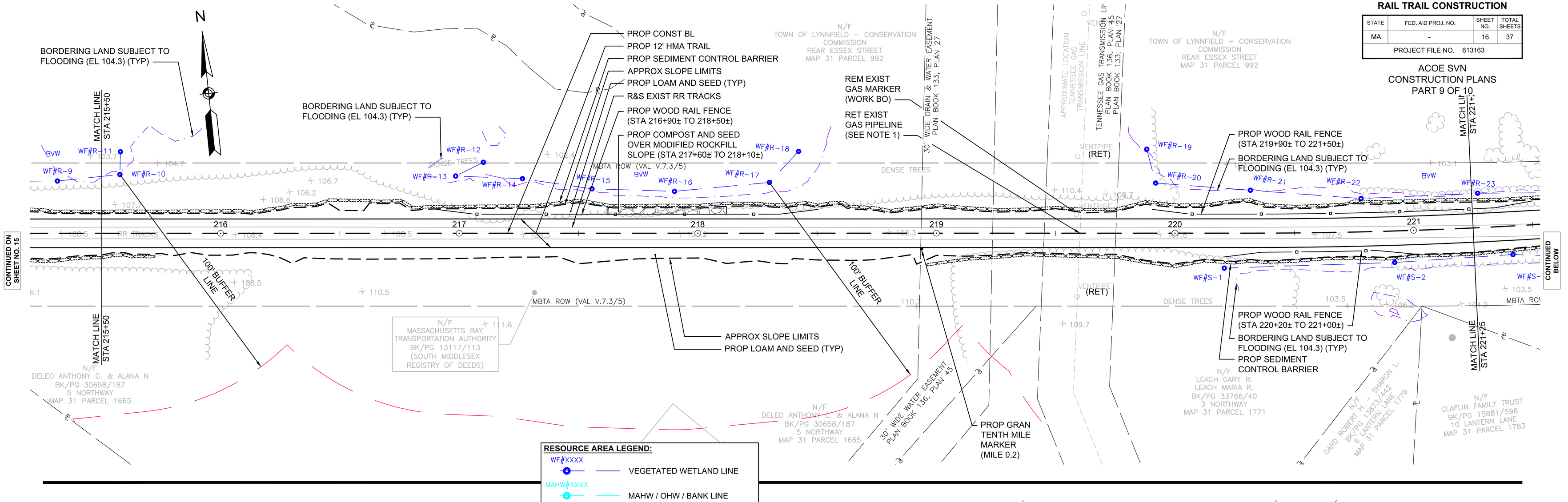
Proposal No. 613163-138786

A00830 59

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 9 OF 10



613163_HD(CONST PLANS)_SVN.DWG Plotted on 17-Apr-2025 12:56 PM

Proposal No. 613163-135786

A00830 - 60

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 10 OF 10

N

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

CITY OF PEABODY
TOWN OF LYNNFIELD

N/F
WEISSLEDER R & PETROPOULOS A
BK/PG 17082/29
11 NICHOLS LN
MAP/LOT 055-028A

N/F
DIAS MESSIAS & LUCINDA
BK/PG 35562/134
4 JAYNE CIR
MAP/LOT 055-034

N/F
CUILLA GREGORY
BK/PG 36152/324
5 NICHOLS LN
MAP/LOT 055-030

NICHOLS LANE IS "MAINTAINED AND USED AS A PUBLIC WAY IN THE CITY OF PEABODY" PER THE PEABODY CITY CLERK, BOOK 13130, PAGE 59, DATED NOVEMBER 1, 1994 AND PER LETTER DATED JANUARY 23, 2025 FROM THE CITY OF PEABODY CITY CLERK: NICHOLS LANE IN THE CITY OF PEABODY IS AN ACCEPTED PUBLIC WAY AND IS LISTED AS SUCH ON THE LIST OF ACCEPTED PUBLIC WAYS DATED JANUARY 12, 1995.

N/F
CITY OF PEABODY
BK/PG /00000
0 NICHOLS LANE
MAP/LOT 055-029
TOTAL PROPERTY AREA=13,503* SQ. FT.

NOTE:
PER DEED DESCRIPTION FOR JOHN A. RUSSO (BOOK 17805, PAGE 108) POINT OF BEGINNING IS AT THE SOUTHEAST CORNER OF THE CEMETERY AND RUNS NORTHEASTERLY BY THE STONE WALL OF THE CEMETERY BEFORE TURNING AND RUNNING SOUTHEASTERLY "ACROSS A LANE BY A STONE WALL" TO THE NORTHERLY LINE OF THE RAILROAD.

NICHOLS LANE EXTENSION
(PRIVATE)

NICHOLS LANE
(PUBLIC)

NICHOLS LANE
(TRAVELED WAY - FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT)

N/F
WEISSLEDER RALPH
PETROPOULOS ANNA
BK/PG 17082/29
OFF ESSEX STREET
MAP 31 PARCEL 1832

N/F
PAUL TRUDEAU
BK/PG 34998/179
9 NICHOLS LANE
MAP/LOT 055-028
TOTAL PROPERTY AREA=20,473* SQ. FT.

N/F
TRUDEAU PAUL
BK/PG 34998/179
OFF ESSEX STREET
MAP 31 PARCEL 1836

N/F
JOHN A. RUSSO
BK/PG 17805/108
SEE NOTE
6 NICHOLS LANE
MAP/LOT 055-027
TOTAL PROPERTY AREA=13,068* SQ. FT.

PROP GRANITE MILE MARKER POST (0 MI)
RET EXIST OHW
PROP TRAFFIC SIGN (TYP)
PROP CEM CONC PCR
PROP 2' WIDE IMPRINT SYSTEM MEDIAN
PROP CONST BL
PROP 12' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED
R&S EXIST RR TRACKS

20' WIDE PERMANENT UTILITY EASEMENT BOOK 6352, PAGE 128 PLAN BOOK 143, PLAN 46

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)

MATCH LINE STA 227+00

CONTINUED ON SHEET NO. 16

ROAD XING

PROJECT END
STA 230+87.54
N3020591.2343
E786484.7034

MBTA ROW (VAL V.7.3/5)

APPROXIMATE 100-FT BUFFER ZONE

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)
(SEE ALTERNATIVE TRANSPORTATION CORRIDOR LEASE AGREEMENT BY AND BETWEEN MASSACHUSETTS BAY TRANSPORTATION AUTHORITY AND THE CITY OF PEABODY, DATED: NOVEMBER 2011)

WINONA POND

APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
PROP TREATMENT AT EXISTING RAILROAD MILE MARKER (SEE DETAIL, SHEET 31)

100' BUFFER LINE

NICHOLS LANE IS "MAINTAINED AND USED AS A PUBLIC WAY IN THE CITY OF PEABODY" PER THE PEABODY CITY CLERK BOOK 13130, PAGE 59

APPROXIMATE BANK BOUNDARY

N/F
BANDINI JANE V.
BK/PG 37614/134
537 OFF ESSEX STREET
MAP 31 PARCEL 1865

N/F
ALFE PETER & STEPHANIE
BK/PG 23819/513
1 NICHOLS LANE EXTENSION
MAP 31 PARCEL 2651

N/F
CITY OF PEABODY
BK/PG /00000
0 WINONA ST (R) INCL P
MAP/LOT 055-043
TOTAL PROPERTY AREA=566,280* SQ. FT.

RESOURCE AREA LEGEND:

- WF#XXXX — VEGETATED WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

0 20 50 100
SCALE: 1" = 20'

613163_HD(CONST PLANS)_SVN.DWG Plotted on 17-Apr-2025 12:59 PM

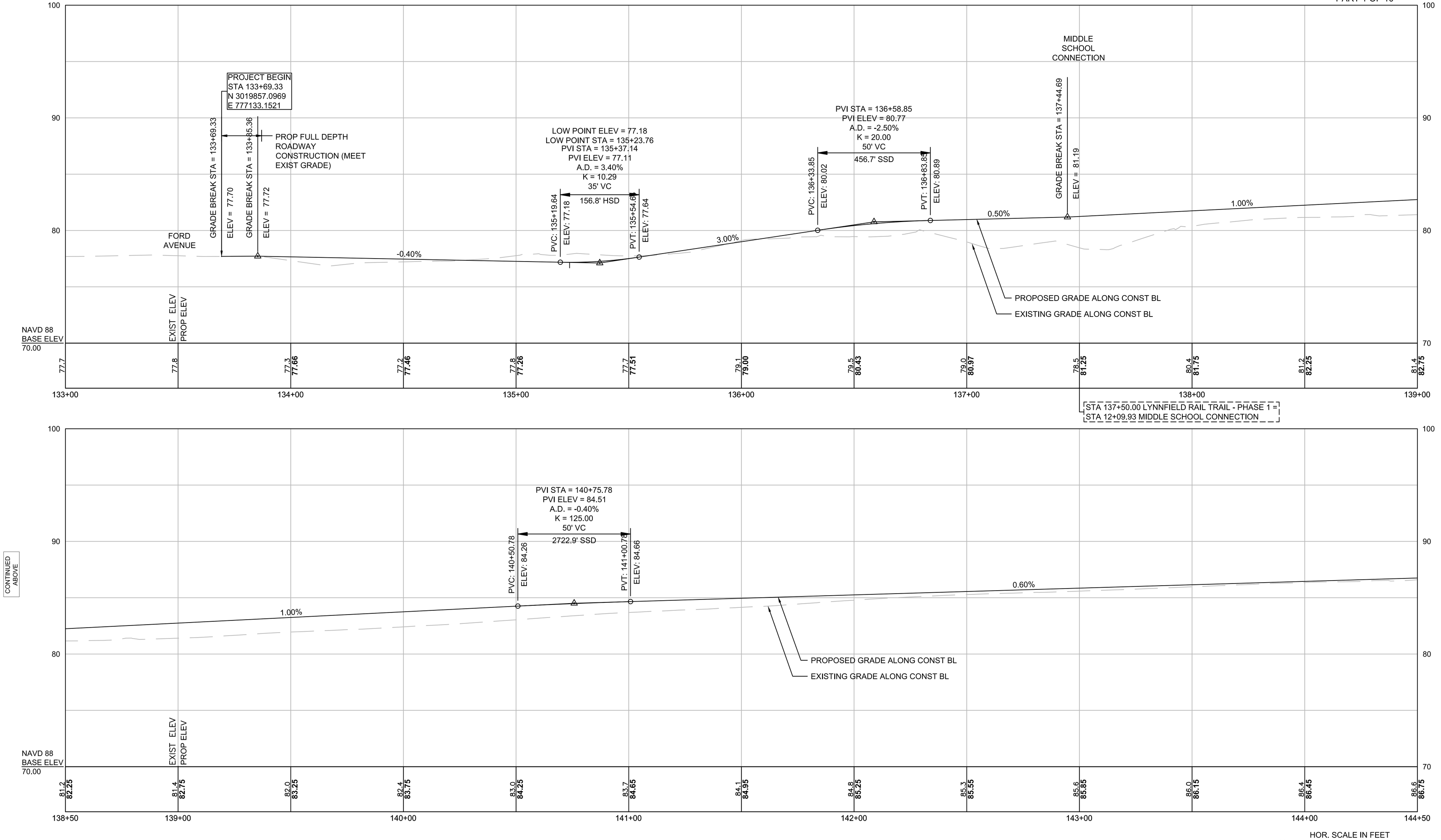
Proposal No. 613163-135786

AV08830 - 19

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 1 OF 10



613163_HD\PROFILES_SVN.DWG Plotted on 17-Apr-2025 1:04 PM

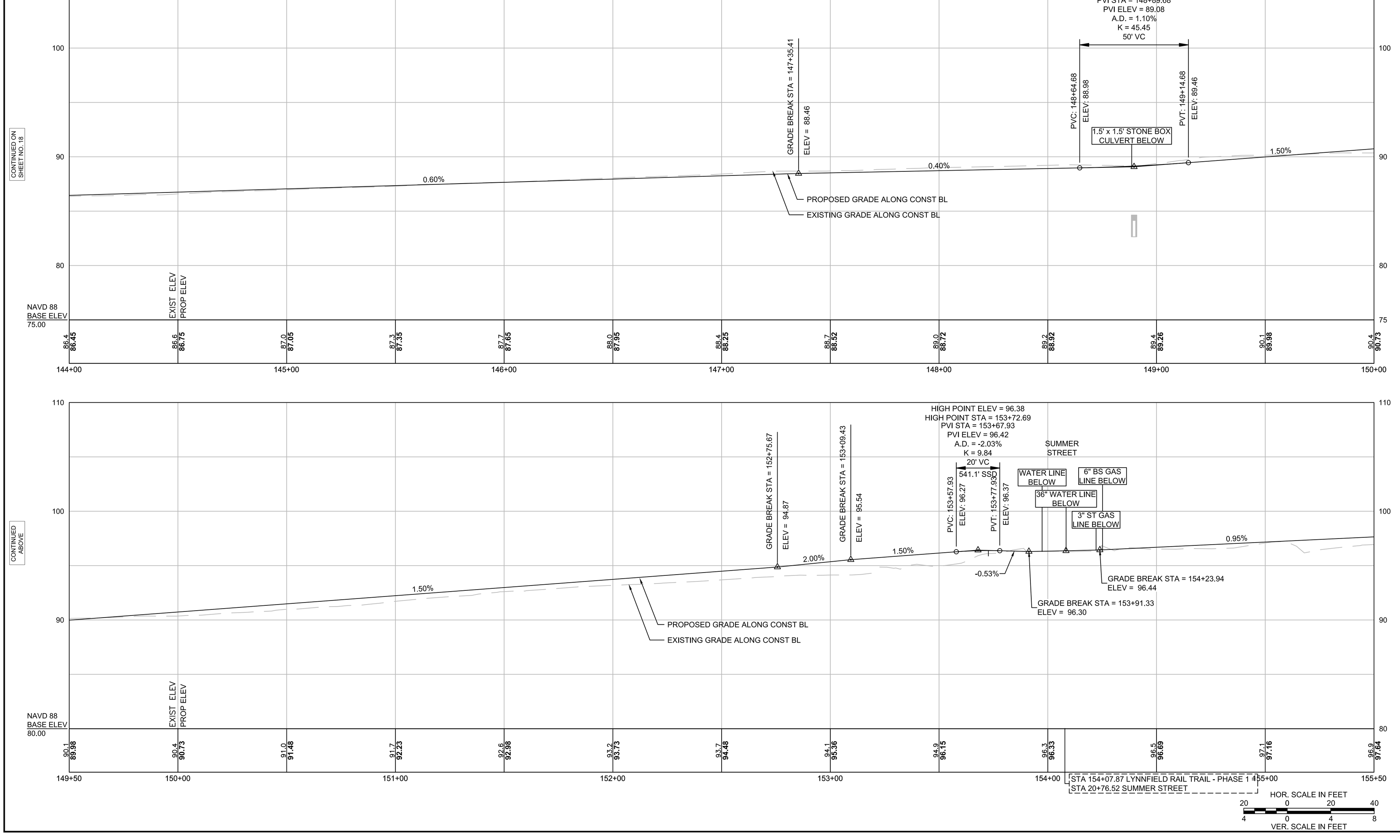
Proposal No. 613163-135786

AV 00030 62

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 2 OF 10



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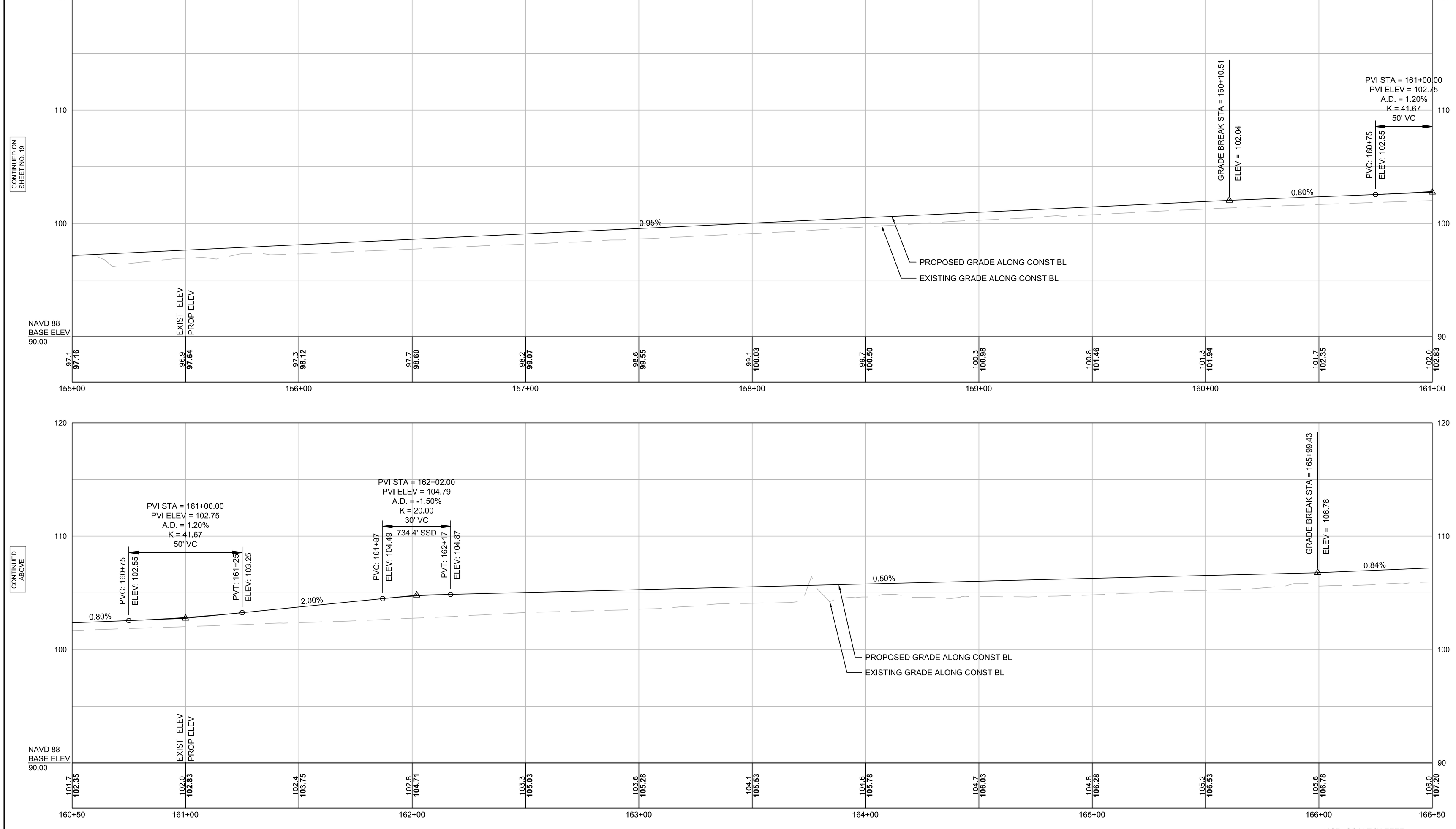
Proposal No. 613163-135786
A00830 - 63

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 3 OF 10



HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

613163_HD\PROFILES_SVN.DWG Plotted on 17-Apr-2025 1:04 PM

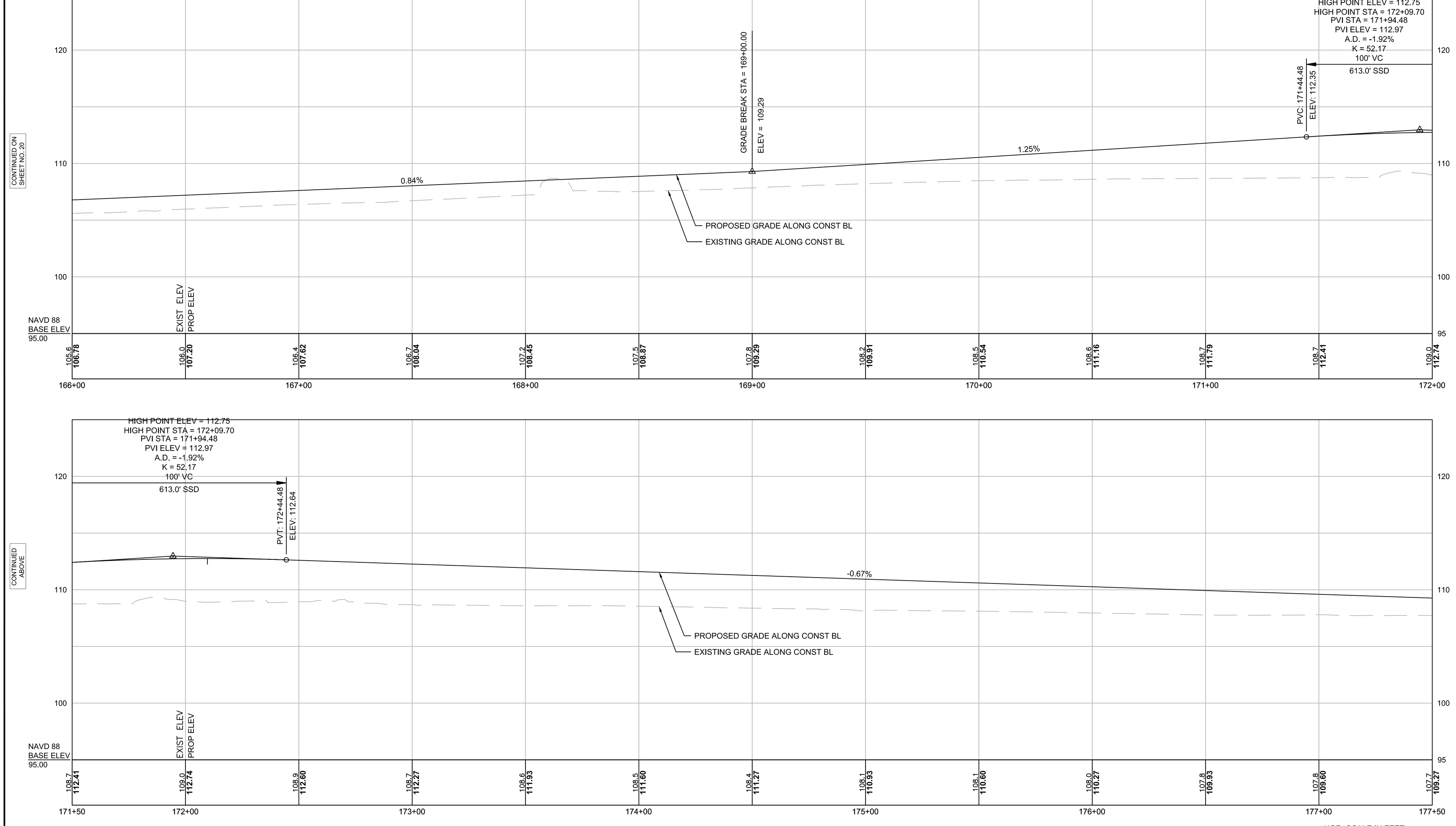
Proposal No. 613163-135786

AV 400030 - 64

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 4 OF 10



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613163_HD\PROFILES_SVN.DWG

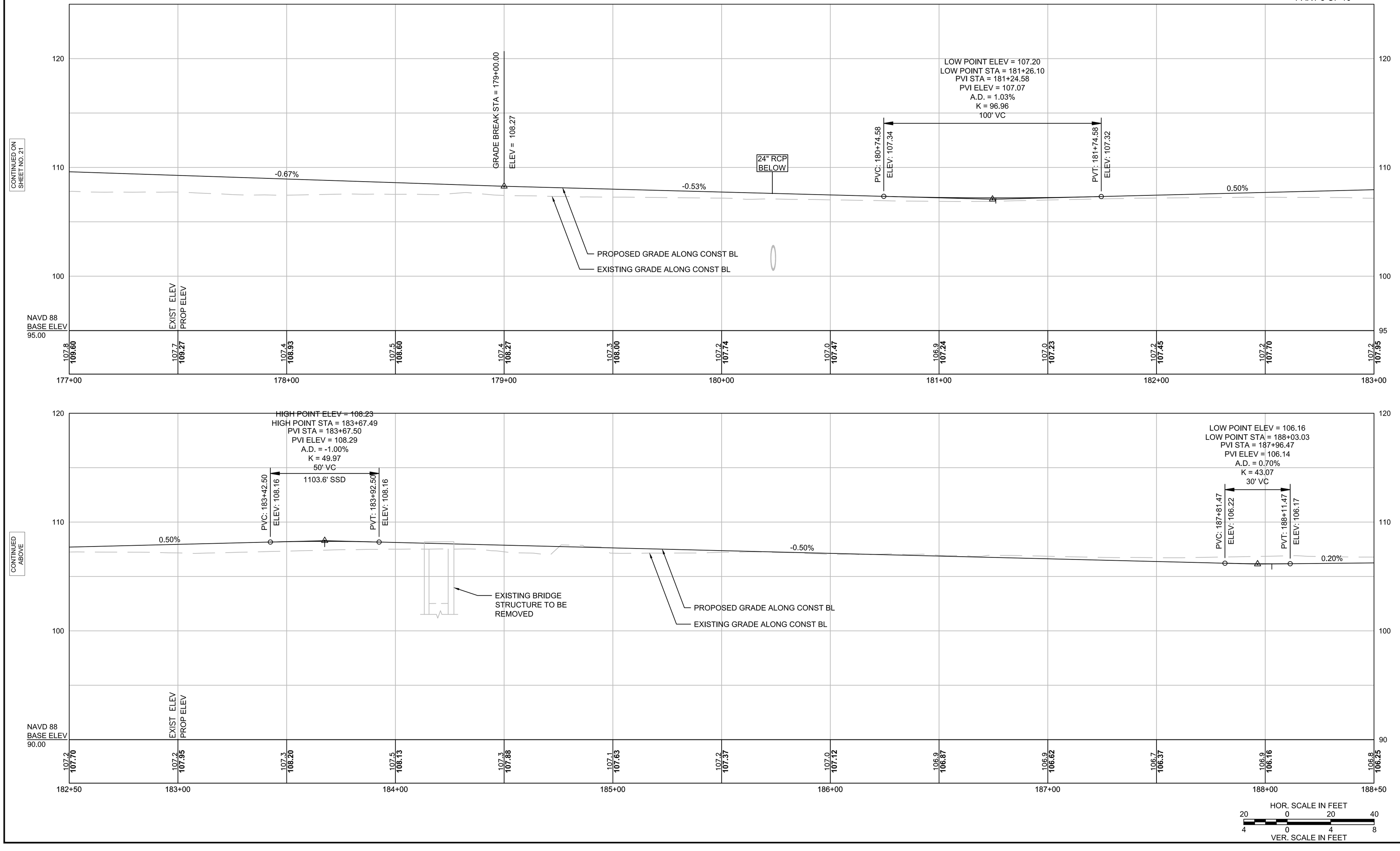
Proposal No. 613163-135786

AV0030 65

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 5 OF 10



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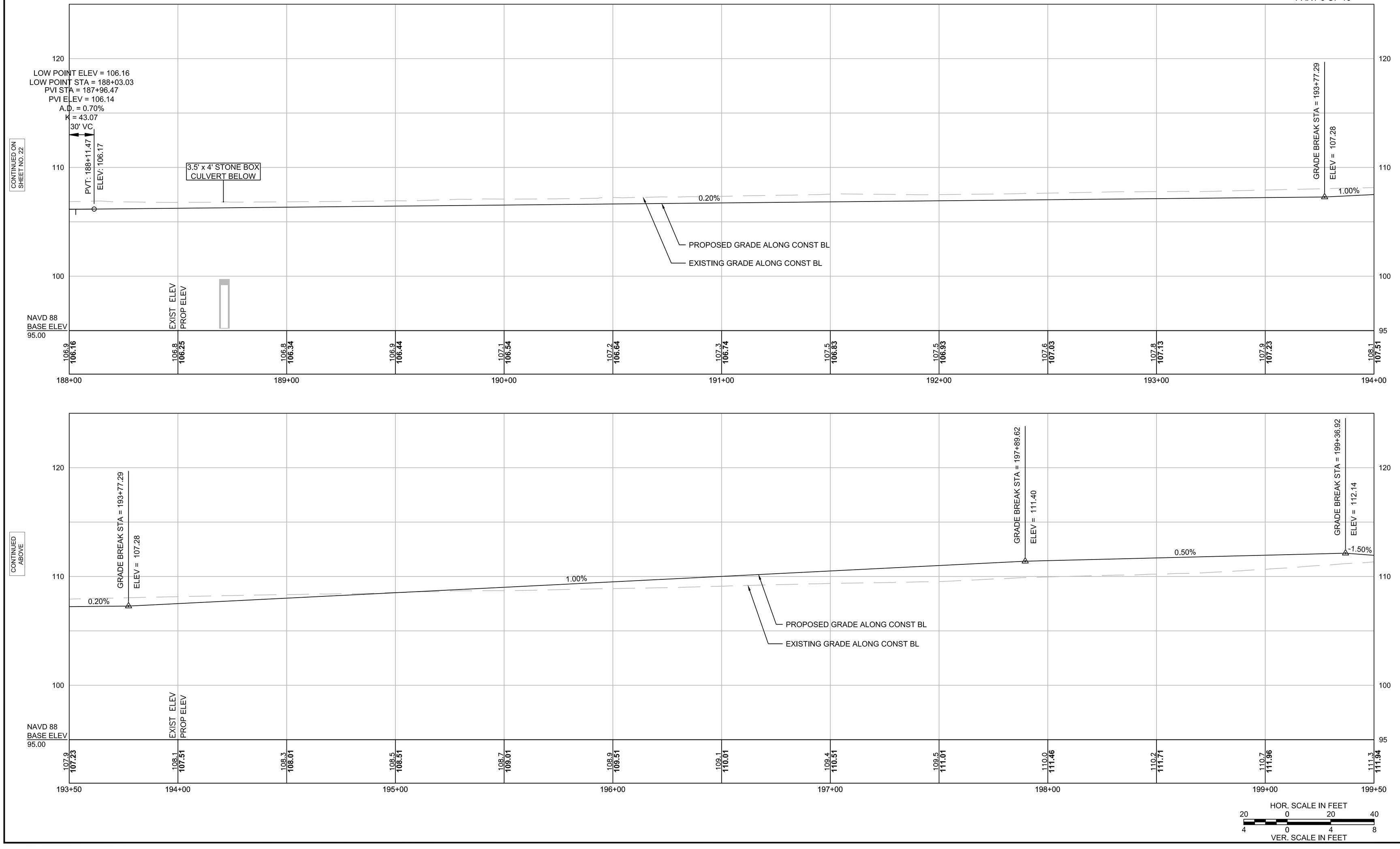
Proposal No. 613163-135786
AV 8008 69 - 99 - 0

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 6 OF 10



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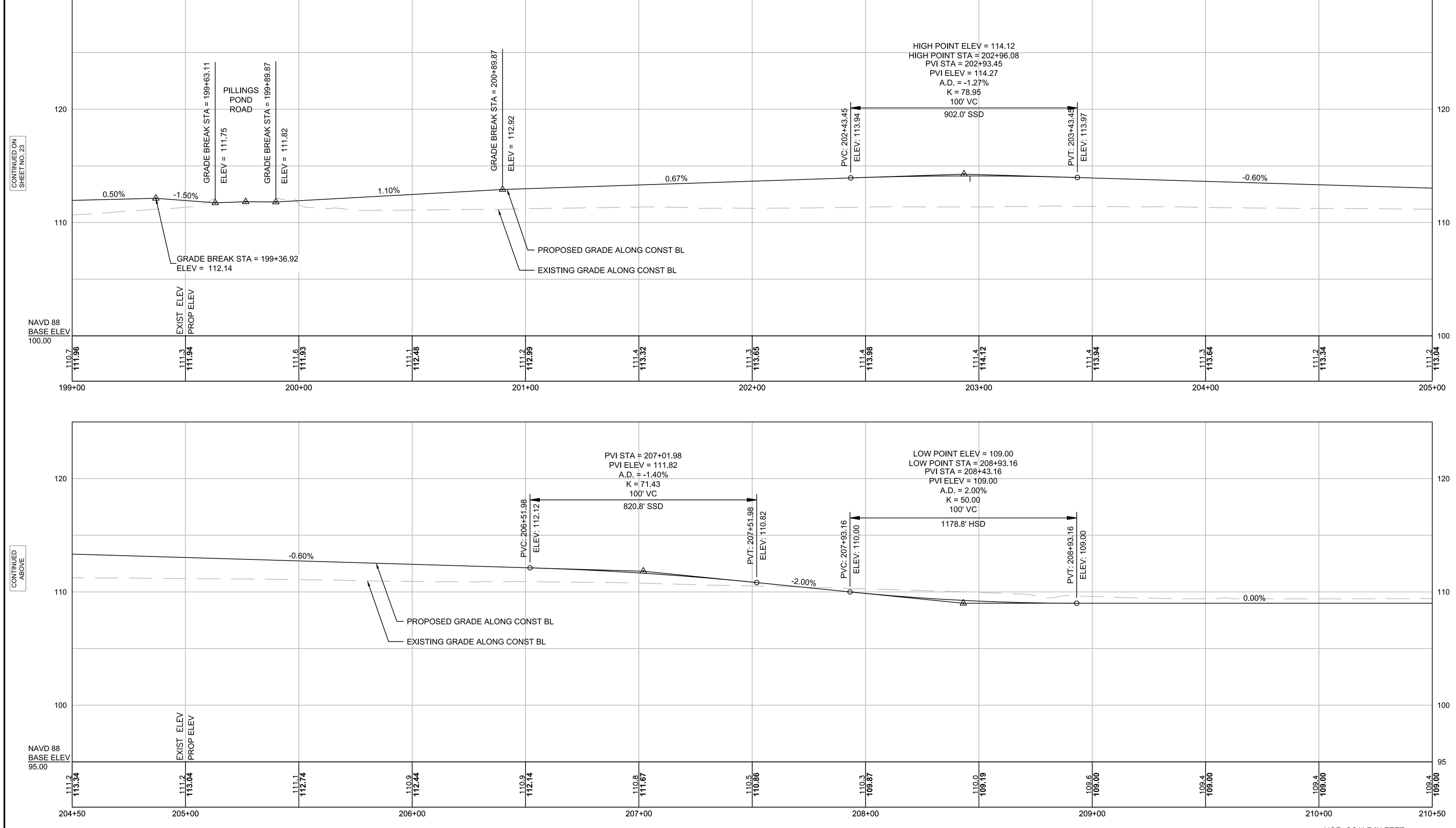
Proposal No. 613163-135786

A00030 - 67

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	24	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 7 OF 10



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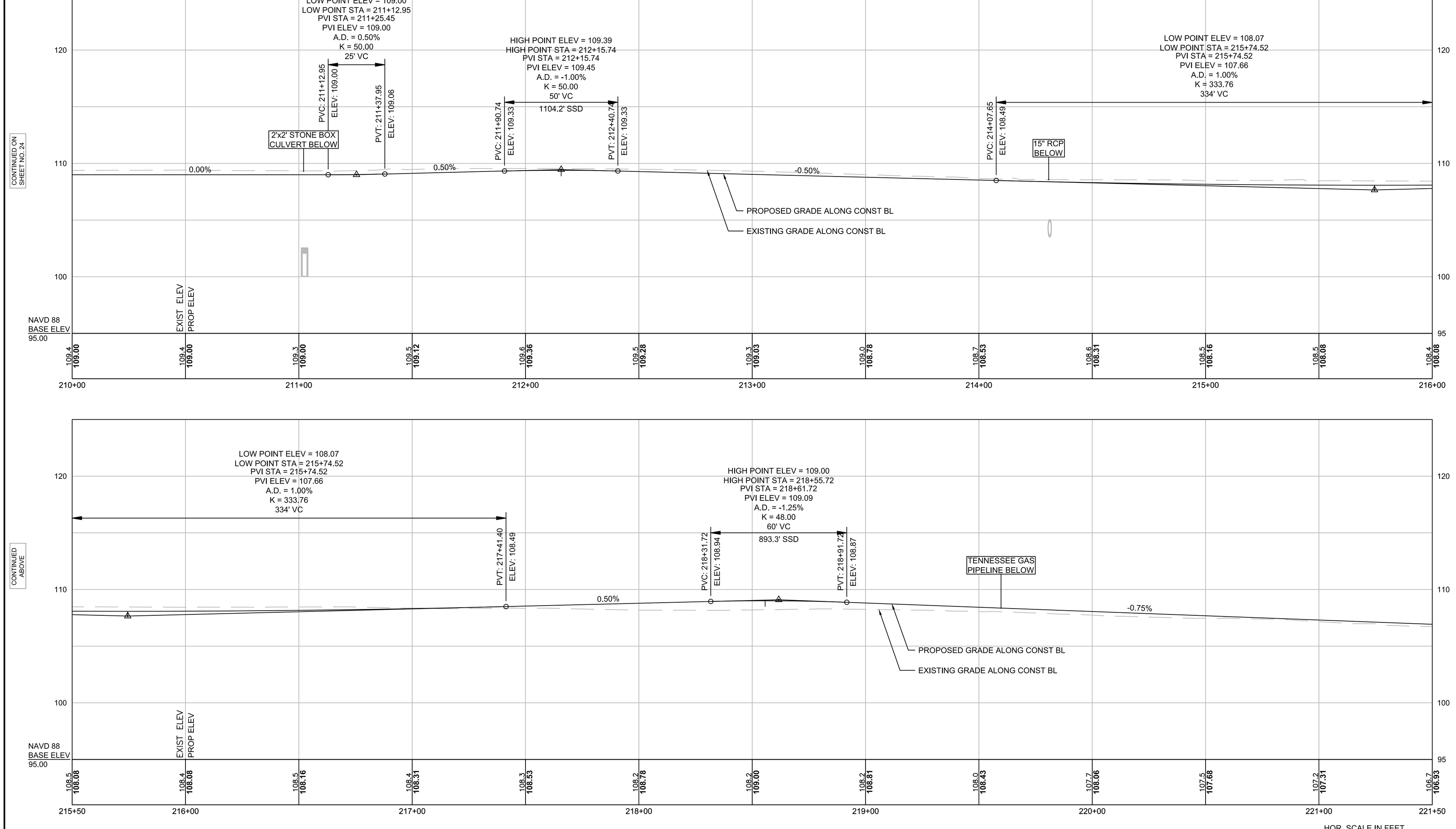
Proposal No. 613163-135786
AV00030 89

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 8 OF 10



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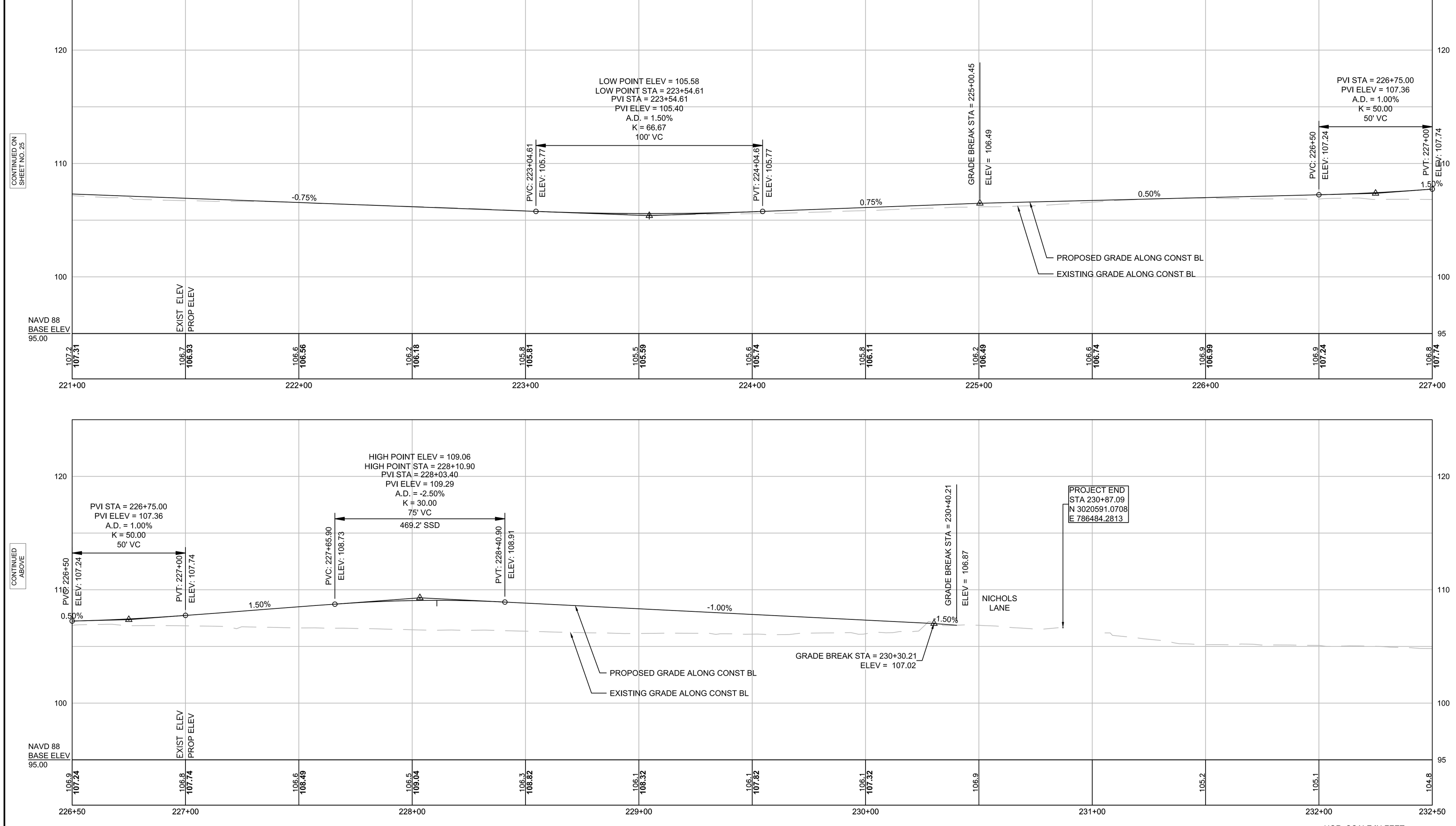
Proposal No. 613163-135786
AV00030 69 - 0 69

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 9 OF 10



HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

613163_HD\PROFILES_SVN.DWG Plotted on 17-Apr-2025 1:08 PM

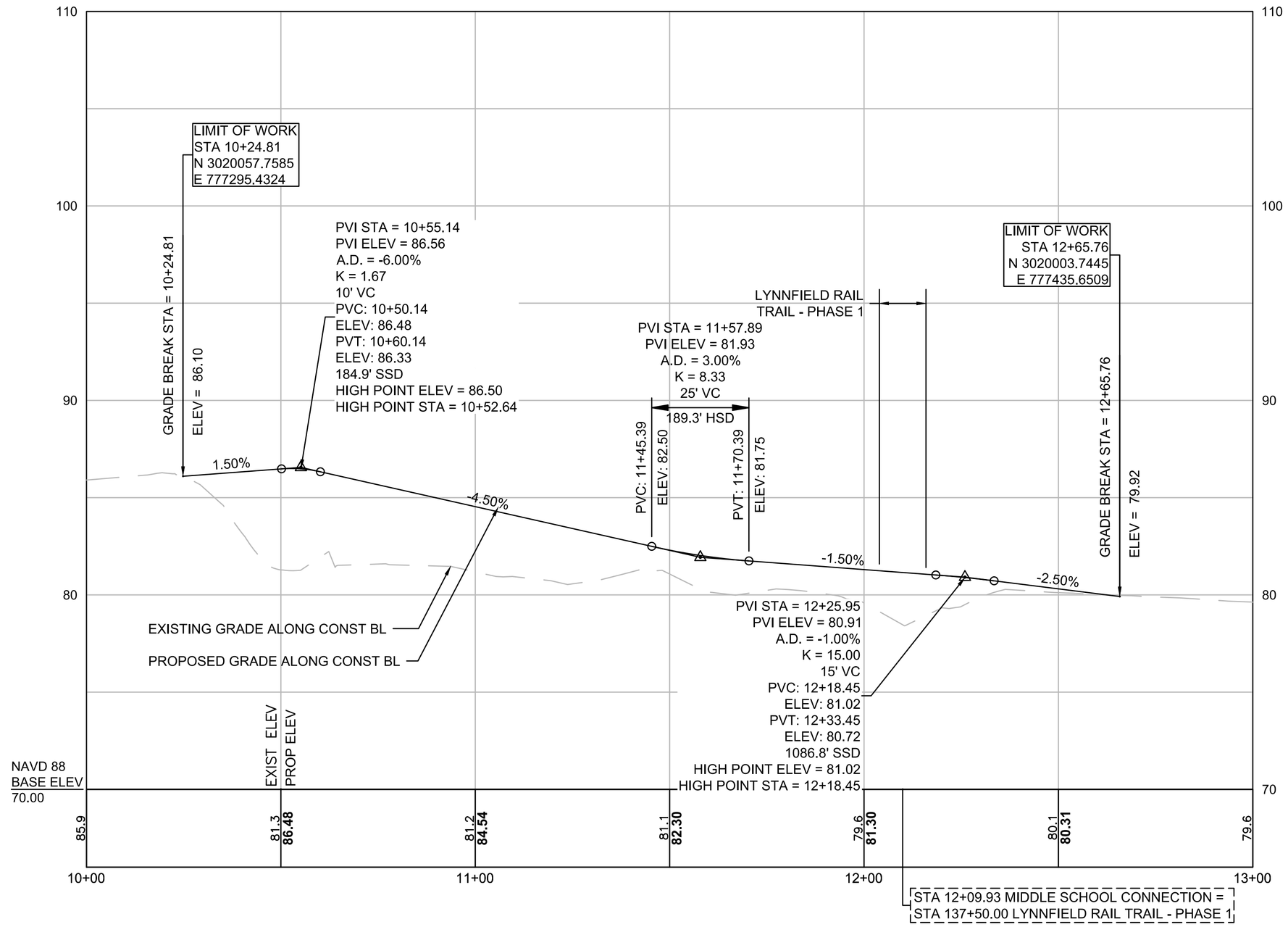
Proposal No. 613163-135786

A00830 - 70

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 10 OF 10



HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

613163_HD\PROFILES_SVN.DWG Plotted on 17-Apr-2025 1:08 PM

Proposal No. 613163-135786

A00830 - 71

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	37
PROJECT FILE NO. 613163			

ACOE SVN
TRAIL AMENITY PLANS
PART 1 OF 3

RESOURCE AREA LEGEND:

- WF#XXXX — VEGETATED WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

TRAIL AMENITY PLANTING SCHEDULE*					
QTY	ID	BOTANICAL NAME	COMMON NAME	SIZE	COMMENT
TREES					
32	TO	THUJA OCCIDENTALIS	ARBORVITAE	5-6 FEET	

* FOR WETLAND REPLICATION AREA PLANTINGS SEE SHEET 33

N/F
JAMES C. DAVIE
BK/PG 28898/575
85 PERRY AVENUE
MAP 28 PARCEL 2857

N/F
DEBRA LACONTE
BK/PG 13696/9
86 PERRY AVENUE
MAP 28 PARCEL 2861
TOTAL PROPERTY
AREA=15,300 SQ. FT.

PERRY AVENUE
(PUBLIC - 40' WIDE)

FORD AVENUE
(UNACCEPTED - 40' WIDE)

FORD AVENUE
(PUBLIC - 40' WIDE)

NOTE: THE TOWN OF LYNNFIELD PLANS TO ACCEPT THE REMAINDER OF FORD AVENUE IN THEIR APRIL, 2025 TOWN MEETING.

TOWN OF LYNNFIELD MIDDLE SCHOOL
BK/PG 3853/583
505 MAIN STREET
MAP/LOT 28/1455

LYNNFIELD RAIL TRAIL CONST BL

N/F
MCQUEEN PHILIP J.
MCQUEEN DEANNA M.
BK/PG 27917/562
1 FORD AVENUE
MAP 28 PARCEL 2891
TOTAL PROPERTY AREA=15,000 SQ. FT.

N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX
REGISTRY OF DEEDS)

STATION 2101
N: 3019820.37'
E: 777100.80'
EL: 77.63'
MAG. NAIL SET

1 STORY
WOOD

SCALE: 1" = 10'

613163_LD(AMENITY PLAN)_SVN.DWG Plotted on 17-Apr-2025 1:18 PM
Proposal No. 613163-135786
A00830 - 72

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	37
PROJECT FILE NO. 613163			

ACOE SVN
TRAIL AMENITY PLANS
PART 2 OF 3

TRAIL AMENITY PLANTING SCHEDULE*					
QTY	ID	BOTANICAL NAME	COMMON NAME	SIZE	COMMENT
TREES					
3	AR	ACER RUBRUM	RED MAPLE	1"-1.5" CALIPER	B&B
5	BN	BETULA NIGRA	RIVER BIRCH	1"-1.5" CALIPER	B&B
16	TO	THUJA OCCIDENTALIS	ARBORVITAE	5-6 FEET	

* FOR WETLAND REPLICATION AREA PLANTINGS SEE SHEET 33

RESOURCE AREA LEGEND:

- WF#XXXX — VEGETATED WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

PROP BICYCLE RACK (TYP, 3 THIS LOCATION)
PROP GRANITE SEAT WALL (TYP, 2 THIS LOCATION)
PROP CEM CONC SIDEWALK AT TRAILHEAD AREA
PROP CEM CONC SIDEWALK AT TRAILHEAD AREA
PROP INTERPRETIVE KIOSK-GRANITE BASE
PROP BICYCLE RACK (TYP, 2 THIS LOCATION)
PROP GRANITE SEAT WALL (TYP, 2 THIS LOCATION)
SUMMER STREET CONST BL
LYNNFIELD RAIL TRAIL CONST BL
ST. PAUL'S DRIVEWAY
SUMMER STREET
BIT CONC PARKING
BCW
FENCE
1937 COUNTY LAYOUT NO 2606
20+00
21
22
153
154
155
156
54
TESTPIT
DENSE TREES
DRAIN DITCH
IVW
WF #K-1
WF #K-2
WF#KK-1
WF#KK-2
WF#KK-3
WF#KK-4
WF#KK-5
WF#KK-6
WF#KK-7
WF#CL E KK-2
MBTA ROW (VAL V.7.3/4)
20' WIDE DRAIN EASEMENT LCP 21086-D
N/F MASSACHUSETTS BAY TRANSPORTATION AUTHORITY BK/PG 13117/113 (SOUTH MIDDLESEX REGISTRY OF DEEDS)
2 AR
1 AR
5 BN
16 TO
2' (MIN)
A B C D E F G H I J K L M N

FOR WETLAND REPLICATION PLANTINGS AND DETAILS SEE SHEET 33

0 10 20 30 40
SCALE: 1" = 10'

NOTES:

1. STATIONS AND OFFSETS ARE TAKEN AT THE GEOMETRIC CENTER OF THE TRAIL AMENITY, DEPICTED AS A DOT ON THE PLAN.
2. UNLESS OTHERWISE NOTED, TRAIL AMENITIES SHALL BE ORIENTED PARALLEL TO THE EDGE OF THE PROPOSED CEMENT CONCRETE SIDEWALK AT TRAILHEAD AREA SURFACE.
3. TRAIL AMENITIES SHALL BE INSTALLED AT LEAST 2-FEET FROM THE EDGE OF THE TRAIL PAVEMENT, AS SHOWN ON THE PLANS.
4. FOR TIES SEE SHEET NO. 38.

TRAIL AMENITY SCHEDULE			
NAME	STATION	OFFSET	SITE FEATURE TYPE
A	153+21.53	11.23', LT	GRANITE SEAT WALL
B	153+25.74	12.51', LT	ADA ACCESSIBLE COMPANION SEATING AREA
C	153+32.06	12.54', LT	BICYCLE RACK
D	153+38.91	13.43', LT	BICYCLE RACK
E	153+45.81	12.82', LT	BICYCLE RACK
F	153+52.16	13.05', LT	ADA ACCESSIBLE COMPANION SEATING AREA
G	153+56.46	11.94', LT	GRANITE SEAT WALL
H	154+42.45	31.33', RT	BICYCLE RACK
I	154+49.22	31.62', RT	GRANITE SEAT WALL
J	154+51.65	28.13', RT	ADA ACCESSIBLE COMPANION SEATING AREA
K	154+53.03	12.63', RT	BICYCLE RACK
L	154+54.48	24.98', RT	INTERPRETIVE KIOSK - GRANITE BASE
M	154+55.48	21.04', RT	ADA ACCESSIBLE COMPANION SEATING AREA
N	154+57.04	17.20', RT	GRANITE SEAT WALL

A00830_73
613163_LD(AMENITY PLAN)_SVN.DWG Plotted on 17-Apr-2025 1:20 PM
Proposal No. 613163-135786

NOTES:

1. STATIONS AND OFFSETS ARE TAKEN AT THE GEOMETRIC CENTER OF THE TRAIL AMENITY, DEPICTED AS A DOT ON THE PLAN.
2. UNLESS OTHERWISE NOTED, TRAIL AMENITIES SHALL BE ORIENTED PARALLEL TO THE EDGE OF THE PROPOSED CEMENT CONCRETE SIDEWALK AT TRAILHEAD AREA SURFACE.
3. TRAIL AMENITIES SHALL BE INSTALLED AT LEAST 2-FEET FROM THE EDGE OF THE TRAIL PAVEMENT, AS SHOWN ON THE PLANS.

RESOURCE AREA LEGEND:

- WF#XXXX — VEGETATED WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	37
PROJECT FILE NO. 613163			

ACOE SVN
TRAIL AMENITY PLANS
PART 3 OF 3

TRAIL AMENITY SCHEDULE			
NAME	STATION	OFFSET	SITE FEATURE TYPE
O	180+50	11.21', LT	GRANITE SEAT WALL
P	180+54	10.00', LT	ADA ACCESSIBLE COMPANION SEATING AREA
Q	180+57.50	10.00', LT	ADA ACCESSIBLE COMPANION SEATING AREA
R	180+61.50	11.21', LT	GRANITE SEAT WALL

N

N/F
SILVA JENNIFER L
CERT. 90879
20 LOVELL ROAD
MAP 30 PARCEL 918

20' WIDE DRAINAGE EASEMENT
(LCP 4233-M, CERT NO. 23973)

N/F
RAYMOND J. DORMANN AND
ROSE MARIE
CERT. 91426
22 LOVELL ROAD
MAP 30 PARCEL 929

MBTA ROW (VAL V.7.3/4)

DENSE TREES

PROP GRANITE SEAT WALL
(TYP, 2 THIS LOCATION)

PROP CEM CONC SIDEWALK
AT TRAILHEAD AREA

LYNNFIELD RAIL
TRAIL CONST BL

O R P Q

2' (MIN)

180 RR TRACKS 181 182

N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX
REGISTRY OF DEEDS)

N/F
CHILDREN'S BOURQUE ROAD TRUST
DICESARE ELIZABETH N. TR.
BK/PG 23983/289
28 READ WESTOVER DRIVE
MAP 30 PARCEL 975

DITCH

STONE WALL

WF#M-1 WF#M-2 WF#M-3 WF#M-4

WETLAND BOUNDARY LINE BY
AERIAL INTERPRETATION

N/F
CHILDREN'S BOURQUE ROAD TRUST
CERT. 78177
125 BOURQUE ROAD
MAP 30 PARCEL 1075

0 10 20 30 40
SCALE: 1" = 10'

613163_LD(AMENITY PLAN)_SVN.DWG Plotted on 17-Apr-2025 1:23 PM

Proposal No. 613163-135786

A00830 -74

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

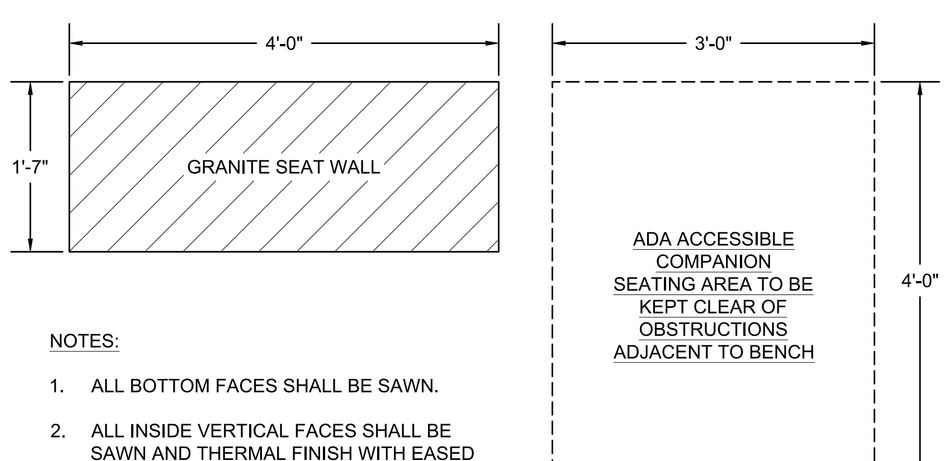
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	37
PROJECT FILE NO. 613163			

ACOE SVN
TRAIL AMENITY DETAILS
PART 1 OF 2

613163_LD(AMENITY DETAILS)_SVN.DWG Plotted on 17-Apr-2025 1:25 PM

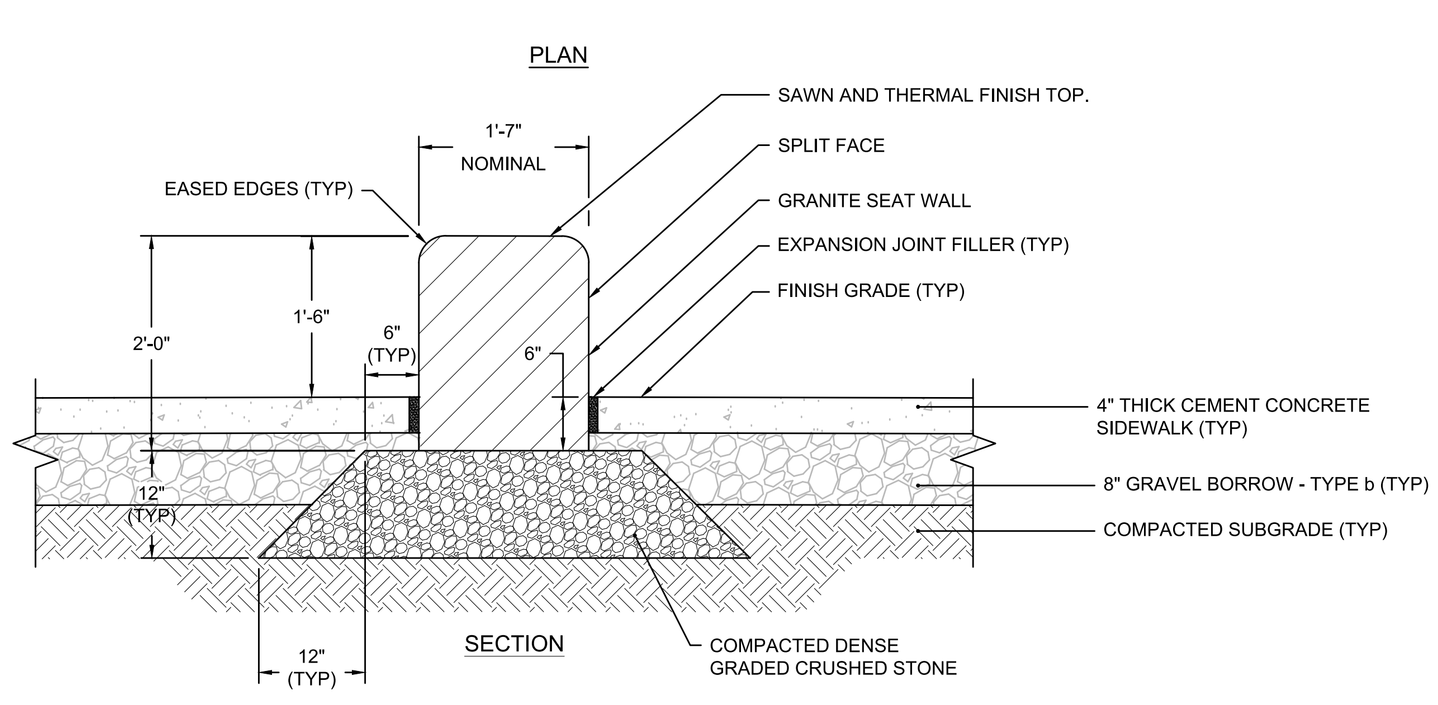
Proposal No. 613163-135786

A00830 - 75

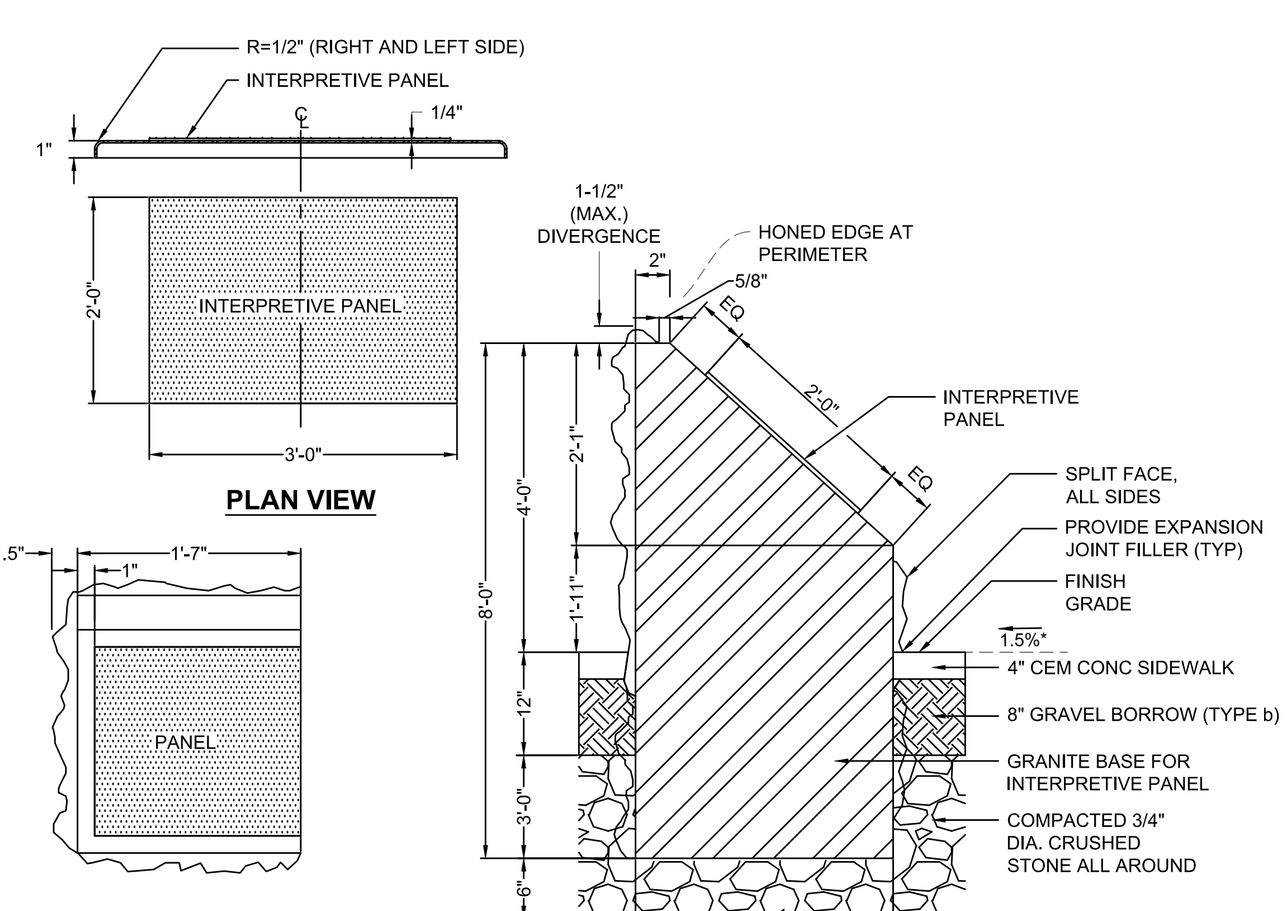


NOTES:

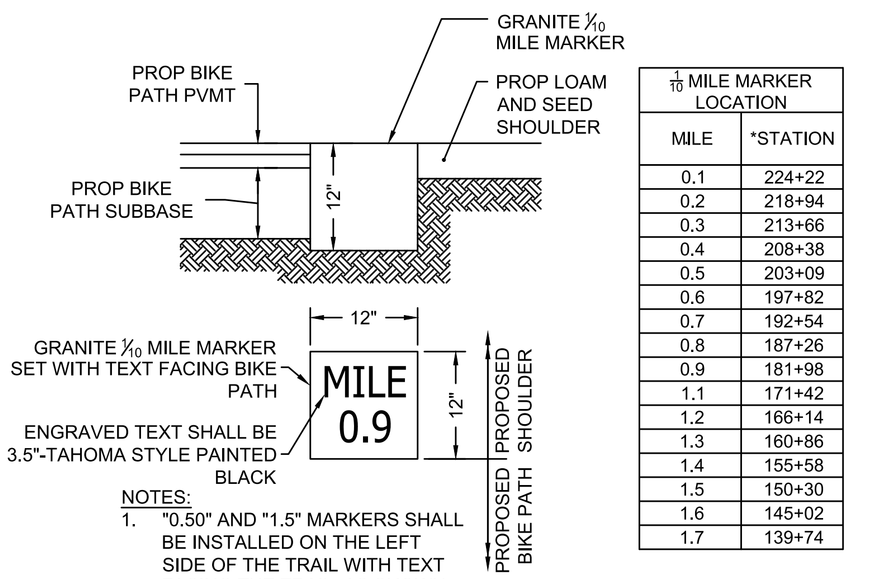
1. ALL BOTTOM FACES SHALL BE SAWN.
2. ALL INSIDE VERTICAL FACES SHALL BE SAWN AND THERMAL FINISH WITH EASED EDGES



GRANITE SEAT WALL
NOT TO SCALE



INTERPRETIVE KIOSK-GRANITE BASE
NOT TO SCALE



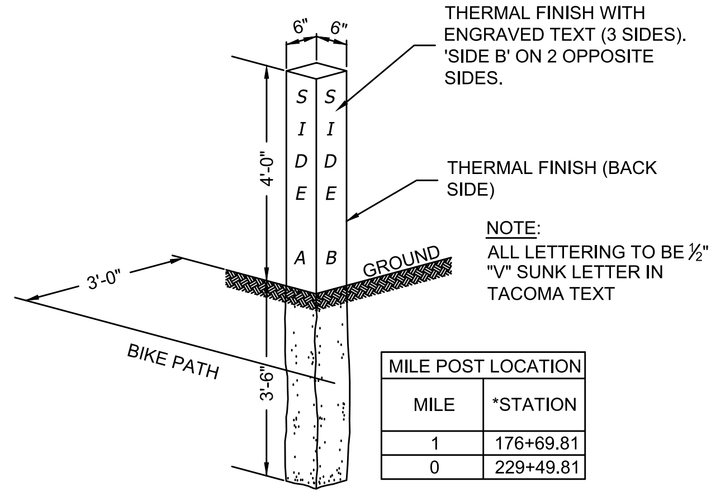
NOTES:

1. "0.50" AND "1.5" MARKERS SHALL BE INSTALLED ON THE LEFT SIDE OF THE TRAIL WITH TEXT FACING THE TRAIL, AS SHOWN.
2. ALL OTHER MARKERS SHALL BE INSTALLED ON THE RIGHT SIDE OF THE TRAIL WITH TEXT FACING THE TRAIL, AS SHOWN.

1/10 MILE MARKER LOCATION	
MILE	*STATION
0.1	224+22
0.2	218+94
0.3	213+66
0.4	208+38
0.5	203+09
0.6	197+82
0.7	192+54
0.8	187+26
0.9	181+98
1.1	171+42
1.2	166+14
1.3	160+86
1.4	155+58
1.5	150+30
1.6	145+02
1.7	139+74

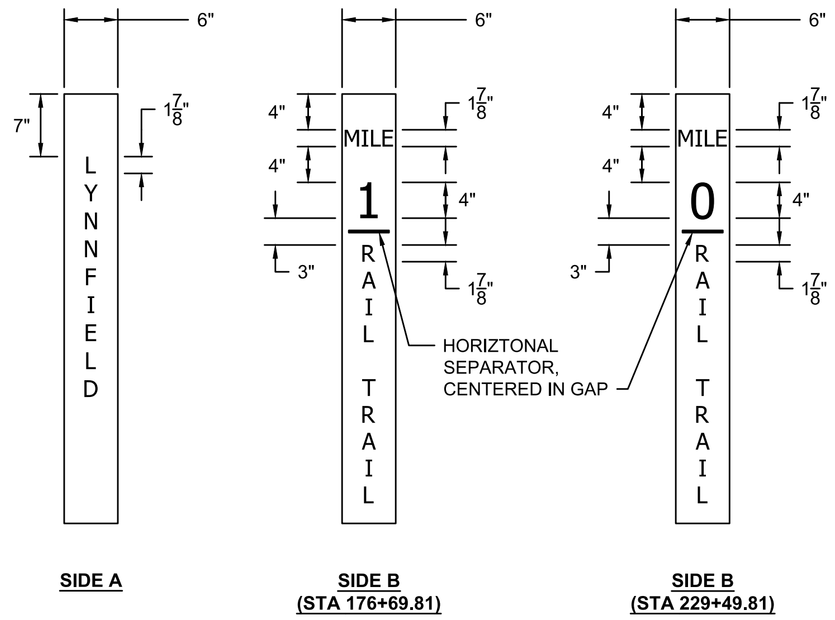
*STATIONING IS APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS PRIOR TO INSTALLATION

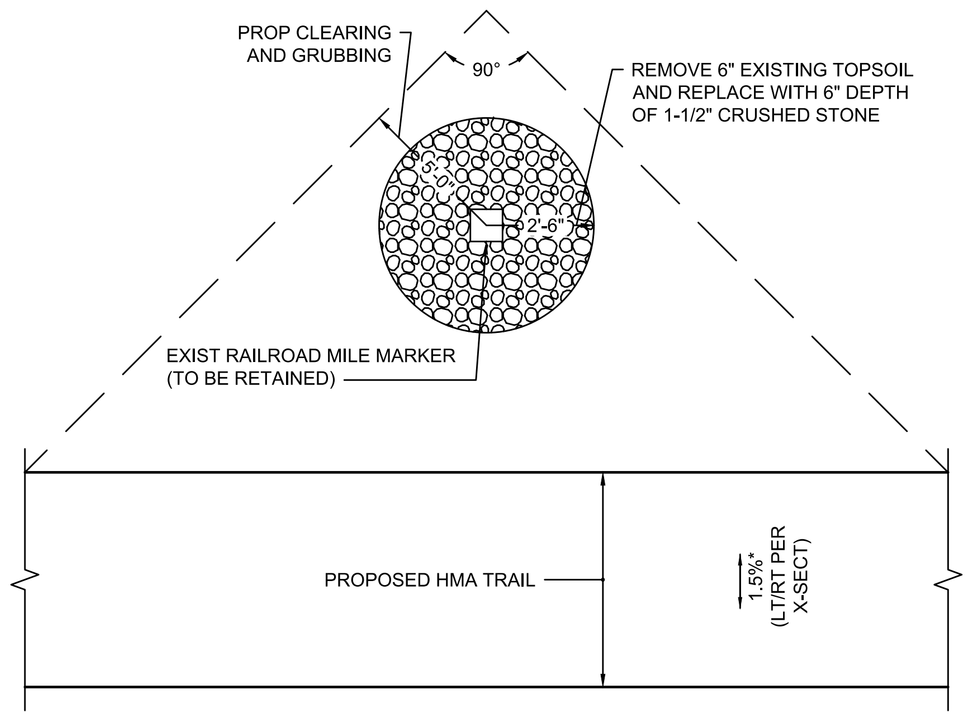
GRANITE TENTH MILE MARKER
NOT TO SCALE



MILE POST LOCATION	
MILE	*STATION
1	176+69.81
0	229+49.81

*STATIONING IS APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS PRIOR TO INSTALLATION





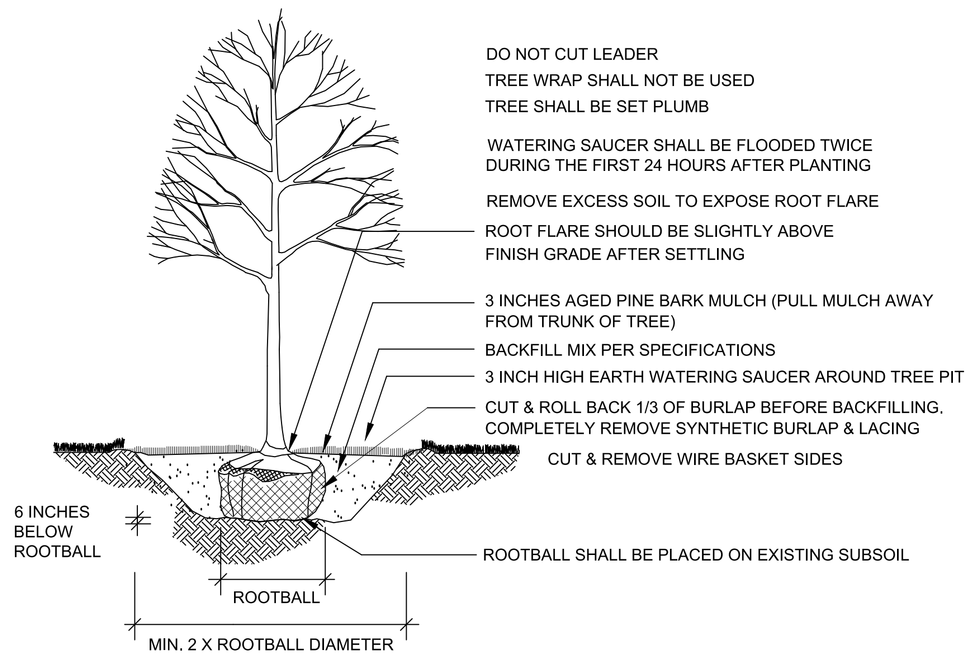
TREATMENT AT EXISTING RAILROAD MILE MARKER
(STATION 229+52±, RT)
NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5% (TYP.)

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

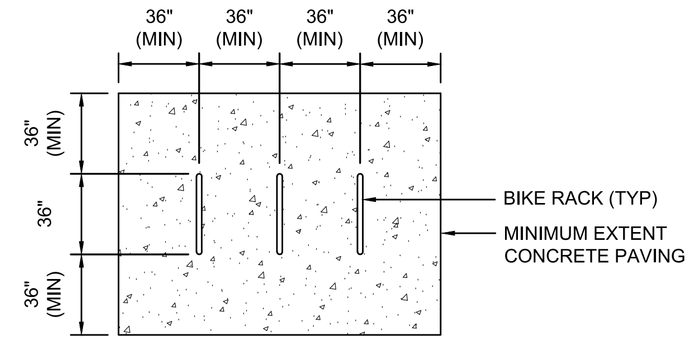
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	37
PROJECT FILE NO. 613163			

ACOE SVN
TRAIL AMENITY DETAILS
PART 2 OF 2

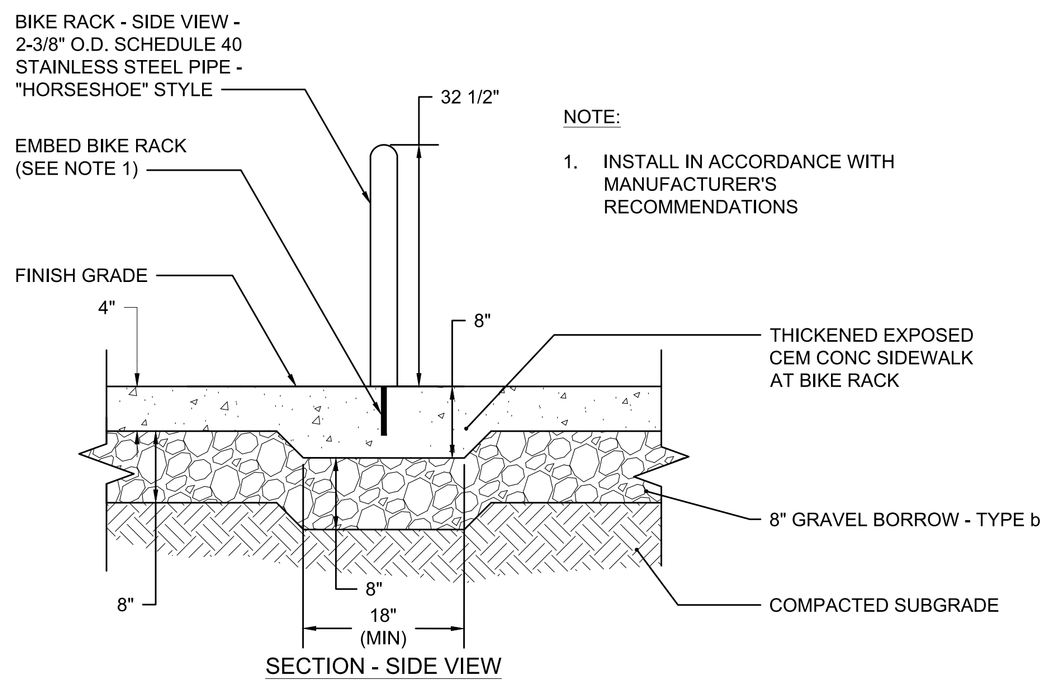


DECIDUOUS TREE PLANTING

NOT TO SCALE



PLAN
TYPICAL SPACING



NOTE:

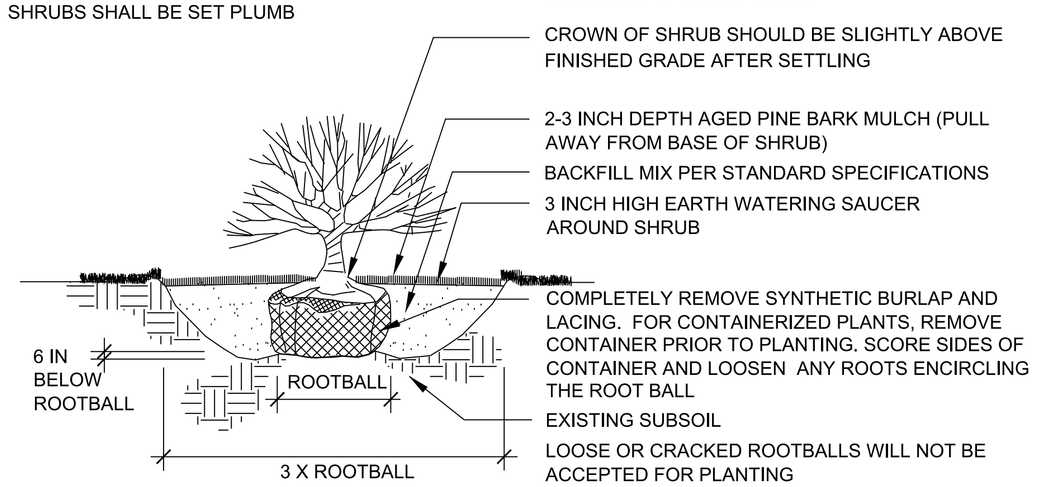
1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

SECTION - SIDE VIEW

EXCAVATE TO REQUIRED DEPTH AND BACKFILL WITH PLANTING MIX

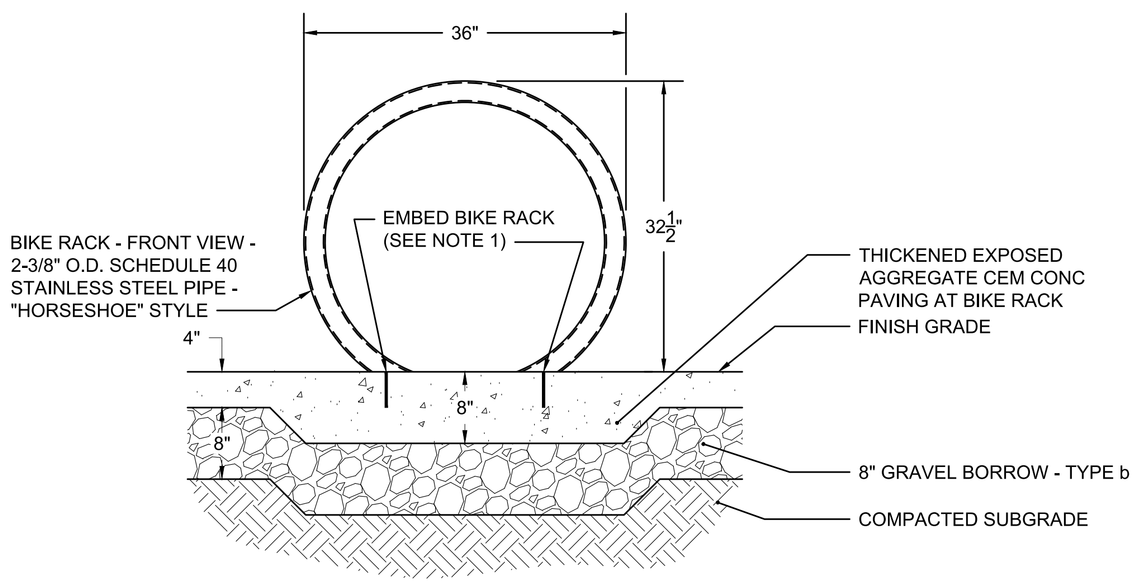
SHRUBS SHALL BE SET PLUMB

WATER BY FLOODING TWICE IN FIRST TWO HOURS AFTER PLANTING. WATER & MAINTAIN AS PER STANDARD SPECIFICATIONS



SHRUB PLANTING

NOT TO SCALE



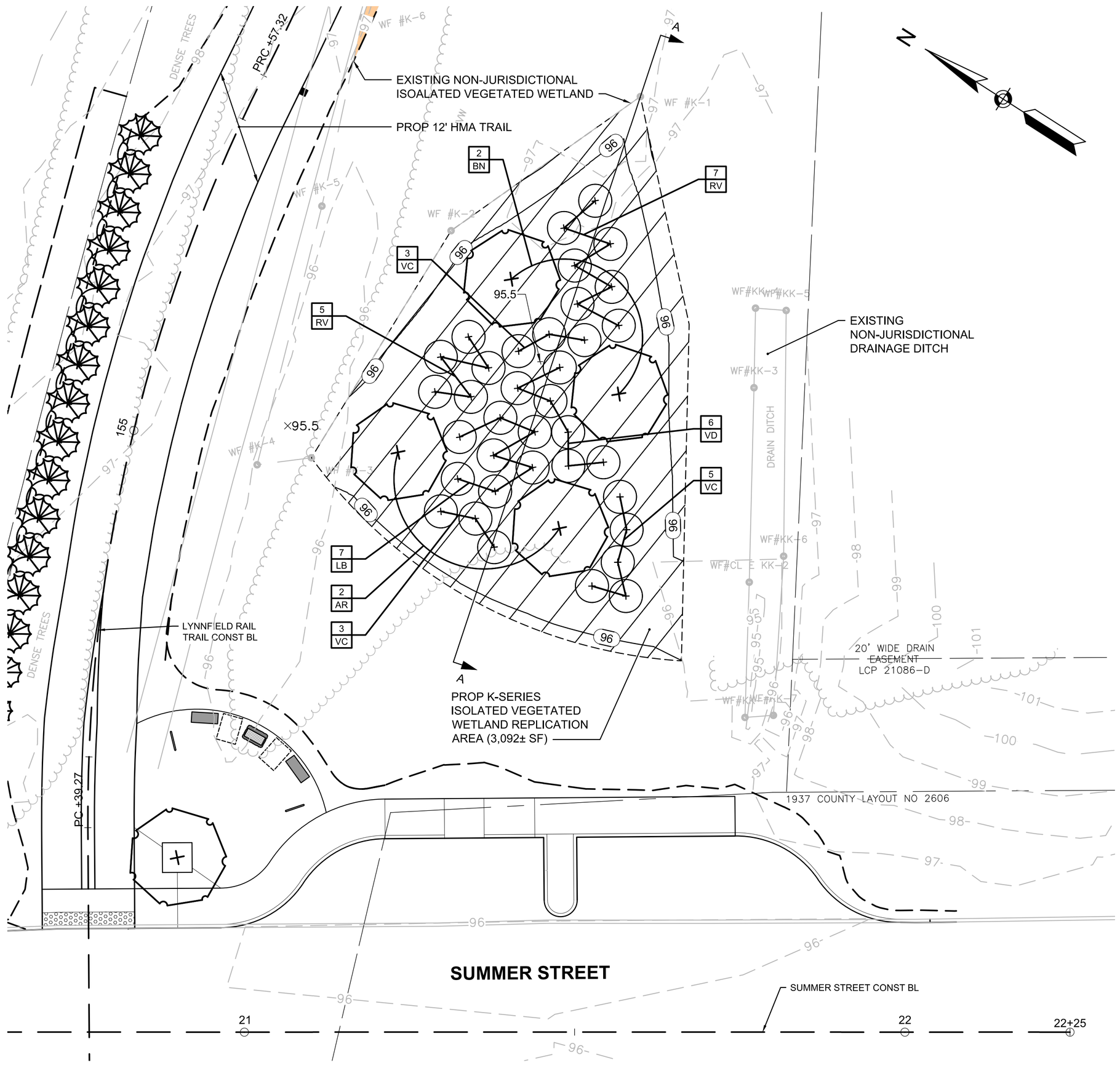
SECTION - FRONT VIEW

BIKE RACK DETAIL

NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5% (TYP.)

613163_LD(AMENITY DETAILS)_SVN.DWG Plotted on 17-Apr-2025 1:25 PM
Proposal No. 613163-135786
A00830 - 76



RESOURCE AREA LEGEND:

- WF#XXXX — VEGETATED WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	37
PROJECT FILE NO. 613163			

ACOE SVN
WETLAND REPLICATION AREA

K-SERIES ISOLATED VEGETATED WETLAND REPLICATION/RESTORATION NOTES:

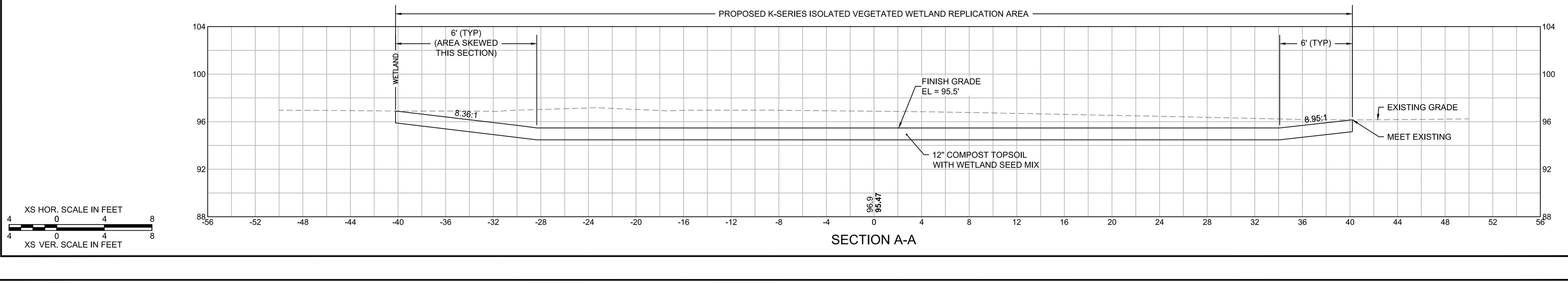
1. ALL WETLAND REPLICATION/RESTORATION SHALL BE CONDUCTED UNDER THE SUPERVISION AND DIRECTION OF THE PROJECT WETLAND SPECIALIST.
2. AREAS OF TEMPORARY WETLAND ALTERATION ASSOCIATED WITH THE PROPOSED CONSTRUCTION, WILL BE RESTORED IN-KIND AT THE DIRECTION OF THE SUPERVISING WETLAND SCIENTIST BY RESTORING NATURAL WETLAND SOIL PROFILES (WHERE NEEDED) AND SEEDING WITH FACW MEADOW MIX. SEEDED AREAS SHALL BE STABILIZED VIA HYDRO-SEEDING, STRAW MULCH, AND/OR EROSION CONTROL BLANKETS AT THE DIRECTION OF THE WETLAND SPECIALIST.
3. WETLAND REPLICATION AREA SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 755.35 OF THE SPECIAL PROVISIONS. EXCAVATE EXISTING SOIL TO TARGET ELEVATIONS. IF EXISTING SUBSOIL IS DETERMINED TO BE UNSUITABLE FOR PLANTING, EXCAVATE TO DEPTH NECESSARY FOR PLANTING AND BACKFILL WITH APPROPRIATE MANUFACTURED SOIL. BACKFILL SHALL BE INSTALLED AS PER MASSDOT STANDARD SPECIFICATIONS.
4. FOLLOWING WETLAND SOIL PLACEMENT, THE WRA SHALL BE PLANTED WITH THE SAPLING TREES AND SHRUBS SPECIFIED HEREIN, AND SEEDED WITH FACW MEADOW MIX.
5. SEEDED AREAS SHALL BE STABILIZED VIA HYDRO-SEEDING, STRAW MULCH, AND/OR EROSION CONTROL BLANKETS AT THE DIRECTION OF THE WETLAND SPECIALIST.
6. SEE SHEET 32 FOR PLANTING DETAILS.

WETLAND REPLICATION AREA PLANTING SCHEDULE

QTY	ID	BOTANICAL NAME	COMMON NAME	SIZE	COMMENT
TREES					
2	AR	ACER RUBRUM	RED MAPLE	1"-1.5" CALIPER	B&B
2	BN	BETULA NIGRA	RIVER BIRCH	1"-1.5" CALIPER	B&B
SHRUBS					
11	VC	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	2'-3' HT.	
6	VD	VIBURNUM DENTATUM	ARROWWOOD	2'-3' HT.	
12	RV	RHODODENDRON VISCOSUM	SWAMP AZALEA	2'-3' HT.	
7	LB	LINDERA BENZOIN	SPICEBUSH	2'-3' HT.	

* FOR TRAIL AMENITY AREA PLANTINGS SEE SHEET 29

0 10 20 30 40
PLAN SCALE: 1" = 10'

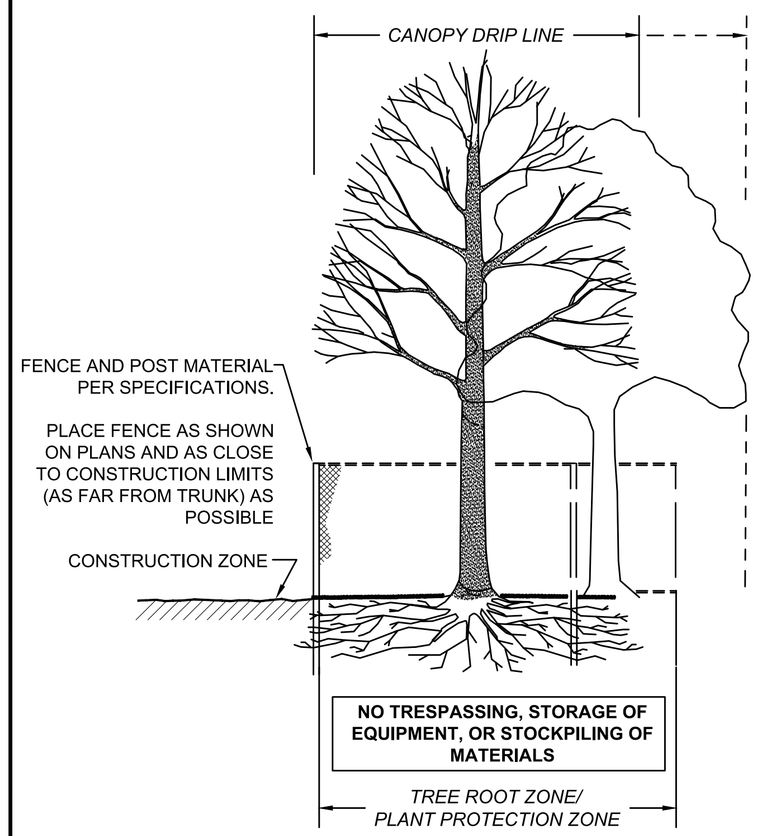


SECTION A-A

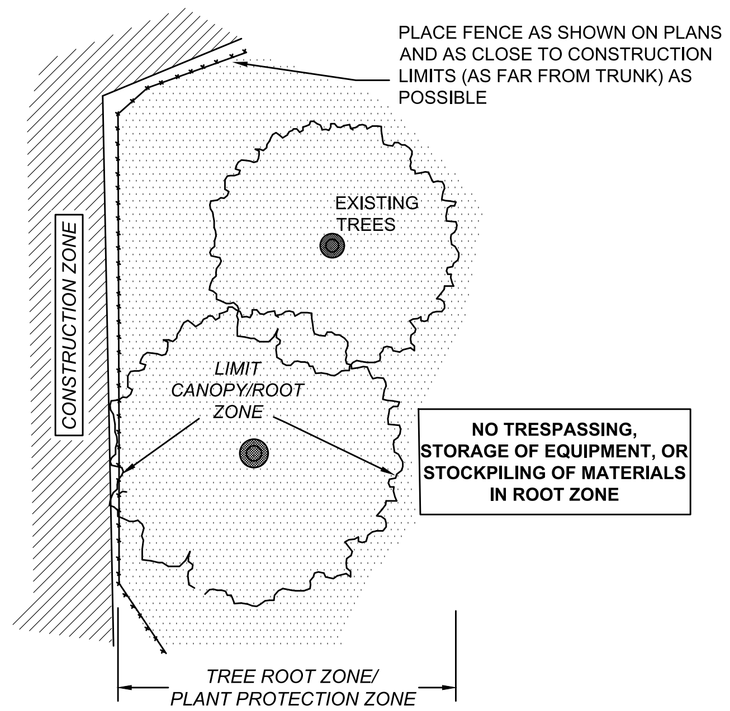
XS HOR. SCALE IN FEET
4 0 4 8
XS VER. SCALE IN FEET
4 0 4 8

613163_EV(WETLAND REPL_SVN.DWG Plotted on 17-Apr-2025 1:34 PM
Proposal No. 613163-135786
A00830 - 77

613163_HD(CONSTRUCTION DETAILS)_SVN.DWG Plotted on 17-Apr-2025 1:36 PM
Proposal No. 613163-135786
A008301 - 78



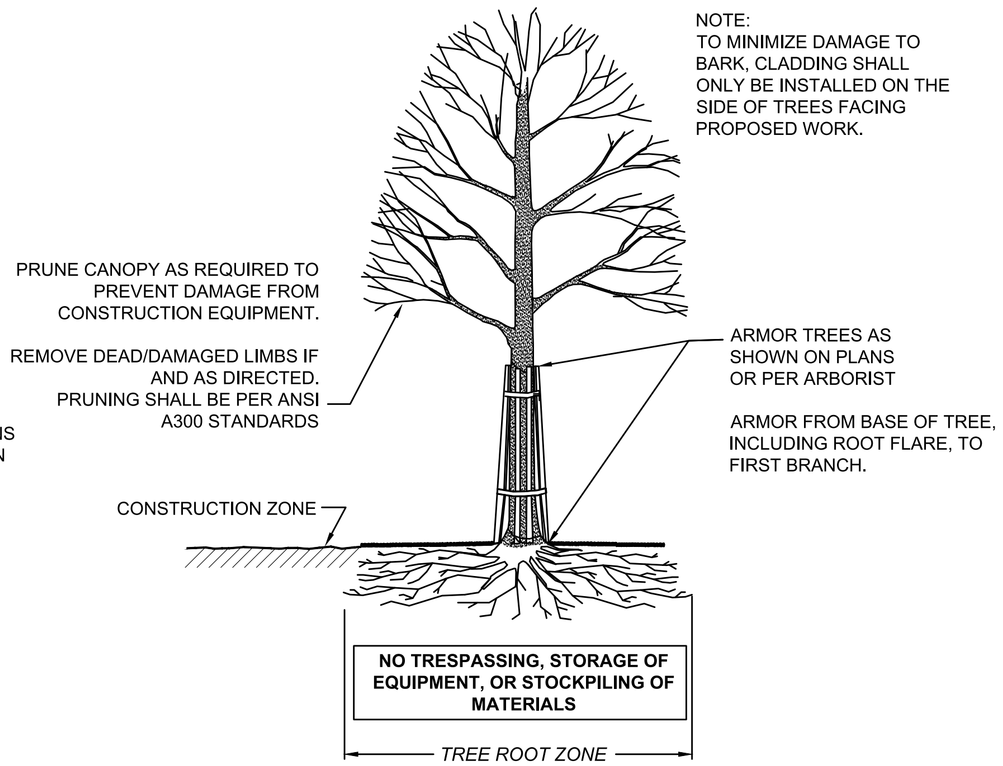
SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION - ROOT ZONE

NOT TO SCALE

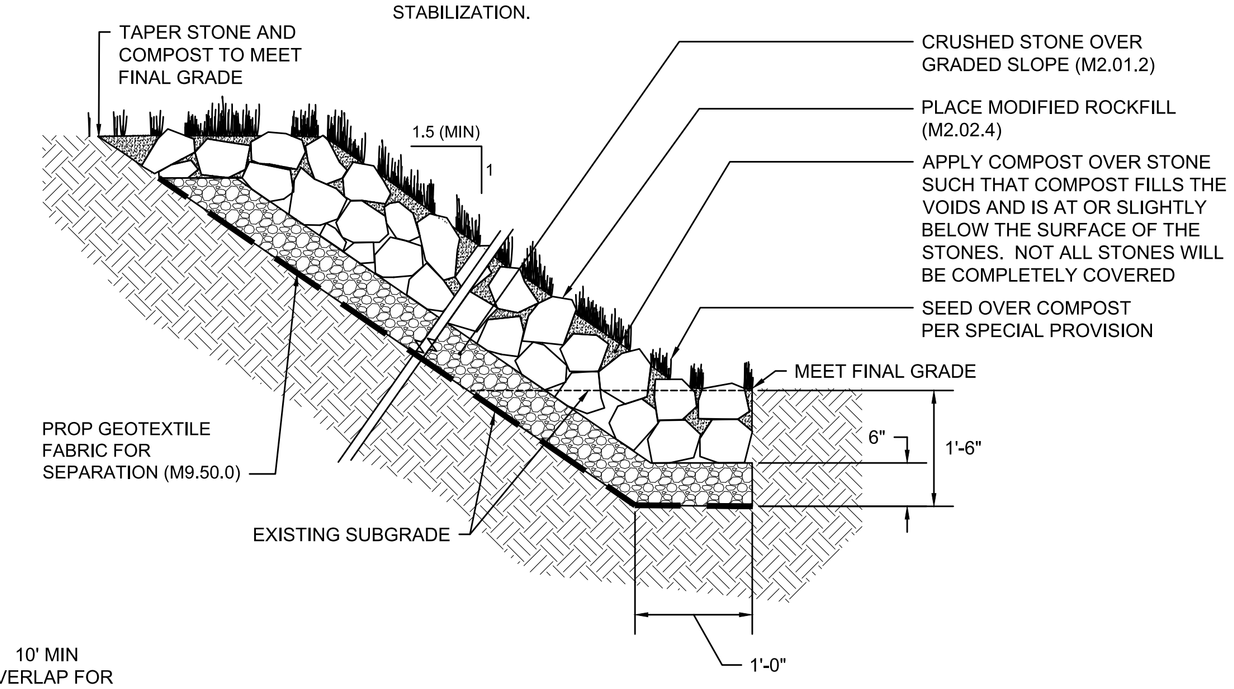


SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION - TRUNK

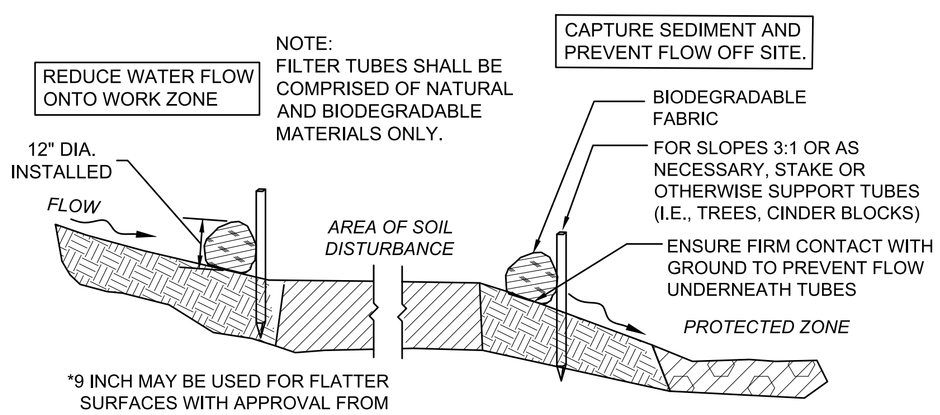
NOT TO SCALE

NOTE: WHERE SLOPES EXCEED 2:1, MODIFIED ROCK FILL IS PROPOSED. SEE CONSTRUCTION PLANS FOR LIMITS OF MODIFIED ROCKFILL SLOPE STABILIZATION.



COMPOST AND SEED OVER MODIFIED ROCKFILL DETAIL

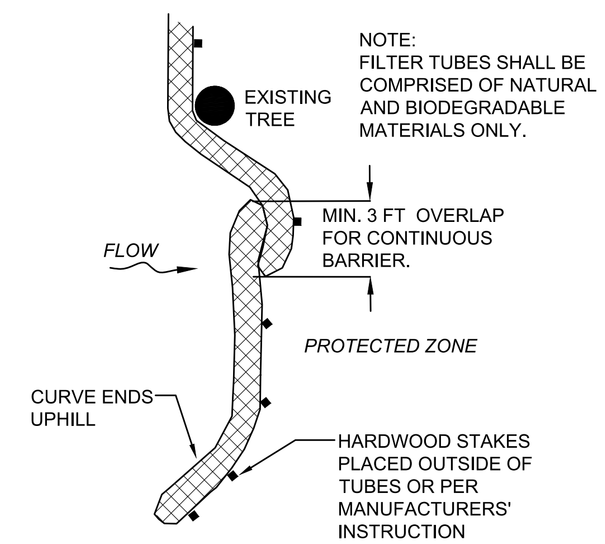
NOT TO SCALE



SECTION

SEDIMENT BARRIERS - COMPOST FILTER TUBES

NOT TO SCALE



PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.

PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE

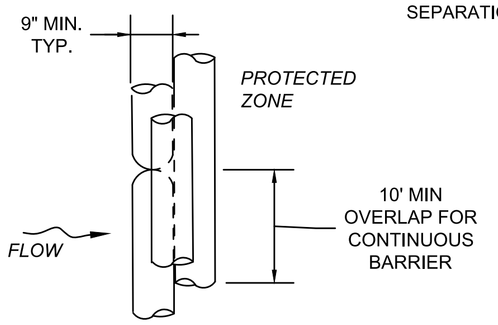
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE.

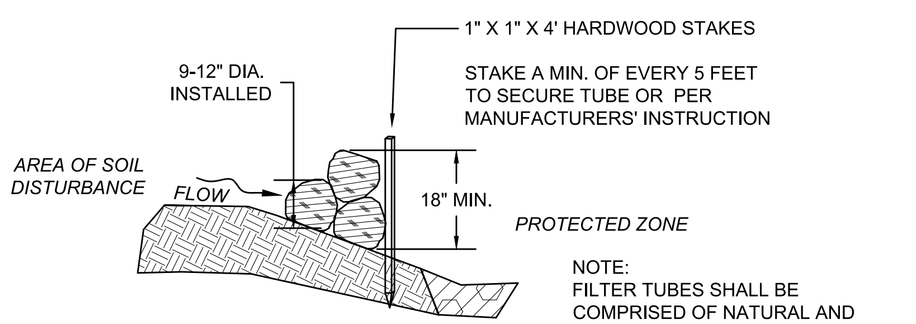
PLAN VIEW

SEDIMENT BARRIERS

NOT TO SCALE



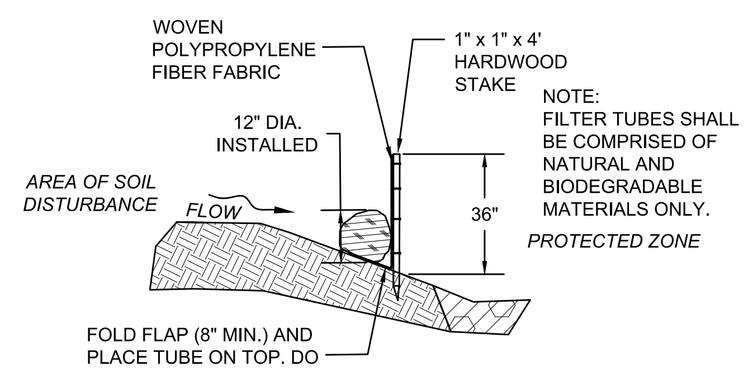
PLAN VIEW



SECTION

COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)

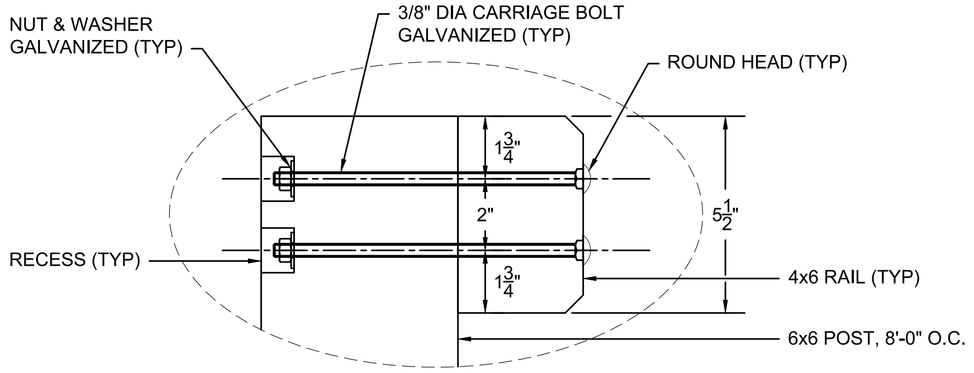
NOT TO SCALE



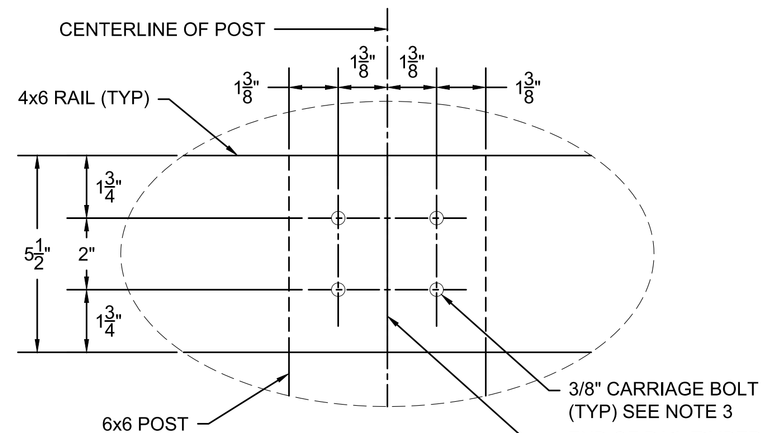
SECTION

COMPOST FILTER TUBE & SILT FENCE

NOT TO SCALE



DETAIL A
NOT TO SCALE



DETAIL B
NOT TO SCALE

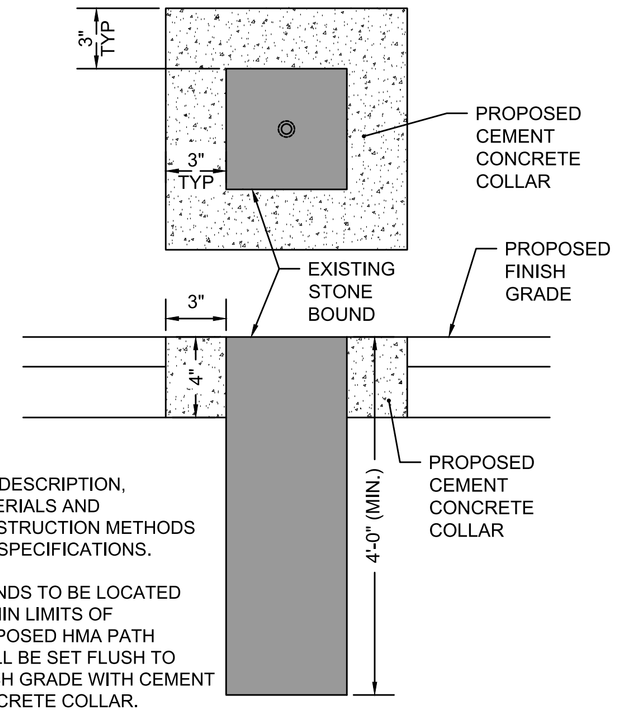
NOTES:

1. ALL FENCING MATERIAL SHALL CONFORM TO THE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. MOUNTING FOR UPPER RAIL IS SHOWN IN DETAIL A. MOUNT ALL OTHER RAILS IN A SIMILAR FASHION.
3. IF A RAIL TIMBER IS CONTINUOUS OVER A POST ONLY 2 BOLTS ARE REQUIRED TO ATTACH RAIL TO POST. BOLTS INSTALLED ON CONTINUOUS RAILS SHALL BE CENTERED ON POST.

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	37
PROJECT FILE NO. 613163			

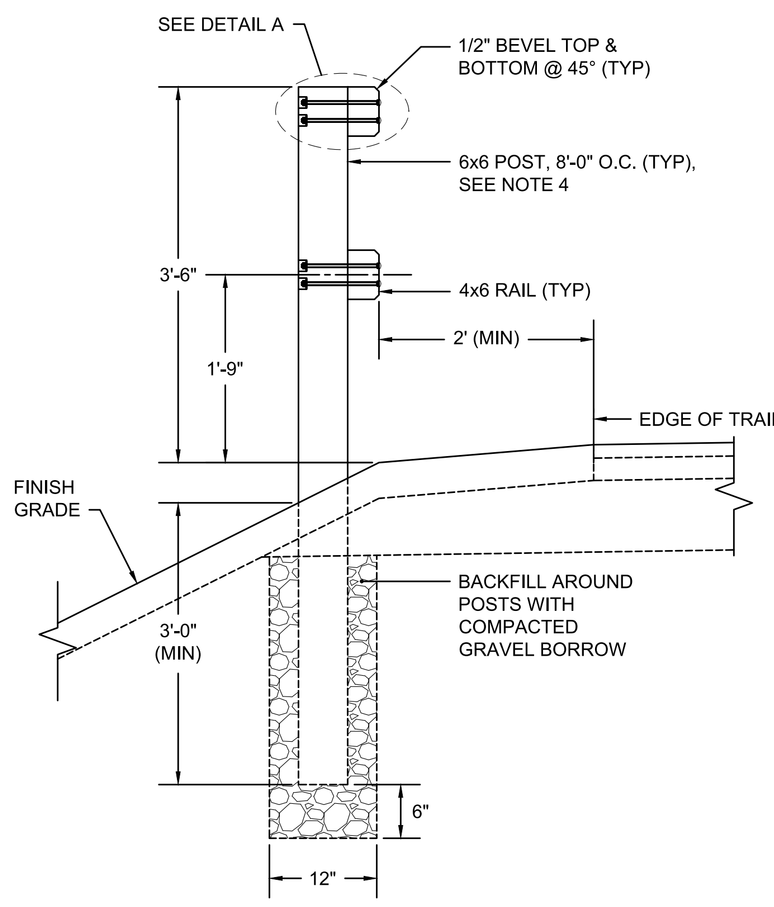
ACOE SVN
CONSTRUCTION DETAILS
PART 2 OF 4



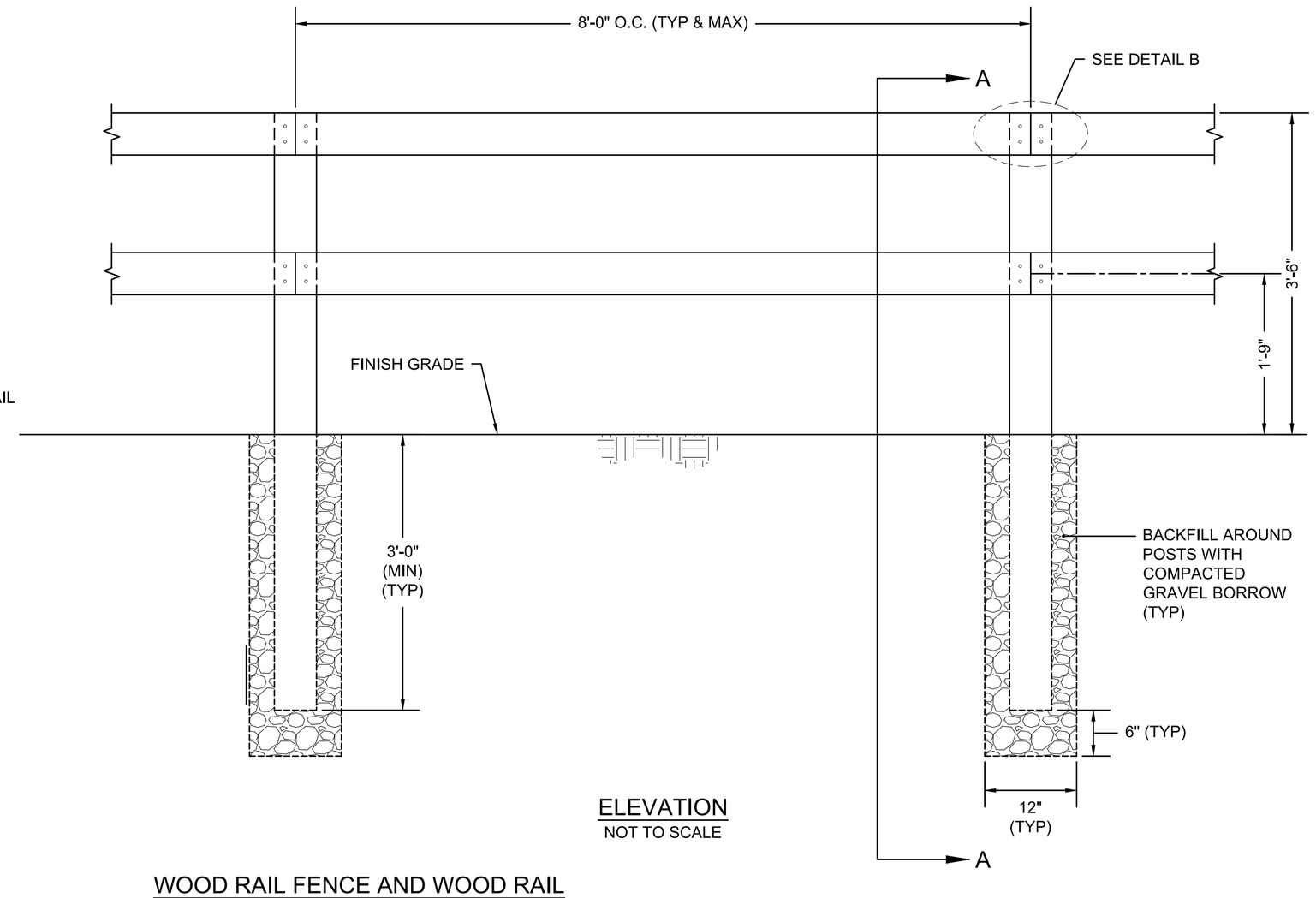
NOTES:

1. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHODS SEE SPECIFICATIONS.
2. BOUNDS TO BE LOCATED WITHIN LIMITS OF PROPOSED HMA PATH SHALL BE SET FLUSH TO FINISH GRADE WITH CEMENT CONCRETE COLLAR.

BOUND RESET IN PAVEMENT DETAIL
NOT TO SCALE



SECTION A-A
NOT TO SCALE



ELEVATION
NOT TO SCALE

WOOD RAIL FENCE AND WOOD RAIL FENCE WITH WIRE MESH DETAIL
NOT TO SCALE

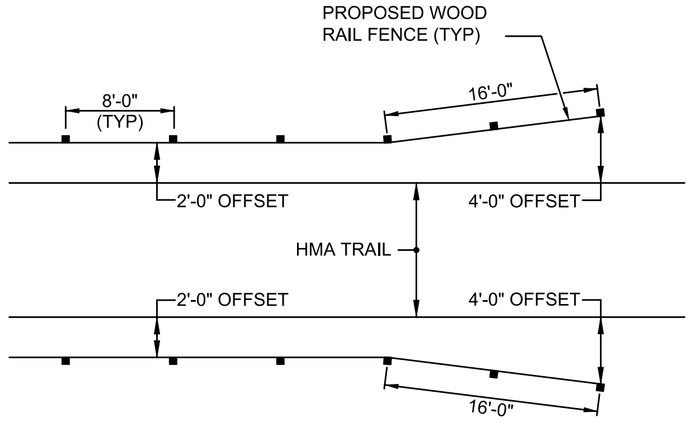
ISOMETRIC VIEW

TOP VIEW

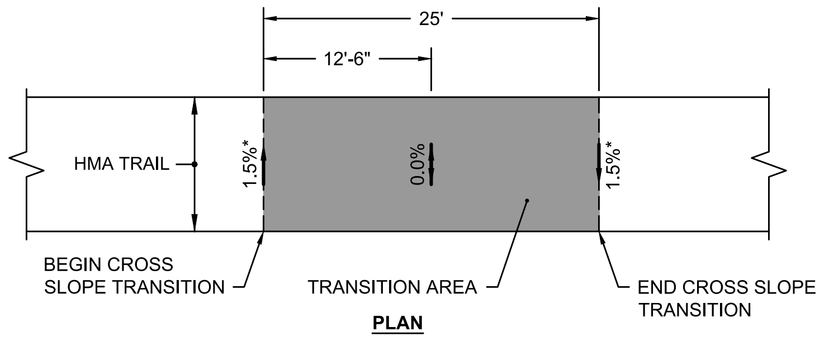
FRONT VIEW

SIDE VIEW

VERTICAL GRANITE TRANSITION CURB TO HMA CURBING AND SLOPED GRANITE EDGING
NOT TO SCALE

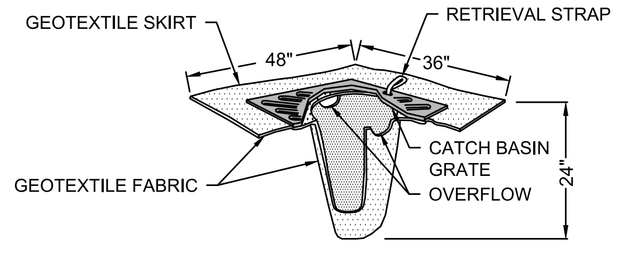


WOOD RAIL FENCE FLARED-END TREATMENT
NOT TO SCALE



PLAN

SHARED-USE PATH CROSS SLOPE TRANSITION DETAIL
NOT TO SCALE



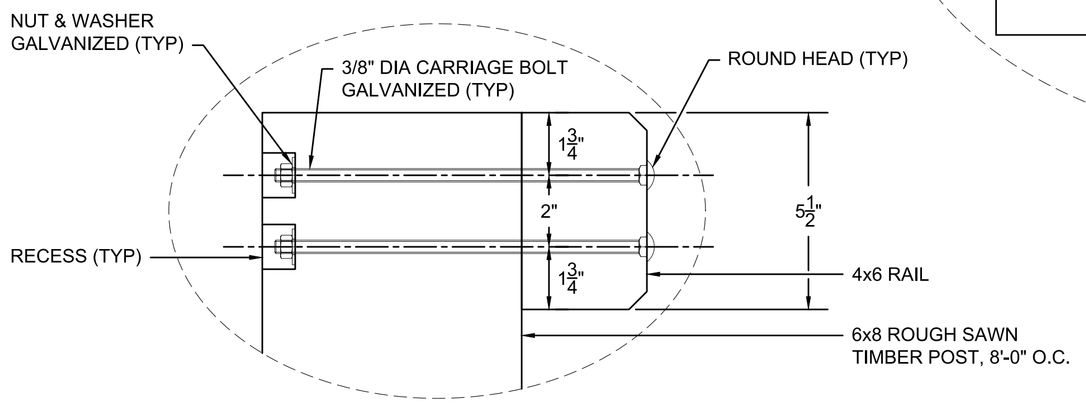
SILT SACK FOR SEDIMENT CONTROL
NOT TO SCALE

613163_HD(CONSTRUCTION DETAILS)_SVN.DWG Plotted on 17-Apr-2025 1:38 PM
Proposal No. 613163-135786
A008830 - 79

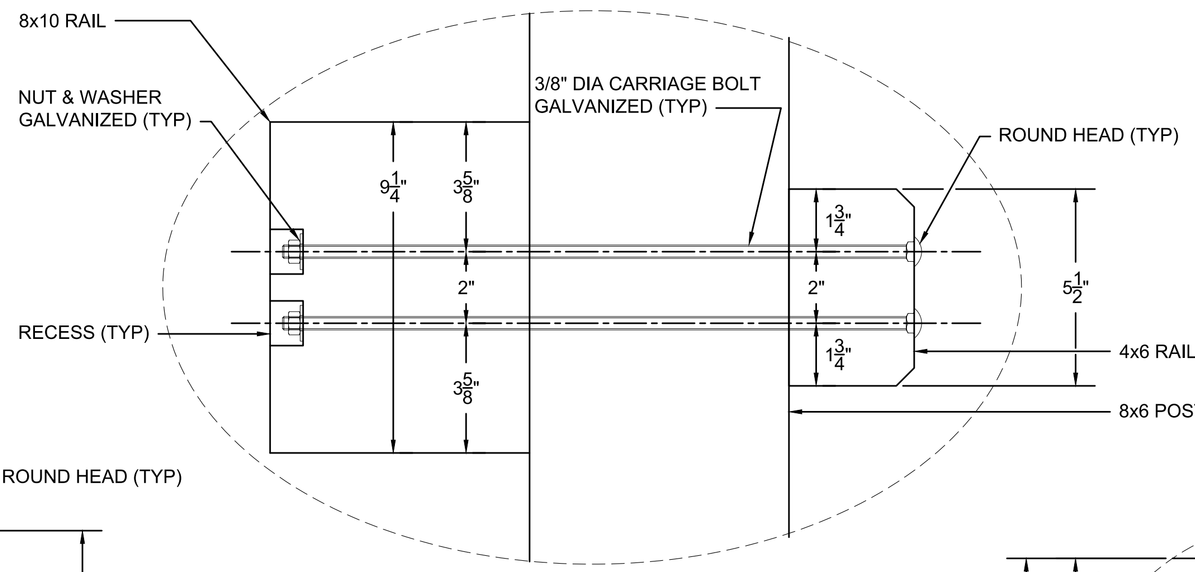
LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	37
PROJECT FILE NO. 613163			

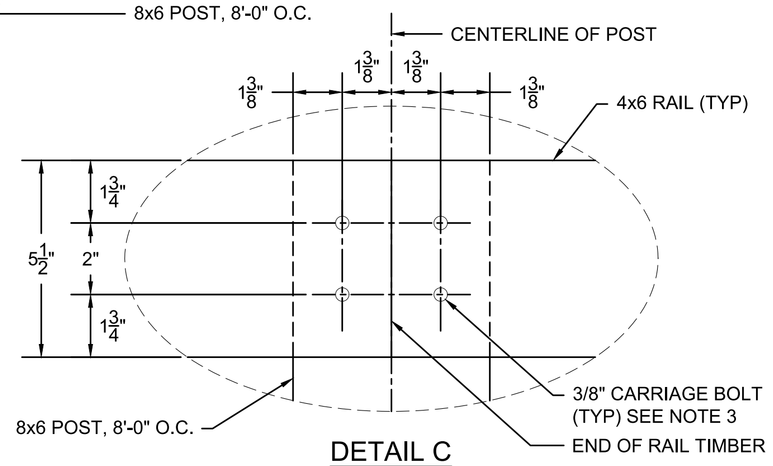
ACOE SVN
CONSTRUCTION DETAILS
PART 3 OF 4



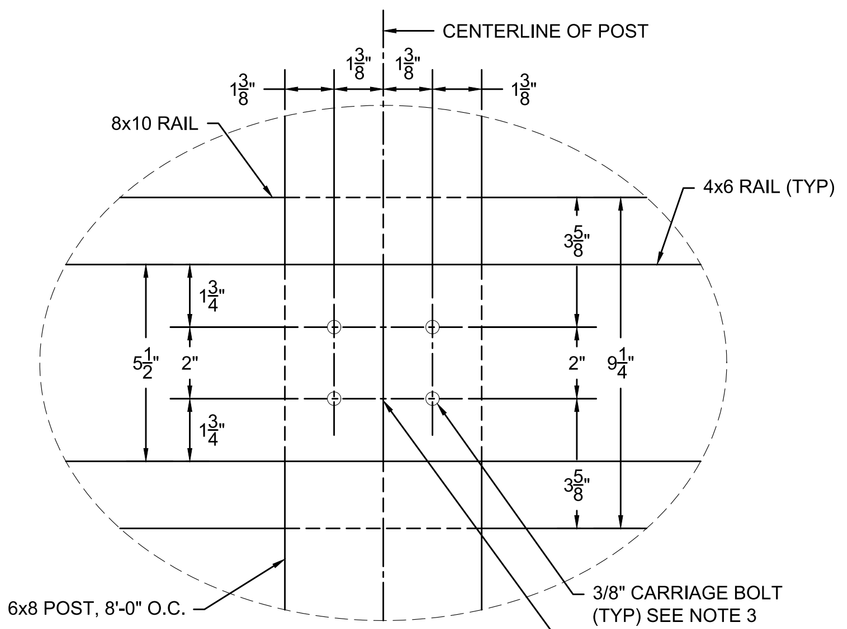
DETAIL A
NOT TO SCALE



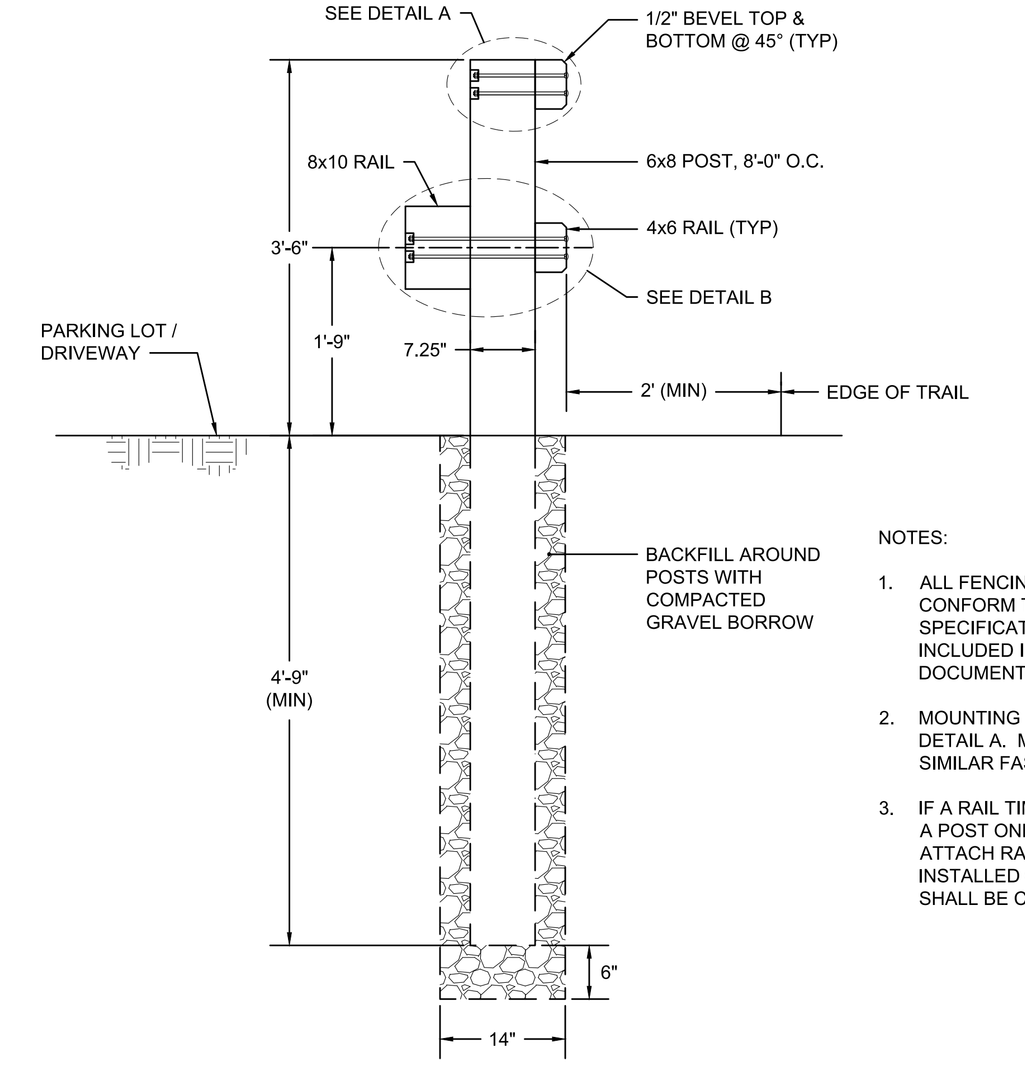
DETAIL B
NOT TO SCALE



DETAIL C
NOT TO SCALE



DETAIL D
NOT TO SCALE

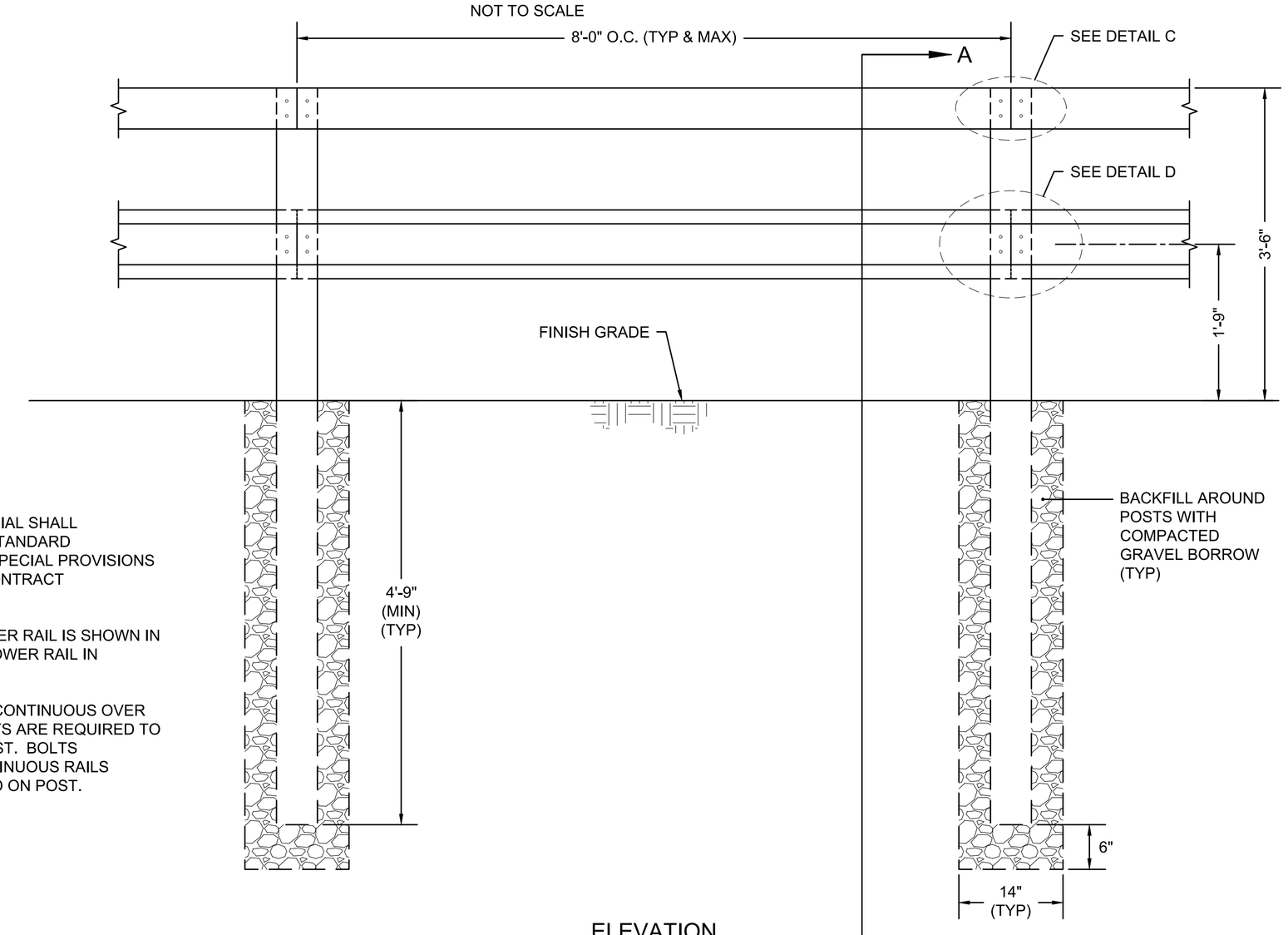


SECTION A-A
NOT TO SCALE

NOTES:

1. ALL FENCING MATERIAL SHALL CONFORM TO THE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. MOUNTING FOR UPPER RAIL IS SHOWN IN DETAIL A. MOUNT LOWER RAIL IN SIMILAR FASHION.
3. IF A RAIL TIMBER IS CONTINUOUS OVER A POST ONLY 2 BOLTS ARE REQUIRED TO ATTACH RAIL TO POST. BOLTS INSTALLED ON CONTINUOUS RAILS SHALL BE CENTERED ON POST.

WOOD RAIL FENCE WITH WOOD GUARDRAIL
NOT TO SCALE



ELEVATION
NOT TO SCALE

613163_HD(CONSTRUCTION DETAILS)_SVN.DWG Plotted on 17-Apr-2025 1:39 PM
Proposal No. 613163-135786
A008830 80

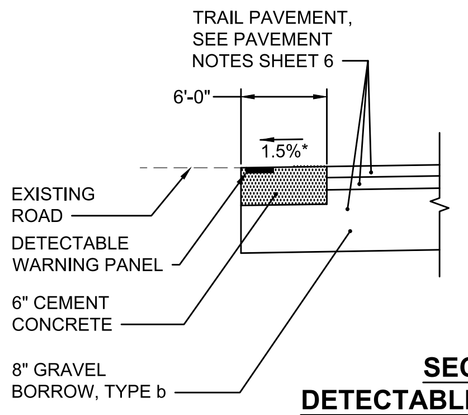
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION DETAILS
PART 4 OF 4

613163_HD(CONSTRUCTION DETAILS)_SVN.DWG Plotted on 17-Apr-2025 1:41 PM

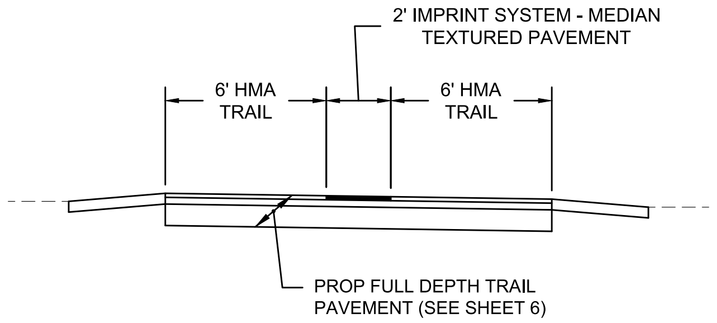
Proposal No. 613163-135786

A90830 - 81

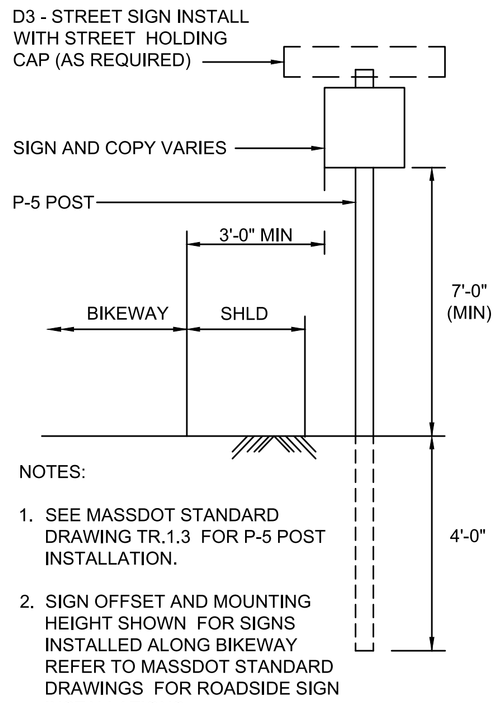


NOTES:
1. ALL DETECTABLE WARNING PANELS (PROJECT WIDE) SHALL BE MOUNTED IN CEMENT CONCRETE.
2. DETECTABLE WARNING PANELS SHALL CONFORM TO MASSDOT STANDARD DETAIL E107.6.5.
3. DETECTABLE WARNING PANELS, AS SHOWN, SHALL BE PROVIDED AT ALL INTERSECTING ROADWAYS THAT DO NOT HAVE AN EXISTING SIDEWALK. INTERSECTING ROADWAYS WITH AN EXISTING SIDEWALKS SHALL HAVE A PEDESTRIAN CURB RAMP AS SHOWN ON THE PLANS.

SECTION A-A
DETECTABLE WARNING PANEL
AT TRAIL INTERSECTION
NOT TO SCALE

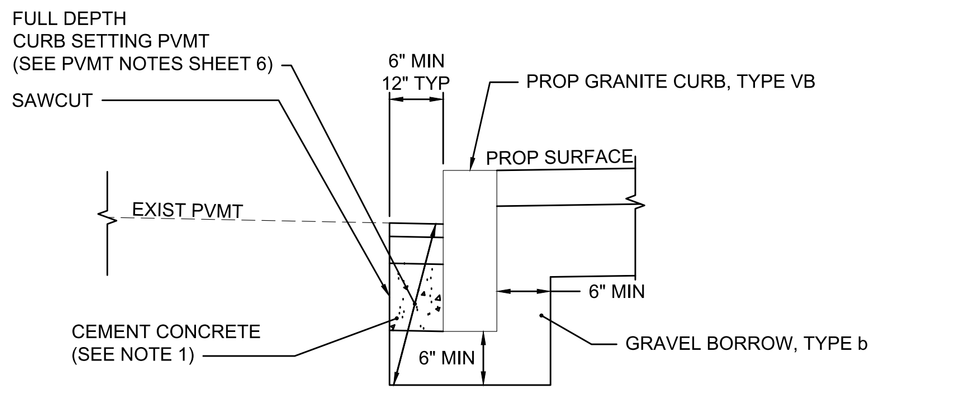


SECTION B-B
IMPRINT SYSTEM - MEDIAN
NOT TO SCALE



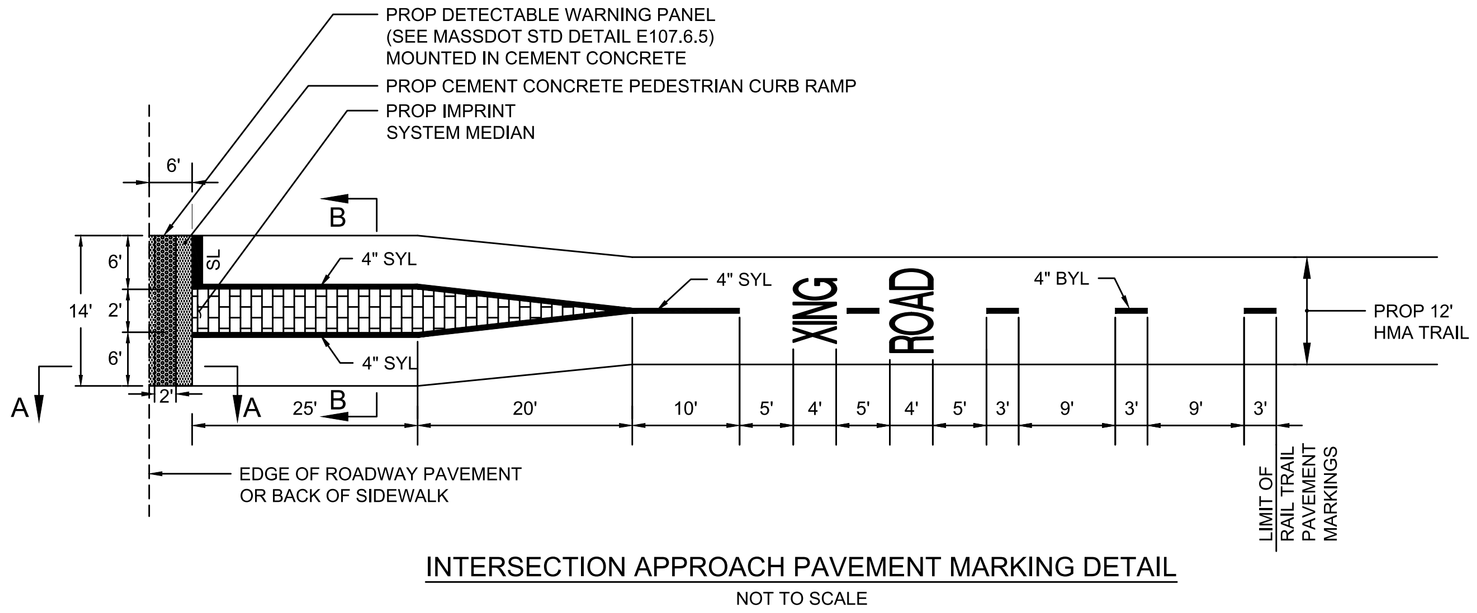
NOTES:
1. SEE MASSDOT STANDARD DRAWING TR.1.3 FOR P-5 POST INSTALLATION.
2. SIGN OFFSET AND MOUNTING HEIGHT SHOWN FOR SIGNS INSTALLED ALONG BIKEWAY REFER TO MASSDOT STANDARD DRAWINGS FOR ROADSIDE SIGN INSTALLATIONS.

TYPICAL SIGN LOCATION
NOT TO SCALE

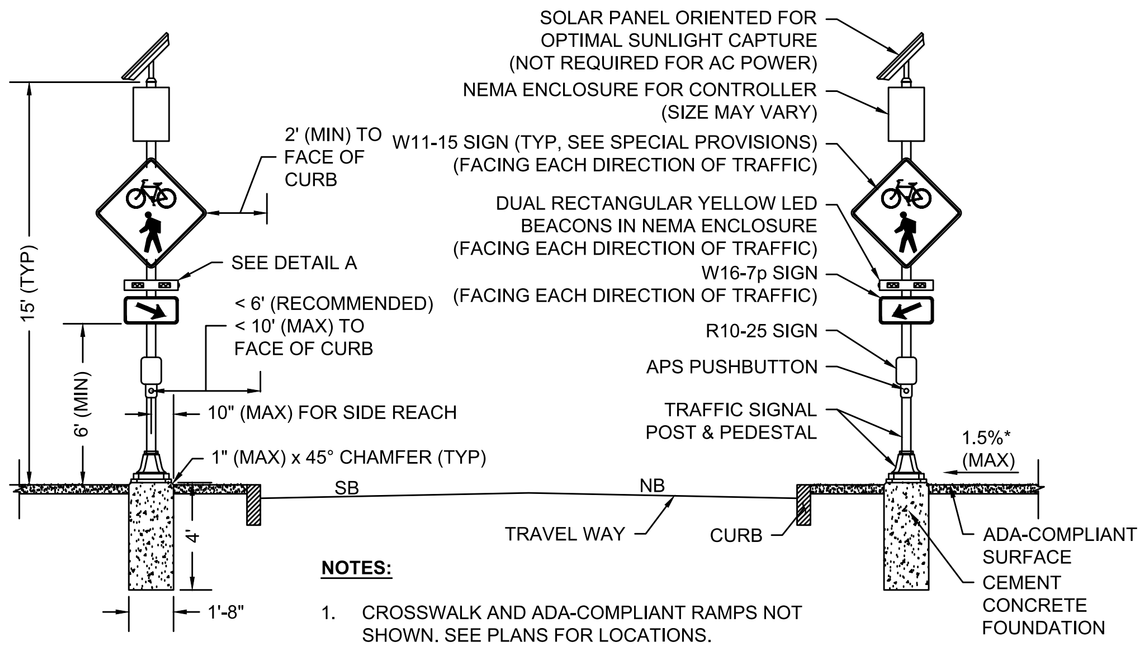


NOTES:
1. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED; ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE FOR CEMENT CONCRETE.
2. SAWCUTTING EXISTING PAVEMENT SHALL BE INCLUDED IN THE PRICE BID FOR PROPOSED OR RESET GRANITE CURB.
3. CURB SETTING SHALL CONFORM TO MASSDOT STANDARD DETAIL E106.3.0.

METHOD OF SETTING GRANITE CURB
(AGAINST EXISTING PAVEMENT)
NOT TO SCALE



INTERSECTION APPROACH PAVEMENT MARKING DETAIL
NOT TO SCALE

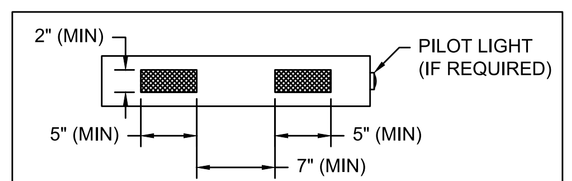


NOTES:
1. CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
2. REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
3. ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AAB COMPLIANT.
4. *0.5% CONSTRUCTION TOLERANCE FOR CROSS-SLOPE.

MAJOR ITEMS LIST

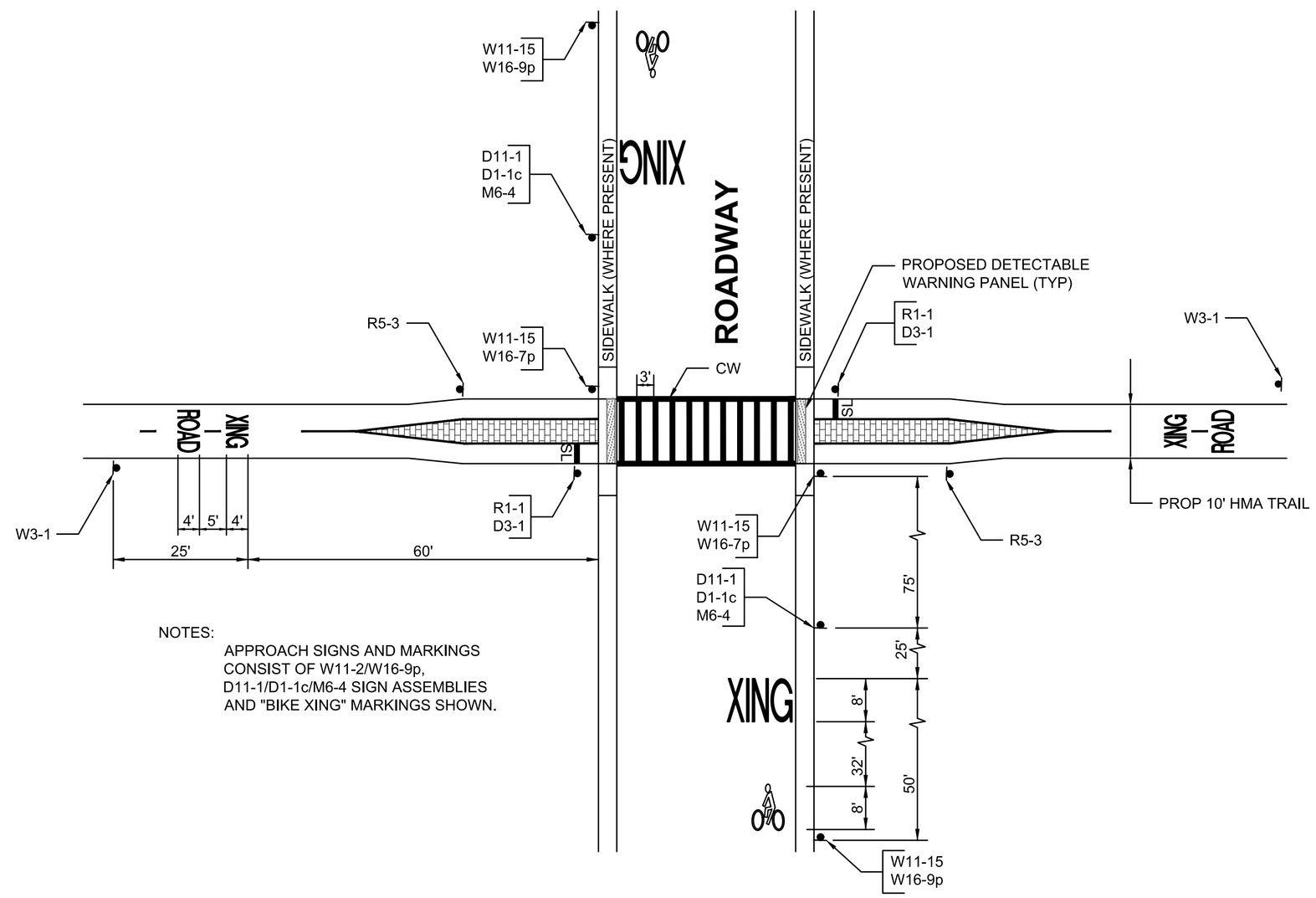
2	CEMENT CONCRETE FOUNDATIONS PER 812.30.1
2	15' TRAFFIC SIGNAL POSTS & PEDESTALS
2	APS PUSHBUTTON SYSTEMS
4	DUAL RECTANGULAR YELLOW LED BEACONS IN NEMA ENCLOSURES
2	R10-25 SIGNS
4	W11-15 SIGNS
2	W16-7PR SIGNS
2	W16-7PL SIGNS
2	SOLAR PANEL SYSTEMS (NOT REQUIRED FOR AC POWER)
2	NEMA ENCLOSURES FOR ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISIONS
2	BATTERY SYSTEMS (NOT REQUIRED FOR AC POWER)

PLUS ALL MOUNTING AND SUPPORTING HARDWARE AND WIRING NECESSARY TO COMPLETE A WORKING SYSTEM.



DETAIL A: DUAL YELLOW BEACON
NOT TO SCALE

RECTANGULAR RAPID FLASHING BEACON
NOT TO SCALE



NOTES:
APPROACH SIGNS AND MARKINGS CONSIST OF W11-2/W16-9p, D11-1/D1-1c/M6-4 SIGN ASSEMBLIES AND "BIKE XING" MARKINGS SHOWN.

TYPICAL INTERSECTION SIGNS AND MARKINGS
NOT TO SCALE

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DOCUMENT A00831

ARMY CORPS OF ENGINEERS

GENERAL PERMIT

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From: Newton, Kevin M CIV USARMY CENAE (USA)
To: Collins, Lily R. (DOT)
Cc: Davis, Heidi (DEP); scennaj@lcwd.us; dwells@lecenvironmental.com; Larner, Erica N. (DOT)
Subject: NAE-2020-02900, MassDOT / Lynnfield Rail Trail
Date: Friday, May 30, 2025 7:45:32 AM

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Good morning,

We received your Self-Verification (SV) application for the General Permits for Massachusetts (GPs for MA) indicating that you plan to conduct work in our jurisdiction. We have logged this into our database and assigned it file number NAE-2020-02900. Please reference this number in any future correspondence with us.

This confirmation that we have received the SV notification form does not confirm that the work is authorized under the GPs for MA. By submitting the SV application, you are self-verifying that your project is authorized under and meets the terms and conditions of the applicable GPs with no review by the Corps of Engineers. Activities that do not qualify for SV require a PCN to the Corps.

Please let me know if you have any questions.

Thanks,

Kevin Newton
Biologist/Project Manager
U.S. Army Corps of Engineers
New England District, Regulatory Division
696 Virginia Road
Concord, MA 01742
(978) 318-8044

From: Collins, Lily R. (DOT)
To: Newton, Kevin M CIV USARMY CENAE (USA)
Cc: Vasconcelos, Daniel B CIV USARMY CENAE (USA)
Subject: RE: DoD ShareFile Link for Large Files, Lynnfield Rail Trail, Phase 1
Date: Wednesday, May 28, 2025 1:38:00 PM
Attachments: 2025-05-27 - 613163 ACOE SVN Plans.pdf

Hi Kevin,
As promised, here is a revised copy of the plans for Phase 1 of the Lynnfield Rail Trail. I believe all of your comments were addressed, but if anything was missed, please let me know.
Thank you!

Best,

Lily Collins
Wetlands and Water Resources Co-Op
***Mass*DOT – Highway Division**
10 Park Plaza, Boston MA, 02116
857-275-7182 | lily.r.collins@dot.state.ma.us

From: Newton, Kevin M CIV USARMY CENAE (USA) <Kevin.M.Newton@usace.army.mil>
Sent: Tuesday, May 13, 2025 9:06 AM
To: Collins, Lily R. (DOT) <lily.r.collins@dot.state.ma.us>
Cc: Vasconcelos, Daniel B CIV USARMY CENAE (USA) <Daniel.B.Vasconcelos@usace.army.mil>
Subject: RE: DoD ShareFile Link for Large Files, Lynnfield Rail Trail, Phase 1

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Hi Lily,

Do you know if this is related to USACE file NAE-2020-02900, which previously had a pre-application meeting with discussions on a proposed rail trail on an existing abandoned rail bed through Reedy Meadow in Lynnfield? The notes I can see in the file mention discussions about a pile supported section of boardwalk, invasive species control efforts, and mitigation. Is this a phase connected to that project?

I briefly reviewed the plans, and it appears portions of impacts are not included on the plan sheets. Sheet 11 and 13 of 37 depicts areas of “non-jurisdictional isolated vegetated wetland” but does not seem to include the impacts as discharges of fill in the impact tables on the sheets (although it seems to be accounted for on the SVN form). Without an approved jurisdictional determination, these wetlands are considered WOTUS and will need to be included in the total impact calculations. All plans should be revised to represent Corps jurisdiction terminology (i.e ordinary high-water mark,

wetlands, etc.). Note that vegetated wetland, isolated vegetated wetland, and bank are state terminology.

On sheet 13 of 37, OHW should be shown through the culvert conveying Bates Brook through the project area.

3,092 square feet of impacts are summarized in the project impact table of the SVN form which appear to be related to state-required replication. Sheet 33 of 37 also appears to have wetland flags around the replication (flag #K-1, K-2, K-3). Can you please clarify and confirm if this replication includes discharges of fill into WOTUS?

Thanks,

Kevin Newton
Biologist/Project Manager
U.S. Army Corps of Engineers
New England District, Regulatory Division
696 Virginia Road
Concord, MA 01742
(978) 318-8044

From: Collins, Lily R. (DOT) <lily.r.collins@dot.state.ma.us>
Sent: Thursday, May 8, 2025 9:13 AM
To: Newton, Kevin M CIV USARMY CENAE (USA) <Kevin.M.Newton@usace.army.mil>; Vasconcelos, Daniel B CIV USARMY CENAE (USA) <Daniel.B.Vasconcelos@usace.army.mil>
Subject: [Non-DoD Source] RE: DoD ShareFile Link for Large Files

Hi Kevin,
I received it. Thank you!

Best,

Lily Collins
Wetlands and Water Resources Co-Op
***Mass*DOT – Highway Division**
10 Park Plaza, Boston MA, 02116
857-275-7182 | lily.r.collins@dot.state.ma.us

From: Newton, Kevin M CIV USARMY CENAE (USA) <Kevin.M.Newton@usace.army.mil>
Sent: Thursday, May 8, 2025 9:09 AM
To: Collins, Lily R. (DOT) <lily.r.collins@dot.state.ma.us>; Vasconcelos, Daniel B CIV USARMY CENAE (USA) <Daniel.B.Vasconcelos@usace.army.mil>
Subject: RE: DoD ShareFile Link for Large Files

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN AND PROFILE OF

LYNNFIELD RAIL TRAIL

CONSTRUCTION - PHASE 1

IN THE TOWN & CITY OF

LYNNFIELD & PEABODY

ESSEX COUNTY

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	37
PROJECT FILE NO. 613163			

ACOE SVN
TITLE SHEET & INDEX

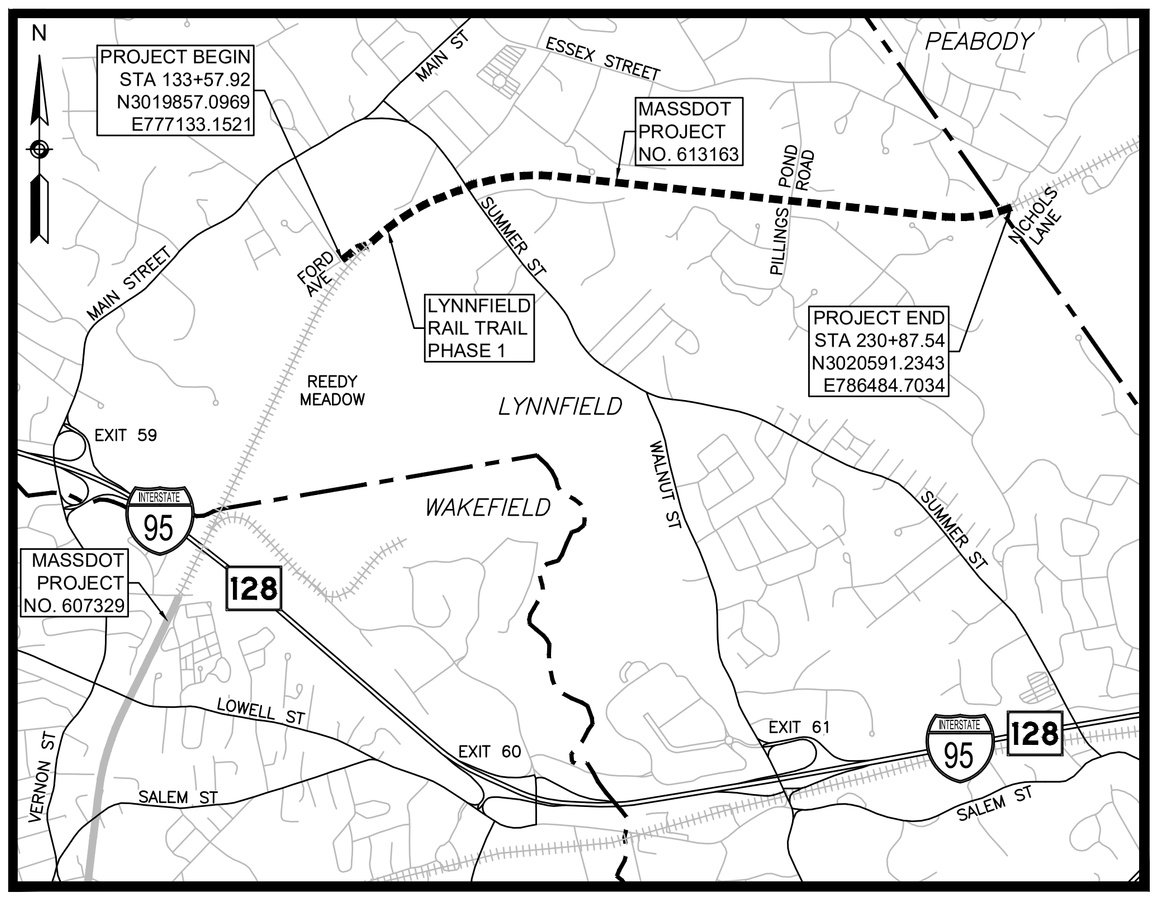
613163_HD(TITLE)_SVN.DWG Plotted on 27-May-2025 3:10 PM

Proposal No. 613163-135786

A00831 - 6

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	GENERAL NOTES
4 - 5	KEY PLANS
6 - 7	TYPICAL SECTIONS
8 - 17	CONSTRUCTION PLANS
18 - 27	PROFILES
28 - 30	TRAIL AMENITY PLANS
31 - 32	TRAIL AMENITY DETAILS
33	WETLAND REPLICATION AREA
34 - 37	CONSTRUCTION DETAILS



0 1,500 3,000 4,500 6,000

SCALE: 1" = 1,500'

LENGTH OF PROJECT = 9,718.21 FEET = 1.841 MILES

SELF-VERIFICATION NOTIFICATION PLANS

MAY 27, 2025

NOT FOR CONSTRUCTION

DATE	DESCRIPTION	REV #
2025-05-27	REVISED ACOE SVN PLANS	1
2025-04-21	REVISED ACOE SVN PLANS	0
2025-03-11	REVISED ACOE SVN PLANS	0
2025-02-28	DRAFT ACOE SVN PLANS	0

massDOT Massachusetts Department of Transportation Highway Division

APPROVED

CHIEF ENGINEER DATE

Stantec
45 BLUE SKY DRIVE | THIRD FLOOR | BURLINGTON, MA 01803

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
		CATCH BASIN CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
		LIGHT POLE
CO.BD.		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
HTP		TRANSMISSION POLE
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W / 1 LIGHT
UPL	UPL	UTILITY POLE
		BUSH
SIZE & TYPE		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
100 99		CONTOURS (ON-THE-GROUND SURVEY DATA)
100 99		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT CONTROL BARRIER
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
1	1	CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		MICROWAVE DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
	*	EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
RRSG	RRSG	RAILROAD SIGNAL
OR		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
	20'	MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
	20'	MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
	SL	STOP LINE
	CW	CROSSWALK
	SWL	SOLID WHITE LINE
	SYL	SOLID YELLOW LINE
	BWL	BROKEN WHITE LINE
	BYL	BROKEN YELLOW LINE
	DWL	DOTTED WHITE LINE
	DYL	DOTTED YELLOW LINE
	DWLEx	DOTTED WHITE LINE EXTENSION
	DYLEx	DOTTED YELLOW LINE EXTENSION
	DBWL	DOUBLE WHITE LINE
	DBYL	DOUBLE YELLOW LINE

ABBREVIATIONS

GENERAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	37
PROJECT FILE NO. 613163			

ACOE SVN
LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL

R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL ABBREVIATIONS

CAB	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY UPRAISED HAND
FDW	FLASHING UPRAISED HAND
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
FYL	FLASHING YELLOW LEFT ARROW
FYR	FLASHING YELLOW RIGHT ARROW
G	STEADY CIRCULAR GREEN
GL	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALKING PERSON
Y	STEADY CIRCULAR YELLOW
YL	STEADY YELLOW LEFT ARROW

613163_HD(TITLE)_SVN.DWG Plotted on 27-May-2025 3:10 PM
Proposal No. 613163-13578
A00831 - 7

GENERAL NOTES

1. EXISTING GROUND SURFACES SHOWN ON PLANS, PROFILES AND CROSS SECTIONS ARE BASED UPON DATA OBTAINED BY FIELD SURVEYS.

2. THE LOCATIONS OF EXISTING SUBSURFACE STRUCTURES, SUCH AS SEWERS, WATER MAINS, DRAINS AND OTHER UTILITIES ARE APPROXIMATE ONLY AND THE ENGINEER DOES NOT GUARANTEE THEIR NUMBER OR LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE EXCAVATING.

3. ALL GAS GATES, ELECTRIC MANHOLES, AND TELEPHONE MANHOLES WITHIN THE LIMITS OF WORK SHALL BE ADJUSTED BY THE OWNING AGENCY. ALL GAS, ELECTRIC, TELEPHONE AND CATV WORK SHALL BE DONE BY THE OWNING AGENCY. THE CONTRACTOR SHALL NOTIFY THE OWNING AGENCIES TO ADJUST AND/OR RELOCATE THESE STRUCTURES TO AVOID IMPACTING THE CONTRACTOR'S SCHEDULE OF OPERATIONS.

4. ANY CLEANING OF CATCH BASINS OR DRAIN PIPES NECESSARY FOR THE PROPOSED WORK SHALL BE COMPLETED BY THE RESPECTIVE MUNICIPALITY INVOLVED.

5. ANY DRAINAGE / SEWER / WATER CASTINGS BROKEN THROUGH NO FAULT OF THE CONTRACTOR SHALL BE SUPPLIED BY THE RESPECTIVE MUNICIPALITY FOR ADJUSTMENT UNDER THE CONTRACT ITEMS.

6. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE UTILITY COMPANIES DOING WORK IN THE SAME AREA. THE CONTRACTOR SHALL ALLOW THE UTILITY COMPANIES AND THEIR REPRESENTATIVES TO ADJUST AND/OR INSTALL THEIR SYSTEMS WITHIN CITY/ STATE OWNED STREETS AND EASEMENTS.

7. CURB SHALL BE FURNISHED AND SET AT LOCATIONS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.

8. CONSTRUCT DRIVEWAYS AND WALKS AS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.

9. EXISTING GRANITE CURB AND EDGING SUITABLE FOR REUSE WITHIN THE PROJECT SITE SHALL BE REMOVED AND RESET IN ACCORDANCE WITH THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.

10. SAWCUT EXISTING ASPHALT ROADWAYS, CEMENT CONCRETE SIDEWALKS, AND ASPHALT DRIVEWAYS AS SHOWN ON THE PLANS AND AT THE PROPOSED MATCH LINE.

11. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

12. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.

13. ALL ACCESSIBLE ROUTES, WALKWAYS, CURB CUTS, RAMPS, SIDEWALKS, DRIVEWAY OPENINGS, CLEARANCES AND SLOPE TOLERANCES SHALL CONFORM WITH THE ARCHITECTURAL ACCESS BOARD (AAB), 521 CMR AND MASSDOT CONSTRUCTION AND TRAFFIC STANDARD DRAWINGS.

14. ITEMS LABELED "REM" SHALL BE REMOVED AND DISCARDED BY CONTRACTOR.

15. THE CONTRACTOR SHALL PROTECT EXISTING SURVEY MONUMENTS AND SHALL RESET ANY MONUMENTATION DISTURBED BY THEIR OPERATIONS.

16. THE CONTRACTOR SHALL INSTALL OTHER NECESSARY TEMPORARY REGULATORY AND WARNING SIGNS DURING CONSTRUCTION AS REQUIRED BY THE ENGINEER FOR OTHER INCIDENTAL CONSTRUCTION ACTIVITIES. ALL SIGNAGE AND TRAFFIC CONTROL DEVICES USED MUST CONFORM TO THE LATEST "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD)

17. THE CONTRACTOR SHALL PERFORM HIS WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT INTERFERENCE WITH AND INCONVENIENCE TO BUSINESS CONCERNS AND ABUTTERS, ON ACCOUNT OF THE CONSTRUCTION WORK, IS KEPT TO A MINIMUM.

18. THE CONTRACTOR SHALL NOT BE ALLOWED TO PARK EQUIPMENT OR STOCKPILE EQUIPMENT OR MATERIAL ON THE TRAVELED WAYS OVERNIGHT OR WHEN NOT IN USE.

19. THE CONTRACTOR SHALL MAINTAIN SAFE AND REASONABLE ACCESS TO AND FROM ABUTTING PROPERTY, PRIVATE WAYS, DRIVEWAYS AND ALL ALLEYS DURING THE CONSTRUCTION PERIOD.

20. ALL DETECTABLE WARNING PANELS SHALL BE MOUNTED IN CEMENT CONCRETE AND INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARD DETAIL E107.6.5.

SURVEY NOTES

1. COORDINATES, IN U.S. SURVEY FEET, ARE IN THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (MCS), MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983, (NAD 83/2011, EPOCH 2010.00), BASED ON THE KeyNetGPS VIRTUAL REFERENCE SYSTEM (VRS).

2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) BASED ON THE KeyNetGPS VIRTUAL REFERENCE SYSTEM (VRS)

3. SUBSURFACE UTILITY LINES AND FEATURES, AS SHOWN HEREIN, WERE COMPILED FROM FIELD EVIDENCE AND/OR AVAILABLE RECORD INFORMATION (SEE REFERENCES), AND THEIR LOCATIONS ARE ONLY APPROXIMATE. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.

   DAWOOD ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.

   BEFORE DESIGNING FUTURE CONNECTIONS, THE APPROPRIATE UTILITIES MUST BE CONSULTED.

   BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED (SEE MASSACHUSETTS GENERAL LAWS, CHAPTER 82 SECTION 40).

   CALL "DIG SAFE" 1-888-DIG-SAFE. (888-344-7233).

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	37
PROJECT FILE NO. 613163			

ACOE SVN
GENERAL NOTES

A00831 - 8

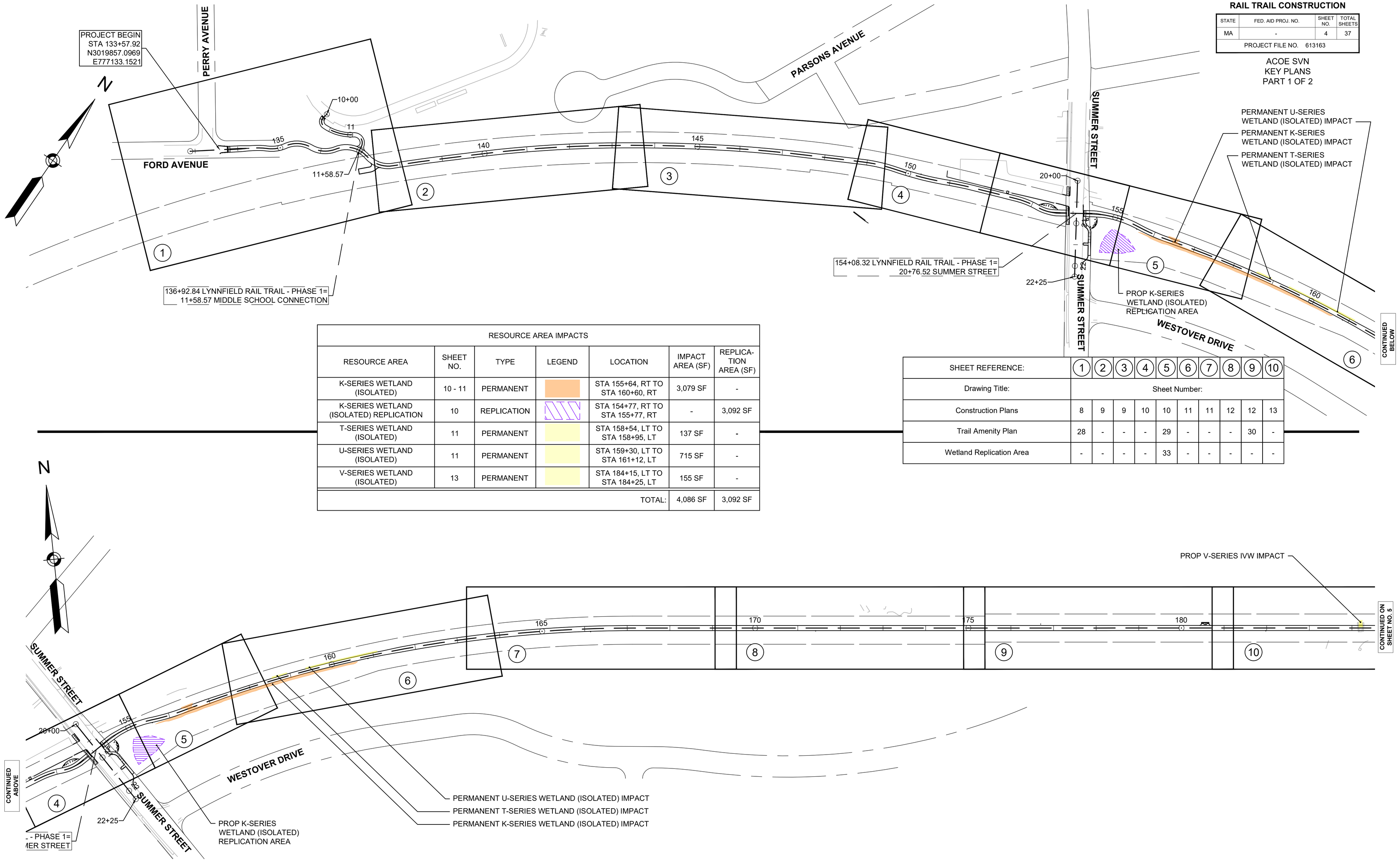
613163_HD(TITLE)_SVN.DWG Plotted on 27-May-2025 3:10 PM

Proposal No. 613163-135786

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	37
PROJECT FILE NO. 613163			

ACOE SVN
KEY PLANS
PART 1 OF 2



RESOURCE AREA IMPACTS						
RESOURCE AREA	SHEET NO.	TYPE	LEGEND	LOCATION	IMPACT AREA (SF)	REPLICA-TION AREA (SF)
K-SERIES WETLAND (ISOLATED)	10 - 11	PERMANENT		STA 155+64, RT TO STA 160+60, RT	3,079 SF	-
K-SERIES WETLAND (ISOLATED) REPLICATION	10	REPLICATION		STA 154+77, RT TO STA 155+77, RT	-	3,092 SF
T-SERIES WETLAND (ISOLATED)	11	PERMANENT		STA 158+54, LT TO STA 158+95, LT	137 SF	-
U-SERIES WETLAND (ISOLATED)	11	PERMANENT		STA 159+30, LT TO STA 161+12, LT	715 SF	-
V-SERIES WETLAND (ISOLATED)	13	PERMANENT		STA 184+15, LT TO STA 184+25, LT	155 SF	-
				TOTAL:	4,086 SF	3,092 SF

SHEET REFERENCE:	1	2	3	4	5	6	7	8	9	10
Drawing Title:	Sheet Number:									
Construction Plans	8	9	9	10	10	11	11	12	12	13
Trail Amenity Plan	28	-	-	-	29	-	-	-	30	-
Wetland Replication Area	-	-	-	-	33	-	-	-	-	-

0 100 200 300 400

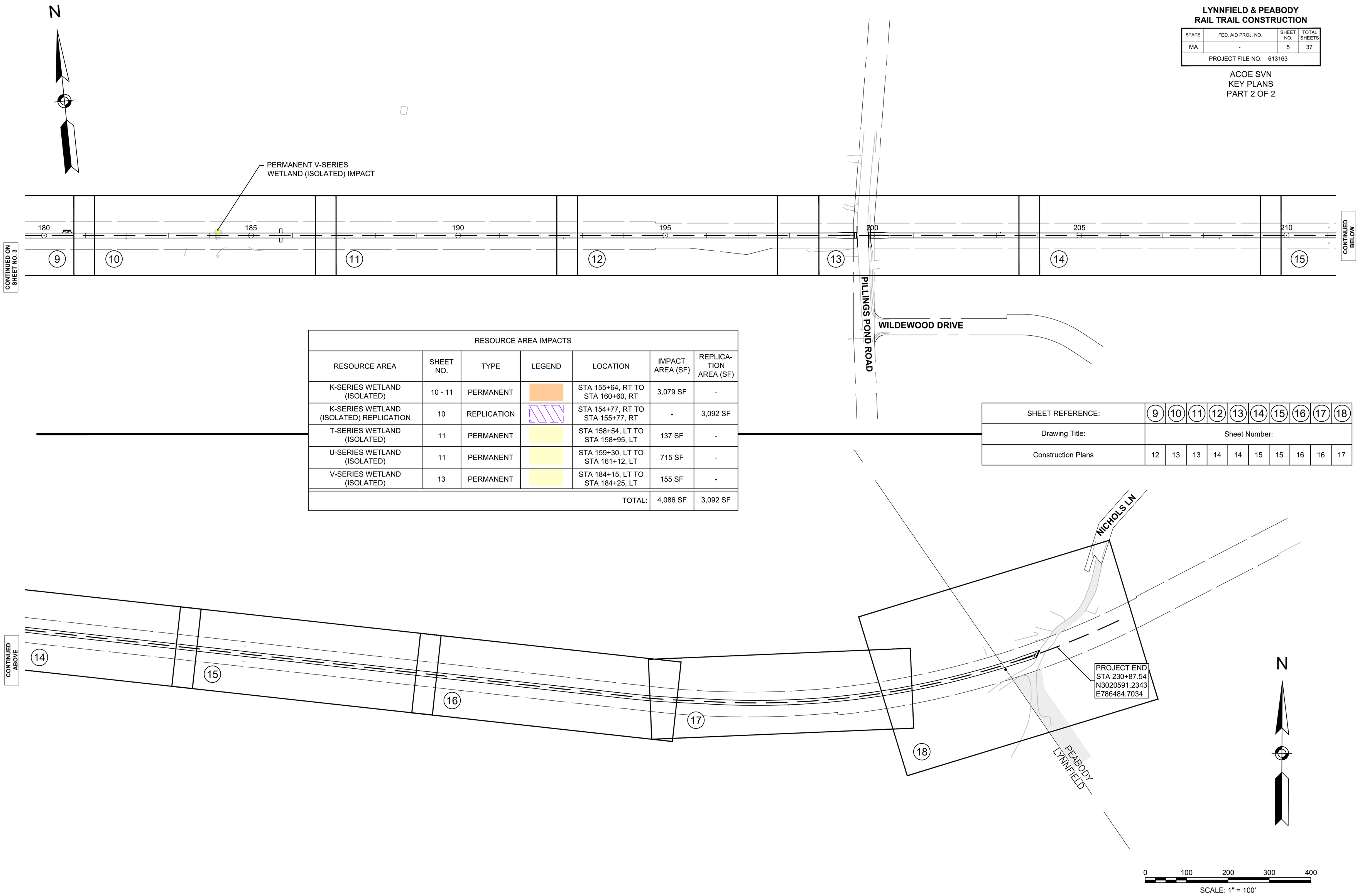
SCALE: 1" = 100'

613163_HDI\KEY PLAN_SVN.DWG Plotted on 27-May-2025 3:39 PM
A00831 - 9
Proposal No. 613163-135786

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	37
PROJECT FILE NO. 613163			

ACOE SVN
KEY PLANS
PART 2 OF 2

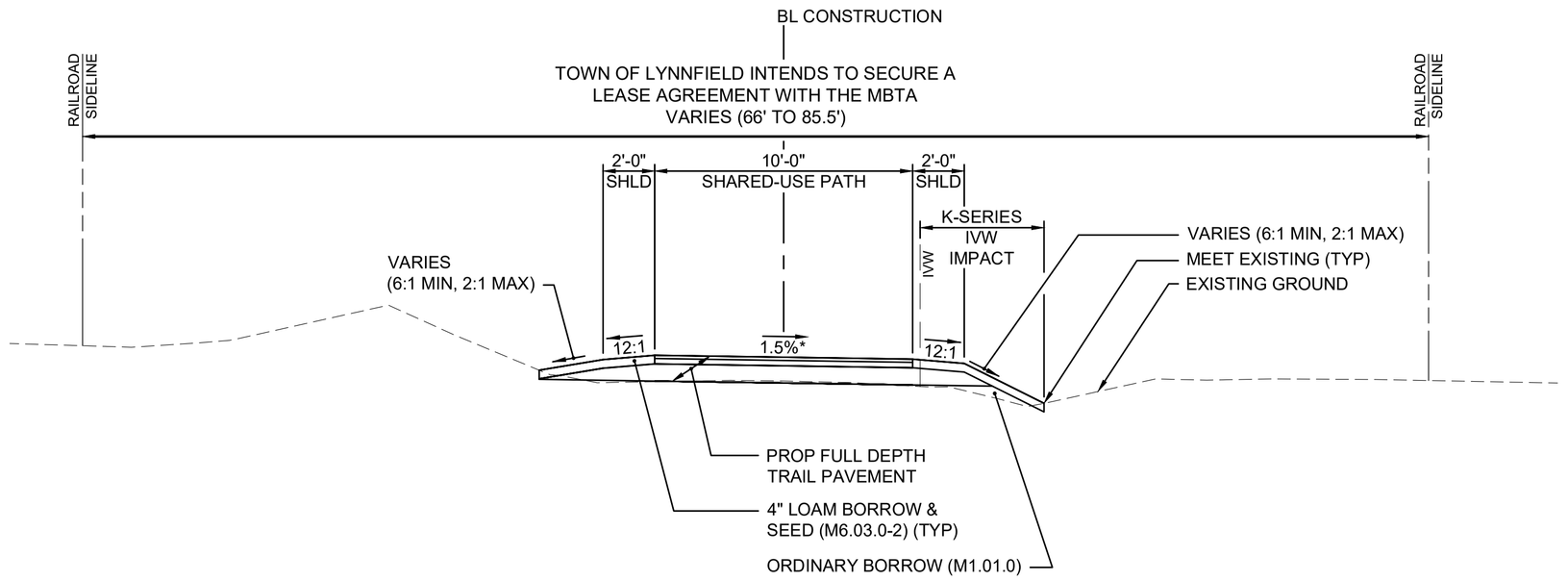


RESOURCE AREA IMPACTS

RESOURCE AREA	SHEET NO.	TYPE	LEGEND	LOCATION	IMPACT AREA (SF)	REPLICA-TION AREA (SF)
K-SERIES WETLAND (ISOLATED)	10 - 11	PERMANENT		STA 155+64, RT TO STA 160+60, RT	3,079 SF	-
K-SERIES WETLAND (ISOLATED) REPLICATION	10	REPLICATION		STA 154+77, RT TO STA 155+77, RT	-	3,092 SF
T-SERIES WETLAND (ISOLATED)	11	PERMANENT		STA 158+54, LT TO STA 158+95, LT	137 SF	-
U-SERIES WETLAND (ISOLATED)	11	PERMANENT		STA 159+30, LT TO STA 161+12, LT	715 SF	-
V-SERIES WETLAND (ISOLATED)	13	PERMANENT		STA 184+15, LT TO STA 184+25, LT	155 SF	-
				TOTAL:	4,086 SF	3,092 SF

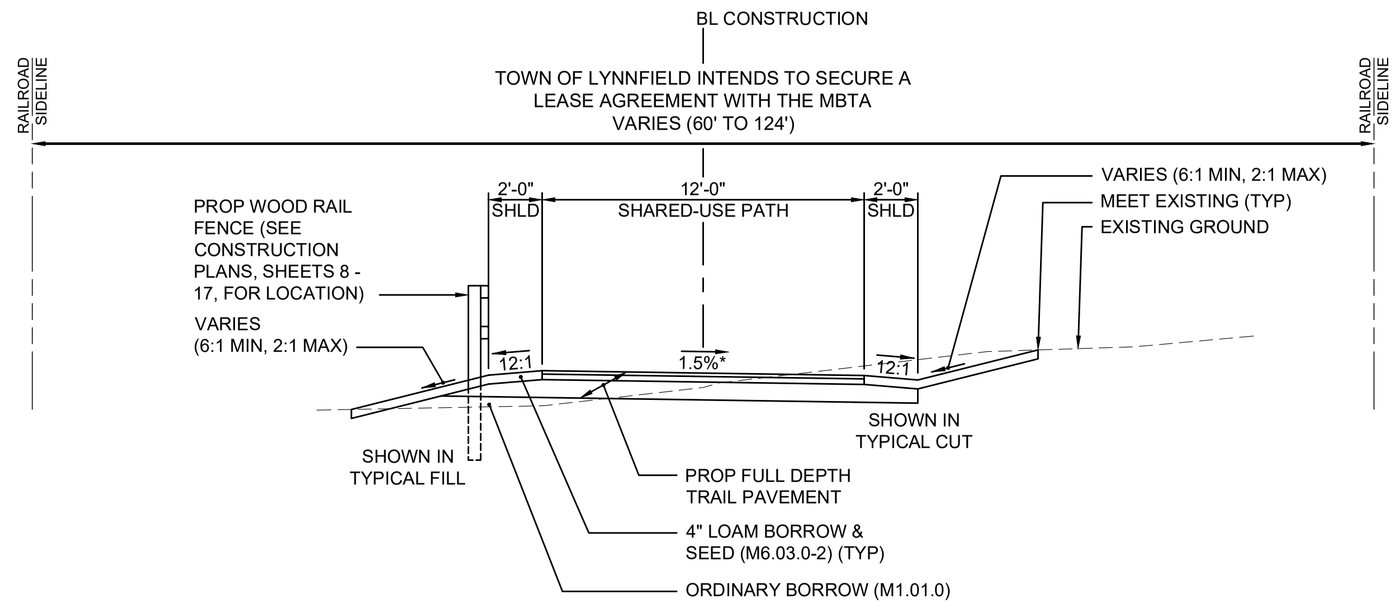
SHEET REFERENCE:	9	10	11	12	13	14	15	16	17	18
Drawing Title:	Sheet Number:									
Construction Plans	12	13	13	14	14	15	15	16	16	17

613163_HD\KEY PLAN_SVN.DWG Plotted on 27-May-2025 3:10 PM
Proposal No. 613163-135786
A00831 - 10



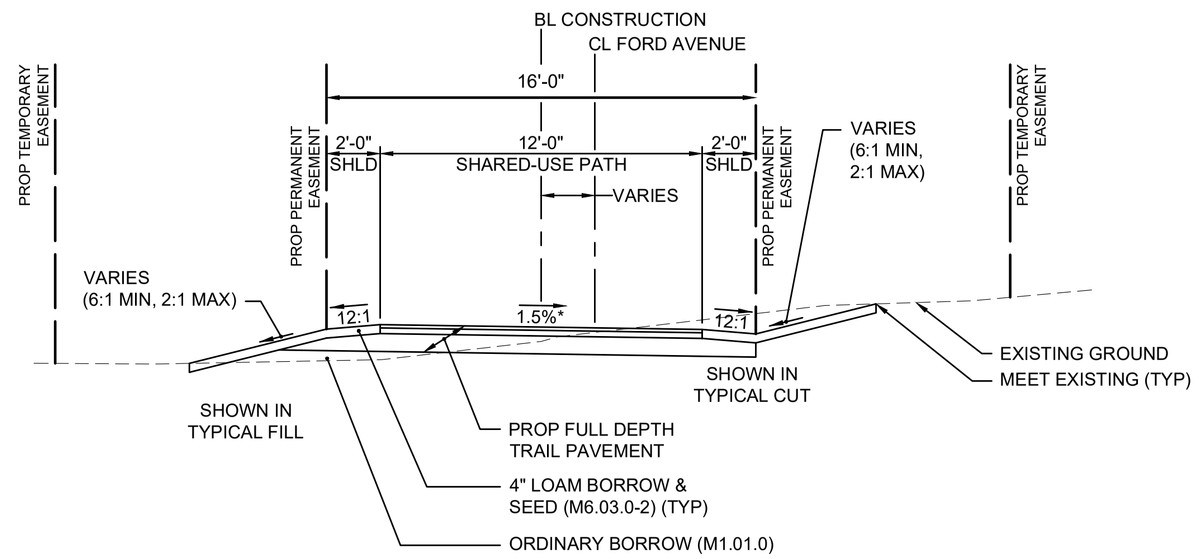
TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 157+38± TO STA 161+20±



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 137+25± (RR CORRIDOR) TO STA 153+85± (SUMMER ST)
STA 154+24± (SUMMER ST) TO STA 157+38±
STA 161+20± TO STA 182+50±



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 133+87± (FORD AVE) TO STA 137+25± (RR CORRIDOR)

*** - TOLERANCE FOR CONSTRUCTION ±0.5% (TYP)**

PAVEMENT NOTES

PROPOSED FULL DEPTH TRAIL PAVEMENT SECTIONS

SURFACE: 1-1/2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5)

INTERMEDIATE: 2-1/2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH ROADWAY PAVEMENT SECTIONS (SUMMER STREET PARKING AREA)

SURFACE: 2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)

INTERMEDIATE: 2-1/2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)

BASE: 4" SUPERPAVE BASE COURSE 37.5 (SBC-37.5)
4" DENSE GRADED CRUSHED STONE FOR SUBBASE
8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH STABILIZED STONEDUST SECTIONS

SURFACE: 4" STABILIZED STONEDUST

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH CEMENT CONCRETE SIDEWALK SECTIONS

SURFACE: 4" CEMENT CONCRETE
(4,000 PSI, 3/4", 610 LBS. AIR ENTRAINED)

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH CEMENT CONCRETE PEDESTRIAN CURB RAMP SECTIONS
PROPOSED FULL DEPTH CEMENT CONCRETE DRIVEWAY SECTIONS

SURFACE: 6" CEMENT CONCRETE
(4,000 PSI, 3/4", 610 LBS. AIR ENTRAINED)

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH CURB SETTING PAVEMENT SECTIONS

SEE METHOD OF SETTING GRANITE CURB (AGAINST EXISTING PAVEMENT)

SURFACE: 1-1/2" HOT MIX ASPHALT FOR PATCHING

INTERMEDIATE: 3" HOT MIX ASPHALT FOR PATCHING

BASE: 7.5"± CEMENT CONCRETE
6" (MIN) GRAVEL BORROW, TYPE b

TACK COAT SHALL BE APPLIED BETWEEN ALL PAVEMENT COURSES IN ACCORDANCE WITH SUBSECTION 450.43G2 AND NOTES BELOW.

TACK COAT NOTE:
ASPHALT EMULSION FOR TACK COAT SHALL BE GRADE RS-1H, PER THE SPECIFICATIONS. TACK COAT SHALL BE SPRAY APPLIED AT THE RATE OF:

- **0.06 TO 0.08 GAL/SY OVER NEW HMA SURFACES, NOT OPENED TO TRAFFIC**
- **0.06 TO 0.08 GAL/SY OVER EXISTING TIGHT SMOOTH PAVEMENT**
- **0.07 TO 0.09 GAL/SY OVER MILLED SURFACES**
- **0.06 TO 0.09 GAL/SY OVER NEW HMA PATCHES**

ANCILLARY WORK NOTE:
PREPARATION OF UNDERLYING SURFACE, ASPHALT EMULSION FOR TACK COAT, HMA FOR PATCHING, AND HMA JOINT SEALANT SHALL BE IN ACCORDANCE WITH SECTION 450.

THE EMBANKMENT SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES SECTION 100 EARTHWORK.

WOOD RAIL FENCE NOTE:
REFERENCE CONSTRUCTION PLANS (SHEETS 8 - 17) FOR LOCATIONS OF WOOD RAIL FENCE.

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	37
PROJECT FILE NO. 613163			

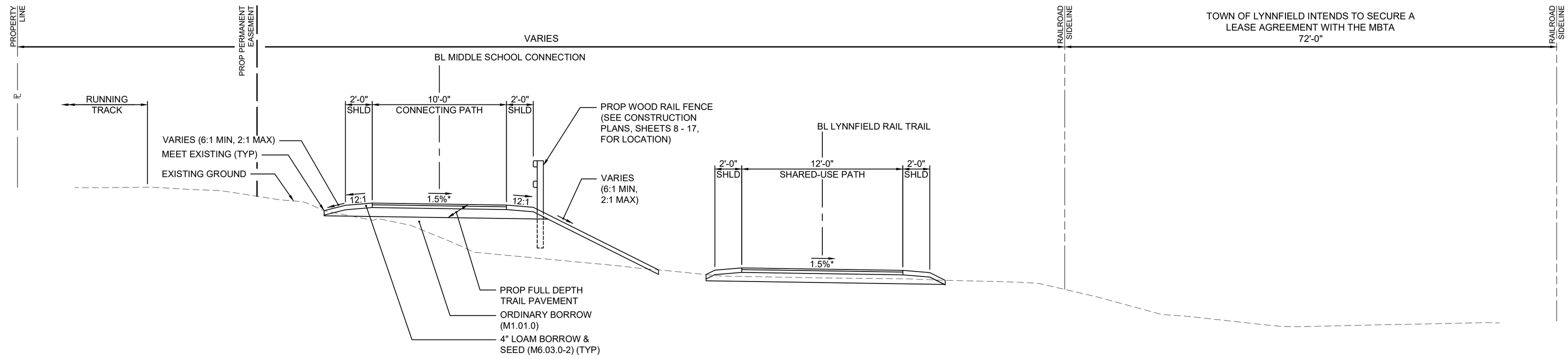
ACOE SVN
TYPICAL SECTIONS
PART 1 OF 2

613163_HD(TYPICAL SECTIONS)_SVN.DWG Plotted on 27-May-2025 3:12 PM
Proposed No. 613163
A00831 - 1
98/587

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

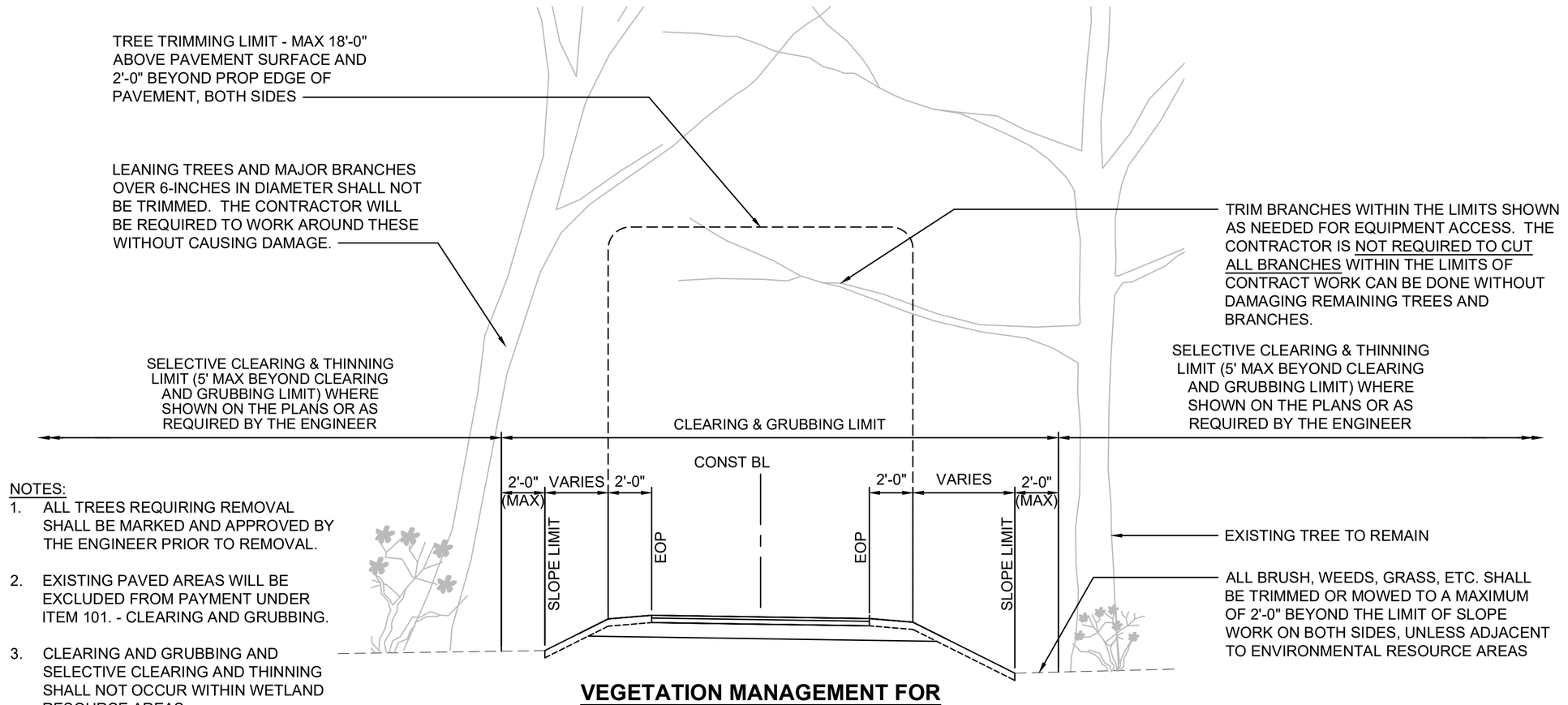
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	37
PROJECT FILE NO. 613163			

ACOE SVN
TYPICAL SECTIONS
PART 2 OF 2



TYPICAL FULL CONNECTING PATH SECTION

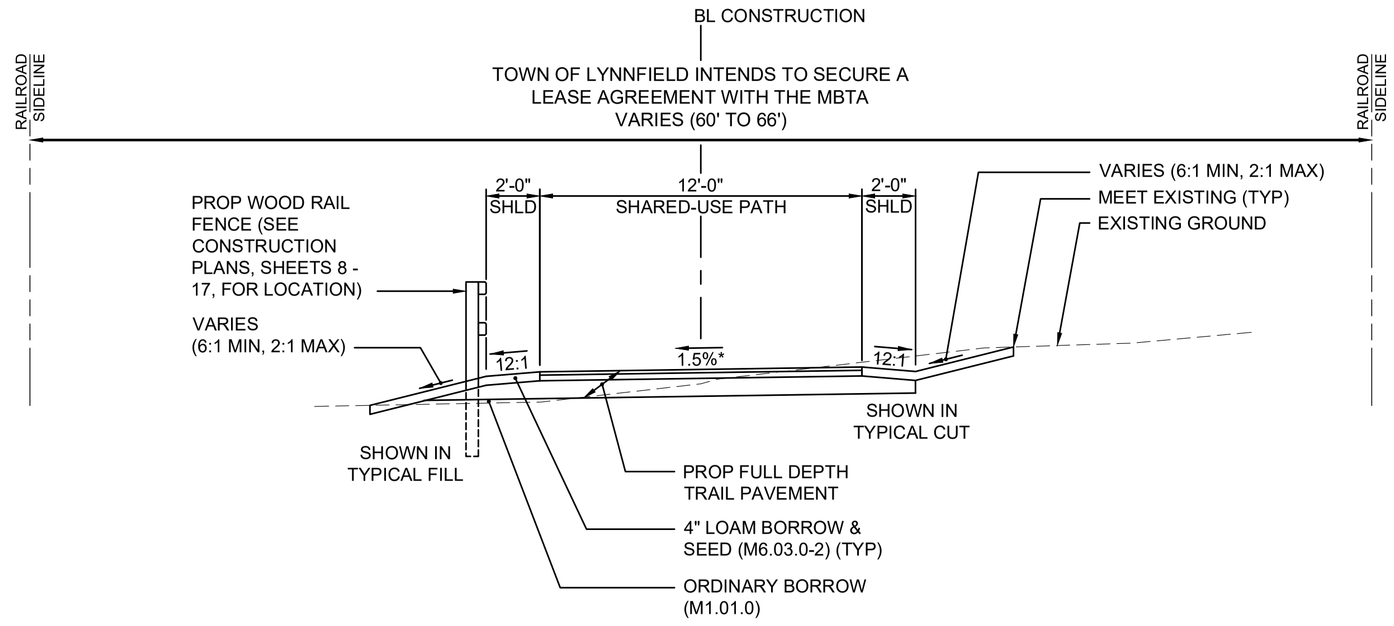
NOT TO SCALE
STA 10+25± TO STA 12+04±



NOTES:
1. ALL TREES REQUIRING REMOVAL SHALL BE MARKED AND APPROVED BY THE ENGINEER PRIOR TO REMOVAL.
2. EXISTING PAVED AREAS WILL BE EXCLUDED FROM PAYMENT UNDER ITEM 101. - CLEARING AND GRUBBING.
3. CLEARING AND GRUBBING AND SELECTIVE CLEARING AND THINNING SHALL NOT OCCUR WITHIN WETLAND RESOURCE AREAS.

VEGETATION MANAGEMENT FOR CONSTRUCTION ACCESS

NOT TO SCALE



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 182+50± TO STA 199+57± (PILLINGS POND RD)
STA 199+96± (PILLINGS POND RD) TO STA 230+30± (NICHOLS LN)

*** - TOLERANCE FOR CONSTRUCTION ±0.5% (TYP)**

613163_HD(TYPICAL SECTIONS)_SVN.DWG Plotted on 27-May-2025 3:14 PM
Proposal No. 613163-135786
A00831 - 12

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 1 OF 10

613163_HD(CONST PLANS)_SVN.DWG Plotted on 27-May-2025 3:15 PM
Proposal No. 613163-135786
A00831 - 13

PERRY AVENUE (PUBLIC - 40' WIDE)
FORD AVENUE (PUBLIC - 40' WIDE)
1953 TOWN LAYOUT
XING
XING ROAD
PROJECT BEGIN
STA 133+57.92
N3019857.0969
E777133.1521
TOWN OF LYNNFIELD
WATER EASEMENT
DEED BOOK 4294, PAGE 74
PLAN BOOK 605 OF 1956
PROP SAWCUT LINE
RET EXIST GUY WIRE
R&D EXIST CURB
PROP GRAN CURB (TYPE VB)
PROP CEM CONC PCR
PROP 2' WIDE IMPRINT SYSTEM MEDIAN
PROP TRAFFIC SIGN (TYP)
PROP CONST BL
APPROX SLOPE LIMITS
PROP 12' HMA TRAIL
PROP LOAM AND SEED (TYP)
PROP INDIVIDUAL TREE PROTECTION (TYP)
RET EXIST FENCE
PROP CLF END POST
R&S EXIST FENCE
PROP FULL DEPTH ROADWAY CONSTRUCTION
R&D EXIST CURB
R&D EXIST UP (WORK BO) RET EXIST FENCE
PROP TEMPORARY TREE PROTECTION FENCE
PROP INDIVIDUAL TREE PROTECTION
PROP CLF END POST
R&D EXIST WELL, SHED & UP (WORK BO)
R&D 117' EXIST FENCE
R&D 100' EXIST STONE WALL
PROP TEMPORARY TREE PROTECTION FENCE
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
BORDERING LAND SUBJECT TO FLOODING (EL 75.1) (TYP)
PROP 12' STONEDUST PATH
R&S EXIST RR TRACKS
PROP TEMPORARY TREE PROTECTION FENCE
PROP PERMANENT EASEMENT
RET EXIST HMA PATH
RET EXIST CLF
PROP CEM CONC PCR
PROP MIDDLE SCHOOL CONNECTION BL
PROP 10' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
PROP WOOD RAIL FENCE (STA 10+30± TO 11+54±)
PROP TEMPORARY TREE PROTECTION FENCE
PROP CLF END POST
100' BUFFER LINE
MATCH LINE STA 137+85
MBTA ROW (VAL V.7.3/4)
RR TRACKS
FENCE
DENSE TREES
BVW
SPORT FIELD
RUNNING TRACK
HMBD
STOP
N/F JAMES C. DAVIE BK/PG 28898/575 85 PERRY AVENUE MAP 28 PARCEL 2857
N/F DEBRA LACONTE BK/PG 13696/9 86 PERRY AVENUE MAP 28 PARCEL 2861
N/F CARD DANIEL M & CARD, TERI L BOTICELLI BK/PG 36370/584 3 FORD AVENUE MAP 28 PARCEL 2888
N/F MCQUEEN PHILIP J. MCQUEEN DEANNA M. BK/PG 27917/562 1 FORD AVENUE MAP 28 PARCEL 2851
N/F MASSACHUSETTS BAY TRANSPORTATION AUTHORITY BK/PG 13117/113 (SOUTH MIDDLESEX REGISTRY OF DEEDS)
N/F TOWN OF LYNNFIELD – LYNNFIELD CENTER BK/PG 24679/171 165 SUMMER STREET MAP/LOT 29/2414
TOWN OF LYNNFIELD BK/PG 3853/583 505 MAIN STREET MAP/LOT 28/1455
TOWN OF LYNNFIELD BK/PG 36442/302 PB/PL 447/91 (PARCEL A) 59 PARSONS AVENUE TOTAL PROPERTY AREA= 6,073 SQ. FT.
CONTINUED ON SHEET NO. 9

RESOURCE AREA LEGEND:
- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

NOTE:
1. THE CONTRACTOR SHALL STAKE THE ALIGNMENT AND LIMITS OF WORK OF THE PROJECT BETWEEN FORD AVENUE AND THE RAILROAD CORRIDOR IN ORDER TO DETERMINE IMPACTS TO EXISTING TREES. THE DESIGN INTENT IS TO HAVE THE TRAIL ALGINEMNT MEANDER BETWEEN THE TREES, WHILE MAINTAINING A 2-FT MINIMUM OFFSET BETWEEN THE EDGE OF PAVEMENT AND THE EDGE OF TREES.

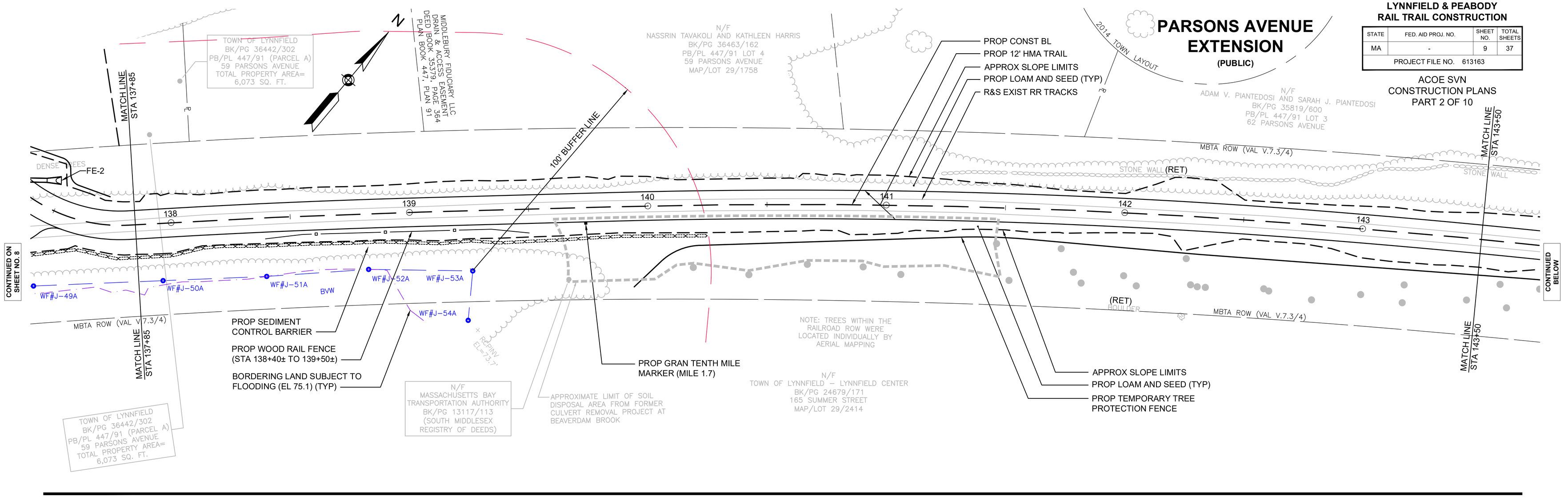
0 20 50 100
SCALE: 1" = 20'

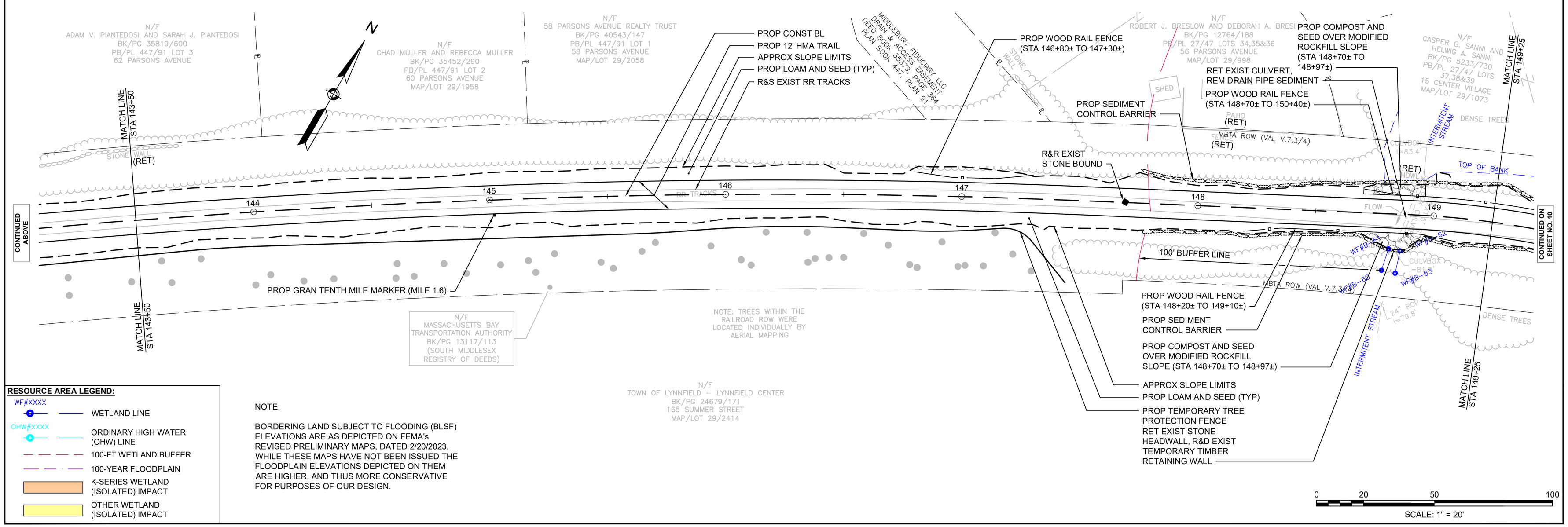
PARSONS AVENUE EXTENSION
(PUBLIC)

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 2 OF 10





RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

0 20 50 100
SCALE: 1" = 20'

613163_HD(CONST PLANS)_SVN.DWG Plotted on 27-May-2025 3:16 PM
Proposal No. 613163-135786
A00831 - 14

RESOURCE AREA IMPACTS						
RESOURCE AREA	SHEET NO.	TYPE	LEGEND	LOCATION	IMPACT AREA (SF)	REPLICATION AREA (SF)
K-SERIES WETLAND (ISOLATED)	10 - 11	PERMANENT		STA 155+64, RT TO STA 160+60, RT	3,079 SF	-
K-SERIES WETLAND (ISOLATED) REPLICATION	10	REPLICATION		STA 154+77, RT TO STA 155+77, RT	-	3,092 SF
T-SERIES WETLAND (ISOLATED)	11	PERMANENT		STA 158+54, LT TO STA 158+95, LT	137 SF	-
U-SERIES WETLAND (ISOLATED)	11	PERMANENT		STA 159+30, LT TO STA 161+12, LT	715 SF	-
V-SERIES WETLAND (ISOLATED)	13	PERMANENT		STA 184+15, LT TO STA 184+25, LT	155 SF	-
				TOTAL:	4,086 SF	3,092 SF

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	37
PROJECT FILE NO. 613163			

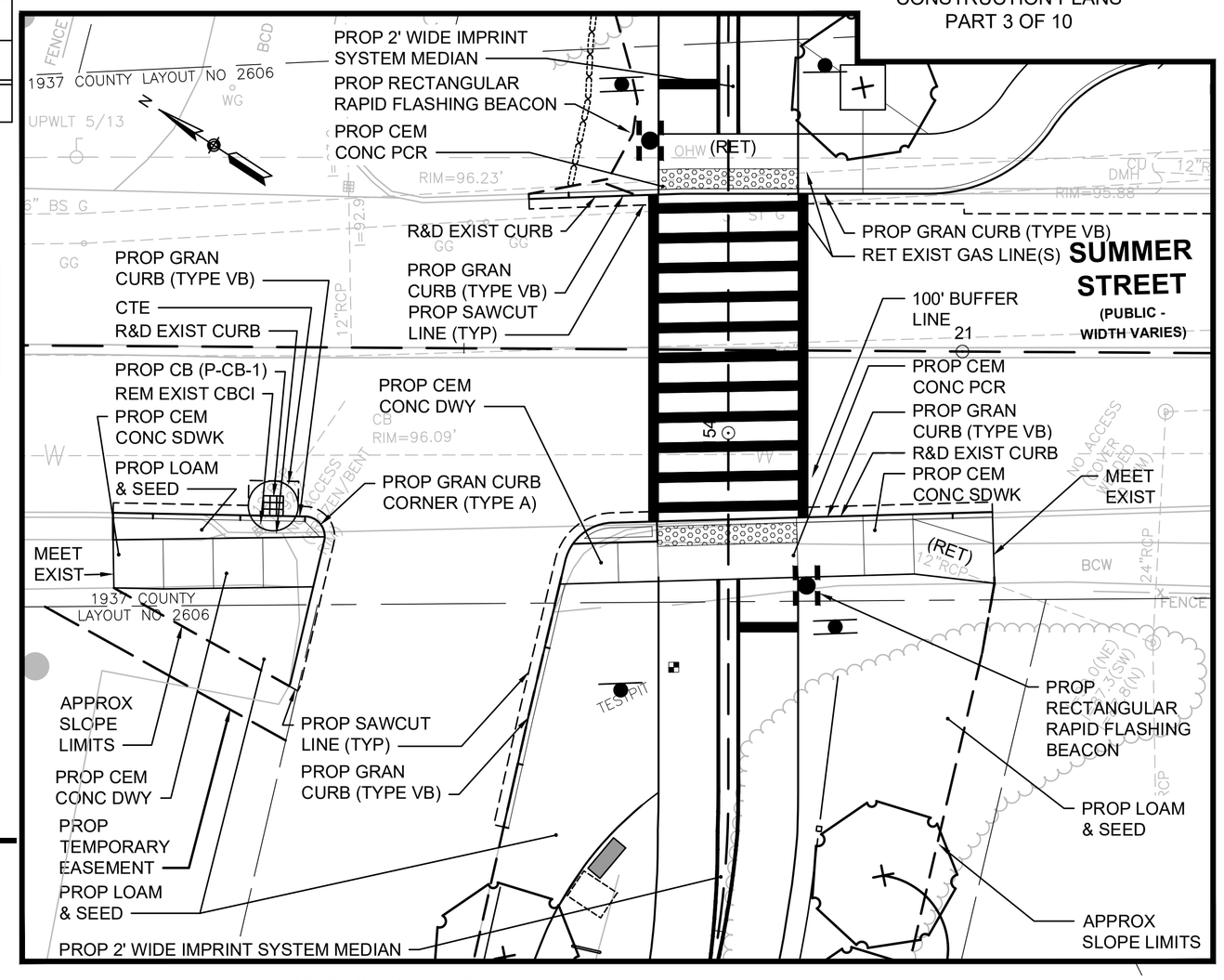
ACOE SVN
CONSTRUCTION PLANS
PART 3 OF 10

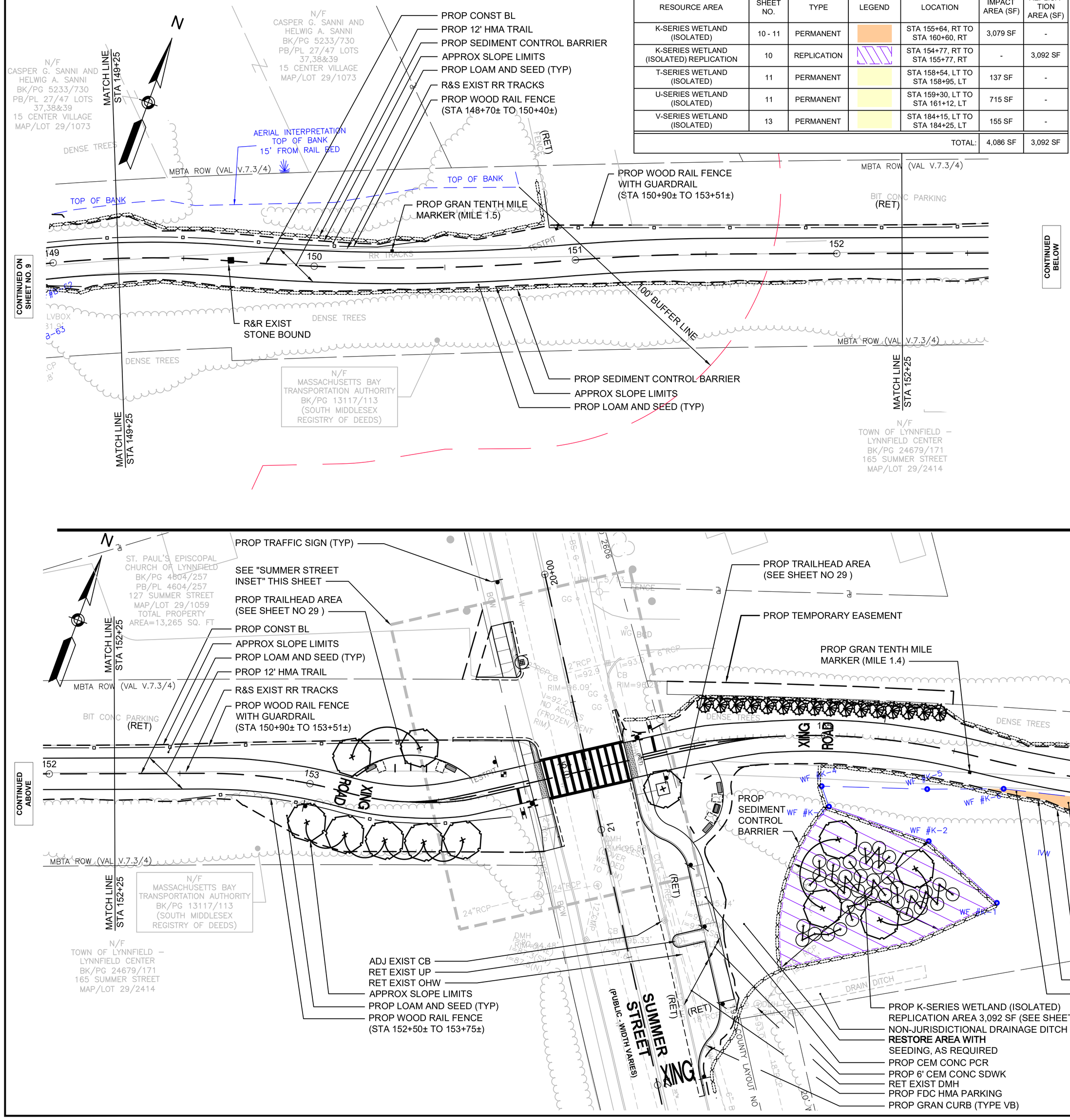
SUMMER STREET INSET

SCALE: 1" = 10'

0 10 20 30 40

SCALE: 1" = 10'





RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

0 20 50 100

SCALE: 1" = 20'

A00831 - 15

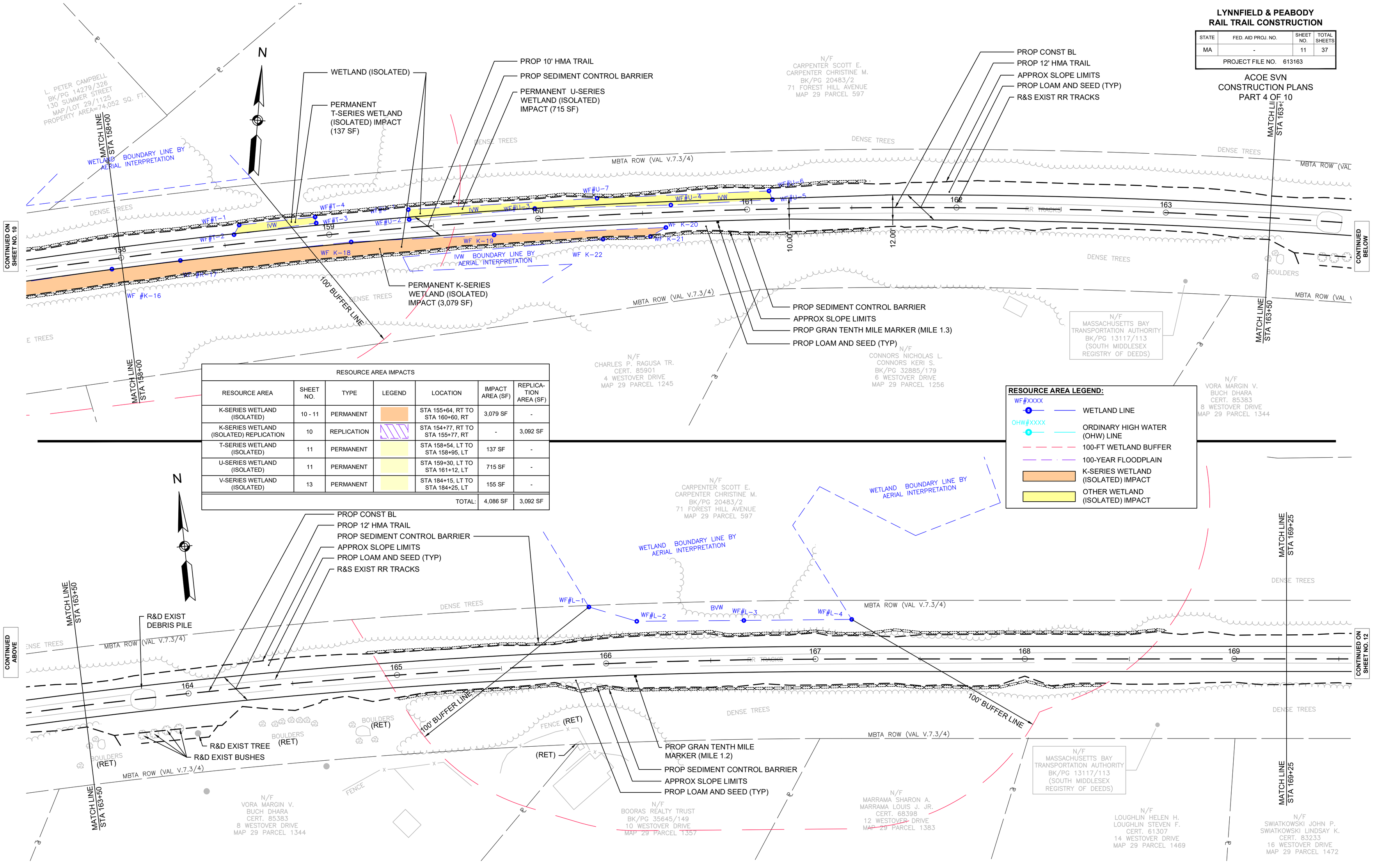
613163_HD(CONST PLANS)_SVN.DWG Plotted on 27-May-2025 3:16 PM

Proposal No. 613163-135786

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 4 OF 10



RESOURCE AREA IMPACTS						
RESOURCE AREA	SHEET NO.	TYPE	LEGEND	LOCATION	IMPACT AREA (SF)	REPLICATION AREA (SF)
K-SERIES WETLAND (ISOLATED)	10 - 11	PERMANENT		STA 155+64, RT TO STA 160+60, RT	3,079 SF	-
K-SERIES WETLAND (ISOLATED) REPLICATION	10	REPLICATION		STA 154+77, RT TO STA 155+77, RT	-	3,092 SF
T-SERIES WETLAND (ISOLATED)	11	PERMANENT		STA 158+54, LT TO STA 158+95, LT	137 SF	-
U-SERIES WETLAND (ISOLATED)	11	PERMANENT		STA 159+30, LT TO STA 161+12, LT	715 SF	-
V-SERIES WETLAND (ISOLATED)	13	PERMANENT		STA 184+15, LT TO STA 184+25, LT	155 SF	-
				TOTAL:	4,086 SF	3,092 SF

RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

0 20 50 100

SCALE: 1" = 20'

A00831 - 16

613163_HD(CONST PLANS)_SVN.DWG Plotted on 27-May-2025 3:17 PM

Proposal No. 613163-13786

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 1 OF 10

N

MATCH LINE STA 169+25

N/F
CARPENTER SCOTT E.
CARPENTER CHRISTINE M.
BK/PG 20483/2
71 FOREST HILL AVENUE
MAP 29 PARCEL 597

N/F
NANCY S FREDRICK 2016
REVOCABLE TRUST
BK/PG 35062/506
MAP 29 PARCEL 672

PROP CONST BL
PROP 12' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS

N/F
MELLEN CHRISTOPHER & LINDA
BK/PG 13783/93
30 UNDERHILL ROAD
MAP 29 PARCEL 619

POOL
SHED
STEPS
STEPS
RET WALL
(RET) FENCE

MATCH LINE STA 175+00

DENSE TREES
DENSE TREES
MBTA ROW (VAL V.7.3/4)
DENSE TREES
DENSE TREES

170 171 172 173 174 175

RR TRACKS

CONTINUED ON SHEET NO. 11

CONTINUED BELOW

PROP GRAN TENTH
MILE MARKER (MILE 1.1)

APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)

STOCKADE FENCE

CITY 20' WIDE EASEMENT PLAN 33 BOOK 126, PLAN 33

N/F
SWIATKOWSKI JOHN P.
SWIATKOWSKI LINDSAY K.
CERT. 83233
16 WESTOVER DRIVE
MAP 29 PARCEL 1472

N/F
GRAVE RALPH A.
GRAVE NINA M.
CERT. 90831
18 WESTOVER DRIVE
MAP 29 PARCEL 1484

N/F
GERACE JAMES A.
BURKE MAUREEN A.
CERT. 84140
20 WESTOVER DRIVE
MAP 29 PARCEL 1494

N/F
22 WESTOVER DRIVE
REVOCABLE REAL ESTATE TRUST
CERT. 92009
22 WESTOVER DRIVE
MAP 29 PARCEL 1493

N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX
REGISTRY OF DEEDS)

N/F
TROISI DEBORAH J.
TROISI MARK
BK/PG 41753/56
24 WESTOVER DRIVE
MAP 30 PARCEL 872

N

N/F
TANNER CYNTHIA D &
ELAINE K
CERT. 88430
10 LOVELL ROAD
MAP 30 PARCEL 812

N/F
SCIRE PAUL A & SHANNON M
CERT. 91487
14 LOVELL ROAD
MAP 30 PARCEL 825

N/F
16 LOVELL ROAD LYNNFIELD
MASS NOMINEE TRUST
CERT. 90379
16 LOVELL ROAD
MAP 30 PARCEL 837

N/F
BRANDANO WARREN
BRANDANO PAULA
CERT. 76723
18 LOVELL ROAD
MAP 30 PARCEL 839

N/F
SILVA JENNIFER L
CERT. 90879
20 LOVELL ROAD
MAP 30 PARCEL 918

20' WIDE DRAINAGE EASEMENT (LCP 4233-M, CERT NO. 2397)

N/F
RAYMOND J. DORMANN AND
ROSE MARIE
CERT. 91426
22 LOVELL ROAD
MAP 30 PARCEL 929

MATCH LINE STA 175+00

MATCH LINE STA 181+00

PROP GRANITE MILE
MARKER POST (1 MI)

PROP CONST BL
PROP 12' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS

PROP CEM CONC BENCH
PAD (SEE SHEET NO. 31)

DENSE TREES
DENSE TREES
MBTA ROW (VAL V.7.3/4)
DENSE TREES
DENSE TREES

(RET)

175 176 177 178 179 180 181

RR TRACKS

CONTINUED ABOVE

CONTINUED ON SHEET NO. 13

FLOW

(RET)
24" RCP
EL=100.8

RET EXIST 24" RCP

24" RCP

DITCH

MBTA ROW (VAL V.7.3/4)

PROP WOOD RAIL FENCE
(STA 180+80± TO 181+70±)

100' BUFFER LINE

APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)

N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX
REGISTRY OF DEEDS)

N/F
CHILDREN'S BOURQUE ROAD TRUST
DICESARE ELIZABETH N. TR.
BK/PG 23983/289
28 READ WESTOVER DRIVE

N/F
TROISI DEBORAH J.
TROISI MARK
BK/PG 41753/56
24 WESTOVER DRIVE
MAP 30 PARCEL 872

N/F
SERIO JEAN E.
SERIO FRANK E.
BK/PG 6215/32
WESTOVER DRIVE
MAP 30 PARCEL 897

WETLAND BOUNDARY LINE BY AERIAL INTERPRETATION

RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

0 20 50 100

SCALE: 1" = 20'

A00831 - 17

613163_HD(CONST PLANS)_SVN.DWG Plotted on 27-May-2025 3:17 PM

Proposal No. 613163-135796

RESOURCE AREA IMPACTS						
RESOURCE AREA	SHEET NO.	TYPE	LEGEND	LOCATION	IMPACT AREA (SF)	REPLICATION AREA (SF)
K-SERIES WETLAND (ISOLATED)	10 - 11	PERMANENT		STA 155+64, RT TO STA 160+60, RT	3,079 SF	-
K-SERIES WETLAND (ISOLATED) REPLICATION	10	REPLICATION		STA 154+77, RT TO STA 155+77, RT	-	3,092 SF
T-SERIES WETLAND (ISOLATED)	11	PERMANENT		STA 158+54, LT TO STA 158+95, LT	137 SF	-
U-SERIES WETLAND (ISOLATED)	11	PERMANENT		STA 159+30, LT TO STA 161+12, LT	715 SF	-
V-SERIES WETLAND (ISOLATED)	13	PERMANENT		STA 184+15, LT TO STA 184+25, LT	155 SF	-
				TOTAL:	4,086 SF	3,092 SF

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	37
PROJECT FILE NO. 613163			

ACOE SVN CONSTRUCTION PLANS PART 6 OF 10

N

N/F RAYMOND J. DORMANN AND ROSE MARIE CERT. 91426 22 LOVELL ROAD MAP 30 PARCEL 929

N/F MASSACHUSETTS BAY TRANSPORTATION AUTHORITY BK/PG 13117/113 (SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F TOWN OF LYNNFIELD – LYNNFIELD HIGH SCHOOL BK/PG 4900/160 235 ESSEX STREET MAP 30 PARCEL 333

PROP WOOD RAIL FENCE (STA 183+70± TO 184+60±)
PROP CONST BL
PROP 12' HMA TRAIL
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS
WETLAND (ISOLATED)
IVW BOUNDARY LINE BY AERIAL INTERPRETATION
PROP 6' WIDE HMA PATH STUB TO STABILIZE EXISTING PATH CONNECTION
PROP COMPOST AND SEED OVER MODIFIED ROCKFILL SLOPE (STA 186+55± TO 186+75±)
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
PROP WOOD RAIL FENCE (STA 186+20± TO 194+70±)
MATCH LINE STA 186+75
CONTINUED BELOW
CONTINUED ON SHEET NO. 12
MBTA ROW (VAL V.7.3/4)
DENSE TREES
RR TRACKS
STONE WALL
(RET)
ROCK LEDGE
100' BUFFER LINE
WF#V-1
WF#V-2
WF#V-3
WF#V-4
WF#V-5
WF#V-6
WF#V-7
WF#V-8
WF#N-1
WF#N-2
WF#N-3
WF#O-1
WF#O-2
BRIDGE ON STONE ABUTMENT
FENCE
AWNING
PATIO
POOL
RET WALL
SW
REM AND DISCARD EXISTING BRIDGE STRUCTURE
PERMANENT V-SERIES WETLAND (ISOLATED) IMPACT(155 SF)
PROP WOOD RAIL FENCE (STA 185+90± TO 193+80±)
PROP 6' WIDE HMA PATH STUB TO STABILIZE EXISTING PATH CONNECTION
PROP SEDIMENT CONTROL BARRIER
BORDERING LAND SUBJECT TO FLOODING (EL 101.9) (TYP)
181
182
183
184
185
186
187
MATCH LINE STA 181+00
(VAL V.7.3/4)
WF#M-1
WF#M-2
WF#M-3
WF#M-4
PROP GRAN TENTH MILE MARKER (MILE 0.9)
100' BUFFER LINE
WETLAND BOUNDARY LINE BY AERIAL INTERPRETATION
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
PROP WOOD RAIL FENCE (STA 180+80± TO 181+70±)
N/F CHILDREN'S BOURQUE ROAD TRUST DICESARE ELIZABETH N. TR. BK/PG 23983/289 28 READ WESTOVER DRIVE MAP 30 PARCEL 975
N/F CHILDREN'S BOURQUE ROAD TRUST CERT. 78177 125 BOURQUE ROAD MAP 30 PARCEL 1075
N/F TOWN OF LYNNFIELD – LYNNFIELD HIGH SCHOOL BK/PG 4900/160 325 ESSEX STREET MAP 30 PARCEL 333

N

N/F TOWN OF LYNNFIELD BK/PG 10706/430 PILLINGS POND ROAD MAP 30 PARCEL 1145

N/F MASSACHUSETTS BAY TRANSPORTATION AUTHORITY BK/PG 13117/113 (SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F TOWN OF LYNNFIELD BK/PG 5378/660 66 REAR BOURQUE ROAD MAP 30 PARCEL 1165

PROP CONST BL
PROP 12' HMA TRAIL
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS
PROP WOOD RAIL FENCE (STA 186+20± TO 194+70±)
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
MATCH LINE STA 186+75
MATCH LINE STA 192+50
CONTINUED ABOVE
CONTINUED ON SHEET NO. 14
MBTA ROW
STONE WALL
(RET)
FLOW
PERENIAL STREAM
BATES BROOK
HDWL
INV EL=95.17'
INV EL=95.25'
WF#N-1
WF#N-2
WF#N-3
WF#N-4
WF#N-5
WF#N-6
WF#N-7 OHW
WF#N-8 OHW
WF#N-9 OHW
WF#N-10 OHW
WF#N-11 OHW
WF#N-12 OHW
WF#N-13 OHW
WF#N-14
WF#N-15
BVW
WF#O-3
WF#O-4
WF#O-5 OHW
WF#O-7 OHW
WF#O-8 OHW
WF#O-9
WF#O-10
WF#O-13
WF#O-14
WF#O-15
187
188
189
190
191
192
PROP COMPOST AND SEED OVER MODIFIED ROCKFILL SLOPE (STA 187+29± TO 187+82±)
BORDERING LAND SUBJECT TO FLOODING (EL 101.9) (TYP)
PROP GRAN TENTH MILE MARKER (MILE 0.8)
RET EXIST CULVERT, STREAM BANK, AND STREAM BED, REM DRAIN PIPE SEDIMENT
PROP COMPOST AND SEED OVER MODIFIED ROCKFILL SLOPE (STA 188+09± TO 188+79±)
PROP WOOD RAIL FENCE (STA 185+90± TO 193+80±)
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
N/F TOWN OF LYNNFIELD CONSERVATION COMM. 0 READ BOURQUE ROAD MAP 30 PARCEL 1095
N/F DRAKE REALTY TRUST DRESIOS ALAN K. TR. CERT. 59850 62 BOURQUE ROAD MAP 30 PARCEL 1811
N/F BOURQUE ROAD 64 LYNNFIELD DRESIOS ALAN K. TR. CERT. 97535 64 BOURQUE ROAD MAP 30 PARCEL 1824
N/F GEMMELL IAN JAMES & MELISSA ANNE CERT. 87925 66 BOURQUE ROAD MAP 30 PARCEL 1829

RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

0 20 50 100
SCALE: 1" = 20'

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

A00831 - 18

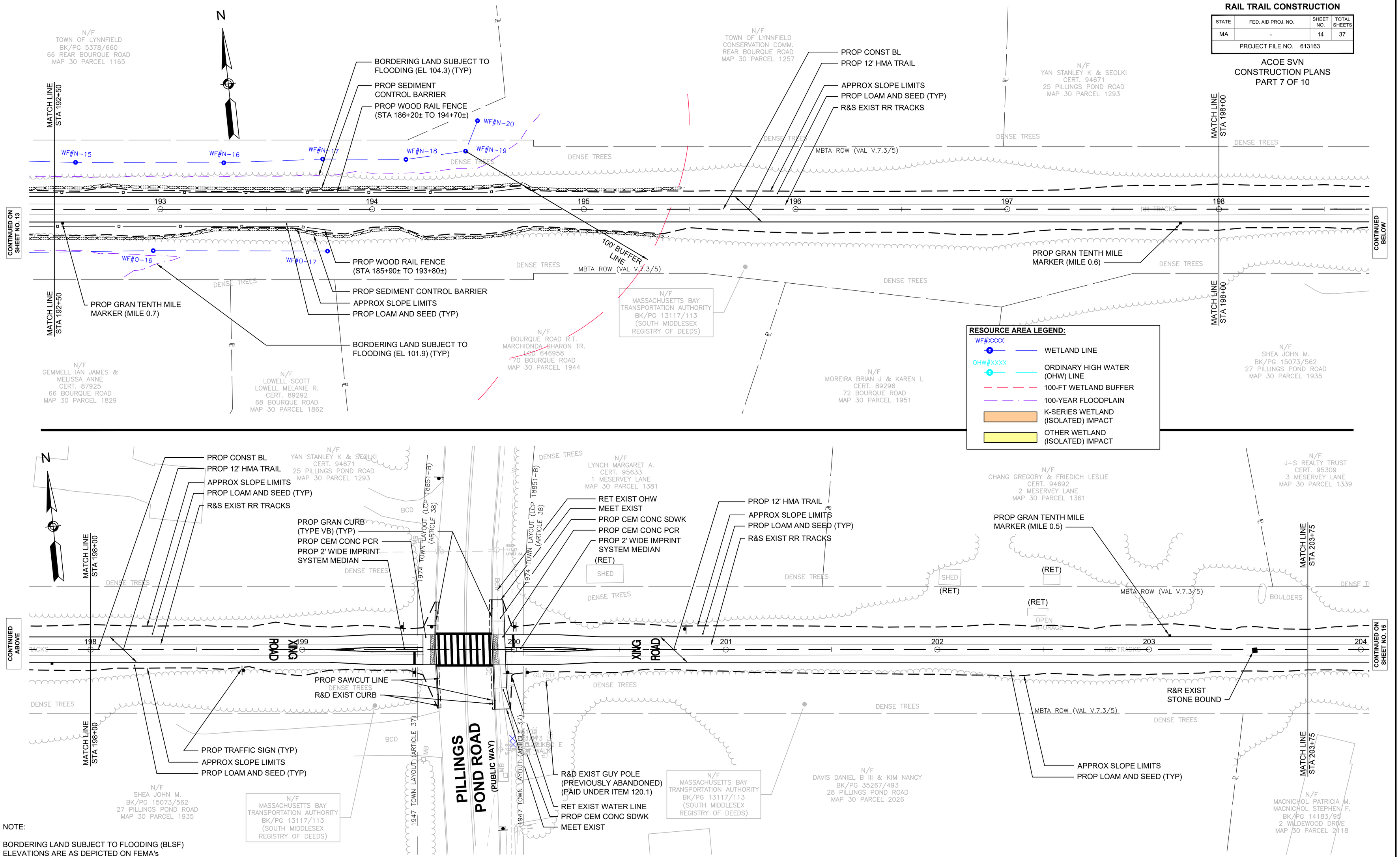
613163_HD(CONST PLANS)_SVN.DWG Plotted on 27-May-2025 3:17 PM

Proposal No. 613163-135786

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 7 OF 10



NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

A00831 - 19
613163_HD(CONST PLANS)_SVN.DWG Plotted on 27-May-2025 3:18 PM
Proposal No. 613163-135786

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 8 OF 10

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

N

PROP CONST BL
PROP 12' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS

N/F
J-S REALTY TRUST
CERT. 95309
3 MESERVEY LANE
MAP 30 PARCEL 1339

N/F
ROSBERG FAMILY IRREVOCABLE TRUST
ROSBERG JOSEPH B. JR. TR.
CERT. 86101
4 MESERVEY LANE
MAP 30 PARCEL 1458

N/F
TOWN OF LYNNFIELD
CERT. 67068
483 REAR ESSEX STREET
MAP 31 PARCEL 891

PROP SEDIMENT CONTROL BARRIER
PROP COMPOST AND SEED OVER MODIFIED ROCKFILL SLOPE (STA 209+00± TO 209+30±)
PROP WOOD RAIL FENCE (STA 207+50± TO 211+50±)
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

MATCH LINE STA 203+75

MATCH LINE STA 209+50

BOULDERS

DENSE TREES

(RET)

100' BUFFER LINE

WF#P-1
WF#P-2
WF#P-3
WF#P-4
WF#

BVW

204 205 206 207 208 209

CONTINUED ON SHEET NO. 14

CONTINUED BELOW

STOCKADE FENCE

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F
MACNICHOL PATRICIA M.
MACNICHOL STEPHEN F.
BK/PG 14183/95
2 WILDEWOOD DRIVE
MAP 30 PARCEL 2118

N/F
ROSATONE ANTONIO & MARIA
BK/PG 10735/294
4 WILDEWOOD DRIVE
MAP 30 PARCEL 2152

N/F
VACCARO LISA M.
VACCARO STEVEN C.
BK/PG 24778/289
6 WILDEWOOD DRIVE
MAP 30 PARCEL 2168

N/F
GUIGLIANO CHILDREN REALTY TR.
BK/PG 9659/275
1 GUIGLIANO TERRACE
MAP 31 PARCEL 1555

PROP WOOD RAIL FENCE (STA 207+50± TO 211+30±)
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)

PROP GRAN TENTH MILE MARKER (MILE 0.4)
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

TOE OF SLOI
(NOT FLAGGE
AERIAL INTERPRE

N

N/F
TOWN OF LYNNFIELD
CERT. 67068
483 REAR ESSEX STREET
MAP 31 PARCEL 891

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
PROP WOOD RAIL FENCE (STA 207+50± TO 211+50±)

ESSEX STREET CONSERVATION AREA

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)

PROP CONST BL
PROP 12' HMA TRAIL
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS
PROP GRAN TENTH MILE MARKER (MILE 0.3)

RET EXIST CULVERT, REM DRAIN PIPE SEDIMENT

N/F
TOWN OF LYNNFIELD
CERT. 67068
483 REAR ESSEX STREET
MAP 31 PARCEL 891

N/F
TOWN OF LYNNFIELD – CONSERVATION COMMISSION
REAR ESSEX STREET
MAP 31 PARCEL 992

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

MATCH LINE STA 209+50

MATCH LINE STA 215+50

BVW

WF#P-5
WF#P-6
WF#P-7
WF#P-8
WF#P-9

MBTA ROW (VAL V.7.3/5)

CULVERT EL=99.7

DENSE TREES

100' BUFFER LINE

WF#R-1
WF#R-2
WF#R-3
WF#R-4
WF#R-5
WF#R-6
WF#R-7
WF#R-8
WF#R-9
WF#R-11

RCPW EL=103.5'

STONE WALL

210 211 212 213 214 215

CONTINUED ABOVE

CONTINUED ON SHEET NO. 16

FLOW

CULVERT EL=100.4

STONE WALL

CAZEBO

POOL

PATIO

RR TRACKS

WF#Q-1
WF#Q-1A
WF#Q-2
WF#Q-3
WF#Q-4
WF#Q-5
WF#Q-6

TOE OF SLOPE (NOT FLAGGED) AERIAL INTERPRETATION

RET EXIST CULVERT, REM DRAIN PIPE SEDIMENT

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

PROP WOOD RAIL FENCE (STA 207+50± TO 211+30±)

PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)

PROP WOOD RAIL FENCE (STA 213+90± TO 214+50±)
SPACE FENCE POSTS TO AVOID CULVERT
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

N/F
GUIGLIANO CHILDREN REALTY TR.
BK/PG 9659/275
1 GUIGLIANO TERRACE
MAP 31 PARCEL 1555

N/F
THE 4 NORTHWAY REALTY TRUST
HAN ILKYO TR.
BK/PG 32675/387
4 NORTHWAY
MAP 31 PARCEL 1685

N/F
DELEO ANTHONY C. & ALANA N
BK/PG 30658/187
5 NORTHWAY
MAP 31 PARCEL 1665

RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

0 20 50 100

SCALE: 1" = 20'

A00831 - 20

613163_HD(CONST PLANS)_SVN.DWG Plotted on 27-May-2025 3:18 PM

Proposal No. 613163-135786

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 9 OF 10

613163_HD(CONST PLANS)_SVN.DWG Plotted on 27-May-2025 3:19 PM
Proposal No. 613163-135786
AV08313 - 12

N

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

MATCH LINE STA 215+50

PROP CONST BL
PROP 12' HMA TRAIL
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS
PROP WOOD RAIL FENCE (STA 216+90± TO 218+50±)
PROP COMPOST AND SEED OVER MODIFIED ROCKFILL SLOPE (STA 217+60± TO 218+10±)

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

N/F
TOWN OF LYNNFIELD – CONSERVATION COMMISSION
REAR ESSEX STREET
MAP 31 PARCEL 992

REM EXIST GAS MARKER (WORK BO)

RET EXIST GAS PIPELINE (SEE NOTE 1)

30' WIDE DRAIN & WATER EASEMENT PLAN BOOK 133, PLAN 27

APPROXIMATE LOCATION TENNESSEE GAS TRANSMISSION LINE

TENNESSEE GAS TRANSMISSION LINE PLAN BOOK 136, PLAN 45
PLAN BOOK 133, PLAN 27

VENTPIPE (RET)

PROP WOOD RAIL FENCE (STA 219+90± TO 221+50±)

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

MATCH LINE STA 221+25

WF#R-9 WF#R-10 WF#R-11 WF#R-12 WF#R-13 WF#R-14 WF#R-15 WF#R-16 WF#R-17 WF#R-18 WF#R-19 WF#R-20 WF#R-21 WF#R-22 WF#R-23
BVW

DENSE TREES

MBTA ROW (VAL V.7.3/5)

RR TRACKS

216 217 218 219 220 221

CONTINUED ON SHEET NO. 15

CONTINUED BELOW

100' BUFFER LINE

APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F
DELEO ANTHONY C. & ALANA N
BK/PG 30658/187
5 NORTHWAY
MAP 31 PARCEL 1665

30' WIDE WATER EASEMENT PLAN BOOK 136, PLAN 45

PROP GRAN TENTH MILE MARKER (MILE 0.2)

WF#S-1 WF#S-2 WF#S-

PROP WOOD RAIL FENCE (STA 220+20± TO 221+00±)

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

PROP SEDIMENT CONTROL BARRIER

N/F
LEACH GARY R.
LEACH MARIA R.
BK/PG 33766/40
3 NORTHWAY
MAP 31 PARCEL 1771

N/F
GARD ROBERT H. – SHARON L.
BK/PG 13873/442
6 LANTERN LANE
MAP 31 PARCEL 1779

N/F
CLAFLIN FAMILY TRUST
BK/PG 15881/596
10 LANTERN LANE
MAP 31 PARCEL 1783

RESOURCE AREA LEGEND:

WF#XXXX — WETLAND LINE
OHW#XXXX — ORDINARY HIGH WATER (OHW) LINE
100-FT WETLAND BUFFER
100-YEAR FLOODPLAIN
K-SERIES WETLAND (ISOLATED) IMPACT
OTHER WETLAND (ISOLATED) IMPACT

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

N

PROP WOOD RAIL FENCE (STA 219+90± TO 221+50±)

MATCH LINE STA 221+25

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

PROP CONST BL
PROP 12' HMA TRAIL
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS

N/F
WEISSLEDER RALPH
PETROPOULOS ANNA
BK/PG 17082/29
OFF ESSEX STREET
MAP 31 PARCEL 1832

FENCE

MATCH LINE STA 227+00

WF#R-22 WF#R-23 WF#R-24 WF#R-25 WF#R-26 WF#R-27 WF#R-28 WF#R-29 WF#R-30 WF#R-31
BVW

MBTA ROW (VAL V.7.3/5)

DENSE TREES

RR TRACKS

221 222 223 224 225 226 227

CONTINUED ABOVE

CONTINUED ON SHEET NO. 17

100' BUFFER LINE

WF#S-3 WF#S-4 WF#S-5 WF#S-6 WF#S-7 WF#S-8 WF#S-9 WF#S-10 WF#S-11 WF#S-12

PROP GRAN TENTH MILE MARKER (MILE 0.1)

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F
CLAFLIN FAMILY TRUST
BK/PG 15881/596
10 LANTERN LANE
MAP 31 PARCEL 1783

N/F
TOWN OF LYNNFIELD
CONSERVATION COMISSION
BK/PG 13668/141
REAR LANTERN LANE
MAP 31 PARCEL 1759

N/F
TOWN OF LYNNFIELD – CUSTODY OF CONSERVATION
REAR MAIN STREET
MAP 31 PARCEL 2571

N/F
NEW ENGLAND POWER CO.
REAR MAIN STREET
MAP 31 PARCEL 1885

N/F
BANDINI JANE V.
BK/PG 37614/134
537 OFF ESSEX STREET
MAP 31 PARCEL 1865

0 20 50 100
SCALE: 1" = 20'

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION PLANS
PART 10 OF 10

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

CITY OF PEABODY
TOWN OF LYNNFIELD

N/F
WEISSLEDER R & PETROPOULOS A
BK/PG 17082/29
11 NICHOLS LN
MAP/LOT 055-028A

N/F
DIAS MESSIAS & LUCINDA
BK/PG 35562/134
4 JAYNE CIR
MAP/LOT 055-034

N/F
CUILLA GREGORY
BK/PG 36152/324
5 NICHOLS LN
MAP/LOT 055-030

N/F
CITY OF PEABODY
(CEMETERY)
BK/PG /00000
0 NICHOLS LANE
MAP/LOT 055-029

NICHOLS LANE IS "MAINTAINED AND USED AS A PUBLIC WAY IN THE CITY OF PEABODY" PER THE PEABODY CITY CLERK, BOOK 13130, PAGE 59; DATED NOVEMBER 1, 1994 AND PER LETTER DATED JANUARY 23, 2025 FROM THE CITY OF PEABODY CITY CLERK "NICHOLS LANE IN THE CITY OF PEABODY IS AN ACCEPTED PUBLIC WAY AND IS LISTED AS SUCH ON THE LIST OF ACCEPTED PUBLIC WAYS DATED JANUARY 12, 1995"

NICHOLS LANE
(PUBLIC)

NOTE:
PER THE DEED DESTRIPTION FOR JOHN A. RUSSO (DEED BOOK 17805, PAGE 108) THE POINT OF BEGINNING FOR THE PROPERTY IS AT THE SOUTHEAST CORNER OF THE CEMETERY, AND RUNS NORTHEASTERLY BY THE STONE WALL BEFORE TURNING AND RUNNING "ACROSS A LANE BY A STONE WALL TO THE NORTHERLY LINE OF THE RAILROAD

NICHOLS LANE EXTENSION
(PRIVATE)

NICHOLS LANE
(TRAVELED WAY FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT)

N/F
JOHN A. RUSSO
BK/PG 17805/108
(SEE NOTE)
6 NICHOLS LANE
MAP/LOT 055-027
TOTAL PROPERTY AREA=13,068± SQ. FT.

N/F
WEISSLEDER RALPH
PETROPOULOS ANNA
BK/PG 17082/29
OFF ESSEX STREET
MAP 31 PARCEL 1832

N/F
PAUL TRUDEAU
BK/PG 34998/179
9 NICHOLS LANE
MAP/LOT 055-028

N/F
TRUDEAU PAUL
BK/PG 34998/179
OFF ESSEX STREET
MAP 31 PARCEL 1836

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)

PROP GRANITE MILE MARKER POST (0 MI)
RET EXIST OHW
PROP TRAFFIC SIGN (TYP)
PROP CEM CONC PCR
PROP 2' WIDE IMPRINT SYSTEM MEDIAN
PROP CONST BL
PROP 12' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED
R&S EXIST RR TRACKS

MATCH LINE STA 227+00

CONTINUED ON SHEET NO. 16

227 228 229 230 231 232 232+50

ROAD XING

PROJECT END
STA 230+87.54
N3020591.2343
E786484.7034

20' WIDE PERMANENT UTILITY EASEMENT BOOK 6352, PAGE 128 PLAN BOOK 143, PLAN 46

MBTA ROW (VAL V.7.3/5)

APPROXIMATE 100-FT BUFFER ZONE

N/F
MASSACHUSETTS BAY TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX REGISTRY OF DEEDS)
(SEE ALTERNATIVE TRANSPORTATION CORRIDOR LEASE AGREEMENT BY AND BETWEEN MASSACHUSETTS BAY TRANSPORTATION AUTHORITY AND THE CITY OF PEABODY, DATED: NOVEMBER 2011)

WINONA POND

100' BUFFER LINE

APPROXIMATE BANK BOUNDARY

N/F
CITY OF PEABODY
BK/PG /00000
0 WINONA ST (R) INCL P
MAP/LOT 055-043

N/F
BANDINI JANE V.
BK/PG 37614/134
537 OFF ESSEX STREET
MAP 31 PARCEL 1865

APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
PROP TREATMENT AT EXISTING RAILROAD MILE MARKER (SEE DETAIL, SHEET 31)

NICHOLS LANE IS "MAINTAINED AND USED AS A PUBLIC WAY IN THE CITY OF PEABODY" PER THE PEABODY CITY CLERK BOOK 13130, PAGE 59

N/F
ALFE PETER & STEPHANIE
BK/PG 23819/513
1 NICHOLS LANE EXTENSION
MAP 31 PARCEL 2651

RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

0 20 50 100
SCALE: 1" = 20'

613163_HD(CONST PLANS)_SVN.DWG Plotted on 27-May-2025 3:19 PM
Proposal No. 613163-135786

Proposal No. 613163-135786

A00831 - 23

HOR. SCALE IN FEET
20 0 20 40

VER. SCALE IN FEET
4 0 4 8

NAVD 88
BASE ELEV
70.00

EXIST ELEV
PROP ELEV

138+50	139+00	140+00	141+00	142+00	143+00	144+00	144+50
81.64 / 81.2	82.27 / 81.4	82.62 / 82.4	82.89 / 82.0	83.14 / 83.0	84.65 / 83.7	84.95 / 84.1	85.25 / 84.8
85.55 / 85.3	85.85 / 85.6	86.15 / 86.0	86.45 / 86.4	86.75 / 86.9			

70
80
90
100

0.60%
1.25%

PROPOSED GRADE ALONG CONST BL
EXISTING GRADE ALONG CONST BL

PVT: 141+06.74
ELEV: 84.69

PVC: 140+56.74
ELEV: 84.23

1685.2' SSD
PVI STA = 140+81.74
PVI ELEV = 84.54
A.D. = -0.65%
K = 76.92
50' VC

CONTINUED ABOVE

CONTINUED ON SHEET NO. 19

133+00	134+00	135+00	136+00	137+00	138+00	139+00
77.7 / 77.7	77.36 / 77.0	77.47 / 77.2	77.93 / 77.8	77.99 / 77.9	78.34 / 78.8	79.59 / 79.4	80.26 / 78.7	80.51 / 79.6	81.02 / 80.7	81.64 / 81.2	82.27 / 81.4

[STA 136+92.84 LYNNFIELD RAIL TRAIL - PHASE 1 =
STA 11+58.57 MIDDLE SCHOOL CONNECTION]

70
80
90
100

EXISTING GRADE ALONG CONST BL
PROPOSED GRADE ALONG CONST BL

PROP DRAIN
18" RCP CLASS V
I=77.69

MIDDLE SCHOOL CONNECTION

PROP FULL DEPTH ROADWAY CONSTRUCTION (MEET EXIST GRADE)

FORD AVENUE

PROJECT BEGIN
STA 133+57.92
N 3019857.0969
E 777133.1521

GRADE BREAK STA = 133+57.92
ELEV = 77.70
0.11%
-1.50%
GRADE BREAK STA = 133+74.38
ELEV = 77.72
PVC: 133+93.23
ELEV: 77.44
874.9' HSD
PVT: 134+18.23
ELEV: 77.31
LOW POINT ELEV = 77.30
LOW POINT STA = 134+11.95
PVI STA = 134+05.73
PVI ELEV = 77.25
A.D. = 2.00%
K = 12.48
25' VC

GRADE BREAK STA = 134+57.92
ELEV = 77.51
0.50%
1.00%
PVC: 135+08.15
ELEV: 78.02
731.9' SSD
PVT: 135+33.15
ELEV: 78.08
HIGH POINT ELEV = 78.10
HIGH POINT STA = 135+24.82
PVI STA = 135+20.65
PVI ELEV = 78.14
A.D. = -1.50%
K = 16.67
25' VC

-0.50%
PVC: 135+67.79
ELEV: 77.91
189.3' HSD
PVT: 135+92.79
ELEV: 78.16
LOW POINT ELEV = 77.89
LOW POINT STA = 135+71.96
PVI STA = 135+80.29
PVI ELEV = 77.84
A.D. = 3.00%
K = 8.33
25' VC

2.50%
PVC: 136+51.44
ELEV: 79.62
559.6' SSD
PVT: 136+91.44
ELEV: 80.22
PVI STA = 136+71.44
PVI ELEV = 80.12
A.D. = -2.00%
K = 20.00
40' VC

0.50%
1.25%
PVC: 137+51.01
ELEV: 80.52
PVT: 137+81.01
ELEV: 80.78
PVI STA = 137+66.01
PVI ELEV = 80.59
A.D. = 0.75%
K = 40.00
30' VC

CONTINUED BELOW

ACOE SVN
PROFILES
PART 1 OF 10

PROJECT FILE NO. 613163			
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	37

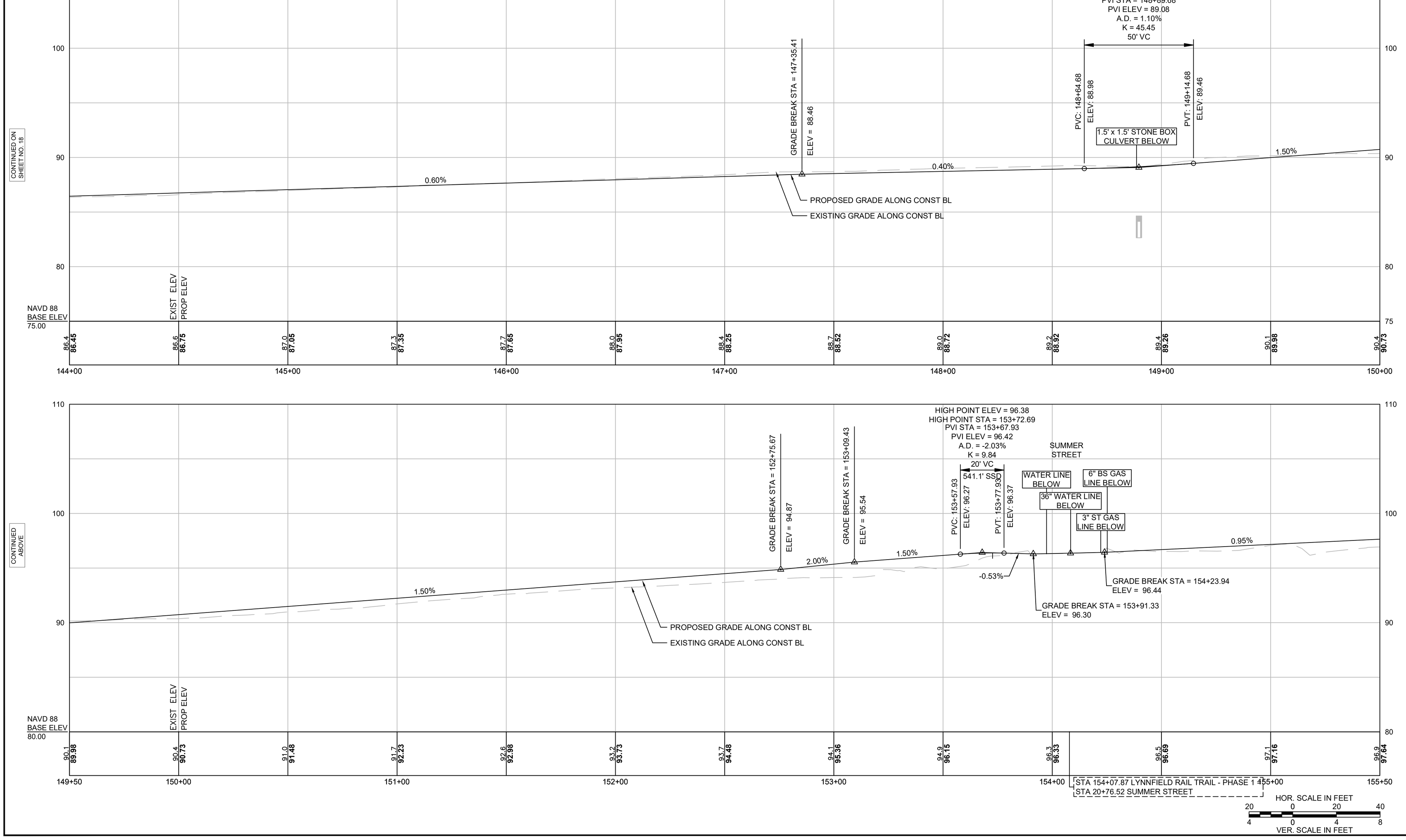
LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

613163_HD\PROFILES_SVN.DWG Plotted on 27-May-2025 3:20 PM

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 2 OF 10



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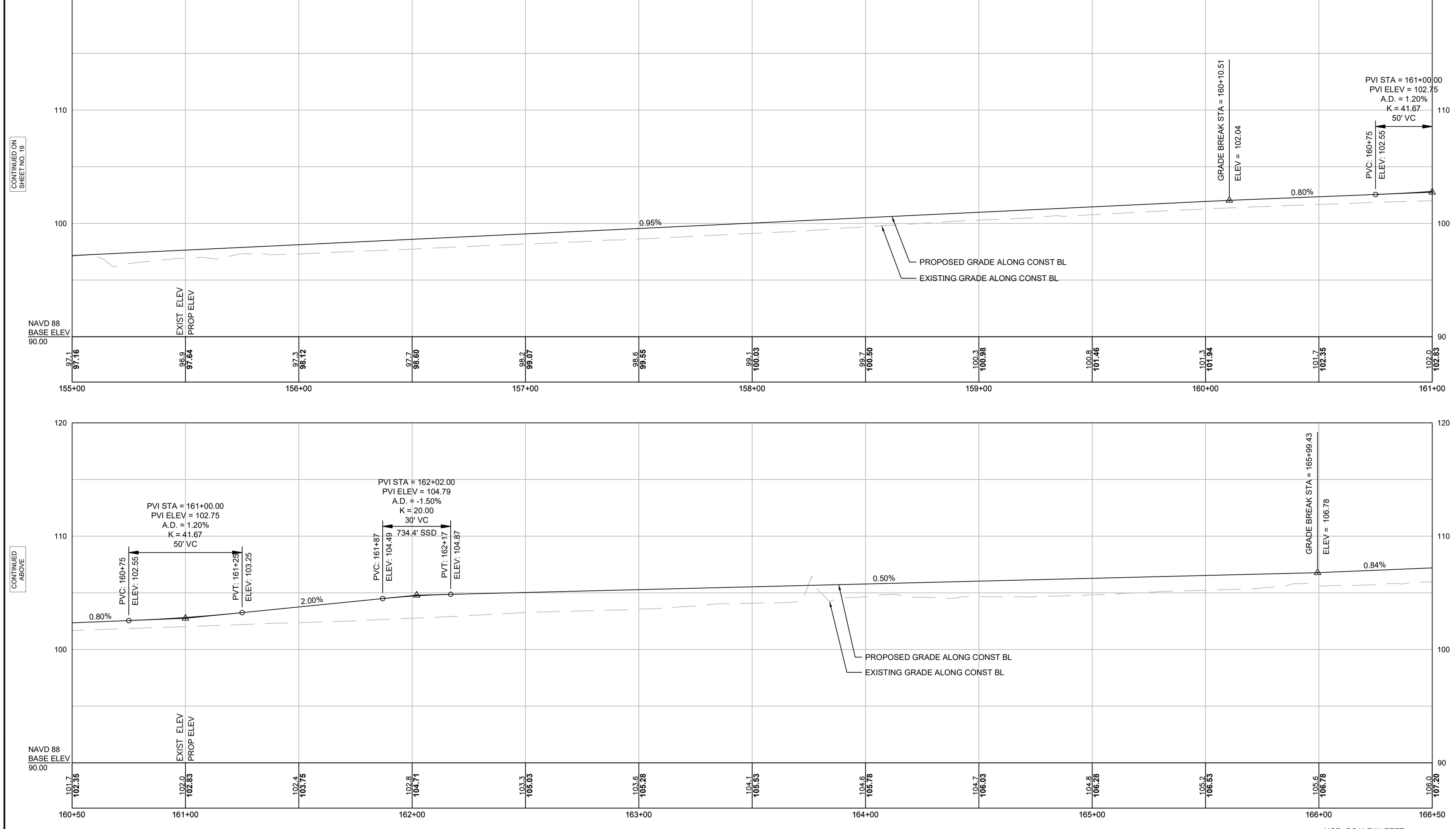
Proposal No. 613163-135786

A00831 - 24

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 3 OF 10



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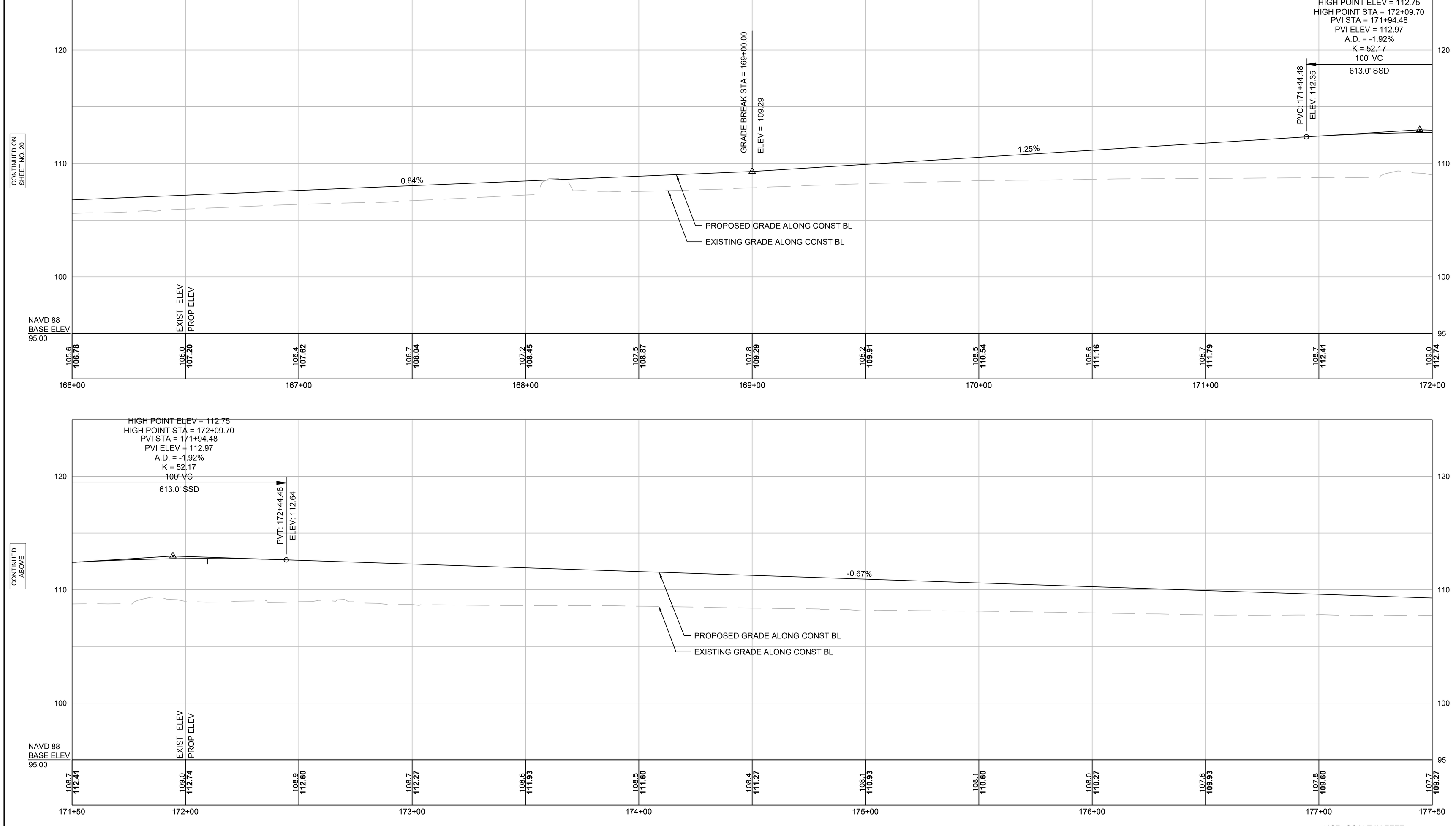
Proposal No. 613163-135786
A00831 - 25

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 4 OF 10



	166+00	167+00	168+00	169+00	170+00	171+00	172+00
EXIST ELEV	105.6	106.0	106.4	106.7	107.2	107.5	107.8
PROP ELEV	106.78	107.20	107.62	108.04	108.45	108.87	109.29

	171+50	172+00	173+00	174+00	175+00	176+00	177+00	177+50
EXIST ELEV	108.7	109.0	108.9	108.7	108.6	108.5	108.4	108.1
PROP ELEV	112.41	112.74	112.60	112.27	111.93	111.60	111.27	110.93

	171+50	172+00	173+00	174+00	175+00	176+00	177+00	177+50
EXIST ELEV	108.2	108.5	108.6	108.7	109.0	109.7	108.7	109.0
PROP ELEV	109.91	110.54	111.16	111.79	112.41			

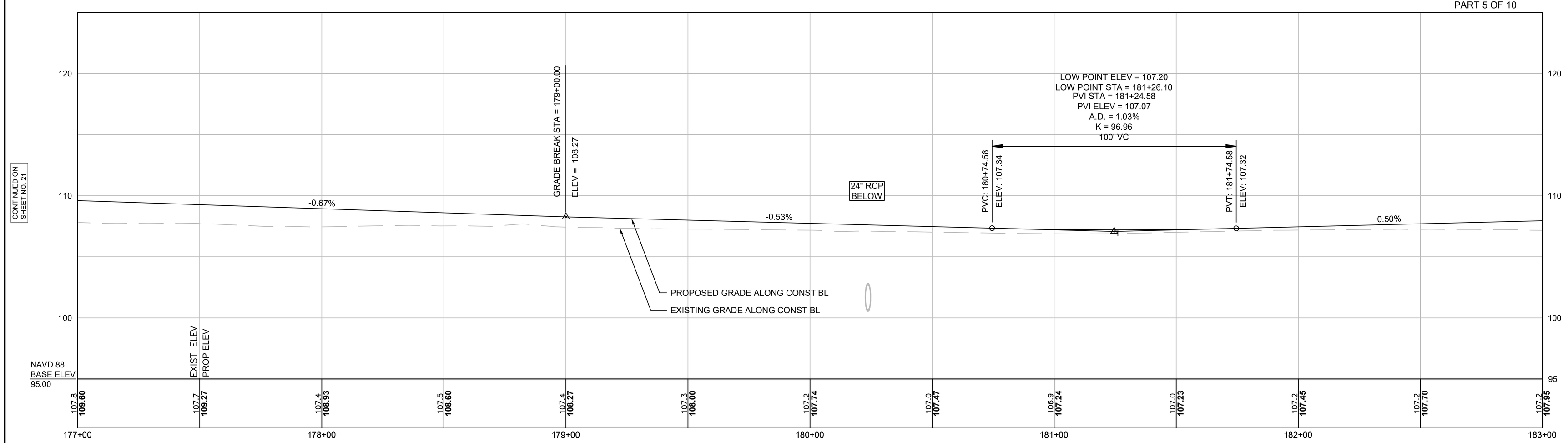
	171+50	172+00	173+00	174+00	175+00	176+00	177+00	177+50
EXIST ELEV	108.1	108.0	107.8	107.7	107.6	107.4	107.8	107.7
PROP ELEV	110.93	110.60	110.27	109.93	109.60	109.27		

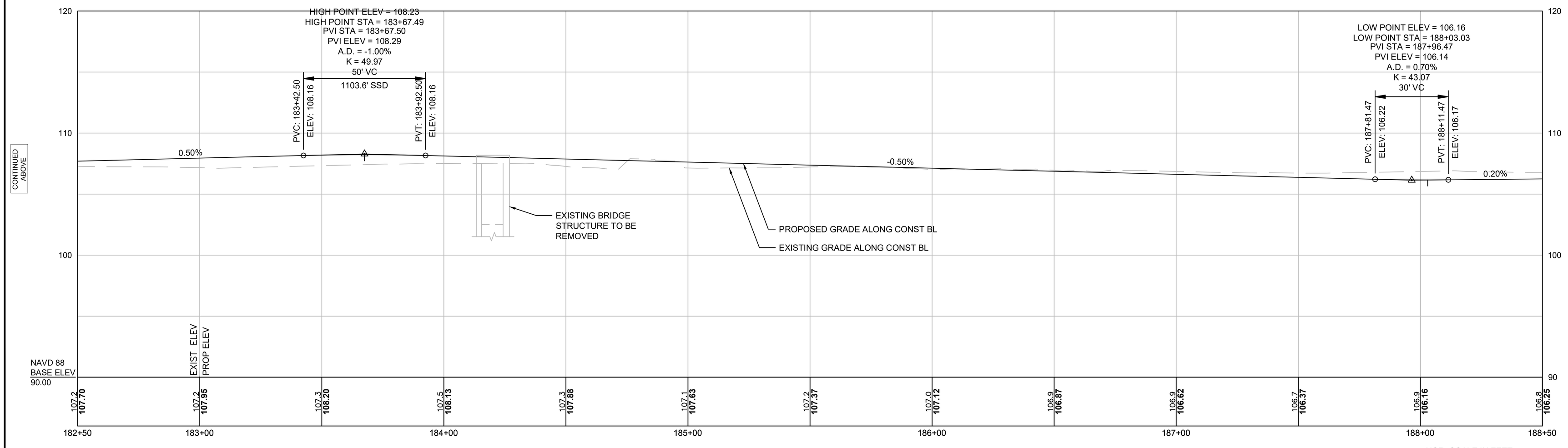
A00831-26
613163_HD\PROFILES_SVN.DWG Plotted on 27-May-2025 3:20 PM
Proposal No. 613163-153786

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 5 OF 10





HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

613163_HD\PROFILES_SVN.DWG Plotted on 27-May-2025 3:21 PM

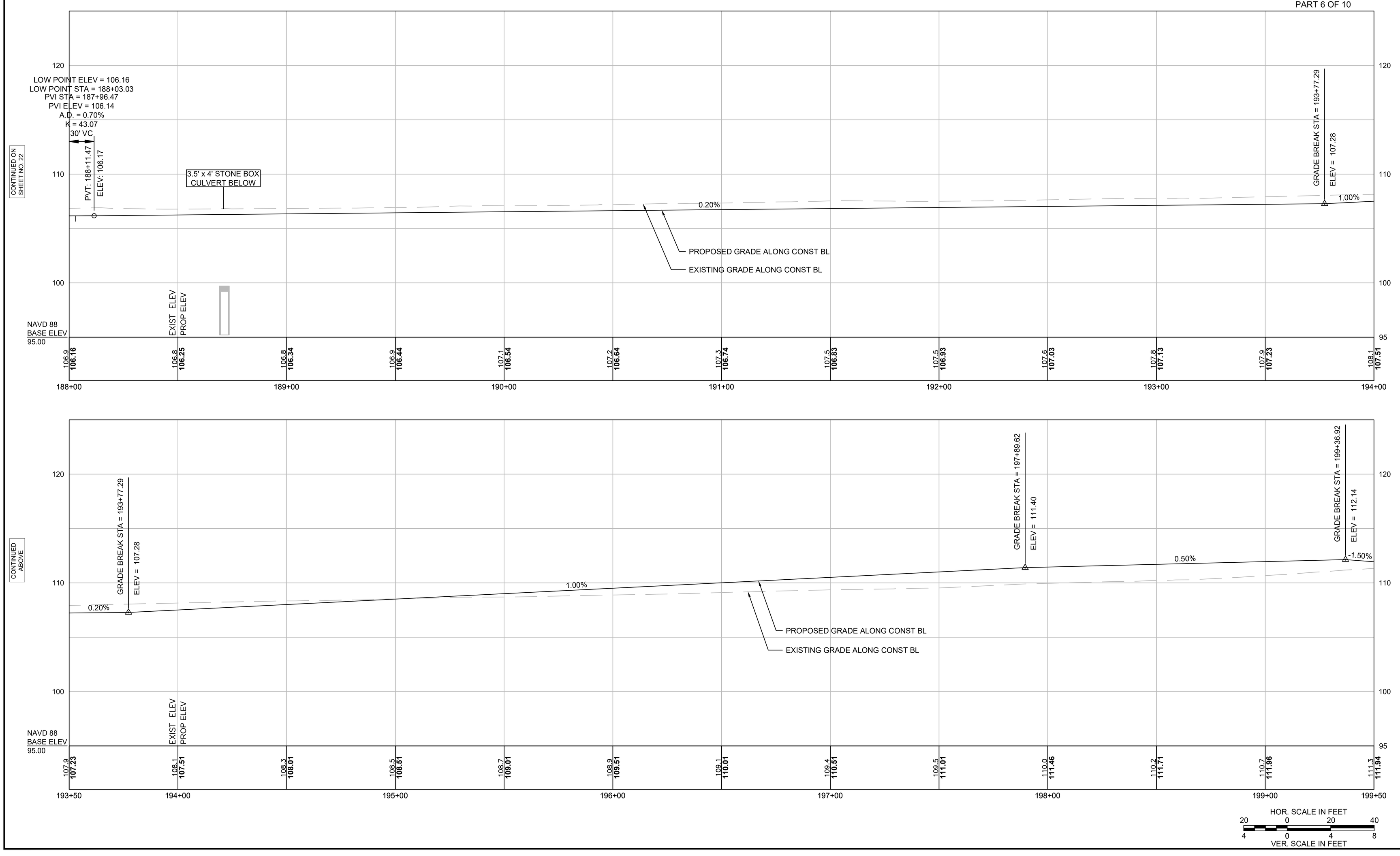
Proposal No. 613163-125786

A00831-27

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 6 OF 10



HOR. SCALE IN FEET
20 0 20 40
VER. SCALE IN FEET
4 0 4 8

613163_HD\PROFILES_SVN.DWG Plotted on 27-May-2025 3:21 PM

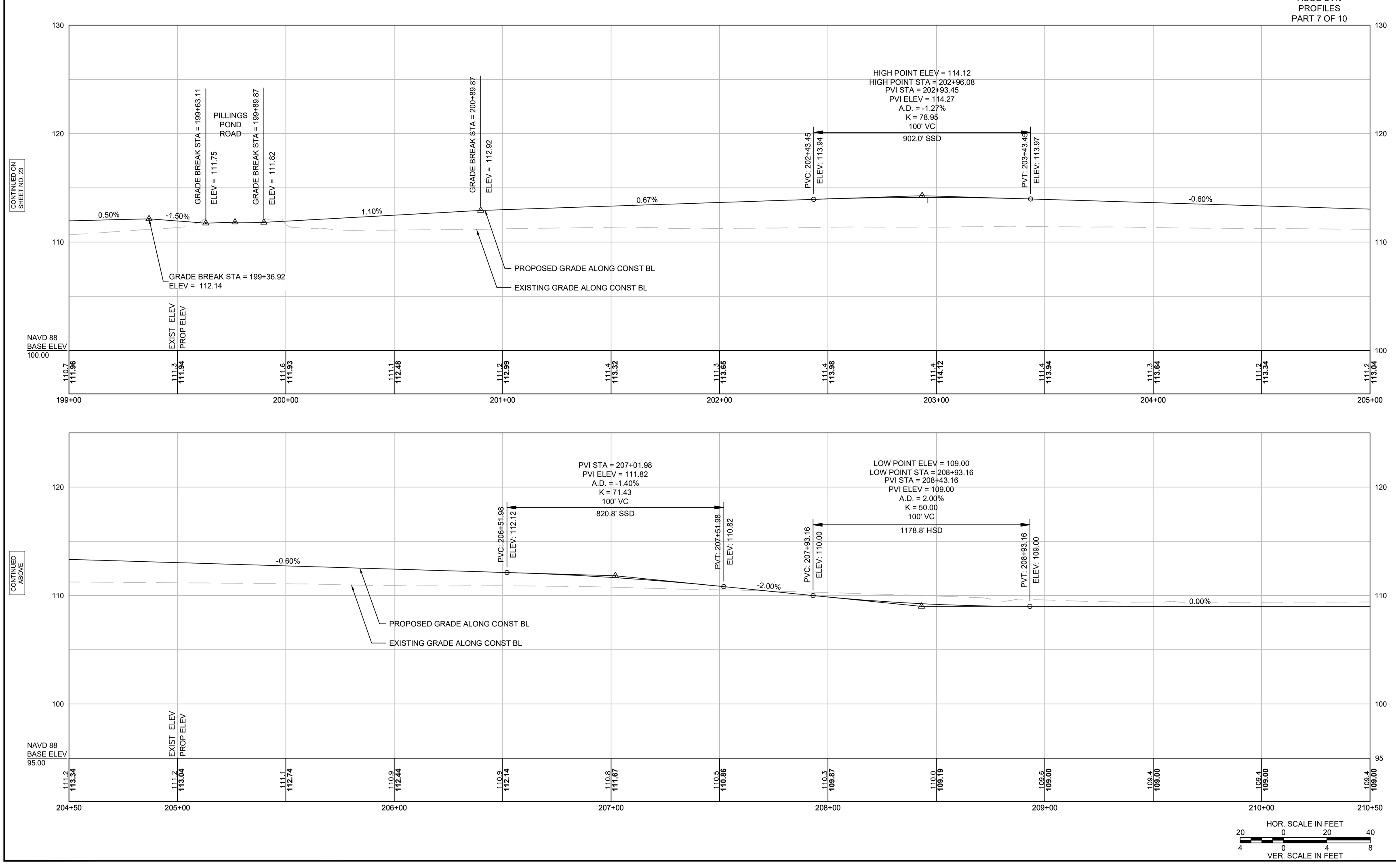
Proposal No. 613163-153786

A00831 - 28

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	24	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 7 OF 10



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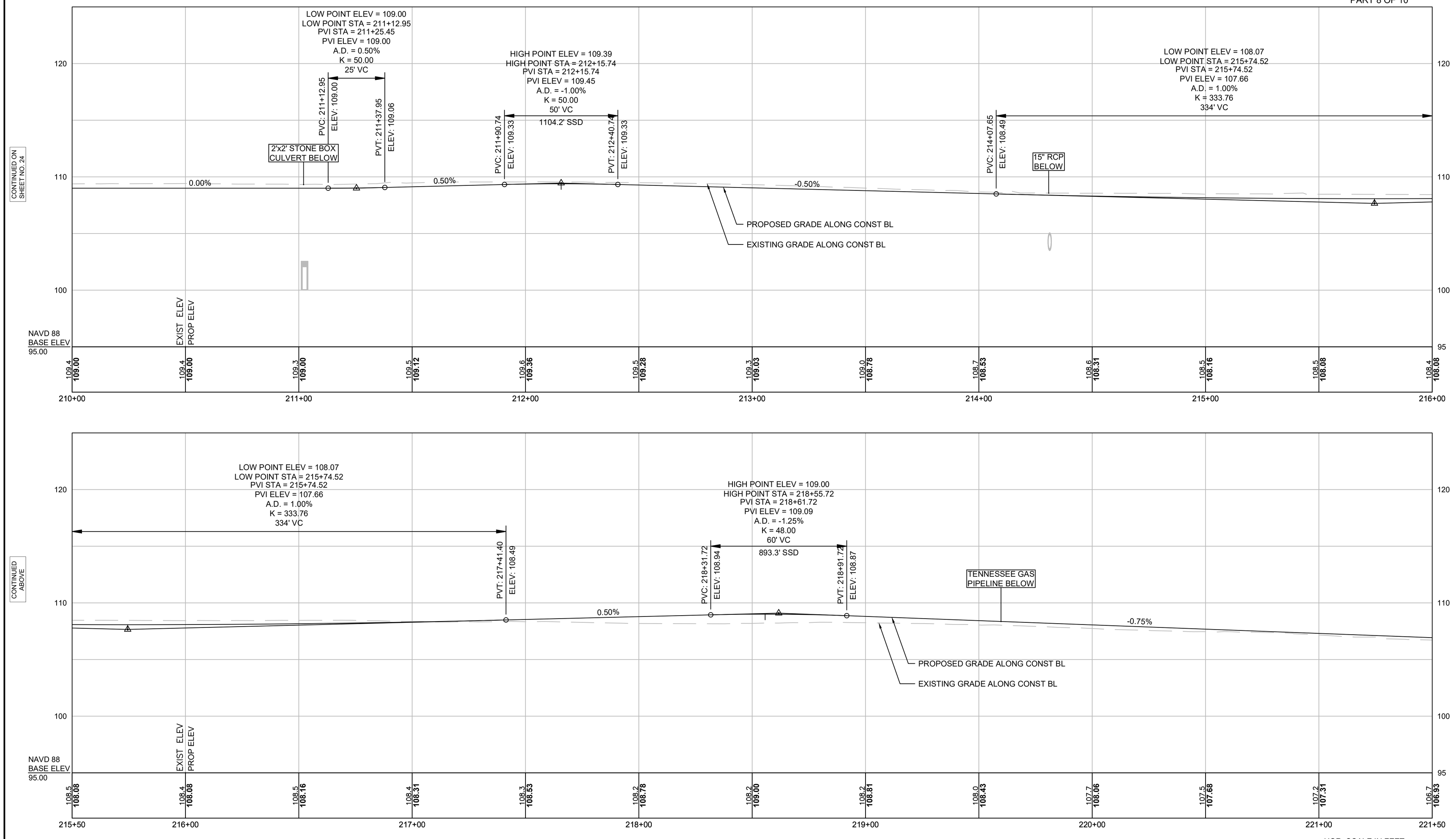
Proposal No. 613163-157586
A00831 - 29

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 8 OF 10



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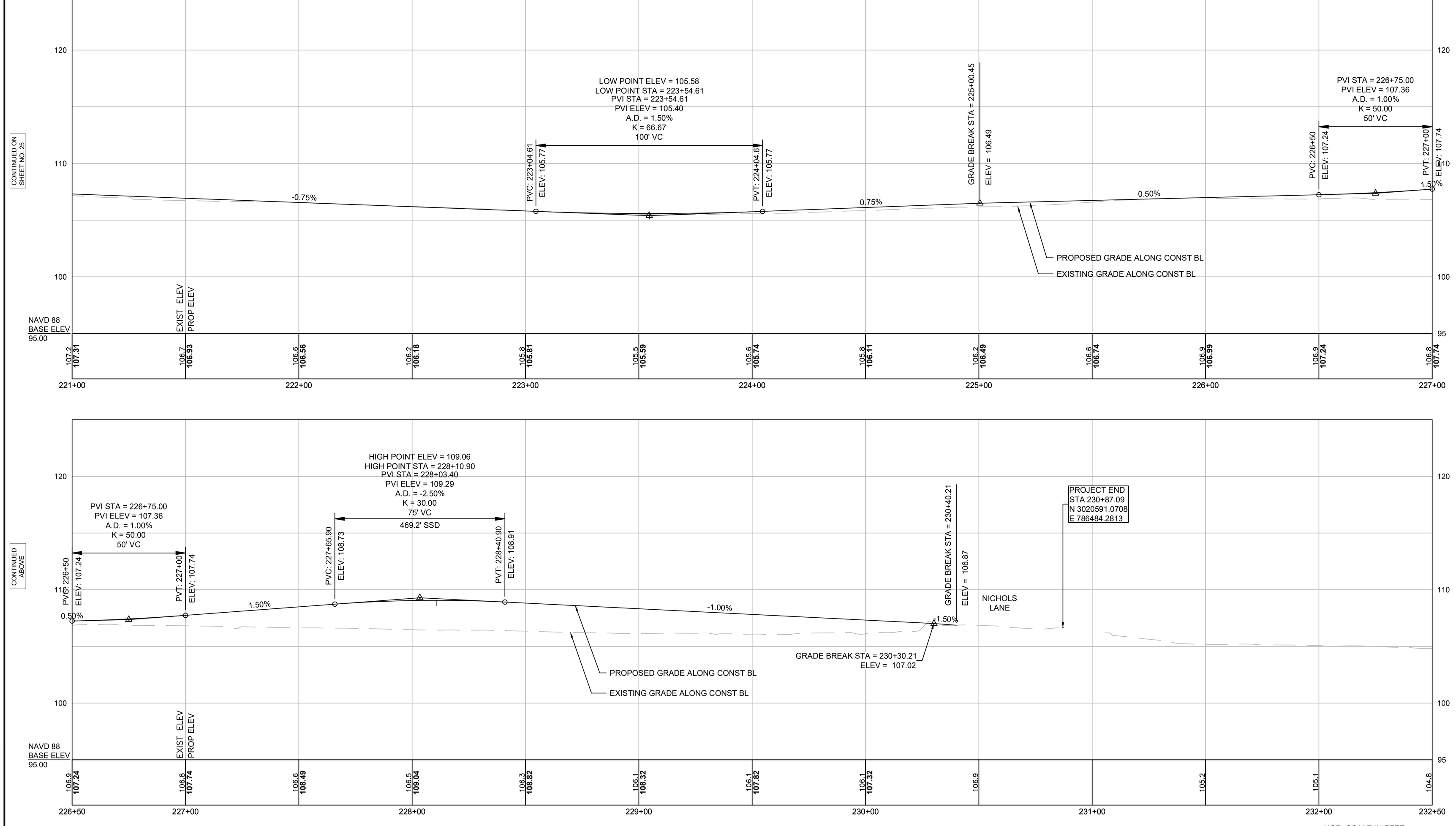
Project No. 613163-135786
A00813 30

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 9 OF 10



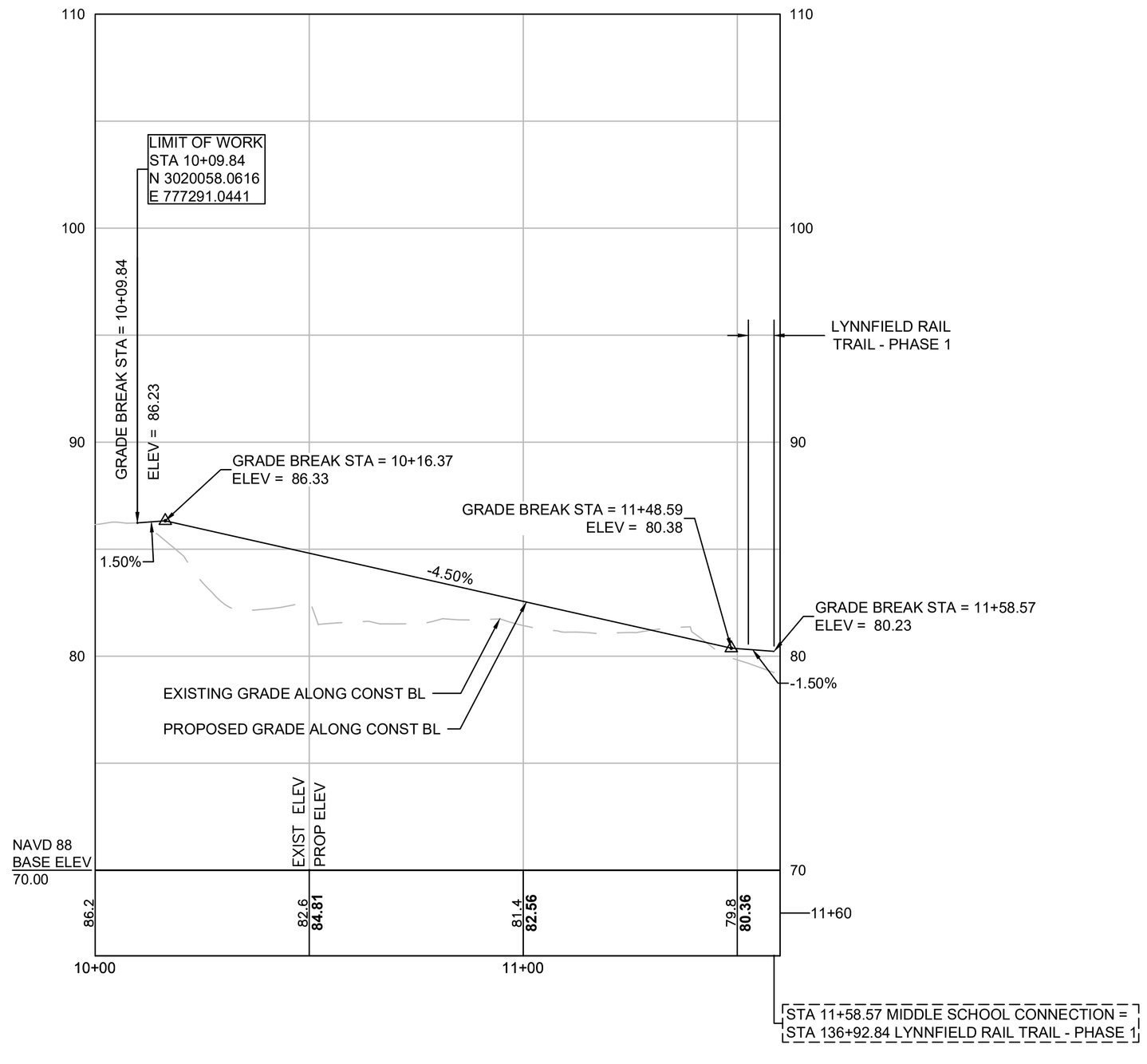
HOR. SCALE IN FEET
20 0 20 40
VER. SCALE IN FEET
4 0 4 8

613163_HD\PROFILES_SVN.DWG Plotted on 27-May-2025 3:21 PM
Proposal No. 613163-135786
A00831 - 31

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	37
PROJECT FILE NO. 613163			

ACOE SVN
PROFILES
PART 10 OF 10



HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

613163_HD\PROFILES_SVN.DWG Plotted on 27-May-2025 3:21 PM
Proposal No. 613163-13786
A00831 - 32

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	37
PROJECT FILE NO. 613163			

ACOE SVN
TRAIL AMENITY PLANS
PART 1 OF 3

RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORIDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

TRAIL AMENITY PLANTING SCHEDULE*					
QTY	ID	BOTANICAL NAME	COMMON NAME	SIZE	COMMENT
TREES					
32	TO	THUJA OCCIDENTALIS	ARBORVITAE	5-6 FEET	

* FOR WETLAND REPLICATION AREA PLANTINGS SEE SHEET 33

N/F
JAMES C. DAVIE
BK/PG 28898/575
85 PERRY AVENUE
MAP 28 PARCEL 2857

N/F
DEBRA LACONTE
BK/PG 13696/9
86 PERRY AVENUE
MAP 28 PARCEL 2861

PERRY AVENUE
(PUBLIC - 40' WIDE)

1953 TOWN LAYOUT

SBCC

GRASS

TREE

LANDSCAPING

4 TO

6 TO

5 TO

17 TO

134

135

133

TOWN OF LYNNFIELD
WATER EASEMENT
DEED BOOK 4294, PAGE 74
PLAN BOOK 605 OF 1956

FORD AVENUE
(PUBLIC - 40' WIDE)

132+88.59

BUSH

BIT CONC DRIVEWAY

CLF

GATE

TOWN OF LYNNFIELD
BK/PG 3853/583
505 MAIN STREET
MAP/LOT 28/1455

12"D
18"D
20"D
10"D
16"I
34"D
MULTI
24"D
5"D
14"D
TOP MW=79.74'
GRND@MW=78.7'
36"D
8"D
12"D
18"D
16"D

LYNNFIELD RAIL
TRAIL CONST BL

N/F
MCQUEEN PHILIP J.
MCQUEEN DEANNA M.
BK/PG 27917/562
1 FORD AVENUE
MAP 28 PARCEL 2891

STATION 2101
N: 3019820.37'
E: 777100.80'
EL: 77.63'
MAG. NAIL SET

1 STORY
WOOD

FENCE

BVW

WF#J-41

N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX
REGISTRY OF DEEDS)

0 10 20 30 40
SCALE: 1" = 10'

613163_LD(AMENITY PLAN)_SVN.DWG Plotted on 27-May-2025 3:22 PM

Proposal No. 613163-15786

A00831 - 33

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	37
PROJECT FILE NO. 613163			

ACOE SVN
TRAIL AMENITY PLANS
PART 2 OF 3

TRAIL AMENITY PLANTING SCHEDULE*					
QTY	ID	BOTANICAL NAME	COMMON NAME	SIZE	COMMENT
TREES					
3	AR	ACER RUBRUM	RED MAPLE	1"-1.5" CALIPER	B&B
5	BN	BETULA NIGRA	RIVER BIRCH	1"-1.5" CALIPER	B&B
16	TO	THUJA OCCIDENTALIS	ARBORVITAE	5-6 FEET	

* FOR WETLAND REPLICATION AREA PLANTINGS SEE SHEET 33

RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORIDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

NOTES:

1. STATIONS AND OFFSETS ARE TAKEN AT THE GEOMETRIC CENTER OF THE TRAIL AMENITY, DEPICTED AS A DOT ON THE PLAN.
2. UNLESS OTHERWISE NOTED, TRAIL AMENITIES SHALL BE ORIENTED PARALLEL TO THE EDGE OF THE PROPOSED CEMENT CONCRETE SIDEWALK AT TRAILHEAD AREA SURFACE.
3. TRAIL AMENITIES SHALL BE INSTALLED AT LEAST 2-FEET FROM THE EDGE OF THE TRAIL PAVEMENT, AS SHOWN ON THE PLANS.
4. FOR TIES SEE SHEET NO. 38.

TRAIL AMENITY SCHEDULE			
NAME	STATION	OFFSET	SITE FEATURE TYPE
A	153+21.53	11.23', LT	GRANITE SEAT WALL
B	153+25.74	12.51', LT	ADA ACCESSIBLE COMPANION SEATING AREA
C	153+32.06	12.54', LT	BICYCLE RACK
D	153+38.91	13.43', LT	BICYCLE RACK
E	153+45.81	12.82', LT	BICYCLE RACK
F	153+52.16	13.05', LT	ADA ACCESSIBLE COMPANION SEATING AREA
G	153+56.46	11.94', LT	GRANITE SEAT WALL
H	154+42.45	31.33', RT	BICYCLE RACK
I	154+49.22	31.62', RT	GRANITE SEAT WALL
J	154+51.65	28.13', RT	ADA ACCESSIBLE COMPANION SEATING AREA
K	154+53.03	12.63', RT	BICYCLE RACK
L	154+54.48	24.98', RT	INTERPRETIVE KIOSK - GRANITE BASE
M	154+55.48	21.04', RT	ADA ACCESSIBLE COMPANION SEATING AREA
N	154+57.04	17.20', RT	GRANITE SEAT WALL

PROP BICYCLE RACK (TYP, 3 THIS LOCATION)
PROP GRANITE SEAT WALL (TYP, 2 THIS LOCATION)
PROP CEM CONC SIDEWALK AT TRAILHEAD AREA
PROP CEM CONC SIDEWALK AT TRAILHEAD AREA
PROP INTERPRETIVE KIOSK-GRANITE BASE
PROP BICYCLE RACK (TYP, 2 THIS LOCATION)
PROP GRANITE SEAT WALL (TYP, 2 THIS LOCATION)
SUMMER STREET CONST BL
LYNNFIELD RAIL TRAIL CONST BL
ST. PAUL'S DRIVEWAY
SUMMER STREET (PUBLIC - WIDTH VARIES)
MBTA ROW (VAL V.7.3/4)
1937 COUNTY LAYOUT NO 2606
BCW
FENCE
DENSE TREES
DRAIN DITCH
IVW
20' WIDE DRAIN EASEMENT LCP 21086-D
FOR WETLAND REPLICATION PLANTINGS AND DETAILS SEE SHEET 33

ST. PAUL'S EPISCOPAL CHURCH OF LYNNFIELD
BK/PG 4604/257
PB/PL 4604/257
127 SUMMER STREET
MAP/LOT 29/1059
TOTAL PROPERTY AREA=13,265 SQ. FT

L. PETER CAMPBELL
BK/PG 14279/326
130 SUMMER STREET
MAP/LOT 29/1125
TOTAL PROPERTY AREA=74,052 SQ. FT.

N/F MASSACHUSETTS BAY TRANSPORTATION AUTHORITY BK/PG 13117/113 (SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F TOWN OF LYNNFIELD - LYNNFIELD CENTER BK/PG 24679/171 165 SUMMER STREET MAP/LOT 29/2414

N/F LESLIE A. MCKEOUGH L.C.C. 21086-D (LOT 41) CERT. # 92098 DOC. # 597841 2 WESTOVER DRIVE MAP 29 PARCEL 1183

0 10 20 30 40
SCALE: 1" = 10'

613163_LD(AMENITY PLAN)_SVN.DWG Plotted on 27-May-2025 3:23 PM
Proposal No. 613163-135786
A00831 - 34

N

NOTES:

1. STATIONS AND OFFSETS ARE TAKEN AT THE GEOMETRIC CENTER OF THE TRAIL AMENITY, DEPICTED AS A DOT ON THE PLAN.
2. UNLESS OTHERWISE NOTED, TRAIL AMENITIES SHALL BE ORIENTED PARALLEL TO THE EDGE OF THE PROPOSED CEMENT CONCRETE SIDEWALK AT TRAILHEAD AREA SURFACE.
3. TRAIL AMENITIES SHALL BE INSTALLED AT LEAST 2-FEET FROM THE EDGE OF THE TRAIL PAVEMENT, AS SHOWN ON THE PLANS.

RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORIDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	37
PROJECT FILE NO. 613163			

ACOE SVN
TRAIL AMENITY PLANS
PART 3 OF 3

TRAIL AMENITY SCHEDULE			
NAME	STATION	OFFSET	SITE FEATURE TYPE
O	180+50	11.21', LT	GRANITE SEAT WALL
P	180+54	10.00', LT	ADA ACCESSIBLE COMPANION SEATING AREA
Q	180+57.50	10.00', LT	ADA ACCESSIBLE COMPANION SEATING AREA
R	180+61.50	11.21', LT	GRANITE SEAT WALL

N/F
SILVA JENNIFER L
CERT. 90879
20 LOVELL ROAD
MAP 30 PARCEL 918

20' WIDE DRAINAGE EASEMENT
(LCP 4233-M, CERT NO. 23973)

N/F
RAYMOND J. DORMANN AND
ROSE MARIE
CERT. 91426
22 LOVELL ROAD
MAP 30 PARCEL 929

MBTA ROW (VAL V.7.3/4)

DENSE TREES

PROP GRANITE SEAT WALL
(TYP, 2 THIS LOCATION)

PROP CEM CONC SIDEWALK
AT TRAILHEAD AREA

LYNNFIELD RAIL
TRAIL CONST BL

O R P Q

2' (MIN)

180 181 182

RR TRACKS

N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX
REGISTRY OF DEEDS)

N/F
CHILDREN'S BOURQUE ROAD TRUST
DICESARE ELIZABETH N. TR.
BK/PG 23983/289
28 READ WESTOVER DRIVE
MAP 30 PARCEL 975

DITCH

STONE WALL

WF#M-1 WF#M-2 WF#M-3 WF#M-4

WETLAND BOUNDARY LINE BY
AERIAL INTERPRETATION

N/F
CHILDREN'S BOURQUE ROAD TRUST
CERT. 78177
125 BOURQUE ROAD
MAP 30 PARCEL 1075

0 10 20 30 40
SCALE: 1" = 10'

613163_LD(AMENITY PLAN)_SVN.DWG Plotted on 27-May-2025 3:23 PM

Proposal No. 613163-13786

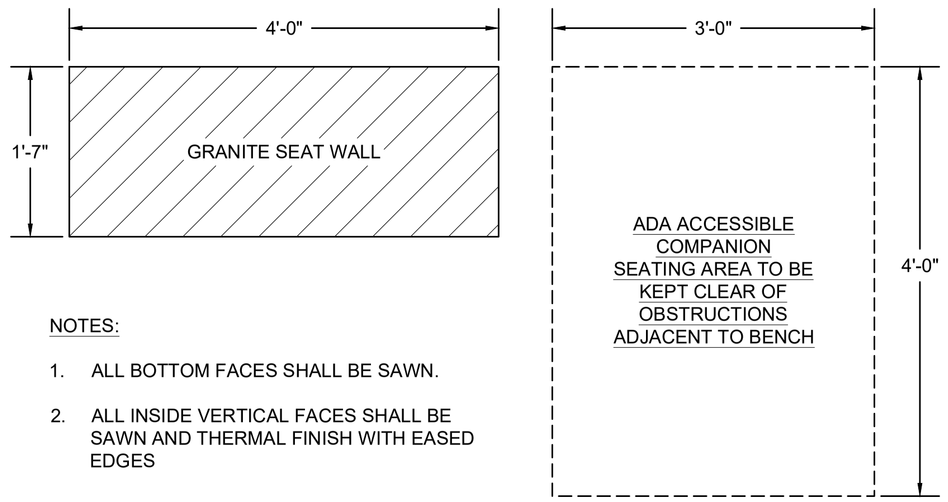
A00831 - 35

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	37
PROJECT FILE NO. 613163			

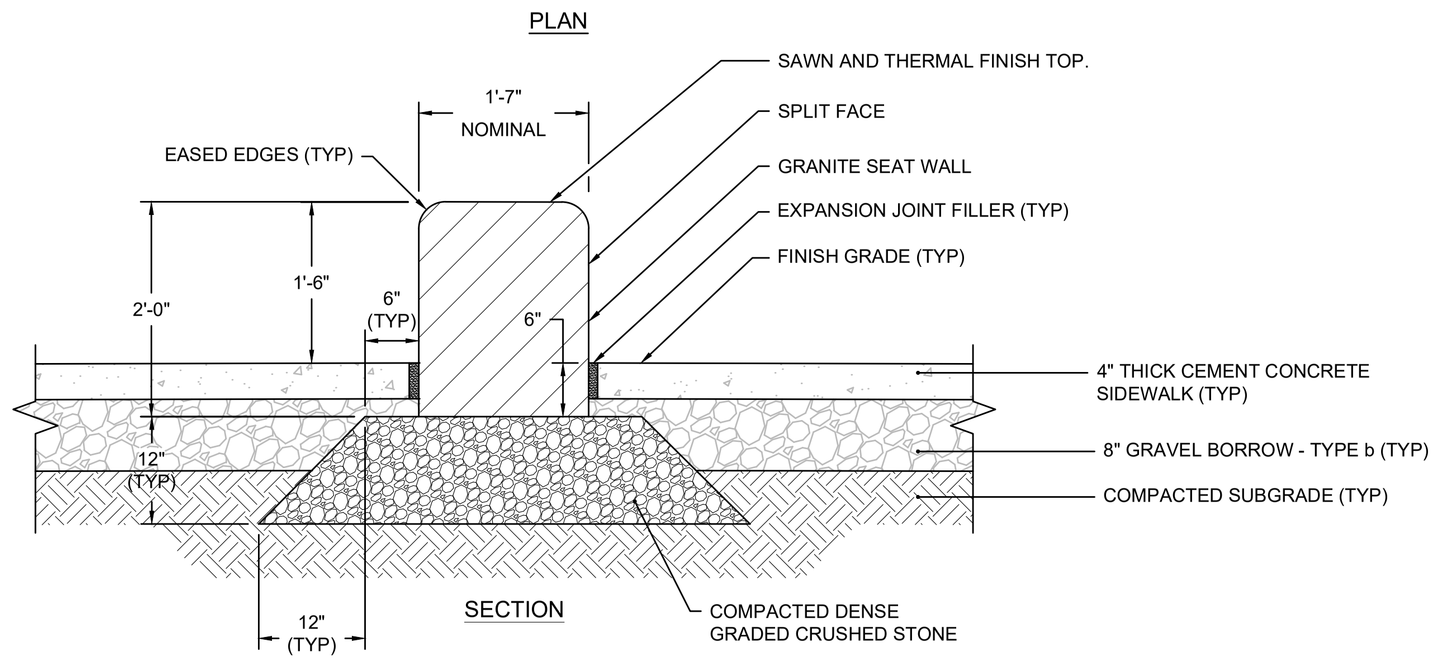
ACOE SVN
TRAIL AMENITY DETAILS
PART 1 OF 2

613163_LD(AMENITY DETAILS)_SVN.DWG Plotted on 27-May-2025 3:23 PM

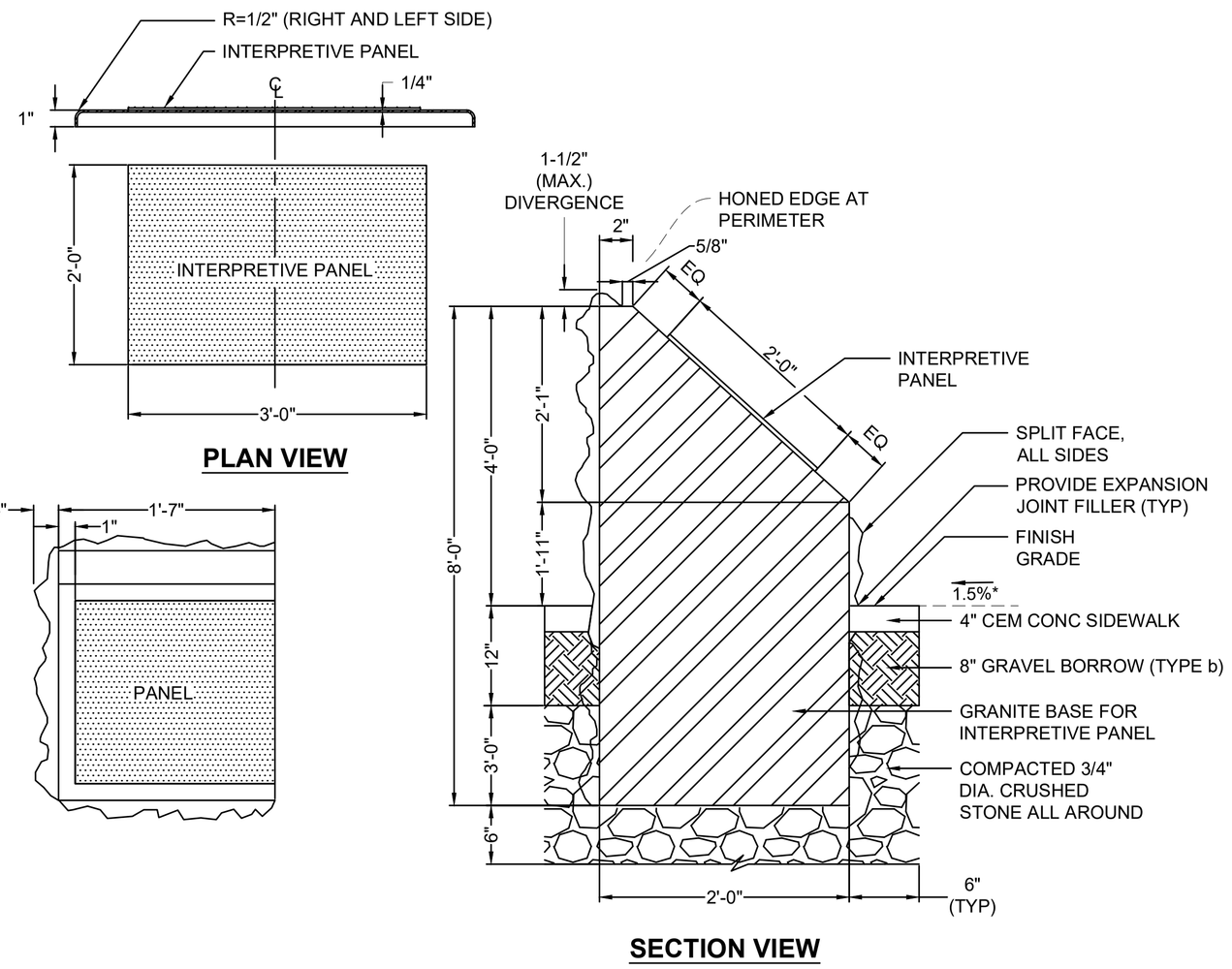


NOTES:

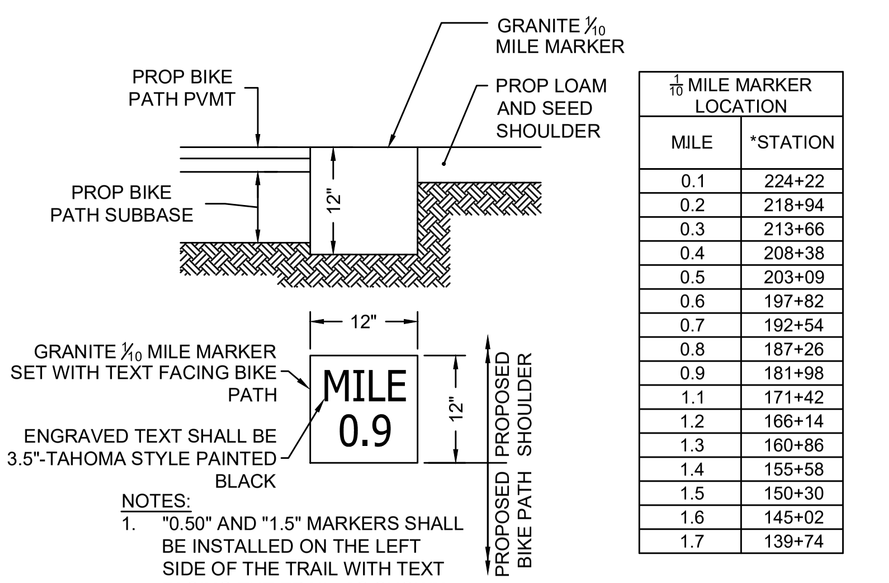
1. ALL BOTTOM FACES SHALL BE SAWN.
2. ALL INSIDE VERTICAL FACES SHALL BE SAWN AND THERMAL FINISH WITH EASED EDGES



GRANITE SEAT WALL
NOT TO SCALE



INTERPRETIVE KIOSK-GRANITE BASE
NOT TO SCALE



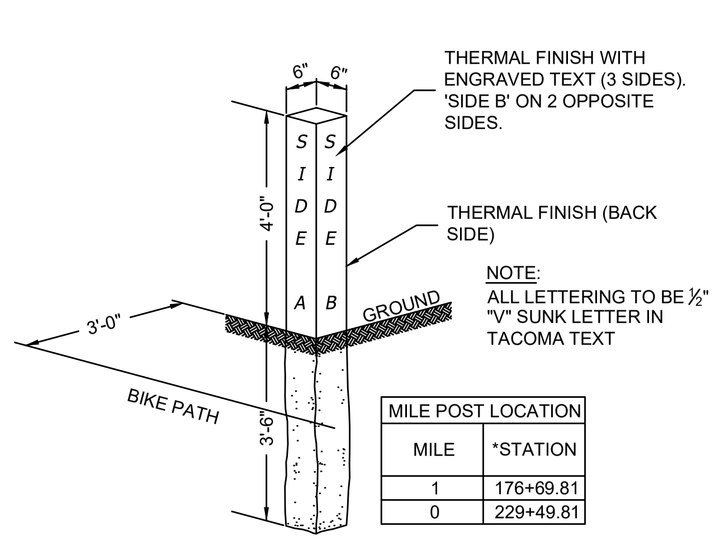
NOTES:

1. "0.50" AND "1.5" MARKERS SHALL BE INSTALLED ON THE LEFT SIDE OF THE TRAIL WITH TEXT FACING THE TRAIL, AS SHOWN.
2. ALL OTHER MARKERS SHALL BE INSTALLED ON THE RIGHT SIDE OF THE TRAIL WITH TEXT FACING THE TRAIL, AS SHOWN.

1/10 MILE MARKER LOCATION	
MILE	*STATION
0.1	224+22
0.2	218+94
0.3	213+66
0.4	208+38
0.5	203+09
0.6	197+82
0.7	192+54
0.8	187+26
0.9	181+98
1.1	171+42
1.2	166+14
1.3	160+86
1.4	155+58
1.5	150+30
1.6	145+02
1.7	139+74

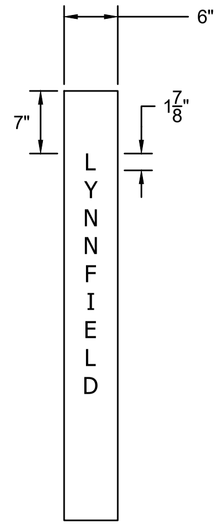
*STATIONING IS APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS PRIOR TO INSTALLATION

GRANITE TENTH MILE MARKER
NOT TO SCALE

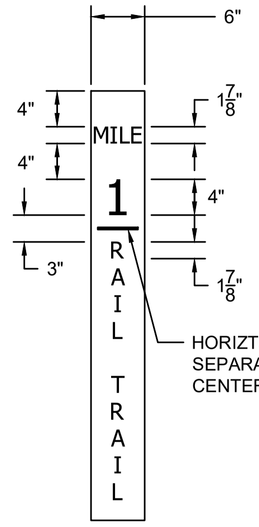


MILE POST LOCATION	
MILE	*STATION
1	176+69.81
0	229+49.81

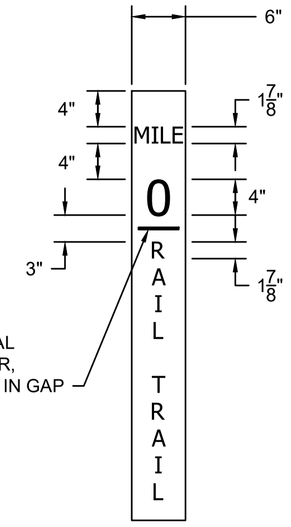
*STATIONING IS APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS PRIOR TO INSTALLATION



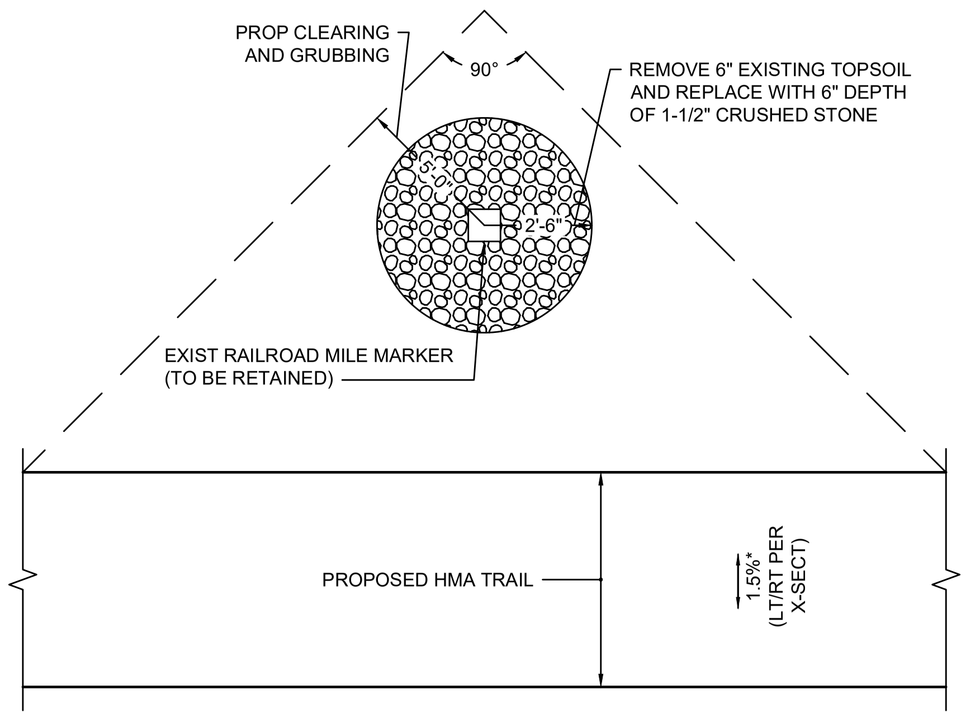
SIDE A



SIDE B
(STA 176+69.81)



SIDE B
(STA 229+49.81)

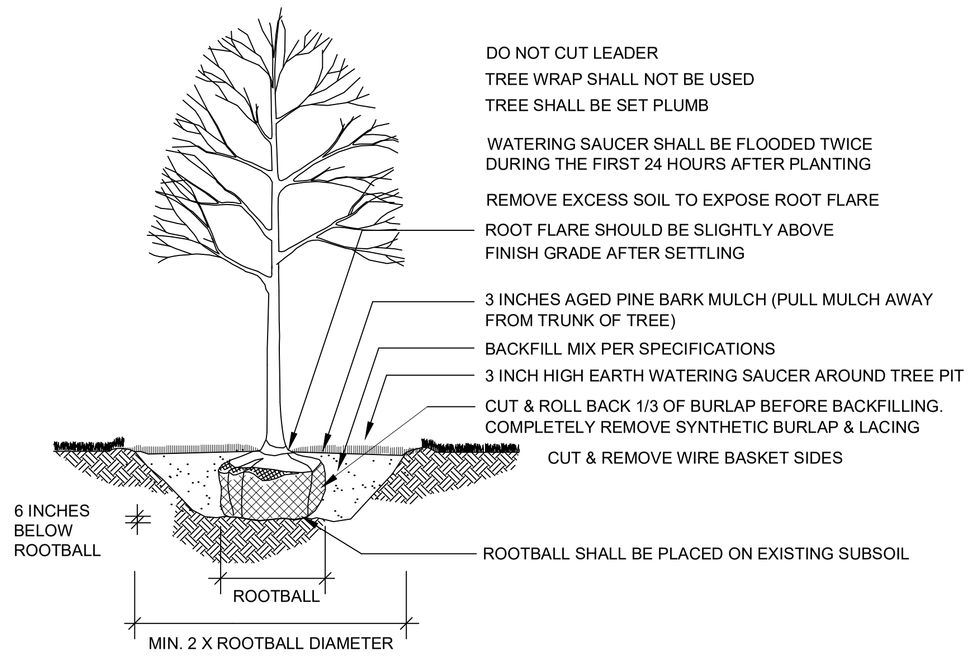


TREATMENT AT EXISTING RAILROAD MILE MARKER
(STATION 229+52±, RT)
NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5% (TYP.)

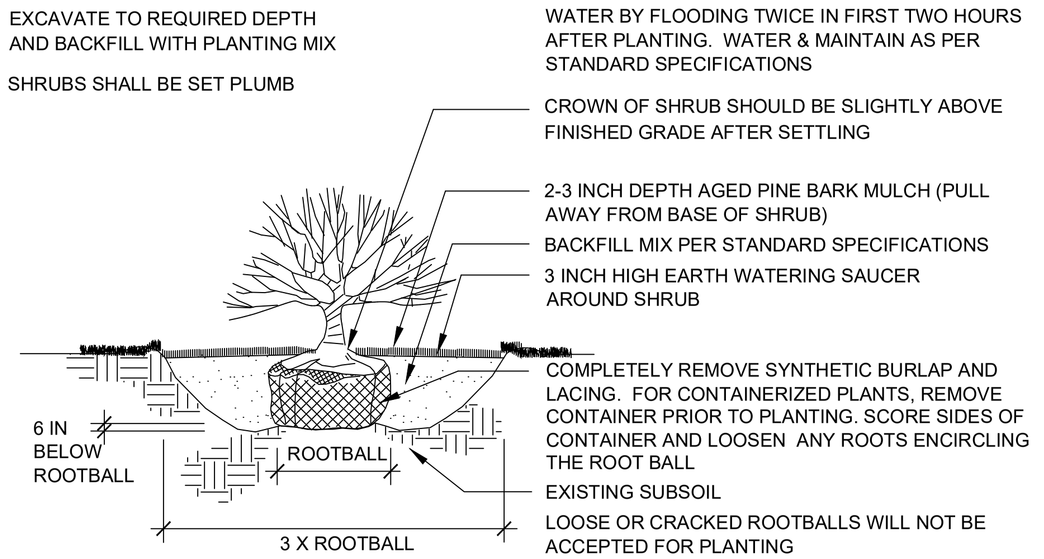
A00831 - 36

Proposal No. 613163-135786



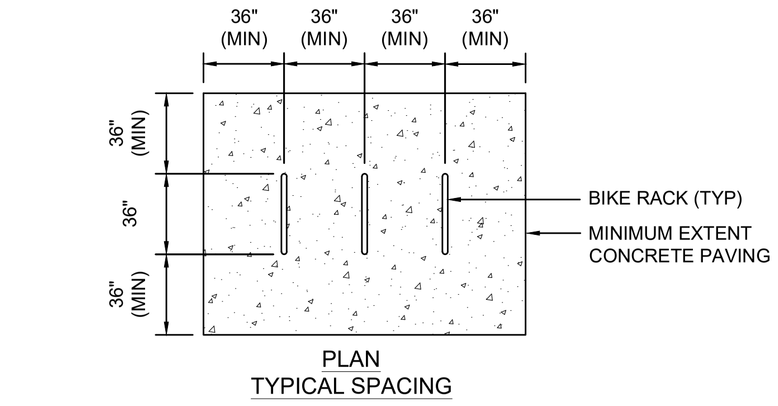
DECIDUOUS TREE PLANTING

NOT TO SCALE

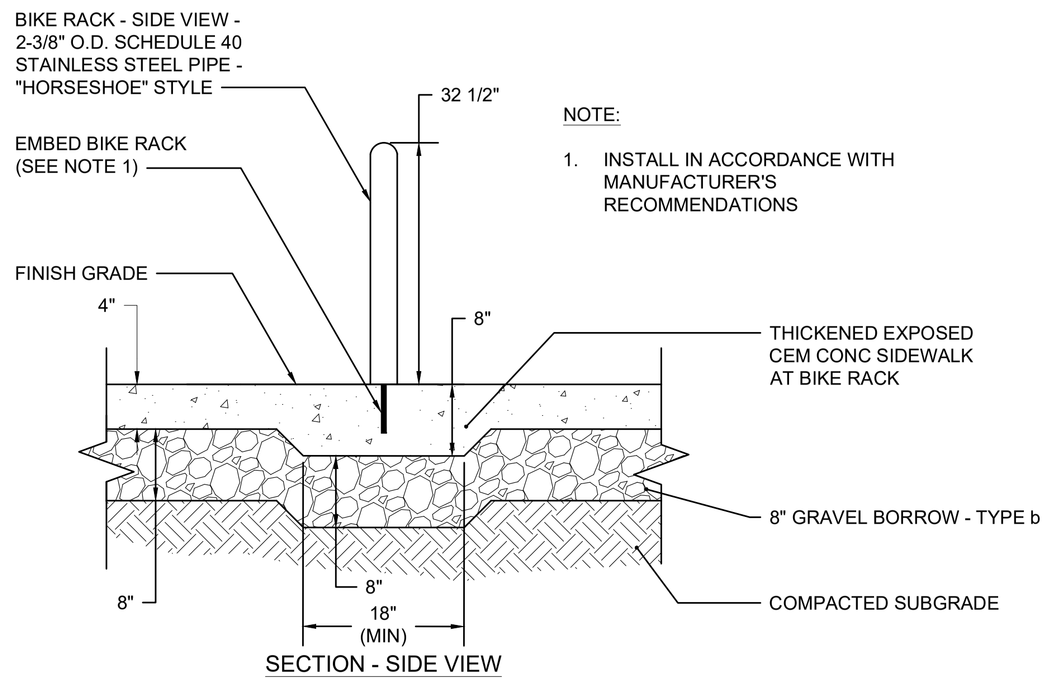


SHRUB PLANTING

NOT TO SCALE



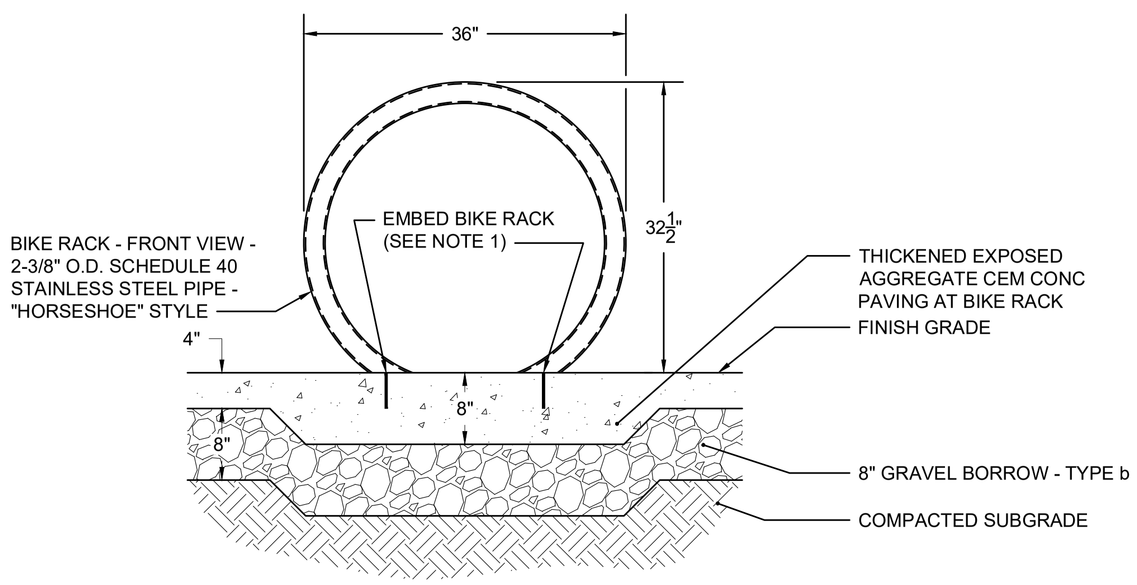
PLAN
TYPICAL SPACING



SECTION - SIDE VIEW

NOTE:

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS



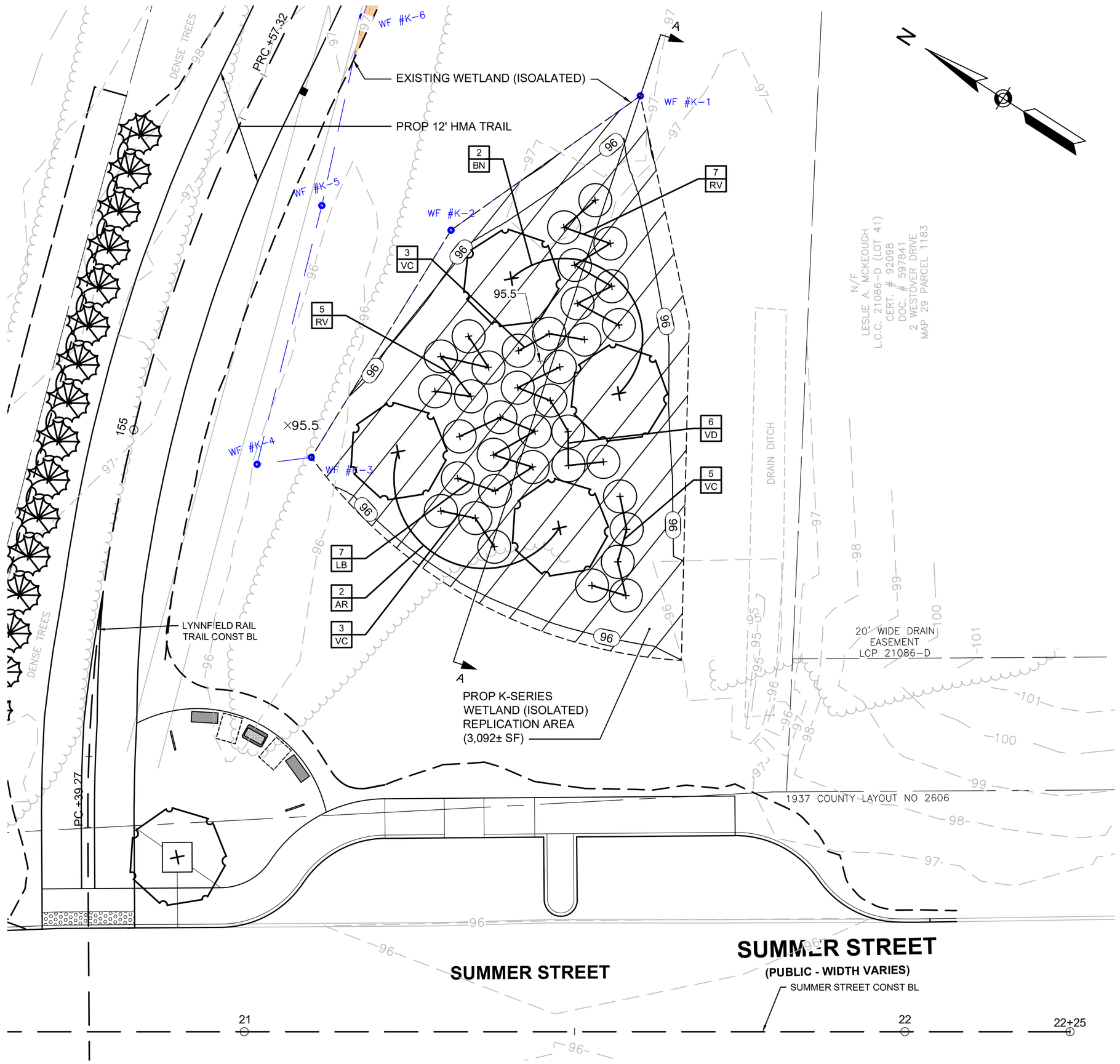
SECTION - FRONT VIEW

BIKE RACK DETAIL

NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5% (TYP.)

613163_LD(AMENITY DETAILS)_SVN.DWG Plotted on 27-May-2025 3:23 PM
Proposal No. 613163-135786
A00831 - 37



RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- OHW#XXXX — ORDINARY HIGH WATER (OHW) LINE
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- K-SERIES WETLAND (ISOLATED) IMPACT
- OTHER WETLAND (ISOLATED) IMPACT

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	37
PROJECT FILE NO. 613163			

ACOE SVN
WETLAND REPLICATION AREA

K-SERIES WETLAND (ISOLATED) REPLICATION/RESTORATION NOTES:

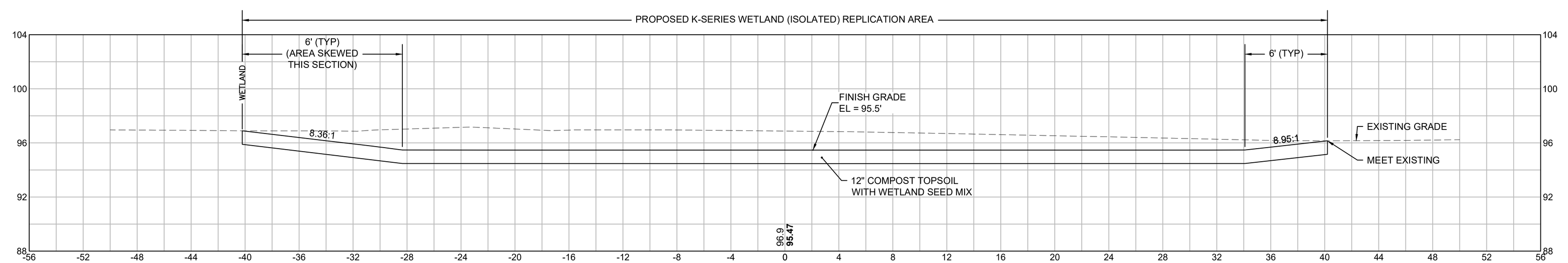
1. ALL WETLAND REPLICATION/RESTORATION SHALL BE CONDUCTED UNDER THE SUPERVISION AND DIRECTION OF THE PROJECT WETLAND SPECIALIST.
2. AREAS OF TEMPORARY WETLAND ALTERATION ASSOCIATED WITH THE PROPOSED CONSTRUCTION, WILL BE RESTORED IN-KIND AT THE DIRECTION OF THE SUPERVISING WETLAND SCIENTIST BY RESTORING NATURAL WETLAND SOIL PROFILES (WHERE NEEDED) AND SEEDING WITH FACW MEADOW MIX. SEEDED AREAS SHALL BE STABILIZED VIA HYDRO-SEEDING, STRAW MULCH, AND/OR EROSION CONTROL BLANKETS AT THE DIRECTION OF THE WETLAND SPECIALIST.
3. WETLAND REPLICATION AREA SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 755.35 OF THE SPECIAL PROVISIONS. EXCAVATE EXISTING SOIL TO TARGET ELEVATIONS. IF EXISTING SUBSOIL IS DETERMINED TO BE UNSUITABLE FOR PLANTING, EXCAVATE TO DEPTH NECESSARY FOR PLANTING AND BACKFILL WITH APPROPRIATE MANUFACTURED SOIL. BACKFILL SHALL BE INSTALLED AS PER MASSDOT STANDARD SPECIFICATIONS.
4. FOLLOWING WETLAND SOIL PLACEMENT, THE WRA SHALL BE PLANTED WITH THE SAPLING TREES AND SHRUBS SPECIFIED HEREIN, AND SEEDED WITH FACW MEADOW MIX.
5. SEEDED AREAS SHALL BE STABILIZED VIA HYDRO-SEEDING, STRAW MULCH, AND/OR EROSION CONTROL BLANKETS AT THE DIRECTION OF THE WETLAND SPECIALIST.
6. SEE SHEET 32 FOR PLANTING DETAILS.

WETLAND REPLICATION AREA PLANTING SCHEDULE

QTY	ID	BOTANICAL NAME	COMMON NAME	SIZE	COMMENT
TREES					
2	AR	ACER RUBRUM	RED MAPLE	1"-1.5" CALIPER	B&B
2	BN	BETULA NIGRA	RIVER BIRCH	1"-1.5" CALIPER	B&B
SHRUBS					
11	VC	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	2'-3' HT.	
6	VD	VIBURNUM DENTATUM	ARROWWOOD	2'-3' HT.	
12	RV	RHODODENDRON VISCOSUM	SWAMP AZALEA	2'-3' HT.	
7	LB	LINDERA BENZOIN	SPICEBUSH	2'-3' HT.	

* FOR TRAIL AMENITY AREA PLANTINGS SEE SHEET 29

0 10 20 30 40
PLAN SCALE: 1" = 10'

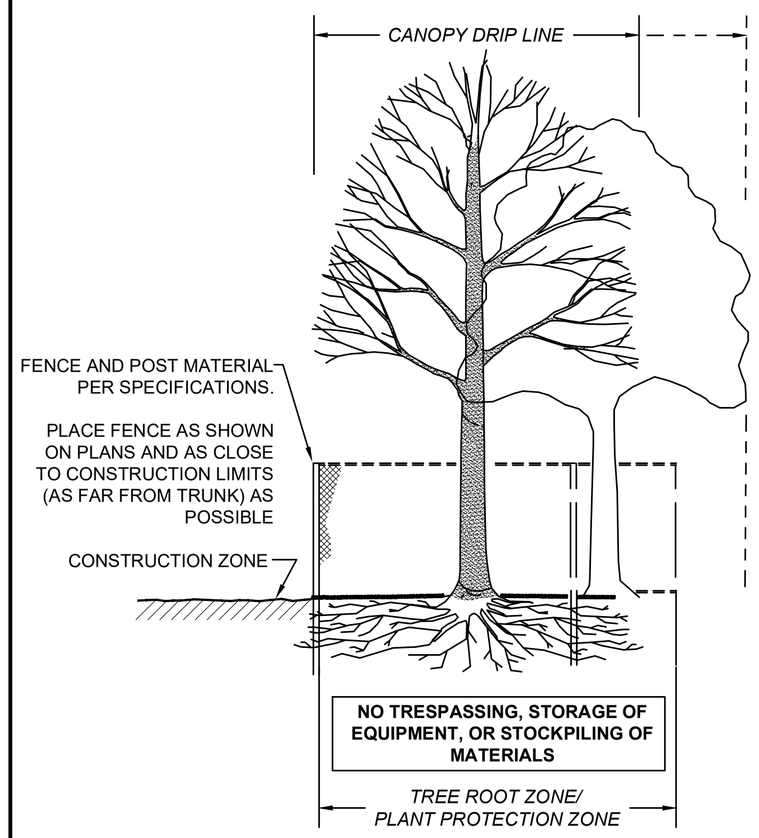


SECTION A-A

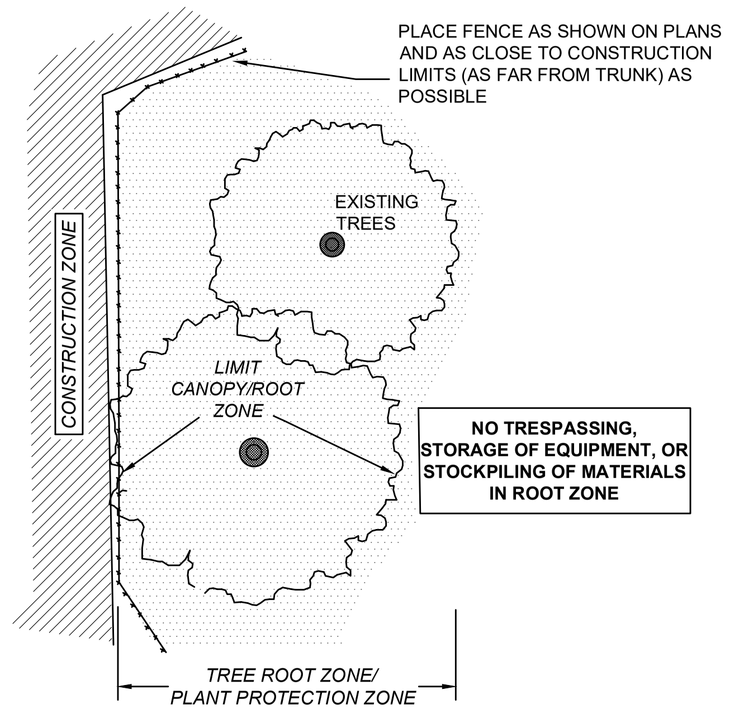
XS HOR. SCALE IN FEET
4 0 4 8
XS VER. SCALE IN FEET
4 0 4 8

613163_EV(WETLAND REPL_SVN.DWG Plotted on 27-May-2025 3:46 PM
Proposal No. 613163-135786
A008381 - 38

613163_HD(CONSTRUCTION DETAILS)_SVN.DWG Plotted on 27-May-2025 3:25 PM
Proposal No. 613163-135786
A008831-59



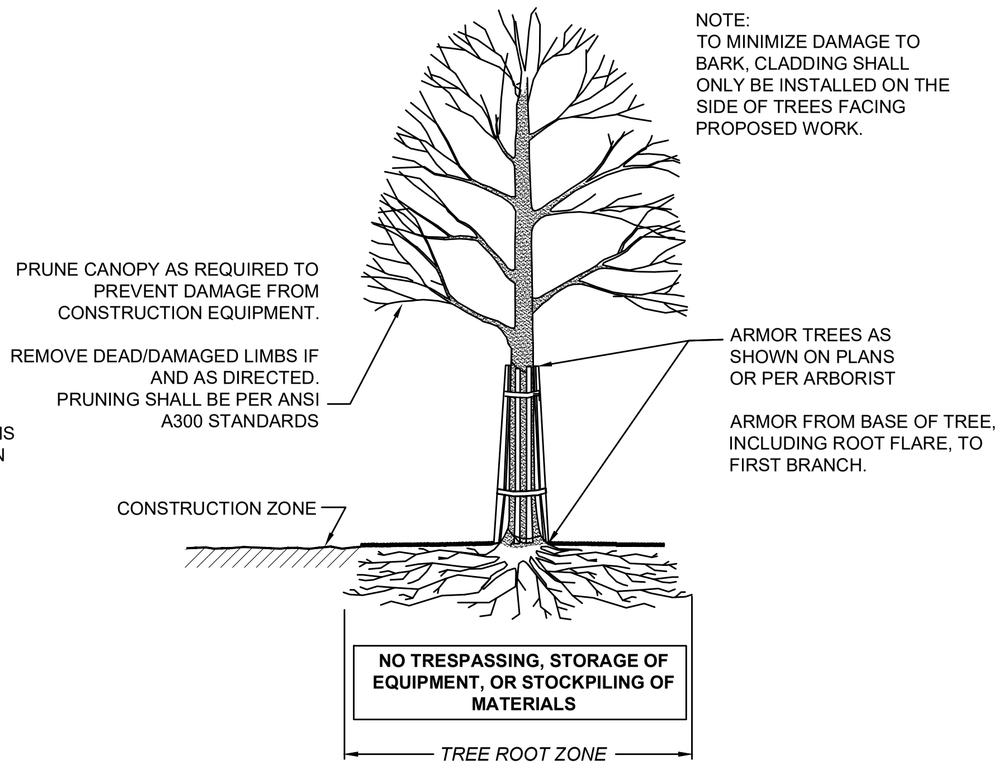
SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION - ROOT ZONE

NOT TO SCALE

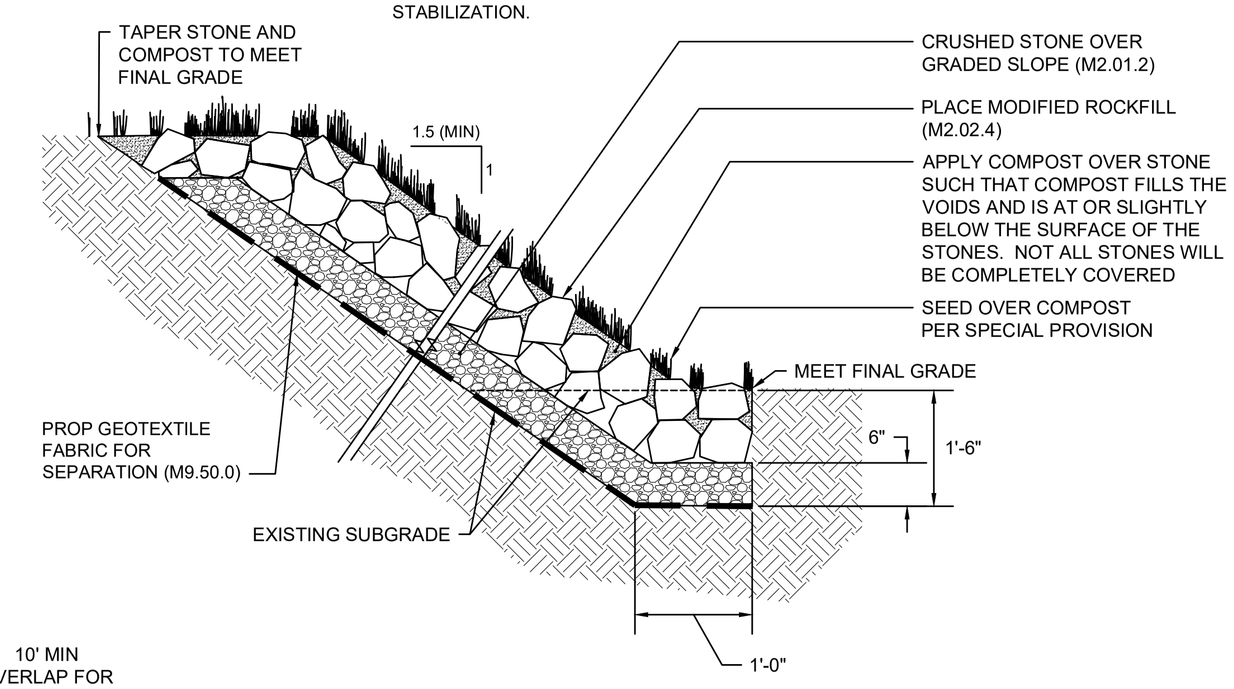


SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION - TRUNK

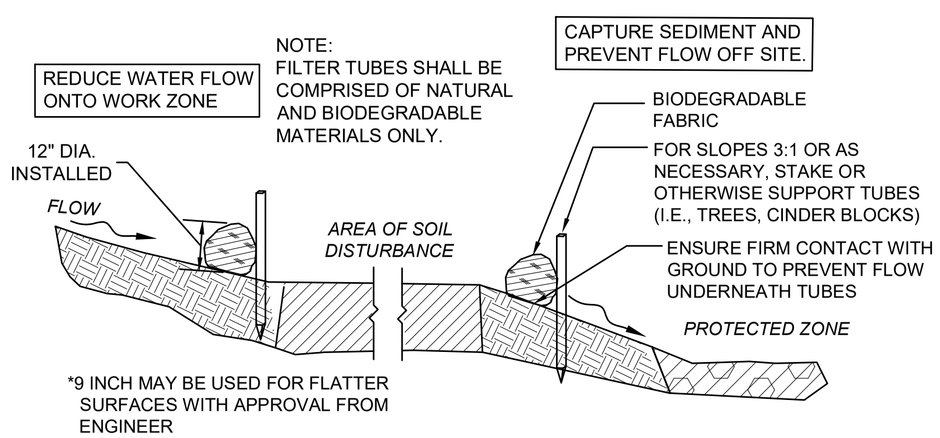
NOT TO SCALE

NOTE: WHERE SLOPES EXCEED 2:1, MODIFIED ROCK FILL IS PROPOSED. SEE CONSTRUCTION PLANS FOR LIMITS OF MODIFIED ROCKFILL SLOPE STABILIZATION.



COMPOST AND SEED OVER MODIFIED ROCKFILL DETAIL

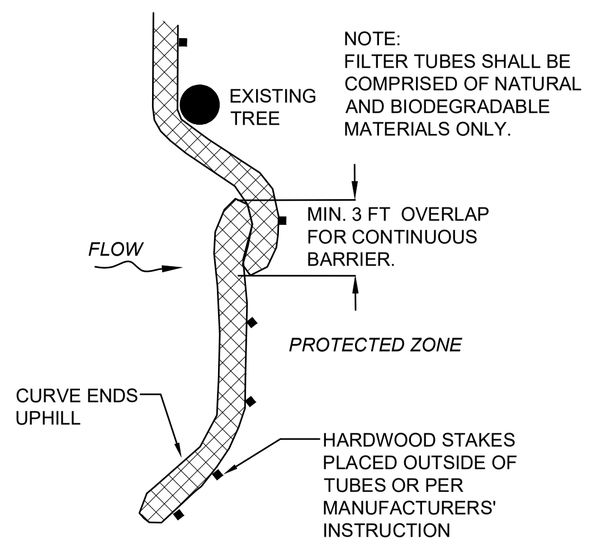
NOT TO SCALE



SECTION

SEDIMENT BARRIERS - COMPOST FILTER TUBES

NOT TO SCALE



PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.

PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE

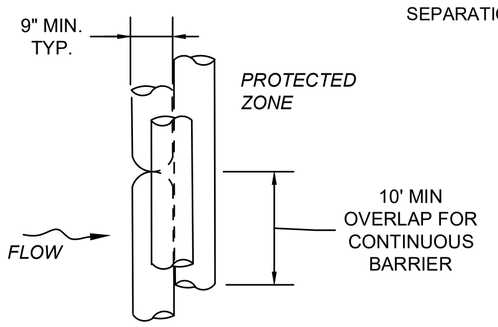
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE.

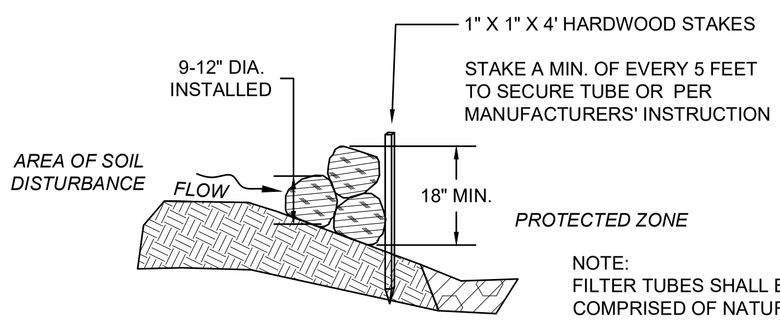
PLAN VIEW

SEDIMENT BARRIERS

NOT TO SCALE



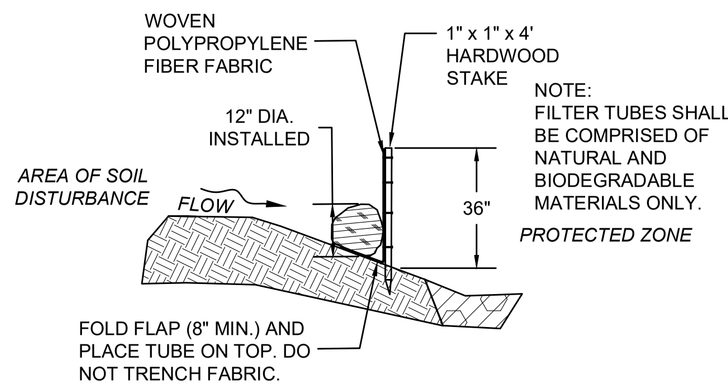
PLAN VIEW



SECTION

COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)

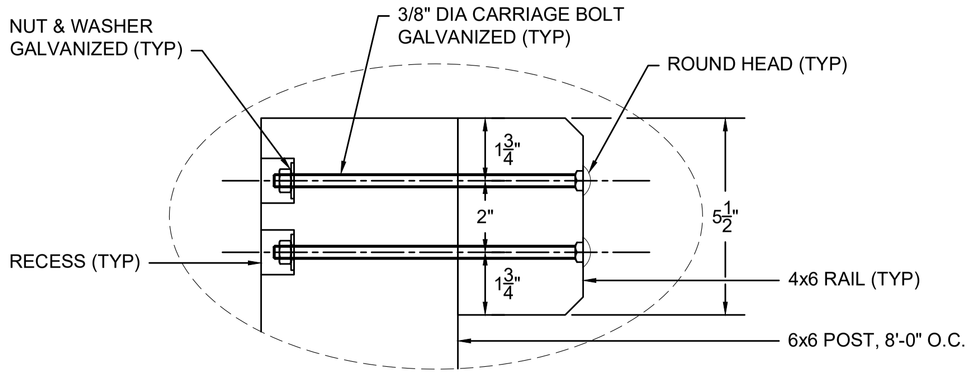
NOT TO SCALE



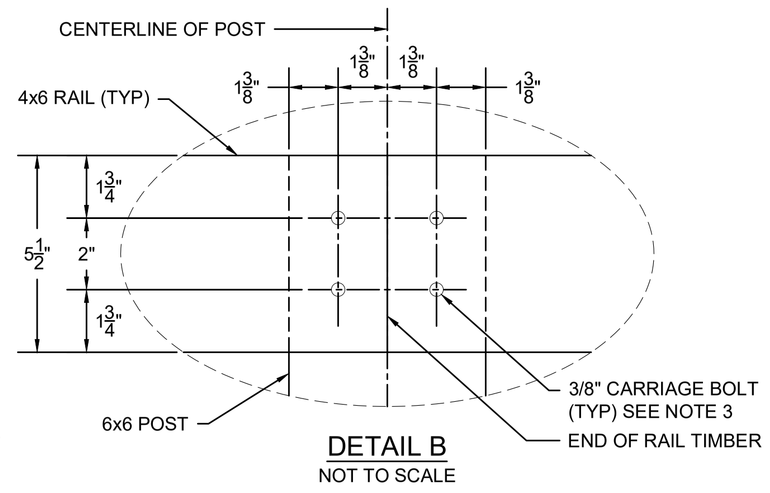
SECTION

COMPOST FILTER TUBE & SILT FENCE

NOT TO SCALE



DETAIL A
NOT TO SCALE



DETAIL B
NOT TO SCALE

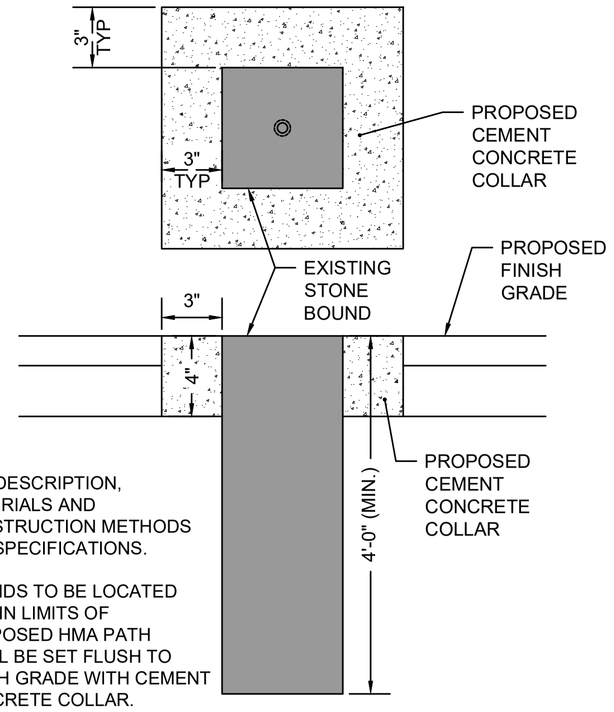
NOTES:

1. ALL FENCING MATERIAL SHALL CONFORM TO THE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. MOUNTING FOR UPPER RAIL IS SHOWN IN DETAIL A. MOUNT ALL OTHER RAILS IN A SIMILAR FASHION.
3. IF A RAIL TIMBER IS CONTINUOUS OVER A POST ONLY 2 BOLTS ARE REQUIRED TO ATTACH RAIL TO POST. BOLTS INSTALLED ON CONTINUOUS RAILS SHALL BE CENTERED ON POST.

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	37
PROJECT FILE NO. 613163			

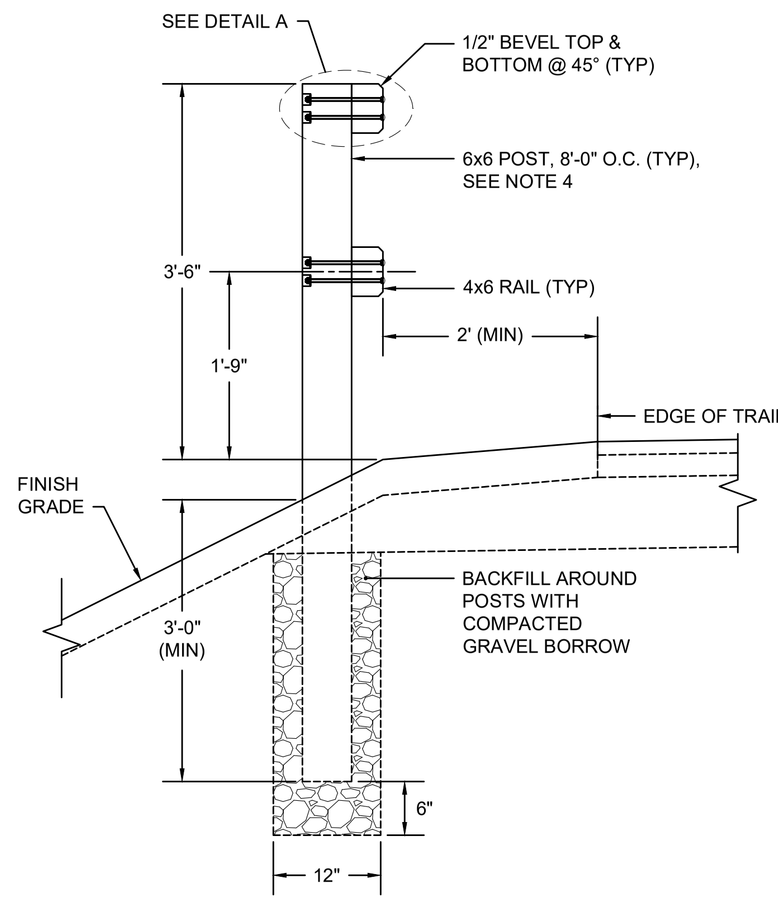
ACOE SVN
CONSTRUCTION DETAILS
PART 2 OF 4



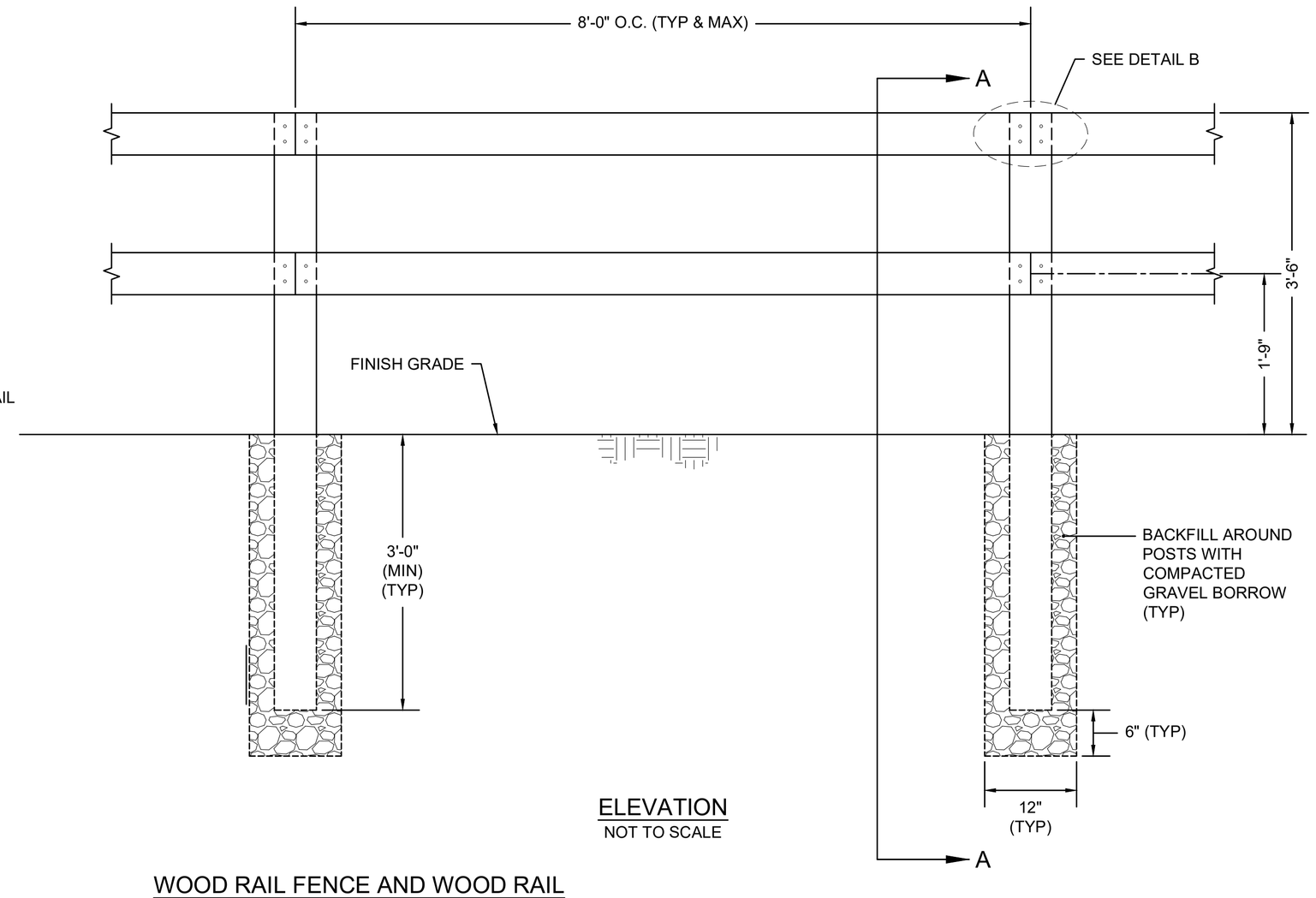
NOTES:

1. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHODS SEE SPECIFICATIONS.
2. BOUNDS TO BE LOCATED WITHIN LIMITS OF PROPOSED HMA PATH SHALL BE SET FLUSH TO FINISH GRADE WITH CEMENT CONCRETE COLLAR.

BOUND RESET IN PAVEMENT DETAIL
NOT TO SCALE



SECTION A-A
NOT TO SCALE



ELEVATION
NOT TO SCALE

WOOD RAIL FENCE AND WOOD RAIL FENCE WITH WIRE MESH DETAIL
NOT TO SCALE

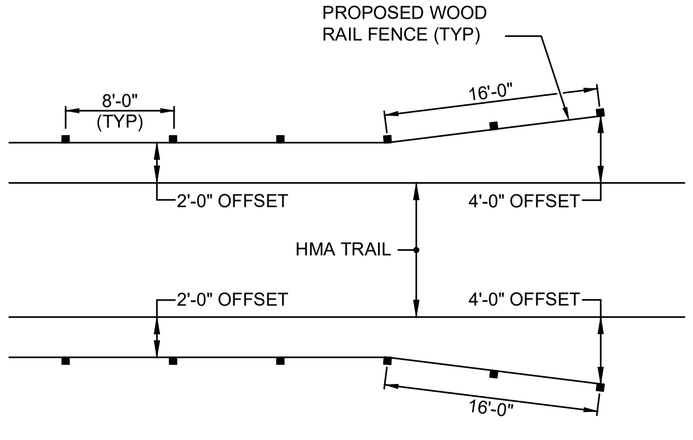
ISOMETRIC VIEW

TOP VIEW

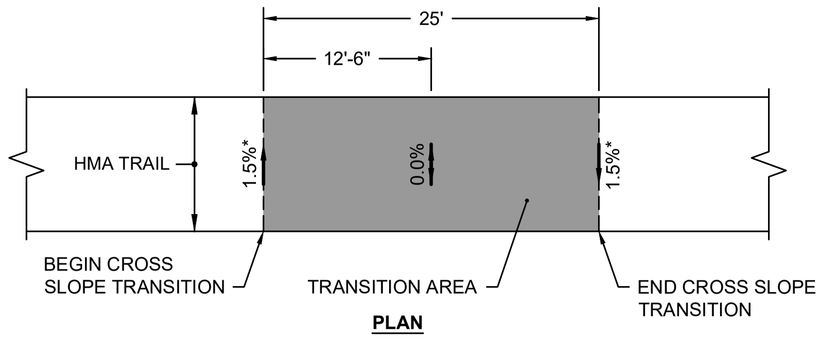
FRONT VIEW

SIDE VIEW

VERTICAL GRANITE TRANSITION CURB TO HMA CURBING AND SLOPED GRANITE EDGING
NOT TO SCALE

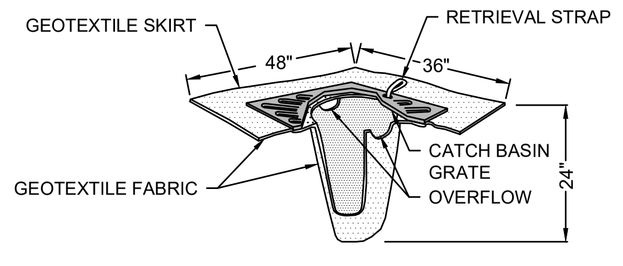


WOOD RAIL FENCE FLARED-END TREATMENT
NOT TO SCALE



PLAN

SHARED-USE PATH CROSS SLOPE TRANSITION DETAIL
NOT TO SCALE



SILT SACK FOR SEDIMENT CONTROL
NOT TO SCALE

A00831 - 40

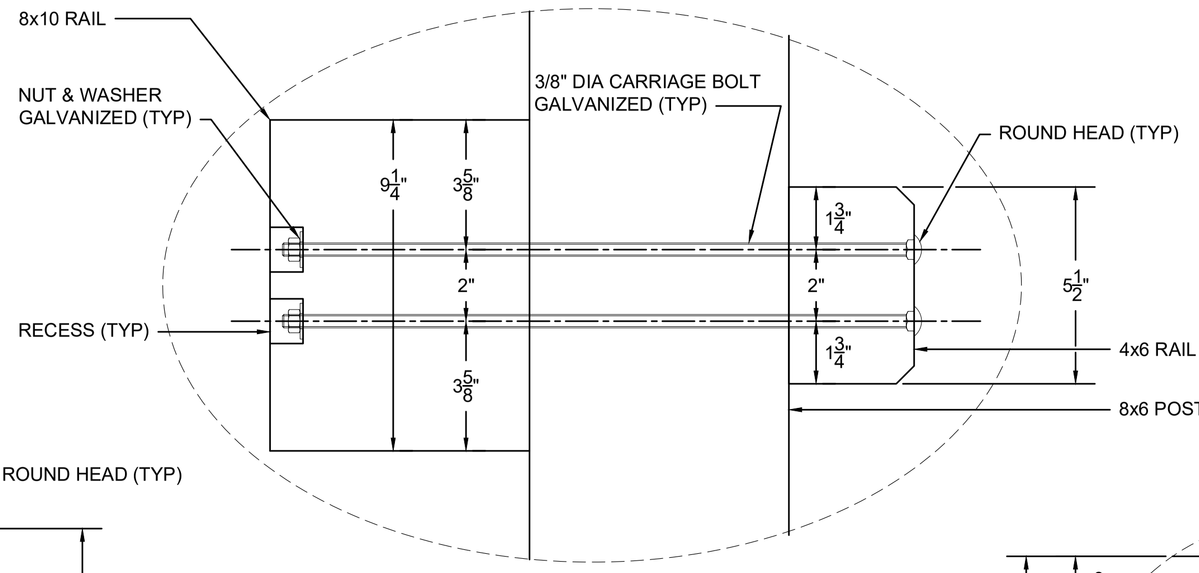
Proposal No. 613163-135786

613163_HD(CONSTRUCTION DETAILS)_SVN.DWG Plotted on 27-May-2025 3:25 PM

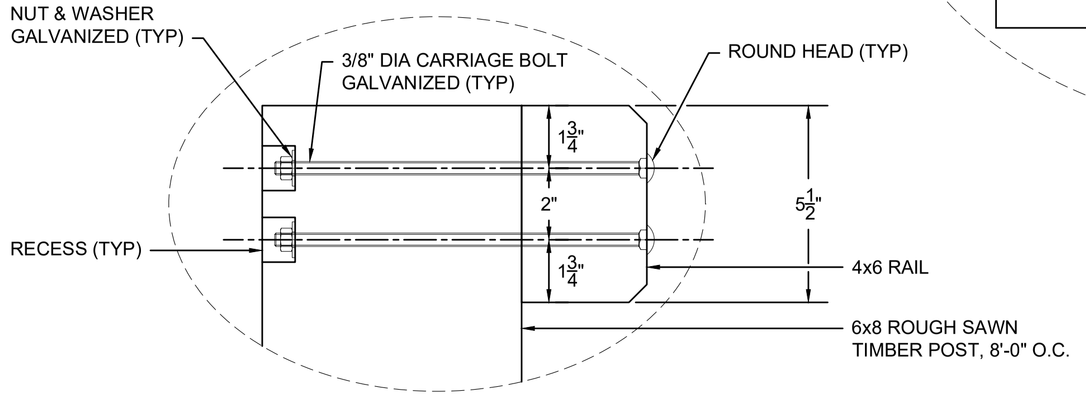
LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	37
PROJECT FILE NO. 613163			

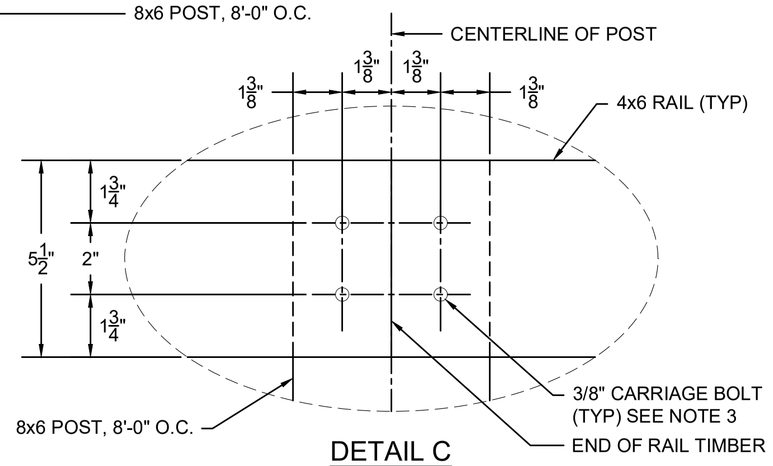
ACOE SVN
CONSTRUCTION DETAILS
PART 3 OF 4



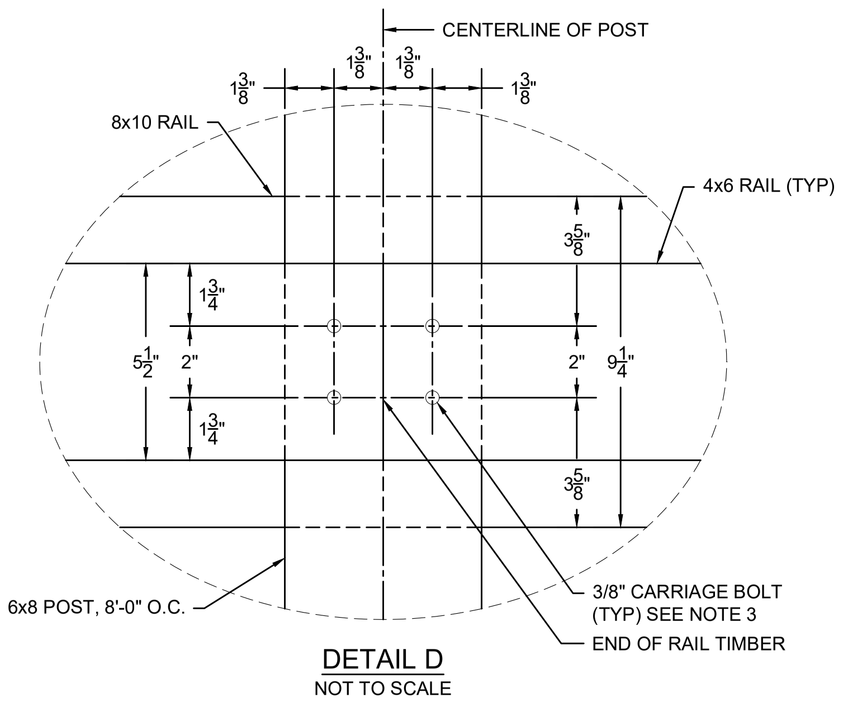
DETAIL B
NOT TO SCALE



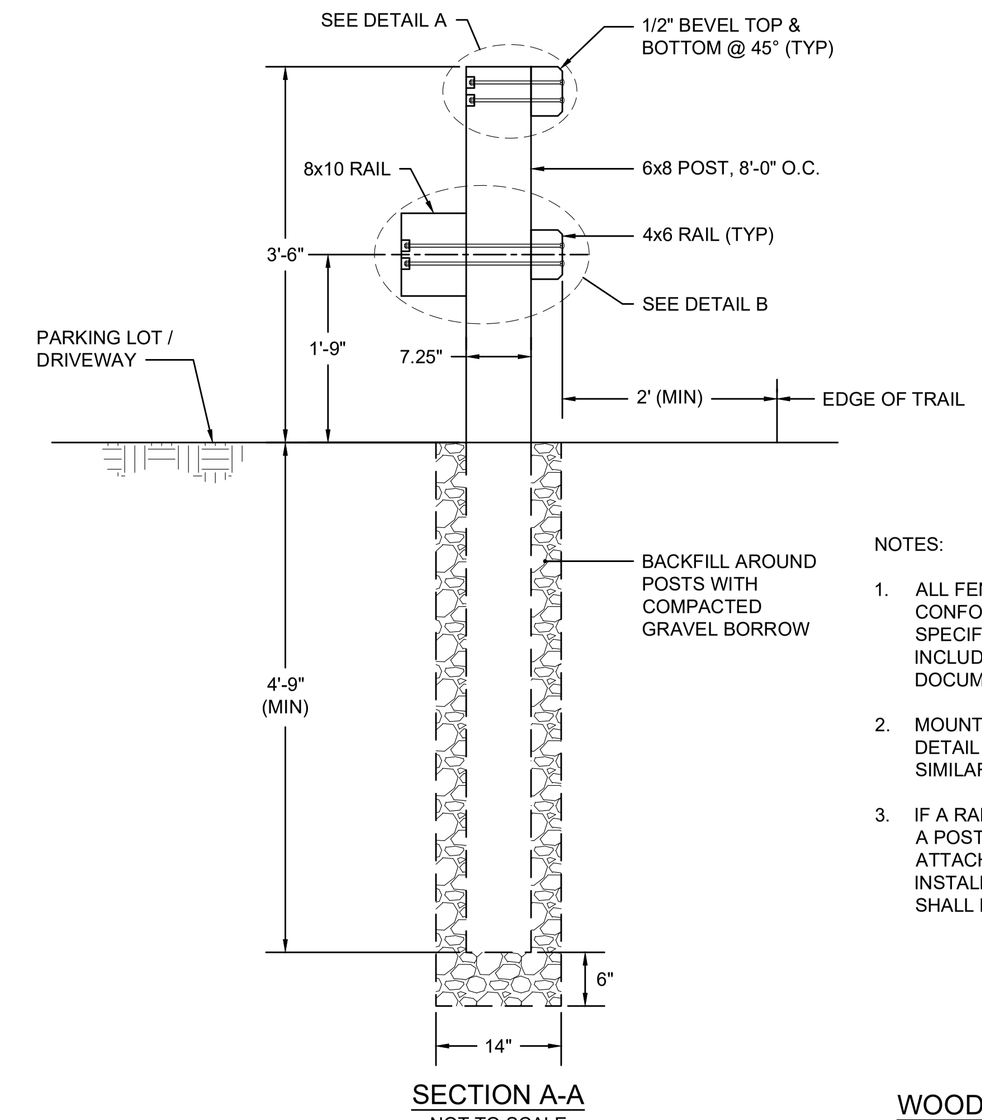
DETAIL A
NOT TO SCALE



DETAIL C
NOT TO SCALE



DETAIL D
NOT TO SCALE

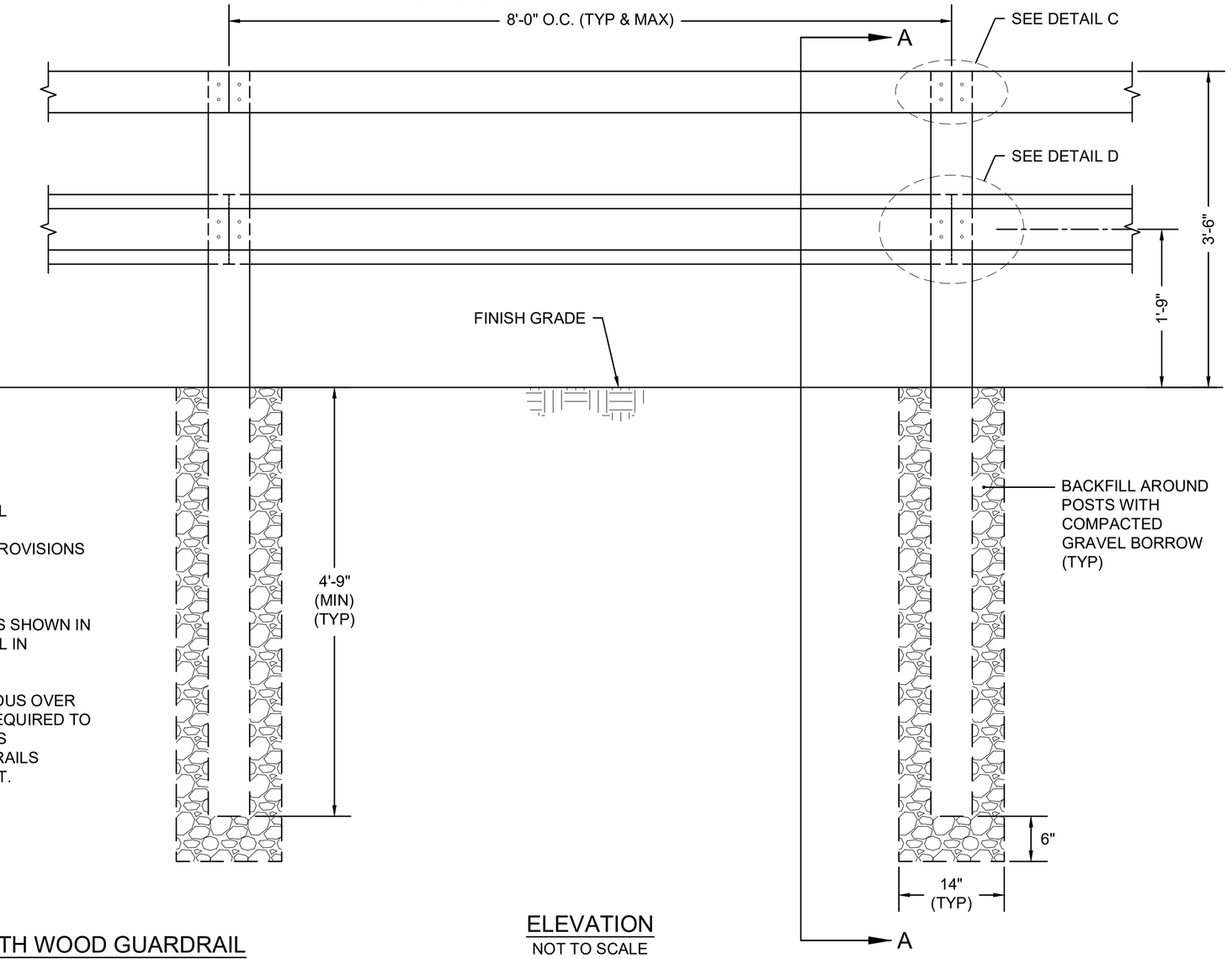


SECTION A-A
NOT TO SCALE

NOTES:

1. ALL FENCING MATERIAL SHALL CONFORM TO THE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. MOUNTING FOR UPPER RAIL IS SHOWN IN DETAIL A. MOUNT LOWER RAIL IN SIMILAR FASHION.
3. IF A RAIL TIMBER IS CONTINUOUS OVER A POST ONLY 2 BOLTS ARE REQUIRED TO ATTACH RAIL TO POST. BOLTS INSTALLED ON CONTINUOUS RAILS SHALL BE CENTERED ON POST.

WOOD RAIL FENCE WITH WOOD GUARDRAIL
NOT TO SCALE



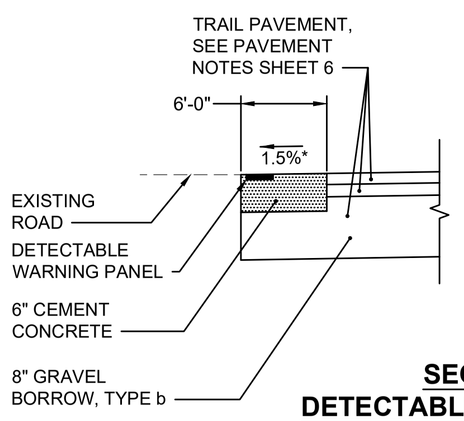
ELEVATION
NOT TO SCALE

A00831 - 41

613163_HD(CONSTRUCTION DETAILS)_SVN.DWG Plotted on 27-May-2025 3:25 PM
Proposal No. 613163-135786

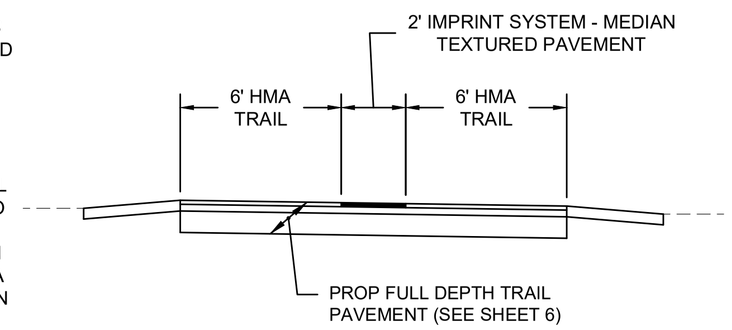
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	37
PROJECT FILE NO. 613163			

ACOE SVN
CONSTRUCTION DETAILS
PART 4 OF 4

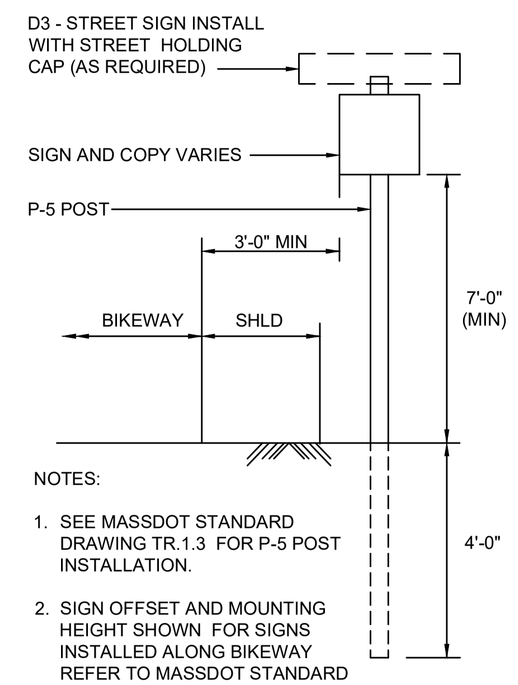


NOTES:
1. ALL DETECTABLE WARNING PANELS (PROJECT WIDE) SHALL BE MOUNTED IN CEMENT CONCRETE.
2. DETECTABLE WARNING PANELS SHALL CONFORM TO MASSDOT STANDARD DETAIL E107.6.5.
3. DETECTABLE WARNING PANELS, AS SHOWN, SHALL BE PROVIDED AT ALL INTERSECTING ROADWAYS THAT DO NOT HAVE AN EXISTING SIDEWALK. INTERSECTING ROADWAYS WITH AN EXISTING SIDEWALKS SHALL HAVE A PEDESTRIAN CURB RAMP AS SHOWN ON THE PLANS.

SECTION A-A
DETECTABLE WARNING PANEL AT TRAIL INTERSECTION
NOT TO SCALE

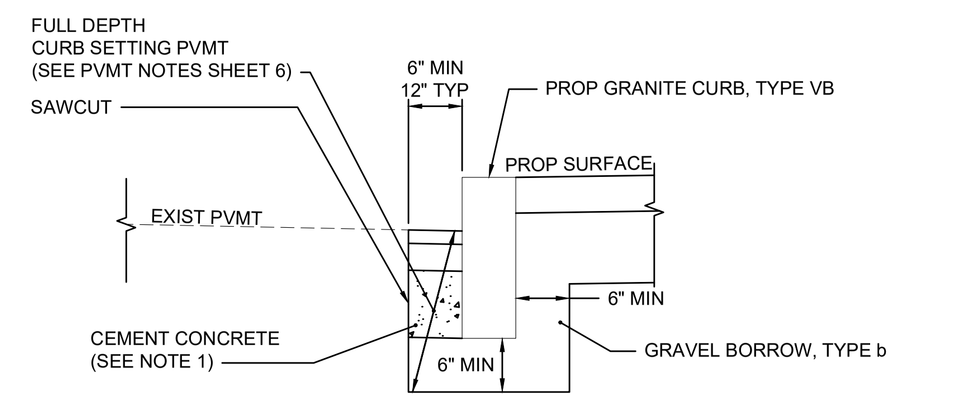


SECTION B-B
IMPRINT SYSTEM - MEDIAN
NOT TO SCALE



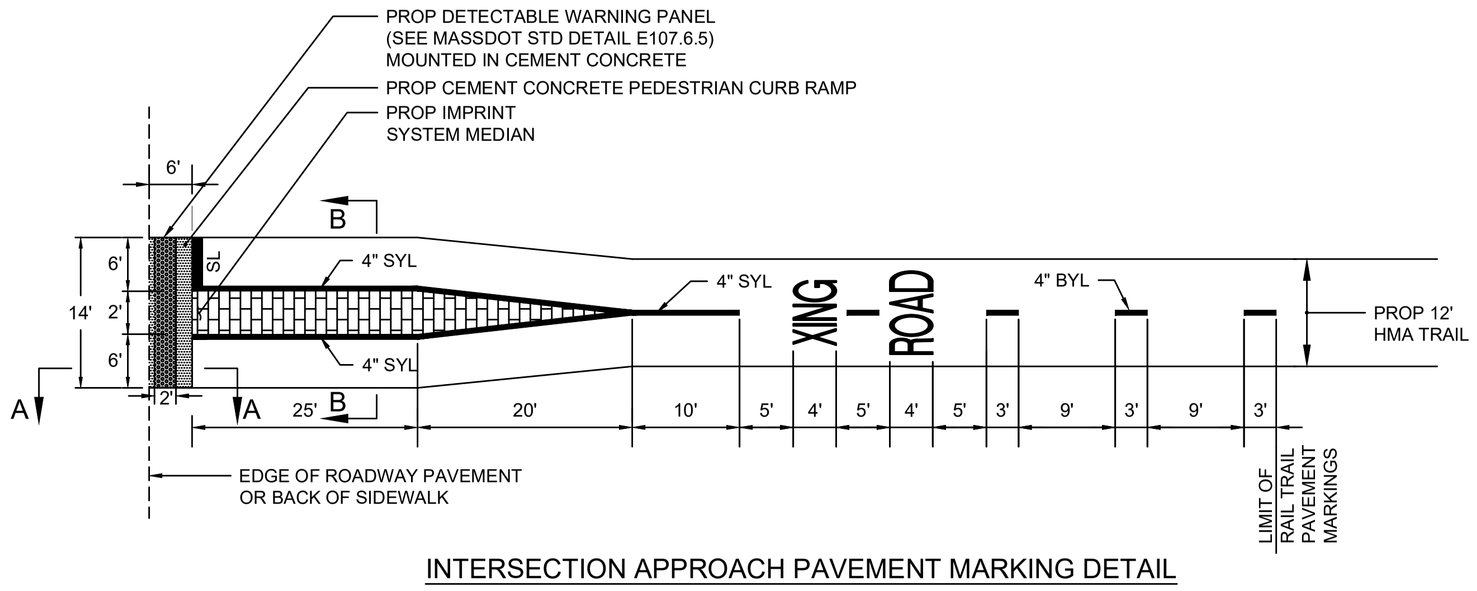
NOTES:
1. SEE MASSDOT STANDARD DRAWING TR.1.3 FOR P-5 POST INSTALLATION.
2. SIGN OFFSET AND MOUNTING HEIGHT SHOWN FOR SIGNS INSTALLED ALONG BIKEWAY REFER TO MASSDOT STANDARD DRAWINGS FOR ROADSIDE SIGN INSTALLATIONS.

TYPICAL SIGN LOCATION
NOT TO SCALE

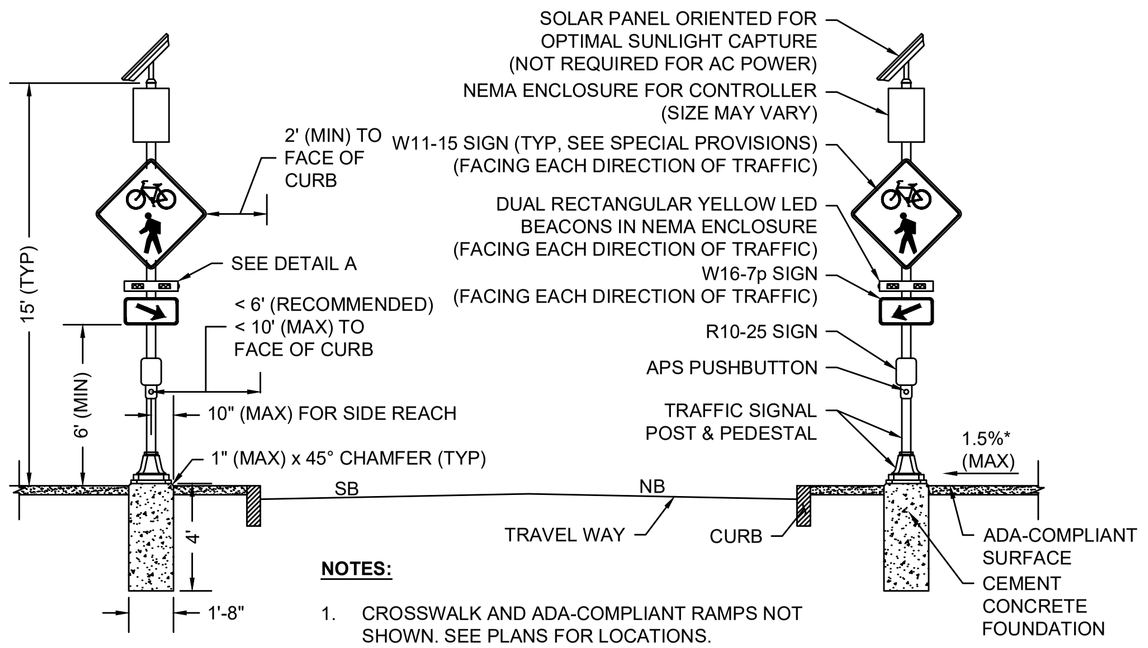


NOTES:
1. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED; ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE FOR CEMENT CONCRETE.
2. SAWCUTTING EXISTING PAVEMENT SHALL BE INCLUDED IN THE PRICE BID FOR PROPOSED OR RESET GRANITE CURB.
3. CURB SETTING SHALL CONFORM TO MASSDOT STANDARD DETAIL E106.3.0.

METHOD OF SETTING GRANITE CURB
(AGAINST EXISTING PAVEMENT)
NOT TO SCALE



INTERSECTION APPROACH PAVEMENT MARKING DETAIL
NOT TO SCALE

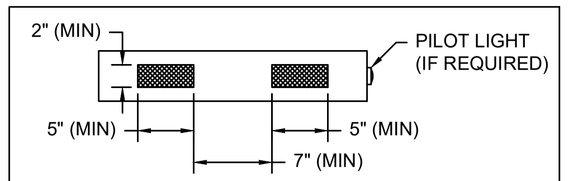


NOTES:
1. CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
2. REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
3. ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AAB COMPLIANT.
4. *0.5% CONSTRUCTION TOLERANCE FOR CROSS-SLOPE.

MAJOR ITEMS LIST

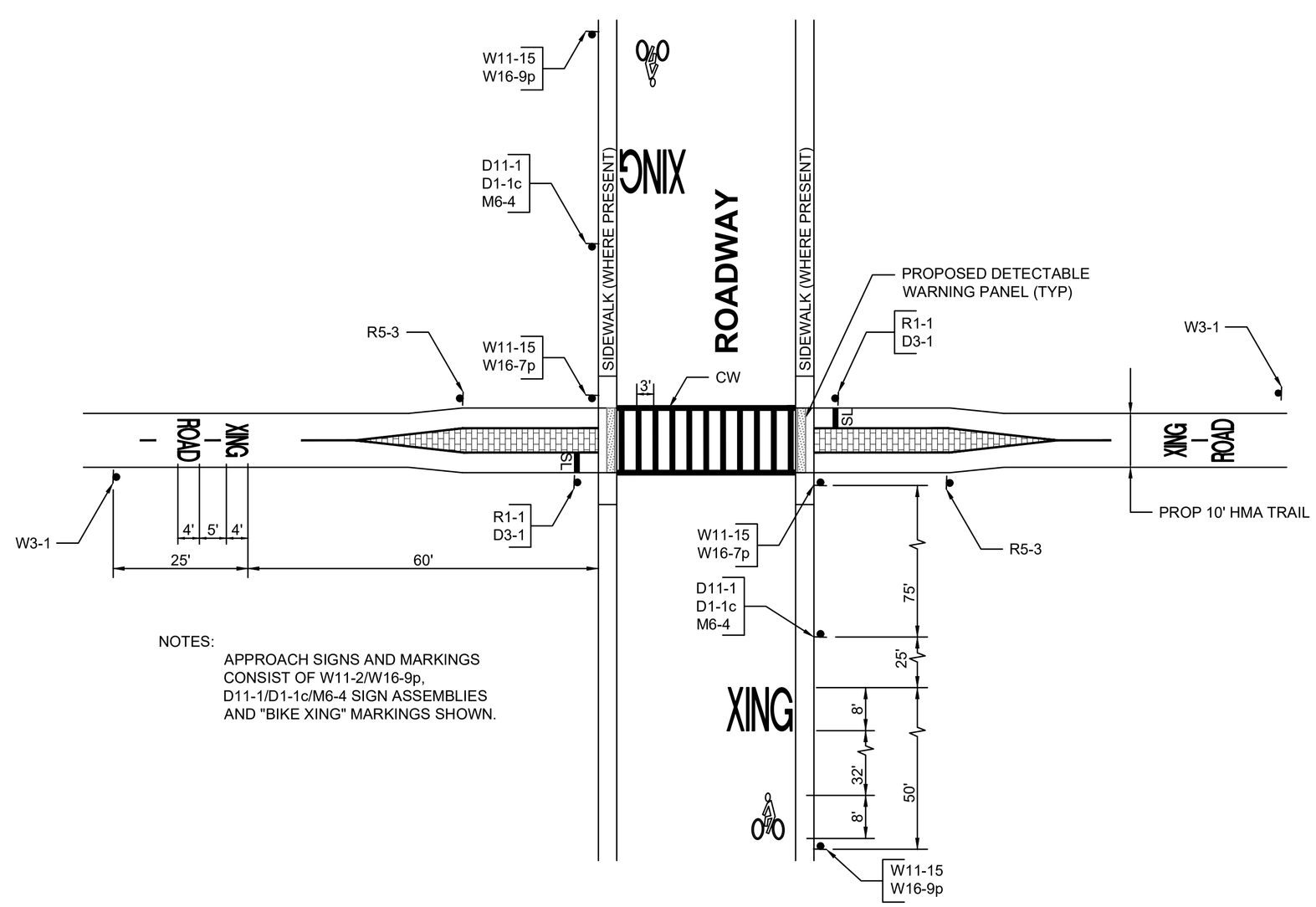
2	CEMENT CONCRETE FOUNDATIONS PER 812.30.1
2	15' TRAFFIC SIGNAL POSTS & PEDESTALS
2	APS PUSHBUTTON SYSTEMS
4	DUAL RECTANGULAR YELLOW LED BEACONS IN NEMA ENCLOSURES
2	R10-25 SIGNS
4	W11-15 SIGNS
2	W16-7PR SIGNS
2	W16-7PL SIGNS
2	SOLAR PANEL SYSTEMS (NOT REQUIRED FOR AC POWER)
2	NEMA ENCLOSURES FOR ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISIONS
2	BATTERY SYSTEMS (NOT REQUIRED FOR AC POWER)

PLUS ALL MOUNTING AND SUPPORTING HARDWARE AND WIRING NECESSARY TO COMPLETE A WORKING SYSTEM.



DETAIL A: DUAL YELLOW BEACON
NOT TO SCALE

RECTANGULAR RAPID FLASHING BEACON
NOT TO SCALE



NOTES:
APPROACH SIGNS AND MARKINGS CONSIST OF W11-2/W16-9p, D11-1/D1-1c/M6-4 SIGN ASSEMBLIES AND "BIKE XING" MARKINGS SHOWN.

TYPICAL INTERSECTION SIGNS AND MARKINGS
NOT TO SCALE

613163_HD(CONSTRUCTION DETAILS)_SVN.DWG Plotted on 27-May-2025 3:26 PM
Proposal No. 613163-135786
A00831 - 42

General Permit No.: NAE-2022-02649 Final Effective Date: June 2, 2023
Applicant: General Public, Commonwealth of Massachusetts Expiration Date: June 1, 2028

Department of the Army
General Permits for the Commonwealth of Massachusetts

The New England District of the U.S. Army Corps of Engineers (USACE) hereby issues twenty-five (25) regional general permits (GPs) for activities subject to USACE jurisdiction in waters of the U.S., including wetlands, navigable waters within the Commonwealth of Massachusetts and adjacent ocean waters to the seaward limit of the outer continental shelf. The Massachusetts GPs (hereafter referred to as the MA GP or GP) are issued in accordance with USACE regulations at 33 CFR 320 – 332 [see 33 CFR 325.5(c)(1)]. These GPs establish criteria and contain permit conditions to ensure that the authorized activities have no more than minimal individual and cumulative adverse impacts to the environment.

This document contains the following sections: Pages

SECTION I	Statutory Authorities & Regulated Activities	2
SECTION II	Review Categories & Application Procedures	3-7
SECTION III	Massachusetts General Permits	8-34
SECTION IV	General Conditions	35-51
SECTION V	Mitigation Standards	52-54
SECTION VI	Federal & State Agency Contact Information & Websites	55-56
SECTION VII	Definitions & Acronyms	57-66
APPENDIX A	Guidance for Section 106 NHPA Compliance in Massachusetts	67-71
APPENDIX B	Pre-Construction Notification	72-77
APPENDIX C	Self-Verification Notification	78-81
APPENDIX D	Pre-Construction Notification Application Checklist	82-88

In issuing these GPs, the Federal Government does not assume any liability for the following: (a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the U.S. in the public interest; (c) damages to persons, property or to other permitted or unpermitted activities or structures caused by the activity authorized by any of the GPs; (d) design or construction deficiencies associated with the permitted work; or (e) damage claims associated with any future modification, suspension or revocation of these permits.

Tammy R. Turley 02 June 2023

Tammy R. Turley Date
Chief, Regulatory Division

SECTION I. STATUTORY AUTHORITES & REGULATED ACTIVITIES

1. Work Requiring USACE Authorization

a. Section 10: Work and structures that are located in, over, under or that affect navigable waters of the United States (U.S.) (see 33 CFR 329). The USACE regulates these activities under section 10 of the Rivers and Harbors Act of 1899 (see 33 CFR 322).

b. Section 404: The discharge of dredged or fill material into waters of the U.S (see 33 CFR 328). The USACE regulates these activities under Section 404 of the Clean Water Act (CWA). The term "discharge of dredged or fill material" also includes certain discharges resulting from excavation. Applicants should contact USACE to determine if a particular excavation discharge occurring within waters of the U.S., is a regulated activity. See 33 CFR 323.4 of the CWA for exempted activities.

For additional information on the limits of USACE jurisdiction, please see: https://www.nae.usace.army.mil/Portals/74/docs/regulatory/JurisdictionalLimits/Jurisdictional_Limits_Brochure.pdf

2. Authority to Issue General Permits

a. In accordance with 33 CFR 322.2(f), 325.2(e)(2), and 325.5(c), USACE may issue regional general permits authorizing activities under Section 10 of the RHA.

b. In accordance with Section 404(e) of the CWA, 33 USC 1344(e), and 33 CFR 323.2(h), 325.2(e)(2), and 325.5(c), after notice and opportunity for public hearing, USACE may issue regional general permits for any category of activities involving discharges of dredged or fill material if the activities in such category are similar in nature, will cause only minimal adverse environmental effects when performed separately, and will only have minimal cumulative adverse effect on the environment.

3. Related Laws

33 CFR 320.3 includes a list of related laws including, but not limited to, Section 408 of the Rivers and Harbors Act of 1899, Section 401 of the Clean Water Act, Section 402 of the Clean Water Act, Section 307(c) of the Coastal Zone Management Act of 1972, Section 106 of the National Historic Preservation Act of 1966, Section 7 of the Endangered Species Act, the Fish and Wildlife Coordination Act of 1956, the Magnuson-Stevens Fishery Conservation and Management Act, the Fish and Wildlife Coordination Act, Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972, Section 7(a) of the Wild and Scenic Rivers Act, the Golden Eagle Protection Act, and the Migratory Bird Treaty Act.

SECTION II. REVIEW CATEGORIES & APPLICATION PROCEDURES

To qualify under these GPs, the design, construction, and maintenance associated with each proposed activity must meet the terms and eligibility criteria listed in Section III, all applicable general conditions (GCs) in Section IV, and any specific mitigation requirements in Section V. Applicants should first review the GPs to see if a project is eligible for authorization under one or more of the GPs within this document. Any activity not specifically listed may still be eligible for authorization under these GPs; applicants are advised to contact USACE for specific eligibility determination.

Please note that these GPs allow for Self-Verification (SV) contingent upon meeting all criteria and with full adherence to all GCs. Projects that do not qualify for SV, may meet criteria for Pre-Constriction Notification (PCN). Tables are provided under each activity, which outline criteria for SV and PCN. Activities that do not meet criteria for SV or PCN may require review as an Individual Permit (IP). Activities may require a PCN or IP as noted in Sections III and/or IV of this GP. Notwithstanding compliance with the terms of these GPs, USACE retains discretionary authority to require either PCN review or IP review on a case-by-case basis for any project based on concerns for the environment or for any of the other public interest factors found in 33 CFR 320.4(a). These GPs also do not replace or change those activities identified as exempt from USACE regulation (33 CFR 323.4).

1. Pre-Application Assistance

Prospective applicants may request a pre-application meeting to address any questions they may have. USACE may also request a pre-application meeting or additional information to facilitate review of the request. Pre-application meetings and/or site visits help streamline the authorization process by alerting the prospective applicant to potentially time-consuming factors that may arise during the evaluation of their project (e.g., avoidance, minimization and compensatory mitigation requirements, historic properties, endangered species, essential fish habitat, impacts to federal projects, and/or dredging of contaminated sediments).

To schedule a pre-application meeting, present questions, or if you need further assistance, please contact USACE at:

Email: cenae-r-ma@usace.army.mil (strongly preferred) Phone: (978) 318-8338

Mail: U.S. Army Corps of Engineers
New England District
Regulatory Division, Massachusetts Section
696 Virginia Road
Concord, MA 01742

2. Submitting a Request

Please follow the procedures outlined in Sections II.2-5 when requesting an SV or applying for PCN authorization for activities covered by these GPs. The GPs are provided in Section III below. For SV-eligible projects, the Self-Verification Notification (SVN) must be submitted within 30 days of commencing work. Otherwise, a Pre-Construction Notification (PCN) must be submitted for work that is not SV-eligible. Please include appropriate drawings and attachments and submit your request using the mailbox identified in Section II.4 or II.5 below. USACE will promptly confirm receipt of your request and notify you in the event additional information is required. Guidance on

how to submit electronic correspondence is located on the NAE Regulatory website here: https://www.nae.usace.army.mil/Missions/Regulatory/Submitting-Electronic-Correspondence.

3. Local, State & Federal Approvals

Applicants are responsible for applying for and obtaining any required local, state, and federal permits or approvals. These must be obtained prior to the commencement of work in waters. Such authorizations may include a Water Quality Certification, a Coastal Zone Management Act consistency determination, and other approvals as noted below. Authorization under these GPs does not obviate the need for the permittee to obtain other Federal, State, or local permits, approvals, or authorizations required by law.

I. Water Quality Certification under Section 401 of the Federal Clean Water Act (33 USC 1341).
Applicants are responsible for determining the appropriate 401 Water quality Certification (WQC) requirements and submitting this information to the USACE at the time of their PCN application or when completing their SVN. Applicants that are unsure of whether their activity has been certified should contact MassDEP, or EPA Region 1 when the activity is located on tribal lands, for a determination. The 401 WQC requirement must be satisfied by acquiring one of the following WQCs from MassDEP (see GC 8):

General 401 WQC: The MassDEP issued a WQC on April 21, 2023 conditionally certifies all activities in GPs 1 – 24 eligible for SV and PCN so long as the activity is described in 314 CMR 9.03, and is not an activity described in 314 CMR 9.04, and so long as the activity meets all other requirements, terms and conditions of this WQC. The MassDEP WQC also conditionally certifies activities described in GP 25 so long as the activity meets all other conditions of the WQC. Emergency projects described in GP 25 must obtain an emergency certification or otherwise be authorized pursuant to 310 CMR 10.06, qualify under a Severe Weather Emergency Declaration pursuant to 310 CMR 10.06(8) issued by the MassDEP, or meet the requirements of 9.12(2) or (3) in order to be certified under the WQC

Applicants should refer to the following link to determine if their activity is eligible: *https://www.nae.usace.army.mil/Missions/Regulatory/ State-General-Permits/ Massachusetts-General-Permit/*. If eligible, you must comply with all applicable WQC conditions. Activities listed in 314 CMR 9.03 that are not exempt from the Wetland Protection Act must have a valid Final Order of Conditions (OOC) or Final Restoration Order of Conditions pursuant to 310 CMR 10.00 to be eligible under the General 401 WQC.

Individual 401 WQC: In the event the proposed activity is not covered by the general WQC, applicants shall contact MassDEP and apply for an individual 401 WQC if their activity does not qualify for a General 401 WQC as outlined above. MassDEP may issue, waive, or deny the individual 401 WQC on a case-by-case basis. All activities listed in 314 CMR 9.04 must obtain an individual 401 WQC from MassDEP to be eligible under these GPs. When an Individual 401 WQC is required for *PCN activities*, the applicant shall submit their Individual 401 WQC application concurrently to MassDEP and the USACE to comply with 40 CFR 121.

Activities Proposed on Tribal Lands: When an activity is proposed on Tribal lands, the applicant shall refer to the general 401 WQCs granted by the Environmental Protection Agency (EPA), Region 1 on May 15, 2023. These 401 WQCs are located on the USACE Regulatory website: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.

II. Coastal Zone Management Act Federal Consistency Concurrence pursuant to Section 307 of the CZMA of 1972, as amended. Federal consistency concurrence is required for all activities located within the coastal zone, unless determined otherwise by the Massachusetts Office of Coastal Zone Management (MA CZM) (see GC 9). As applicable, this requirement must be satisfied by acquiring one of the following from the MA CZM:

General CZM Federal Consistency Concurrence (General Concurrence): MA CZM has granted General Concurrence for all SV and PCN activities for GPs 1-25 and this can be found at: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/. The applicant must obtain all applicable permits and approvals prior to the commencement of work in USACE jurisdiction (i.e., construction begins on site). For SVs, General Concurrence is automatically granted and no further action is required from the applicant. For PCNs, the USACE will coordinate with MA CZM to acquire General Concurrence as part of the PCN application review. During review of the PCN application, USACE may request additional information from the applicant to support CZM's evaluation of the activity.

Individual CZM Federal Consistency Concurrence (Individual Concurrence): In certain cases, MA CZM may elevate any GP activity 1-25 to require Individual Concurrence. The applicant must contact MA CZM and follow the procedures to obtain Individual Concurrence as determined appropriate by MA CZM.

The MA CZM program includes five regional offices that serve 78 coastal municipalities. The following map provides more information about these offices: https://www.mass.gov/service-details/czm-regions-coastal-communities-and-coastal-zone-boundary

III. Other Approvals: Approvals typically required in Massachusetts include, but are not limited to, a Chapter 91 Permit/License, Massachusetts Environmental Protection Act (MEPA) review, Wetlands Protection Act Order of Conditions, and/or Aquaculture Certification. *Applicants should also be aware that USACE may not be able to render a permit decision in the event the proposed activity is denied by another local, state and/or federal agency.*

4. Procedures for Self-Verification (SV) Eligible Projects

If the activity is eligible for an SV, the Self-Verification Notification (SVN) must be completed prior to the start of project construction and submitted to USACE within 30 days of commencing work. The purpose of the SVN is to provide applicants with a tool to assist them when determining if the activity as proposed is SV-eligible. The following GPs do not require submission of the SVN: GP 1 (SV #1), GP 3 (SV #2-3), GP 4 (SV #2), GP 11, GP 12 (note #2), GP 14 (see note), GP 15 (see note), and GP 24 (SV #3). **For the activities not listed above, the SVN must be completed prior to the start of work and be kept on site at all times during project construction.** The applicant shall not begin work for SV-eligible activities until they have completely verified the bulleted items below.

Digital submittals by email are **strongly encouraged** to facilitate the most efficient processing of the SVN submittal. Please communicate with USACE staff if you are unable to provide a digital copy. Addresses are cenae-r-ma-sv@usace.army.mil (email) or Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, MA 01742-2751 (mail).

Eligible SV Activities:

- Are subject to USACE jurisdiction (see GC 2); and
- Qualify for one or more of the GPs within this document (Section III); and
- Meet the GCs within this document (Section IV); and

- When required, are supported by a complete SVN (Appendix C); and
- Receive all other required local, State, and/or Federal approvals.

5. Procedures for Pre-Construction Notification (PCN) Eligible Projects

For activities that require a PCN, an application to and written authorization from USACE is required. *No work requiring a PCN may proceed until the applicant receives written authorization from USACE verifying that the activity is authorized.* The verification letter may include special conditions that the applicant must comply with. When possible, it is *highly* recommended that PCN application materials are submitted at least 90 days before the target start date to allow for USACE evaluation and any necessary agency consultations. PCN applications shall demonstrate in writing how the proposed activity complies with all GCs, as applicable to their activity.

Digital submittals by email are **strongly encouraged** to facilitate the most efficient processing of the PCN application. Please communicate with USACE staff if you are unable to provide a digital copy. Addresses are cenae-r-ma@usace.army.mil or Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, MA 01742-2751 (mail).

Eligible PCN Activities:

- Are subject to USACE jurisdiction (see GC 2); and
- Qualify for one or more of the GPs within this document (Section III); and
- Meet the GCs within this document (Section IV); and
- Comply with the Mitigation Standards within this document (Section V); and
- Are supported by a complete PCN document (Appendix B); and
- When required, are supported by the submittal of project information to the appropriate parties identified in Appendix A; and
- Receive all other required local, State, and/or Federal approvals.

6. Interagency Review Procedures

The USACE reserves the opportunity to coordinate PCN activities with Federal and State agencies to ensure that the proposed activity results in no more than a minimal impact to the aquatic environment. In some cases, USACE may require project modifications involving avoidance, minimization, and/or compensatory mitigation for unavoidable impacts to ensure the net effects of a project are minimal. The USACE determines, after review and coordination with the agencies and/or the applicant, if PCN applications:

a. Meet the terms and conditions of the GP as proposed;
b. Require additional information;
c. Require avoidance, minimization, compensatory mitigation, construction sequencing, project modification, or other special conditions to avoid or minimize adverse impacts to the aquatic environment;
d. Require individual permit review regardless of whether the terms and GCs of these GPs are met, based on concerns for the aquatic environment or any other factor of the public interest (see Section 9 below).

For activities requiring a PCN, the applicant must wait for written authorization from USACE before commencing activities in waters of the U.S. Beginning work for PCN required activities without a USACE written authorization is a violation of these GPs, and the terms and conditions of this document. The applicant may be subjected to an enforcement action by USACE and/or the Environmental Protection Agency (EPA).

7. Construction of Solid Fill Structures and Fills Along the Coastline or Baseline from Which the Territorial Sea is Measured.

Projects involving the construction of solid fill structures or discharge of fill that may extend beyond the coastline or the baseline from which the territorial sea is measured (i.e., mean low water) will require a PCN. The USACE will submit a description of the proposed work and a copy of the plans to the Solicitor, Department of the Interior, Washington, DC 20240, and request comments concerning the effects of the proposed work on the outer continental rights of the United States. These comments will be included in the administrative record of the application. After completion of permit review, the record will be forwarded to the Chief of Engineers. The decision on the application will be made by the Secretary of the Army after coordination with the Attorney General.

8. Emergency Activities

Per 33 CFR 325.2(e)(4), an emergency is limited to a situation that would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process an application under standard procedures. Emergency work shall be limited to that which is necessary to stabilize and secure the situation. Additional work needed for final repairs shall not be completed until approval is obtained through the appropriate, non-emergency process. Emergency work is subject to the same terms and conditions of these GPs as non-emergency work, and similarly, must qualify for authorization under these GPs; otherwise, an IP is required. *See GP 25 Emergency Situations for additional information.*

9. Individual Permit

Projects that do not meet the terms and conditions of this GP may require review as an IP (33 CFR 325.5 (b)). Proposed work in this category will require a separate Federal application for an individual permit from USACE (33 CFR 325.1). In addition, USACE retains discretionary authority on a case-by-case basis to elevate GP-eligible activities to an IP based on concerns for the environment or any other factor of the public interest (33 CFR 320.4 (a)). Applicants are required to submit the appropriate application materials directly to USACE as early as possible to expedite the permit review process. General information and application forms can be obtained at our website or by contacting our office at cenae-r-ma@usace.army.mil or (978) 318-8338. Individual 401 WQC and/or CZMA Federal consistency concurrence from the appropriate MA agencies are required before USACE can issue an individual permit. Applying for an IP does not relieve the applicant from their obligation to obtain all required Federal, State and/or local approvals.

10. Compliance

Applicants shall ensure compliance with all applicable GPs in Section III, GCs in Section IV, and any special conditions included in USACE verification letters. Noncompliance with these GPs, GCs, and special conditions may subject the applicant to criminal, civil, or administrative penalties, and/or an ordered restoration, and/or the permit may be modified, suspended or revoked by USACE. The USACE will consider any activity requiring USACE authorization to be noncompliant if that activity does not comply with all GP terms and conditions at all times, including while the project is under construction and when work is completed.

SECTION III. MASSACHUSETTS GENERAL PERMITS

Applicants are encouraged to review Sections I & II prior to submitting an application to confirm that the activity as proposed complies with all terms and conditions of the 2023 MA GPs. Applicants are also encouraged to review the definitions in Section VII, Definitions & Acronyms, of this document. Several terms are frequently used throughout the GPs, and it is important for the reader to understand these terms. If seeking verification for an activity previously verified under the 2018 MA GPs, please contact the USACE to discuss permitting needs in advance of submitting an application.

General Permits

1. Aids to Navigation and Temporary Recreational Structures
2. Maintenance
3. Moorings
4. Structures in Navigable Waters of the U.S.
5. Boat Ramps and Marine Railways
6. Utility Lines, Oil or Natural Gas Pipelines, Outfall Or Intake Structures, and Appurtenant Features
7. Dredging, Disposal of Dredged Material, Beach Nourishment, Rock Removal and Rock Relocation
8. U.S. Coast Guard Approved Bridges
9. Bank and Shoreline Stabilization
10. Aquatic Habitat Restoration, Enhancement, and Establishment Activities
11. Fish and Wildlife Harvesting and Attraction Devices and Activities
12. Response Operations, Oil and Hazardous Substances
13. Cleanup of Hazardous and Toxic Waste
14. Scientific Measurement Devices
15. Survey Activities
16. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects
17. Residential, Commercial and Institutional Developments, and Recreational Facilities
18. Aquaculture
19. Mining Activities
20. Living Shorelines
21. Agricultural Activities
22. Reshaping Existing Drainage Ditches, Construction of New Ditches, and Mosquito Management
23. Linear Transportation Projects and Wetland/Stream Crossings
24. Temporary Construction, Access, and Dewatering
25. Emergency Situations

GP 1. AIDS TO NAVIGATION AND TEMPORARY RECREATIONAL STRUCTURES (Authority: §10)	
(a) The placement of aids to navigation and regulatory markers that are approved by and installed in accordance with the requirements of the U.S. Coast Guard (USCG). See 33 CFR, Part 66; and (b) Temporary buoys, markers, and similar structures placed for recreational use during specific events such as water skiing competitions and boat races or seasonal use. See GC 16.	
Self-Verification Eligible	**Pre-Construction Notification Required**
1. Aids to navigation and regulatory markers approved by and installed in accordance with the requirements of the USCG. 2. Temporary buoys, markers and similar structures that are: (a) placed for recreational use during specific events and removed within 30 days after event; or (b) placed during winter events on ice and removed before spring thaw. These structures must be authorized by the local harbormaster, not located within an FNP or its buffer zone, and not located in saltmarsh or tidal vegetated shallows.	1. Impacts in saltmarsh or tidal vegetated shallows. 2. Activities that are not SV eligible.
Note: An SVN submittal to USACE is not required for work authorized under SV #1 above.	

GP 2. MAINTENANCE (Authorities: §10 and §404)

Repair, rehabilitation, or replacement of any previously authorized[1], currently serviceable structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3 (activities occurring before certain dates), provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction technique requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the activities above. Maintenance dredging and beach nourishment are not eligible under GP 2 (see GP 7). Stream crossing modifications (including sliplining), replacements or extensions are not eligible under GP 2 (see GPs 6, 17, 23). *See GP 25 Emergency Situations for expedited review of emergency activities.*

Not authorized under GP 2 (IP required): (a) Permanent impacts in >1 acre in non-tidal waters and/or wetlands; or (b) Permanent impacts >1/2 acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; or (c) Temporary impacts >1 acre in tidal waters; >5000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >1000 SF in vegetated shallows; (d) New stream channelization or stream relocation projects (e.g., those in response to storm or flood events).

Self-Verification Eligible

Maintenance activities that meet all of the following terms:

1. In non-tidal waters, the combined permanent and temporary impacts extending beyond the original footprint are ≤5,000 SF[2] and not located in vegetated shallows or riffle and pool complexes.

2. In tidal waters, the combined permanent and temporary impacts extending beyond the original footprint are ≤5,000 SF, ≤1,000 SF in mudflats and/or natural rocky habitat, and not located in saltmarsh and tidal vegetated shallows.

3. Minor deviations in the repair, rehabilitation, or replacement of previously authorized, currently serviceable structures or fills.

4. Bulkhead replacement in tidal and non-tidal waters via installation of new bulkhead within 18 inches of the existing bulkhead and associated backfill.

5. Drawdown of an impoundment for dam/levee repair provided it does not exceed 18 months and one growing season (April through September).

Pre-Construction Notification Required

1. Discharges associated with removal of accumulated sediments and debris in the vicinity of existing structures, including intake and outfall structures and associated canals.

2. The removal of sediment outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) that is ≥200 linear feet. This activity is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions existing when the structure was built.

3. Dam and flood control or levee repair, rehabilitation, or replacement involves:
   a. A change in the flood elevation or permanent water surface elevation of the impoundment; or
   b. Drawdown of impoundment for construction exceeding one growing season (see SV eligible #5);
   c. Any modification that changes the character, scope, or size of the original fill design; or
   d. Does not meet SV eligible 1-7.

4. Installation of steel piles, including steel sheet piles, that cannot be done in the dry and where NOAA-ESA listed species are mapped as present.

[1] Some maintenance activities may not be subject to regulation under Section 404 of the CWA in accordance with 33 CFR 323.4(a)(2). Per 33 CFR 330.3, Vested dates are: a) Work performed and structures installed before December 18, 1968 (Section 10); and b) Fill placed before July 25, 1975 (Section 404).
[2] This excludes dam projects that may require a temporary drawdown with impacts >5,000 SF in non-tidal waters. Instead, the drawdown shall comply with SV #5 to be eligible under Self-Verification.

6. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project or within the boundaries of the structure or fill. 7. Work to previously approved tide gates not affecting upstream tidal resource areas.	5. Activities located in the Connecticut River or Merrimack River, unless they are completed in the dry or when the tide is waterward of the work area. 6. Activities on USACE properties & USACE-controlled easements. 7. Activities that do not require an IP. Activities that do not require a PCN or an IP may be SV eligible.
Notes: 1. This authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the CWA §404(f) exemption for maintenance. See 33 CFR 323.4(a)(2). Prior USACE permits may have included authorization to maintain the activity, in which case authorization under this GP is not necessary. 2. See GC 22 for information on temporary construction mats.	

GP 3. MOORINGS (Authority: §10)

New moorings and mooring fields; the relocation of previously authorized moorings; expansions, boundary reconfigurations or modifications of previously authorized mooring fields; and maintenance and replacement of moorings.

Not authorized under GP 3 (IP required): (a) Moorings or mooring fields converted to or associated with a new boating facility[1]; or (b) Moorings in a USACE Federal Navigation Anchorage or USACE Federal Navigation Channel, except municipal-operated mooring fields.

Self-Verification Eligible	Pre-Construction Notification Required
1. New or relocated moorings that meet all the following terms: a. Authorized by a local harbormaster/ municipality under MGL Chapter 91 §10A; and b. No interference with navigation; and c. Single boat, single-point and non-commercial; and d. Not associated with a boating facility, and e. Neither placed within nor impact tidal vegetated shallows (e.g., eelgrass); and f. Not located within a USACE Federal navigation project (FNP) or the FNP buffer zone. 2. Existing, authorized moorings are converted from traditional moorings to low impact mooring technology (see note below) and/or helical anchors. 3. Maintenance and replacement of moorings authorized by the USACE.	1. New mooring fields; or expansions, boundary reconfigurations or modifications of existing, authorized mooring fields. 2. Moorings located such that they, and/or vessels docked or moored at them, are within the buffer zone of the horizontal limits of a Federal Anchorage. The buffer zone is equal to 3 times the authorized depth of that channel (see GC 15). 3. New individual moorings located in saltmarsh, mudflats, natural rocky habitat, and tidal vegetated shallows. Locating moorings these areas should be avoided to the maximum extent practicable. If these areas cannot be avoided, plans should show conservation mooring or low-impact mooring systems that prevent mooring chains from resting or dragging on the bottom substrate at all tides, where practicable. USACE may require a survey in areas previously mapped as containing eelgrass or within 100 ft. of existing eelgrass beds to document presence or absence of eelgrass and to determine the appropriate type and amount of compensatory mitigation for impacts to eelgrass. 4. Replacement moorings located in tidal vegetated shallows. 5. Moorings that are not SV eligible and do not require an IP.

Notes:

1. Low impact mooring systems, including conservation moorings, are encouraged to minimize impacts of chain scouring from conventional moorings during the tidal cycle.
2. An SVN submittal to USACE is not required for work authorized under SV #2-3 above.

[1] Boating facilities are marinas, yacht clubs, boat clubs, boat yards, dockominiums, town facilities, land/homeowner's associations, etc. that provide for a fee, rent or sell mooring or docking space. Not classified as boating facilities are municipal moorings or municipal mooring fields that charge an equitable user fee based only on the actual costs incurred.

GP 4. STRUCTURES IN NAVIGABLE WATERS OF THE U.S. (Authority: §10 & §404)

New, expansions, reconfigurations or modifications of structures for navigational access in waters of the U.S. including but not limited to temporary/seasonal or permanent pile and pole-supported piers, floats, stairs, shore outhauls, and boat and float lifts.

Not authorized under GP 4 (IP required): (a) Structures associated with a new boating facility; (b) Structures in a USACE Federal anchorage or channel; or (c) Artificial reefs.

Self-Verification Eligible

1. Private, non-commercial piers, floats and lifts that meet all the following terms:

a. Piers and floats in: (i) Tidal waters total ≤600 SF combined; and (ii) Non-tidal navigable waters of the U.S. total ≤600 SF combined; and

b. Piers are ≤4 feet wide and ≥6 feet above the marsh substrate (the height is measured from the marsh substrate to the bottom of the lowest longitudinal support); and

c. Floats and lifts in tidal waters and non-tidal navigable waters of the U.S. are ≥24 inches above the substrate during all tidal cycles. Float stops are preferred when site conditions warrant them (i.e., low tide exposes substrate), and skids can only be used in areas where piles are not feasible and on sandy or hard bottom substrates; and

d. Piers, floats and lifts: (i) Are ≥25 feet from previously mapped or existing vegetated shallows, or riparian property line extensions; (ii) Extend ≤25% of the waterway width in non-tidal navigable waters of the U.S. or MHW in tidal navigable waters of the U.S.

e. Installation of ≤12-inch diameter timber piles. Installation of ≥12-inch diameter piles of any material type when installed in the dry.

2. Fenders and similar structures.

Pre-Construction Notification Required

1. Shore outhauls.
2. Expansions, modifications, or new reconfiguration zones at any authorized boating facility.
3. New, expansions, reconfigurations, reconfiguration zones, or modifications of structures that provide public, community or government recreational uses such as boating, fishing, swimming, access, etc.
4. Installation of steel piles, including steel sheet piles, that cannot be done in the dry and where NOAA-ESA listed species are mapped as present.
5. Located within the buffer zone of the horizontal limits of an FNP (GC 15).
6. Miscellaneous structures.
7. Impacts in tidal vegetated shallows.
8. Structures that are not SV eligible and do not require an IP.

Notes:

1. See GC 19 regarding pile driving and pile removal in navigable waters and
2. See GC 20 regarding time of year restrictions in tidal waters.
3. Boating facilities are facilities that provide for a fee, rent, or sell mooring space, such as marinas, yacht clubs, boat clubs, boat yards, town facilities, dockominiums, etc. Pile supported structures with no discharges of dredged or fill material are not regulated by USACE in non-navigable waters.
4. A SVN submittal to USACE is not required for SV #2 above.

GP 5. BOAT RAMPS AND MARINE RAILWAYS (Authorities: §10 and §404)

Activities required for the construction of boat ramps and marine railways, including excavation and fill.

Not authorized under GP 5 (IP required): (a) Permanent impacts that are >1 acre in non-tidal waters of the U.S., >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows[1]; or (c) dredging in navigable waters of the U.S. (see GP 7).

Self-Verification Eligible	Pre-Construction Notification Required
1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows.	1. Boat ramps are located within 25 feet of property line extensions unless the properties are owned by the same owner. The USACE may require a letter of no objection from the abutter(s).
2. In tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) ≤1,000 SF in mudflats and/or natural rocky habitat, and (c), not located in saltmarsh and tidal vegetated shallows.	2. Activities that are not eligible for SV and do not require an IP.

GP 6. UTILITY LINES, OIL OR NATURAL GAS PIPELINES, OUTFALL OR INTAKE STRUCTURES, AND APPURTENANT FEATURES (Authorities: §10 & §404)

Activities required for: (a) The construction, maintenance, repair or removal of utility lines, oil or natural gas pipelines[1], outfall or intake structures[2], and appurtenant features including the associated excavation, backfill, or bedding for these structures. (b) The construction, maintenance, or expansion of substations and other appurtenant facilities associated with a utility line, oil or natural gas pipeline, and outfall or intake structure in non-tidal waters of the U.S.; and (c) The construction and maintenance of foundations for overhead utility line towers, poles, and anchors in tidal and non-tidal waters of the U.S., provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible. This GP authorizes the construction of access roads to facilitate construction of the above activities provided the activity, in combination with all other activities included in one single and complete project, does not exceed the thresholds identified below (IP required). Access roads used solely for construction of the utility line must be removed upon completion of the work. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the activities above.[3]

Not authorized under GP 6 (IP required): (a) Permanent impacts for any single and complete project that are >1 acre in non-tidal waters of the U.S.; >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows; (c) Stormwater treatment or detention systems, or subsurface sewage disposal systems in waters of the U.S.; or (d) New tide gates that do not meet SV criteria below.

Self-Verification Eligible	Pre-Construction Notification Required
1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows. 2. In tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) ≤1,000 SF in mudflats and/or natural rocky habitat, and (c), not located in saltmarsh and tidal vegetated shallows. 3. Intake structures that are dry hydrants used exclusively for firefighting activities with no stream impoundments. 4. New tide gates on outfall structures for pipes conveying stormwater and/or industrial NPDES-permitted discharges from waters that are not waters of the U.S.	1. New outfall and/or intake structures. 2. Unconfined work or silt producing activities in streams with diadromous fish. 3. Submarine cables, conduits, or pipelines that occur in, over or under navigable waters of the U.S. 4. Stream channelization, relocation, impoundment, or loss of streambed occurs. 5. The activity is placed within and runs parallel to or along a streambed within waters of the U.S. 6. There is a permanent change in preconstruction contours in waters of the U.S. 7. Installation of utility lines or gas/oil pipelines using trench excavation where material is temporarily sidecast into waters of the U.S. for >3 months. Applicants must demonstrate how the material would not be dispersed by currents or other forces. 8. Activities that are not SV eligible and do not require an IP.

[1] See the definitions of a “utility line” and “oil or natural gas pipeline” in Section VII.
[2] Outfall structures must be in compliance with regulations issued under the National Pollutant Discharge Elimination System Program (Section 402 of the Clean Water Act).
[3] Temporary impacts shall comply with all GCs, including GC 32 Utility Line Installation and Removal.

GP 7. DREDGING (Authority: §10), DISPOSAL OF DREDGED MATERIAL (Authorities: §10, §404), BEACH NOURISHMENT (Authorities: §10 & §404), ROCK REMOVAL (Authority: §10) AND ROCK RELOCATION (Authorities: §10 & §404)

New, improvement and maintenance dredging (see notes below) including: (a) Disposal of dredged material at a confined aquatic disposal cell, beach nourishment location, near shore site, or ocean disposal site selected under Section 404 of the Clean Water Act pursuant to the 404(b)(1) Guidelines, provided the dredged material meets the requirements for such disposal; (b) Beach nourishment not associated with dredging; and (c) Rock removal and relocation for navigation.

Not authorized under GP 7 (IP required): (a) Dredging where ocean disposal is required for the disposal of dredged material (Section 103); New dredging >½ acre; ≥10,000 CY; >1000 SF permanent impacts to intertidal areas, saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF permanent impacts to tidal vegetated shallows; (b) Maintenance or improvement dredging and/or disposal with >1 acre of impacts to intertidal areas, saltmarsh, mudflats, riffle and pool complexes, or non-tidal vegetated shallows; (c) New dredging where the primary purpose is sand mining for beach nourishment; (d) Beach scraping; (e) Boulder removal and relocation for navigation >½ acre; or (f) Blasting.

Self-Verification Eligible

1. Maintenance dredging of previously dredged areas, with upland disposal, that meet all of the following terms:
   a. Dredged area ≤1/2 acre; and
   b. Activities comply with GC 20, TOY Restrictions. The time-of-year restriction(s) stated in Appendix B of the MA Division of Marine Fisheries (DMF) Technical Report TR-47[1] can apply instead if the general TOY restriction if a TOY is provided for a specific waterbody and is less restrictive. This is to protect endangered species, EFH, and other species; and
   c. The dredge footprint is located >25' from salt marsh or >100' from vegetated shallows; and
   d. Combined permanent and temporary impacts that are (i) ≤1,000 SF in mudflats or natural rocky habitat, or (ii) ≤5,000 SF within intertidal habitat and areas containing shellfish (an area contains shellfish unless: it is verified that minimal shellfish are present per the local shellfish constable or a shellfish survey; or it is not mapped as a MassGIS shellfish suitability area).
   e. No return water from upland disposal areas.

2. Boulder relocation with ≤1,000 SF of impacts, relocated to a similar depth and substrate.

Pre-Construction Notification Required

1. Maintenance dredging where the primary purpose is sand mining for beach nourishment.

2. New dredging and associated disposal ≤1/2 acre or <10,000 cubic yards.

3. Improvement dredging.

4. Beach nourishment in waters of the U.S. not associated with dredging.

5. Activities that are located in saltmarsh and tidal vegetated shallows.

6. Dredging in a Federal Navigation Project or within the buffer zone (see GC 15).

7. Activities that are not eligible for SV and do not require an IP.

Notes:

1. See Section VII for definitions of improvement and maintenance dredging.
2. For PCN activities, the USACE may waive or adjust the time of year requirement on a case-by-case basis after consultation with resource agencies.
3. Disposal site of any dredged material must be identified prior to obtaining USACE authorization.
4. Contact the USACE if a ten-year authorization to maintain an area is desired.

[1] The MA DMF Technical Report TR-47: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/

GP 8. U.S. COAST GUARD APPROVED BRIDGES (Authorities: §404)

Discharges of dredged or fill material incidental to the construction and modification of bridges across navigable waters of the U.S., including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills provided that the USCG authorizes the construction of the bridge structure under Section 9 of the Rivers and Harbors Act of 1899 or other applicable laws. A USCG Authorization Act Exemption or a Surface Transportation and Uniform Relocation Assistance Act (STURRA) (144h) exemption do not constitute USCG authorization.

Not authorized under GP 8 (IP Required): Causeways and approach fills (see GP 23).

Self-Verification Eligible	Pre-Construction Notification Required
1. Discharges of dredged or fill material that are incidental to the construction of bridges across navigable waters and meet all of the following: a. Combined permanent and temporary impacts that are ≤5,000 SF. b. Combined permanent and temporary impacts that are ≤1,000 SF in mudflats and natural rocky habitat. c. Not located in saltmarsh and tidal vegetated shallows.	1. Activities on USACE properties & USACE controlled easements.2. Installation of steel piles, including steel sheet piles, that cannot be done in the dry and where NOAA-ESA listed species are mapped as present. 3. Activities that are not eligible for SV and do not require an IP.

Notes:

1. GP 8 is not applicable to bridges over inland waters or wetlands that are not tidally influenced or regulated as navigable under Section 10.
2. See eligibility criteria for GPs 2 & 23 for projects that are not subject to USCG regulations.

GP 9. BANK AND SHORELINE STABILIZATION (Authorities: §10 & §404)

Bank stabilization activities necessary for erosion protection along the banks of lakes, ponds, streams, estuarine and ocean waters, and any other open waters. Includes bulkheads, seawalls, riprap, revetments, living seawalls, or slope protection & similar structures, specifically for the purpose of shoreline protection. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the activities above.

Activities must meet the following criteria: (a) No material is placed in excess of the minimum needed for erosion protection; (b) No material is of a type, or is placed in any location, or in any manner, that will impair surface water flow into or out of any waters of the U.S.; (c) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored native trees and treetops may be used in low energy areas); (d) Native plants appropriate for current site conditions, including salinity, must be used for bioengineering or vegetative bank stabilization; (e) The activity is not a stream channelization activity; and (f) The activity must be properly maintained, which may require repairing it after severe storms or erosion events. This GP authorizes those maintenance and repair activities if they require authorization. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the bank stabilization activity. See GP 20 for living shoreline stabilization structures or fills.

Not authorized under GP 9 (IP required): (a) New bank stabilization >500 feet in total length (>1,000 linear feet in total length when necessary to protect transportation infrastructure) or permanent loss of saltmarsh >1,000 SF, unless the District Engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects (an exception is for bulkheads – the district engineer cannot issue a waiver for a new bulkhead that is >1,000 feet in length along the bank); (b) Stream channelization or relocation activities; or (c) Breakwaters, groins or jetties.

Self-Verification Eligible

1. Activities in tidal and non-tidal waters that are:
   a. <200 feet in length.
   b. <400 feet in length when necessary to protect transportation infrastructure.
   c. ≤1 cubic yard of fill per linear foot average along the bank waterward of the plane of OHW or HTL.
   d. Not located in non-tidal wetlands, saltmarsh, vegetated shallows.

Pre-Construction Notification Required

1. Activities in tidal and non-tidal waters that are:
   a. ≥200 feet to ≤500 feet in total length. Activities >500 feet in total length must have a written waiver from USACE.
   b. ≥400 feet to ≤1,000 feet in total length when necessary to protect transportation infrastructure. Activities >1,000 feet in total length must have a written waiver from USACE.
   c. >1 cubic yard of fill per linear foot average along the bank waterward of the plane of OHW or HTL.
   d. Located in non-tidal wetlands, saltmarsh, vegetated shallows.
2. Activities with permanent loss of tidal or non-tidal waters that is (a) ≥5,000 SF or (b) ≥1,000 SF in mudflats and natural rocky habitat.
3. Activities that are (a) located in the Connecticut River or Merrimack River and/or (b) require installation of steel piles/steel sheet piles that cannot be done in the dry where NOAA ESA-listed species are mapped as present.
4. Activities on USACE properties & USACE-controlled easements.
5. Activities that require grouted riprap and/or poured/unformed concrete.
6. Activities that are not eligible for SV and do not require an IP.

Note: The applicant shall comply with GC 24. This includes utilization of bioengineering techniques in lieu of hard armoring to the maximum extent practicable as site conditions allow.

GP 10. AQUATIC HABITAT RESTORATION, ENHANCEMENT, AND ESTABLISHMENT ACTIVITIES (Authorities: §10 and §404)

Activities for the restoration, enhancement and establishment of non-tidal and tidal wetlands and riparian areas, including invasive, non-native or nuisance species control; the restoration and enhancement of non-tidal streams and other non-tidal open waters; the relocation of non-tidal waters, including non-tidal streams & associated wetlands for reestablishment of a natural stream morphology and reconnection of the floodplain; the restoration and enhancement of shellfish, finfish and wildlife; and the rehabilitation or enhancement of tidal streams, tidal wetlands and tidal open waters; provided those activities result in net increases in aquatic resource functions and services. See GP 9 for bank and shoreline stabilization. See GP 20 for living shorelines.

Not authorized under GP 10 (IP required): Stream channelization activities and artificial reefs.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. In tidal and non-tidal waters excluding tidal vegetated shallows, the combined permanent and temporary impacts are ≤5,000 SF. 2. Eelgrass (vegetated shallows) planting and transplanting ≤100 SF in tidal waters.	1. In tidal and non-tidal waters excluding tidal vegetated shallows, the combined permanent and temporary impacts are >5,000 SF. 2. Eelgrass (vegetated shallows) planting and transplanting >100 SF in tidal waters. 3. Permanent water impoundments, dam removal, fish ladders, or tide gates. 4. Stream relocation, impoundment, or loss of streambed occurs. 5. Runneling projects with the purpose of restoring saltmarsh by removing excess water that ponds on the saltmarsh surface. 6. The conversion of: (a) a stream or natural wetlands to another aquatic habitat type (e.g., stream to wetland or vice versa, wetland to pond, etc.) or uplands, (b) one wetland type to another (e.g., forested wetland to an emergent wetland). 7. Activities in the Connecticut River from the Turners Falls Dam to the MA/CT border, or Merrimack River from the Essex Dam to the mouth, involving permanent or temporary impacts unless they are performed <5 feet waterward from OHW or HTL and in the dry. This is to protect endangered species. 8. Activities on USACE properties & USACE-controlled easements. 9. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Changes in wetland plant communities that occur when wetland hydrology is more fully restored during wetland rehabilitation activities are not considered a conversion to another aquatic habitat type.
2. See RGL 18-01 for guidance on removal of obsolete dams and other structures from rivers and streams. https://www.usace.army.mil/missions/civil-works/regulatory-program-and-permits/guidance-letters/
3. An ecological reference site may be used for a design basis of the restoration activity. The reference site should possess characteristics of an intact aquatic habitat or riparian area that exists in the region. The reference site shall represent the target habitat type of the proposed activity. A reference site may be required at the discretion of USACE.

GP 11. FISH AND WILDLIFE HARVESTING AND ATTRACTION DEVICES AND ACTIVITIES (Authorities: §10 and §404)

Fish and wildlife harvesting and attraction devices and activities in waters of the U.S. such as pound nets, crab traps, crab and shellfish dredging, eel pots, lobster traps, duck blinds, clam and oyster digging, fish aggregating devices, and small fish attraction devices such as open-water fish concentrators (sea kites, etc.).

Not authorized under GP 11 (IP required): Artificial reefs; or new, or expansions of, impoundments and semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster with an impounded area >½ acre.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤1/2 acre, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows. 2. Fish and wildlife harvesting and attraction devices and activities that do not require a PCN or IP.	1. Pound nets, impoundments or semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster with an impounded area ≤½ acre, fish aggregating devices, or small fish attraction devices. 2. Devices and activities that are located in tidal vegetated shallows, mud flats, or saltmarsh. 3. Devices and activities that do not require an IP.

Note: An SVN submittal to USACE is not required for work authorized under GP 11.

GP 12. RESPONSE OPERATIONS, OIL AND HAZARDOUS SUBSTANCES (Authorities: §10 & §404)

(a) Activities conducted in response to a discharge or release of oil and hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) including containment, cleanup, and mitigation efforts, provided that the activities are done under either: (i) The Spill Prevention, Control and Countermeasure Plan required by 40 CFR 112.3; (ii) The direction or oversight of the Federal on-scene coordinator designated by 40 CFR 300; or (iii) Any approved existing State, regional or local contingency plan provided that the Regional Response Team concurs with the proposed response efforts or does not object to the response effort; (b) Activities required for the cleanup of oil releases in waters of the U.S. from electrical equipment that are governed by EPA's polychlorinated biphenyl (PCB) spill response regulations at 40 CFR 761; (c) Booms placed in navigable waters of the U.S. for oil and hazardous substance containment, absorption and prevention; and (d) The use of structures and fills for spill response training exercises. Wetlands, vegetated shallows, mudflats, and riffle and pool complexes should be restored in place at the same elevation.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. Activities are conducted in accordance with (a) or (b) above that are not planned or scheduled, but an emergency response (see Note 1). 2. Booms placed in navigable waters of the U.S. for oil and hazardous substance containment, absorption and prevention. 3. Temporary impacts for spill response training exercises ≤5000 SF in non-tidal waters and ≤1000 SF in tidal waters with no impacts to wetlands, saltmarsh, mudflats, or vegetated shallows. 4. Temporary structures in tidal waters with no impacts to wetlands, saltmarsh, mudflats, vegetated shallows, or riffle and pool complexes and in place ≤30 days.	1. Activities (a) or (b) above are planned or scheduled, not an emergency response; or 2. Activities that are not eligible for SV and do not require an IP.

Notes:

1. For emergency response activities in the Connecticut River from the Turners Falls Dam to the MA/CT border, Merrimack River from the Essex Dam to the mouth, and remaining tidal waters that are not rivers, the permittee must contact the USACE at (978) 318-8338 before or as soon as possible after the work authorized under GP 12(a) - (c) commences for the USACE to address effects under the Endangered Species Act.
2. An SVN submittal to USACE is not required for booms used for spill prevention, or properly contained and cleaned de minimus oil or hazardous substance discharges into navigable waters of the U.S.

GP 13. CLEANUP OF HAZARDOUS AND TOXIC WASTE (Authorities: §10 and §404)

Specific activities required to affect the containment, stabilization, or removal of hazardous or toxic waste materials, including court ordered remedial action plans or related settlements, which are performed, ordered or sponsored by a government agency with established legal or regulatory authority.

Not authorized under GP 13: (a) Establishment of new disposal sites; or (b) Expansion of existing sites used for the disposal of hazardous or toxic waste.

Self-Verification Eligible	Pre-Construction Notification Required
1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in vegetated shallows and riffle and pool complexes.	1. In non-tidal waters, the combined permanent and temporary impacts are (a) >5,000 SF, and (b) located in vegetated shallows and riffle and pool complexes. 2. Permanent and temporary impacts in tidal waters or navigable waters of the U.S. 3. Stream channelization, relocation, impoundment, or loss of streambed occurs. 4. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Wetlands, vegetated shallows, mudflats, and riffle and pool complexes should be restored in place at the same elevation to the maximum extent practicable.
2. Activities undertaken entirely on a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site by authority of CERCLA, are not required to obtain permits under Section 404 of the CWA or Section 10 of the Rivers and Harbors Act.

GP 14. SCIENTIFIC MEASUREMENT DEVICES (Authorities: §10 and §404)

Scientific measurement devices for measuring and recording scientific data, such as staff gauges, tide and current gauges, meteorological stations, water recording and biological observation devices, water quality testing and improvement devices, and similar structures. Also eligible are small weirs and flumes constructed primarily to record water elevation, flow and/or velocity. Upon completion of the use of the device to measure and record scientific data, the measuring device and any other structures or fills associated with that device (e.g., foundations, anchors, buoys, lines, etc.) must be removed to the maximum extent practicable and the site restored to preconstruction elevations.

Not authorized under GP 14 (IP required): (a) Permanent impacts that are >5,000 SF in tidal and non-tidal waters of the U.S.; >1000 SF in tidal saltmarsh, mud flats, riffle and pool complexes; or >100 SF in tidal vegetated shallows; or (b) Temporary impacts in tidal waters that are >1 acre, unless the District Engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows.

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) not located in riffle and pool complexes and non-tidal vegetated shallows.

2. In tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) ≤1,000 SF in mudflats and/or natural rocky habitat, (c) not located in saltmarsh and tidal vegetated shallows.

3. Temporary, non-biological sampling devices in waters that do not restrict or concentrate movement of aquatic organisms and will not adversely affect the course, condition, or capacity of a waterway for navigation.

4. Scientific measurement devices, and small weirs and flumes constructed primarily to record water quantity and velocity provided the discharge of fill is limited to 25 cubic yards. These cannot obstruct or restrict the waterway course, condition, capacity, and location.

5. Temporary measuring devices and associated structures (e.g., anchors, buoys, etc.) in tidal and non-tidal waters that do not require a PCN or IP.

Pre-Construction Notification Required

1. Biological sampling devices, weirs or flumes, or the activity restricts or concentrates movement of aquatic organisms.

2. Permanent towers located in navigable waters that record and measure scientific data.

3. Devices that are not eligible for SV and do not require an IP.

Note: An SVN submittal to USACE is not required for temporary measuring devices with a footprint of <10 SF, with a profile of <3 feet high measured from the substrate and located in water deeper than -10 feet MLW.

GP 15. SURVEY ACTIVITIES (Authorities: §10 and §404)

Survey activities such as soil borings, core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, exploratory trenching, soil surveys, sampling, sample plots or transects for wetland delineations, and historic resources surveys.

Not authorized under GP 15 (IP required): (a) Permanent impacts that are >1 acre in tidal and non-tidal waters; >1000 SF in tidal saltmarsh, mud flats, or riffle and pool complexes; or >100 SF in tidal vegetated shallows; or (b) Temporary impacts in tidal waters that are >1 acre, unless the District Engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) not located in riffle and pool complexes and non-tidal vegetated shallows. 2. In tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) ≤1,000 SF in mudflats and/or natural rocky habitat, (c) not located in saltmarsh and tidal vegetated shallows.	1. Exploratory trenching (see Note 2) occurs in waterways (e.g., streams, tidal waters). 2. Activities associated with the recovery of historic resources, and the drilling and discharge of excavated material from test wells for oil and gas exploration. 3. Seismic exploratory operations occur in tidal waters, the Connecticut River from the Turners Falls Dam to the MA/CT border, or the Merrimack River from the Essex Dam to the mouth. This is to protect endangered species. 4. Activities that are not eligible for SV and do not require an IP.

Notes:

1. An SVN submittal is not required for wetland delineations, and core sampling conducted for preliminary evaluation of dredge project analysis.
2. For the purposes of GP 15, the term “exploratory trenching” means mechanical land or underwater clearing of the upper soil profile to expose bedrock or substrate for the purpose of mapping or sampling the exposed material.
3. The discharge of drilling mud and cuttings may require a permit under §402 of the CWA.

GP 16. LAND AND WATER-BASED RENEWABLE ENERGY GENERATION FACILITIES (Authorities: §10 and §404), AND HYDROPOWER PROJECTS (Authority: §10 and §404)

Structures and work in tidal waters and discharges of dredged or fill material into tidal and non-tidal waters for the construction, expansion, modification or removal of: (a) Land-based renewable energy production facilities (e.g., solar, wind, biomass, geothermal) and their attendant features; (b) Water-based wind or hydrokinetic renewable energy generation projects and their attendant features; and (c) Discharges of dredged or fill material associated with hydropower projects. Attendant features may include, but are not limited to, land-based collection and distribution facilities, control facilities, and parking lots. For each single and complete project in (b) above, no more than 10 generation units (e.g., wind turbines or hydrokinetic devices) are authorized in navigable waters of the U.S. Upon completion of the pilot project (see note 2), the generation units, transmission lines, and other structures or fills associated with the pilot project must be removed to the maximum extent practicable.

Not authorized under GP 16 (IP required): (a) Permanent impacts that are >1 acre in non-tidal waters, >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in vegetated shallows; or (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows.

Self-Verification Eligible	**Pre-Construction Notification Required**
In non-tidal waters, the combined permanent and temporary impacts for land-based activities are (a) ≤5,000 SF, (b) not located in riffle and pool complexes and non-tidal vegetated shallows.	1. In non-tidal waters, the combined permanent and temporary impacts for land-based activities are (a) >5000 SF, or (b) located in vegetated shallows or riffle and pool complexes. 2. Permanent and temporary impacts in tidal waters. 3. Water-based wind or hydrokinetic renewable energy generation projects, and hydropower projects. 4. For all activities eligible for authorization under GP 16: a. The activity occurs in tidal waters or in, over or under navigable waters. b. Stream channelization, relocation, impoundment, or loss of streambed occurs. 5. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Utility lines constructed to transfer the energy from the land-based renewable generation or collection facility to a distribution system, regional grid, or other facility may be authorized by GP 6.
2. For the purposes of this GP, the term “pilot project” means an experimental project where the renewable energy generation units will be monitored to collect information on their performance and environmental effects at the project site.

GP 17. RESIDENTIAL, COMMERCIAL AND INSTITUTIONAL DEVELOPMENTS AND RECREATIONAL FACILITIES (AUTHORITIES: §404)

Discharges of dredged or fill material into non-tidal waters for the construction or expansion of: (a) Residences and residential subdivisions; (b) Residential, commercial and institutional building foundations and building pads; and (c) Recreational facilities such as playgrounds, playing fields, bikeways, trails, etc. This GP also authorizes attendant features that include, but are not limited to, roads, parking lots, garages, yards, and utility lines, and stormwater management facilities. This GP authorizes attendant features if they are necessary for the use of the project purpose.

Not authorized under GP 17 (IP required): (a) Permanent impacts that result in loss of non-tidal waters >1/2 acre; >1000 SF in riffle and pool complexes or vegetated shallows; or (b) Subsurface sewerage disposal systems in non-tidal waters.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. In non-tidal waters, the combined permanent and temporary impacts are (a) <5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows. 2. Stream channelization or relocation resulting in loss of streambed that is <200 LF.	1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≥5,000 SF, or (b) located in riffle and pool complexes or non-tidal vegetated shallows. 2. Stream and wetland crossings that require a PCN per GCs 20 TOY Restrictions and GC 31 Stream Work and Crossings & Wetland Crossings. 3. Stream channelization or relocation resulting in loss of streambed that is ≥200 LF. Stream impoundment activities of any kind. 4. Activities on USACE properties & USACE-controlled easements. 5. Activities that are not SV eligible and do not require an IP.

Notes:

1. Stream and wetland crossings (permanent and temporary), including those built with construction mats; and modifications (including sliplining), replacements or extensions to existing crossings.
2. See GC 22 for information on temporary construction mats.
3. Subdivisions: For residential subdivisions, the aggregate total loss of waters of United States authorized by this GP cannot exceed 1/2-acre. This includes any loss of waters of the United States associated with development of individual subdivision lots.

GP 18. AQUACULTURE (Authorities: §10 and §404)

(a) The installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures into navigable waters of the U.S.; (b) Discharges of dredged or fill material into tidal and non-tidal waters necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities; and (c) Shellfish seeding or brushing the flats projects. Any fill material imported to the project from offsite (this is limited to mineral growth medium used in culture trays) shall be clean and of comparable grain size to the native substrate. Activities authorized under this GP must have (a) their MA DMF Aquaculture Certificate letter for licensed shellfish aquaculture sites, (b) documentation that the applicant has coordinated with the U.S. Coast Guard regarding USCG Private Aids to Navigation standards, (c) their MEPA Certificate (if required), and (d) documentation that the applicant has contacted their local authorities (ex. harbormaster, select board, shellfish constable) for authorization of their facility.

Not authorized under GP 18 (IP required): (a) New, or expansions of, impoundments and semi-impoundments of tidal and non-tidal waters for the culture or holding of motile species such as lobster with an impounded area >½ acre; (b) Cultivation of a nonindigenous species (see Note 1) unless that species has been previously cultivated in the waterbody; (c) Cultivation of an aquatic nuisance species (see Note 1); (d) Attendant features such as docks, piers, boat ramps (see GP 4); (e) stockpiles, staging areas, or the deposition of shell material back into tidal and non-tidal waters as waste.

Self-Verification Eligible

1. In tidal waters, a new lease site area is (a) ≤2-acre, (b) not located in salt marsh, natural rocky habitat, or tidal vegetated shallows.

2. In tidal waters, *expansions* of existing lease sites not to exceed 2 acres for the entire site (e.g. 1 acre lease site increasing to a 2 acre lease site may qualify as SV). A PCN is required for expansions in salt marsh, natural rocky habitat, and tidal vegetated shallows.

3. Cages, racks that are elevated ≥2 feet above the ocean floor with legs within a lease site with ≤4 buoys marking the corners.

4. Floating cage strings with a single connecting line, ≤2 anchors and ≤2 end marker buoys per string within a lease site with ≤4 buoys marking the corners.

5. No activities located within 25 feet of tidal vegetated shallows.

6. Culture only indigenous species.

7. Not located in FNP or within a distance of three times the authorized depth of an FNP (see GC 15).

8. Not located in or impinge upon the value of any National Lands or Federal Properties.

9. Floating upweller docks that total ≤600 SF in area.

Pre-Construction Notification Required

1. Discharges of fill material associated with aquaculture >5,000 SF.

2. Research, educational, commercial-viability or experimental aquaculture gear activities >1,000 SF.

3. Kelp or finfish aquaculture.

4. Land-based hatchery intakes >3 inches in diameter.

5. Activities in water depths >10 feet mean low lower water (MLLW).

6. Activities with in-water lines, ropes or chains that are not SV eligible (see #3-4).

7. Activities occur in the Connecticut River from the Turners Falls Dam to the MA/CT border or the Merrimack River from the Essex Dam to the mouth. This is to protect endangered species.

8. New, or expansions of, impoundments and semi-impoundments for the culture or holding of motile species such as lobster with an impounded area ≤1/2 acre.

9. Activities that do not require an IP. Activities that do not require a PCN or an IP may be SV eligible.

Note: The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 defines: (a) nonindigenous species as “any species or other viable biological material that enters an ecosystem beyond its historic range, including any such organism transferred from one country into another”; and (b) aquatic nuisance species as “a nonindigenous species that threatens the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agricultural, aquacultural, or recreational activities dependent on such waters.”

GP 19. MINING ACTIVITIES (Authorities: §10 and §404)

Discharges of dredged or fill material into non-tidal waters for mining activities, except for coal mining and metallic mineral mining activities.

Not authorized under GP 19 (IP required): (a) Permanent impacts >1 acre in non-tidal waters; or (b) Activities in tidal waters.

Self-Verification Eligible	Pre-Construction Notification Required
In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes, non-tidal vegetated shallows, and streams.	1. In non-tidal waters, the combined permanent and temporary impacts are (a) >5,000 SF, or (b) located in riffle and pool complexes, non-tidal vegetated shallows, and streams. 2. The activity occurs in non-tidal navigable waters of the U.S. 3. Stream channelization, relocation, impoundment, loss of streambed, or discharge of tailings into streams occurs. 4. Work on USACE properties & USACE-controlled easements. 5. Activities that are not eligible for SV and do not require an IP.

GP 20. LIVING SHORELINES[1] (Authorities: §10 and §404)

Construction and maintenance of living shorelines to stabilize banks and shores in tidal waters. In non-tidal waters that are not subject to the ebb and flow of the tide, nature-based bank stabilization techniques such as bioengineering and vegetative stabilization may be authorized by GP 9. This GP authorizes those maintenance and repair activities in-kind that are necessary to address changing environmental conditions.

The following terms must be met for both SVs and PCNs as applicable: (a) Coir logs, coir mats, stone, native oyster shell, native wood debris, and other structural materials must be adequately anchored, of sufficient weight, or installed in a manner that prevents relocation in most wave action or water flow conditions, except for extremely severe storms; (b) For living shorelines consisting of tidal fringe wetlands, native plants appropriate for current site conditions, including salinity and elevation, must be used if the site is planted by the permittee; (c) Discharges of dredged or fill material into waters of the U.S., and oyster or mussel reef structures in navigable waters, must be the minimum necessary for the establishment and maintenance of the living shoreline; (d) If sills or other structural materials per PCN #4 must be constructed to protect fringe wetlands for the living shoreline, those structures must be the minimum size necessary to protect those fringe wetlands; (e) The activity must be designed, constructed, and maintained so that it has no more than minimal adverse effects on water and sediment movement between the waterbody and the shore and the movement of aquatic organisms between the waterbody and the shore; and (f) The living shoreline must be properly maintained and monitored, which may require periodic repair of sills, bioengineered components, or replacing sand fills after severe storms or erosion events. Vegetation may be replanted to maintain the living shoreline.

Not authorized under GP 20 (IP required): (a) The activity is ≥1000 feet in length along the bank (≥2000 LF both banks) unless waived by the District Engineer; or (b) The activity is >30 feet channel ward of mean low water in tidal waters; or (c) Upland reclamation activities; or (d) Stream channelization or relocation activities; or (e) Breakwaters, groins, jetties, or artificial reefs; or (f) Permanent impacts >1,000 SF in existing saltmarsh; >100 SF in existing tidal vegetated shallows.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. Tidal and non-tidal living shorelines ≤100 LF for each bank (≤200 LF for both banks). 2. Combined permanent and temporary impacts ≤5,000 SF in tidal waters, excluding existing salt marsh, tidal vegetated shallows, natural rocky habitat, and mudflats.	1. Tidal and non-tidal living shorelines >100 LF to <1000 LF (>200 LF to <2000 LF for both banks). 2. Permanent and temporary impacts in existing salt marsh, tidal vegetated shallows, or mudflats. 3. Work on USACE properties & USACE-controlled easements. 4. Use of stone sills, native oyster shell, native wood debris, or other structural materials.

Notes:

1. PCNs require monitoring for a minimum of 5 years in accordance with an approved restoration plan, unless otherwise determined by the USACE. The first year of monitoring will be the first year that the site has been through a full growing period after completion of construction and planting.
2. Applicants are encouraged to obtain a MEPA certificate prior to submitting a USACE permit application.

[1] A living shoreline has a footprint that is made up mostly of native material. It incorporates vegetation or other living, natural “soft” elements alone or in combination with some type of harder shoreline structure (e.g., oyster or mussel reefs or rock sills) for added protection and stability. Living shorelines should maintain the natural continuity of the land-water interface and retain or enhance shoreline ecological processes. Living shorelines must have a substantial biological component, either tidal or lacustrine fringe wetlands or oyster or mussel reef structures.

GP 21. AGRICULTURAL ACTIVITIES (Authority: §404)

Discharges of dredged or fill material in non-tidal waters for agricultural activities, including the construction of building pads for farm buildings. Authorized activities include: (a) installation, placement, or construction of drainage tiles, ditches, or levees; mechanized land clearing; land leveling; the relocation of existing serviceable drainage ditches; and similar activities; (b) construction of farm ponds, excluding perennial streams, provided the farm pond is used solely for agricultural purposes; and (c) discharges of dredged or fill material to relocate existing serviceable drainage ditches constructed in non-tidal streams.

Not authorized under GP 21 (IP required): (a) Permanent impacts that are >1 acre in non-tidal waters; or >1000 SF in riffle and pool complexes, or non-tidal vegetated shallows; (b) Work in tidal waters; or (c) Construction of farm ponds in perennial streams.

Self-Verification Eligible	**Pre-Construction Notification Required**
In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows.	1. In non-tidal waters, the combined permanent and temporary impacts are (a) >5,000 SF, or (b) located in riffle and pool complexes and non-tidal vegetated shallows. 2. Activities occur in non-tidal navigable waters of the U.S. 3. Stream channelization, relocation, impoundment, loss of streambed, or farm ponds in non-perennial streams occurs. 4. Activities that are not eligible for SV and do not require an IP.

Note: Some discharges for agricultural activities may qualify for an exemption under Section 404(f) of the CWA (see 33 CFR 323.4). This GP authorizes the construction of farm ponds that do not qualify for the CWA §404(f)(1)(C) exemption because of the recapture provision at §404(f)(2).

GP 22. RESHAPING EXISTING DRAINAGE DITCHES, CONSTRUCTION OF NEW DITCHES, AND MOSQUITO MANAGEMENT (Authorities: §10 and §404)

Discharges to modify the cross-sectional configuration of currently serviceable drainage ditches constructed in tidal and non-tidal waters, for the purpose of improving water quality by regrading the drainage ditch with gentler slopes, which can reduce erosion, increase growth of vegetation, and increase uptake of nutrients and other substances by vegetation. Also authorized are mosquito reduction activities.

Not authorized under GP 22 (IP required): Stream channelization, relocation, impoundments, or loss of streambed.

Self-Verification Eligible	**Pre-Construction Notification Required**
≤500 linear feet of drainage ditch will be reshaped provided excavated material is deposited in an upland area.	1. >500 linear feet of drainage ditch will be reshaped, excavated material is deposited in a water of the U.S., or the reshaping of the ditch increases the drainage capacity beyond the original as-built capacity or expands the area drained by the ditch as originally constructed (i.e., the capacity of the ditch is not the same as originally constructed or drains additional wetlands or other waters of the U.S.). 2. Permanent and temporary impacts in tidal vegetated shallows. 3. New ditches or relocation of drainage ditches constructed in waters of the U.S. (i.e., the location of the centerline of the reshaped drainage ditch is not approximately the same as the location of the centerline of the original drainage ditch). 4. Activities that are not eligible for SV and do not require an IP.

Note: Some ditch activities are exempt under Section 404(f) of the CWA (see 33 CFR 323.4).

GP 23. LINEAR TRANSPORTATION PROJECTS AND WETLAND/STREAM CROSSINGS (Authorities: §10 & §404)

Activities[1] required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., driveways, roads, highways, railways, trails, airport runways, and taxiways) and attendant features. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats (see Note 1), necessary to construct the linear transportation project.

Not authorized under GP 23 (IP required): (a) Permanent impacts for any single and complete project that are >1 acre in non-tidal waters; >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows; (c) Non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars (see GP 17); or (d) New tide gates.

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are a) ≤5,000 SF; b) not located in riffle and pool complexes and non-tidal vegetated shallows; and c) meet the Massachusetts River and Stream Crossing Standards

2. Existing crossings (e.g., culverts, elliptical or arch pipes, etc.) are not modified by (a) decreasing the diameter of the crossing or (b) changing the friction coefficient, such as through slip lining (retrofitting an existing culvert by inserting a smaller diameter pipe), culvert relining or invert lining.

3. Stream channelization or relocation resulting in loss of streambed that is <200 LF.

Pre-Construction Notification Required

1. In non-tidal waters, the combined permanent and temporary impacts are a) >5,000 SF; b) located in vegetated shallows or riffle and pool complexes; or c) do not meet the Massachusetts River and Stream Crossing Standards (see note 4).

2. The activity occurs in tidal waters, salt marsh, or in, over or under navigable waters of the U.S.

3. Stream and wetland crossings that require a PCN per GC 20 TOY Restrictions and GC 31 Stream Work and Crossings & Wetland Crossings.

4. Stream channelization or relocation resulting in loss of streambed that is ≥200 LF. Stream impoundment activities of any kind.

5. Work on USACE properties & USACE-controlled easements.

6. Activities that are not eligible for SV and do not require an IP.

Notes:

1. See GC 22 for information on temporary construction mats.
2. Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the U.S. may be authorized under GP 8.
3. Loss of streambed does not require a PCN when bridge piers or similar supports are used.
4. In their PCN application submission to the USACE, applicants must explain why they are unable to meet the Massachusetts River and Stream Crossing Standards.
5. For tidal crossings, modeling is encouraged as a method to verify the proposed crossing would not be undersized and resilient to the effects of sea level rise.

[1] Stream crossings must conform with the MA Stream Crossing Guidelines when practicable and comply with all applicable GCs of this document (Section IV).

GP 24. TEMPORARY CONSTRUCTION, ACCESS, AND DEWATERING (Authorities: §10 and §404)

Temporary structures, work, and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites that are not authorized under another GP activity.

Not authorized under GP 24 (IP required): (a) Permanent structures or impacts; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows; (c) Use of cofferdams to dewater wetlands or other aquatic areas to change their use; (d) Temporary stream crossings (see GPs 6, 17, 23); (e) Structures or fill left in place after construction is completed.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. In non-tidal waters, temporary impacts are a) ≤5,000 SF; b) not located in riffle and pool complexes and non-tidal vegetated shallows. 2. In tidal waters, temporary impacts are a) ≤5,000 SF, b) ≤1,000 SF in mudflats and/or natural rocky habitat, and c) not located in saltmarsh and tidal vegetated shallows. 3. Structures in navigable waters of the U.S. provided impacts do not require a PCN and they are left in place ≤30 days.	1. In non-tidal waters, temporary impacts are a) >5,000 SF; b) located in riffle and pool complexes or non-tidal vegetated shallows. 2. In tidal waters, temporary impacts are a) >5,000 SF; b) >1,000 SF in mudflats and/or natural rocky habitat, or (c) located in saltmarsh and tidal vegetated shallows. 3. Activities in the Connecticut River from the Turners Falls Dam to the MA/CT border, or Merrimack River from the Essex Dam to the mouth, involving temporary impacts unless they are performed <5 feet waterward from OHW or HTL and in the dry. This is to protect endangered species; or 4. Activities not eligible for SV and do not require an IP.

Notes:

1. Turbidity or sediment resuspension is generally not considered to occur when properly using management techniques to work in dry conditions. See GC 25.
2. Total impact areas under SV Eligible 1-2 exclude use of temporary construction mats. See GC 22 for information on temporary construction mats.
3. An SVN submittal to USACE is not required for SV #3 above.

GP 25. EMERGENCY SITUATIONS (Authorities: §10 and §404)

Structures or work in or affecting navigable waters of the U.S. and the discharge of dredged or fill material into waters of the U.S., including wetlands, necessary for repair or protection measures associated with an emergency situation[1], MassDEP Emergency Declaration/Certification, or FEMA Declared Disaster. The activity shall be the minimum necessary to alleviate the immediate emergency unless that additional work would result in no more than minimal effects to aquatic environment and is necessary to reduce the potential for future failure or loss of the structure or site. Typical activities authorized under this GP include, but are not limited to, restoration of damaged areas; bank stabilization; temporary fills for staging, access, and dewatering; and, repair, replacement, or rehabilitation of existing structures and/or fills (i.e., roads, bridges, utility pipelines and flood control structures, including attendant features, and other existing structures located in waters of the U.S.).

For the restoration of areas damaged by storms floods, or other discrete events: (a) The restored area must not extend waterward of the ordinary high-water mark or high tide line that existed prior to the damage. (b) The slope of the restored area below the ordinary high-water mark or high tide line must not exceed the slope that existed prior to the damage. (c) The bottom elevation of the restored area must not exceed the bottom elevation that existed prior to the damage (i.e., the restored area must not result in a reduction in the depth of the waterbody that existed prior to the damage). (d) Except in cases of FEMA reimbursement, the activity must be initiated, under contract to commence, or funds shall be allocated for the activity within 30 days of authorization under GP 25.

Not authorized under GP 25 (IP required): (a) Permanent impacts for a single and complete project >1/2 acre in tidal waters, unless the district engineer waives this criterion by making a written determination concluding that the activity will result in no more than minimal adverse environmental effects; >1,000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >5,000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1,000 SF in vegetated shallows; (c) New structures or fills that did not previously exist before the storm event or other discrete event (see other GPs).

Self-Verification Eligible	**Pre-Construction Notification Required**
1. Activities that qualify under a Severe Weather Emergency Declaration pursuant to 310 CMR 10.06(8) and/or receive an Emergency Certification pursuant to 310 CMR 10.06 and/or meet the requirements of 314 CMR 9.12(2) or (3); and 2. Activities eligible under a FEMA Declared Disaster that also comply with #1 above.	1. Activities that are eligible under a FEMA Declared Disaster and do not qualify under SV #1. 2. Minor deviations in the structure or fill area, including those to existing structures or fills are authorized due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to alleviate the emergency. 3. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Review the GCs (Section IV) to confirm if a PCN is not required elsewhere in this document.
2. If the activity is not a MassDEP Emergency Declaration/Certification, does not meet the requirements of 314 CMR 9.12(2) or (3), or is not a FEMA Declared Disaster, applicants must explain in writing why their activity qualifies as an emergency (see footnote) to be eligible under GP 25.
3. SV eligible activities qualify under the general 401 WQC MassDEP issued for the 2023 MA GPs (GC 9).

[1] An emergency, as determined by this office and 33 CFR 325.2(e)(4), is one which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a Department of the Army permit is not undertaken within a time period less than the normal time to process the request under standard processing procedures.

SECTION IV. GENERAL CONDITIONS:

To qualify for GP authorization, the applicant must comply with the following general conditions, as applicable, in addition to authorization-specific conditions imposed by the division or district engineer.

1. Other Permits
2. Federal Jurisdictional Boundaries
3. Single and Complete Projects
4. Use of Multiple General Permits
5. Suitable Material
6. Tribal Rights & Burial Sites
7. Avoidance, Minimization, and Compensatory Mitigation
8. Water Quality & Stormwater Management
9. Coastal Zone Management
10. Federal Threatened and Endangered Species
11. Essential Fish Habitat
12. National Lands
13. Wild and Scenic Rivers
14. Historic Properties
15. USACE Property and Federal Projects (§408)
16. Navigation
17. Permit/Authorization Letter On-Site
18. Storage of Seasonal Structures
19. Pile Driving and Pile Removal in Navigable Waters
20. Time of Year Restrictions
21. Heavy Equipment in Wetlands
22. Temporary Fill & Construction Mats
23. Restoration of Wetland Areas
24. Bank Stabilization
25. Soil Erosion and Sediment Controls
26. Aquatic Life Movements and Management of Water Flows
27. Spawning, Breeding, and Migratory Areas
28. Vernal Pools
29. Invasive Species
30. Fills Within 100-Year Floodplains
31. Stream Work and Crossings & Wetland Crossings
32. Utility Line Installation and Removal
33. Water Supply Intakes
34. Coral Reefs
35. Blasting
36. Inspections
37. Maintenance
38. Property Rights
39. Transfer of GP Verifications
40. Modification, Suspension, and Revocation
41. Special Conditions
42. False or Incomplete Information
43. Abandonment
44. Enforcement Cases
45. Previously Authorized Activities
46. Duration of Authorization

1. Other Permits. Authorization under these GPs does not obviate the need for the permittee to obtain other Federal, State, or local permits, approvals, or authorizations required by law. Permittees are responsible for obtaining all required permits, approvals, or authorizations. Activities that are not regulated by the State, but subject to USACE jurisdiction, may still be eligible for these GPs.

2. Federal Jurisdictional Boundaries.
a. Applicability of these GPs shall be evaluated with reference to Federal jurisdictional boundaries. Activities shall be evaluated with reference to "waters of the U.S." under the CWA (33 CFR 328) and "navigable waters of the U.S." under §10 of the Rivers and Harbors Act of 1899 (33 CFR 329). Permittees are responsible for ensuring that the boundaries used satisfy the Federal criteria defined at 33 CFR 328-329. These sections prescribe the policy, practice, and procedures to be used in determining the extent of the USACE jurisdiction. Note: Waters of the U.S. includes all waters pursuant to 33 CFR 328.3(a), and adjacent wetlands as the term is defined in 33 CFR 328.3(c).
b. Wetlands shall be delineated in accordance with the USACE Wetlands Delineation Manual and the most recent Northcentral/Northeast Regional Supplement. Wetland delineation and jurisdiction information is located at: www.nae.usace.army.mil/missions/regulatory/jurisdiction-and-wetlands and maps are located at www.nae.usace.army.mil/missions/regulatory/state-general-permits/massachusetts-general-permit.
c. Vegetated shallows shall be delineated when present on the project site. Vegetated shallow survey guidance and maps are located at: www.nae.usace.army.mil/missions/regulatory/state-general-permits/massachusetts-general-permit.
d. Natural rocky habitats shall be delineated when present on the project site. The definition of natural rocky habitats is in Section VII of the MA GP. Natural rocky habitat survey guidance and maps are located at: www.nae.usace.army.mil/ missions/regulatory/state-general-permits/massachusetts-general-permit.

3. Single and Complete Projects. The MA GP shall not be used for piecemeal work and shall be applied to single and complete projects. The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers.
a. For non-linear projects, a single and complete project must have independent utility. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed, even if the other phases were not built, can be considered as separate single and complete projects with independent utility.
b. Unless USACE determines the activity has independent utility, all components of a single project and/or all planned phases of a multi-phased project (e.g., subdivisions should include all work such as roads, utilities, and lot development) shall be evaluated as one single and complete project.
c. For linear projects such as power lines or pipelines with multiple crossings, a "single and complete project" is all crossings of a single water of the U.S. (i.e., single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately. If any crossing requires a PCN review or an individual permit review, then the entire linear project shall be reviewed as one project under PCN or the individual permit procedures.

4. Use of Multiple General Permits. The use of more than one GP for a single and complete project is prohibited, except when the acreage loss of waters of the U.S. authorized by the GPs does not exceed the acreage limit of the GPs with the highest specified acreage limit. For example, if a road crossing over waters is constructed under GP 23, with an associated utility line

crossing authorized by GP 6, if the maximum acreage loss of waters of the U.S. for the total project is ≥1 acre it shall be evaluated as an IP.

5. Suitable Material & Discharge of Pollutants. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). All activities involving any discharge into waters of the U.S. authorized under these GPs shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the CWA (33 U.S.C. 1251), and applicable state and local laws. If applicable water quality standards, limitations, etc., are revised or modified during the term of this GP, the authorized work shall be modified to conform with these standards within six months from the effective date of such revision or modification, or within a longer period of time deemed reasonable by the District Engineer in consultation with the Regional Administrator of the EPA. Unless monitoring data indicates otherwise, applicants may presume that their activity complies with state water quality standards provided they are in compliance with the Section 401 WQC (Applicable only to the Section 404 activity).

6. Tribal Rights & Burial Sites

a. For all SV and PCN applications, prospective permittees shall follow the guidance set forth in Appendix A, Guidance for NHPA Section 106 Compliance in Massachusetts.

b. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

c. Many tribal resources are not listed on the National Register of Historic Places (NRHP) and may require identification and evaluation in collaboration with the identifying tribe and by qualified professionals. The Tribal Historic Preservation Officer (THPO) and State Historic Preservation Officer (SHPO) may be able to assist with locating information on:

i. Previously identified tribal resources; and
ii. Areas with potential for the presence of tribal resources.

d. Discovery of Previously Unknown Remains and Artifacts: If any previously unidentified human remains, cultural deposits, or artifacts are discovered while accomplishing the activity authorized by this permit, you must immediately notify the USACE of what you have found, and to the maximum extent practicable, cease work and avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The USACE will initiate the appropriate the Federal, Tribal, and state coordination required to determine if the items or remains are eligible for listing in the NRHP and warrant a recovery effort or can be avoided.

e. Burial Sites: Burial sites, marked or unmarked, are subject to state law (Massachusetts Unmarked Burial Law). Native American burial sites on federal or tribal land are subject to the provisions of Native American Graves Protection and Repatriation Act (NAGPRA). Regulated activities may not result in disturbance or removal of human remains until disposition of the remains has been determined by the appropriate authority under these laws, and the work is authorized by the USACE. Regulated activities which result in an inadvertent discovery of human remains must stop immediately, and the USACE, as well as the appropriate state and tribal authority, must be notified. Regulated work at inadvertent discovery sites requires compliance with state law or NAGPRA, as appropriate, prior to re-starting work.

7. Avoidance, Minimization, and Compensatory Mitigation. To qualify under the MA GP, activities must comply with Section V Mitigation Standards and the following as applicable:

a. Avoid and Minimize: Activities must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the U.S. to the maximum extent practicable at the project site. Avoidance and minimization are required to the extent necessary to ensure that the adverse effects to the aquatic environment (both area and function) are no more than minimal.

b. Compensatory mitigation for unavoidable impacts to waters of the U.S., including direct, indirect, secondary, and temporal loss, will generally be required for permanent impacts that exceed the thresholds identified in Section V, and may be required for temporary impacts, to offset unavoidable impacts which remain after all appropriate and practicable avoidance and minimization has been achieved and to ensure that the adverse effects to the aquatic environment are no more than minimal. Proactive restoration projects or temporary impact work with no secondary effects may generally be excluded from this requirement.
c. Mitigation proposals shall follow the guidelines found in the Compensatory Mitigation for Losses of Aquatic Resources; Final Rule April 10, 2008; 33 CFR 332. Prospective permittees may purchase mitigation credits in-lieu of permittee-responsible mitigation as compensation for unavoidable impacts to waters of the U.S. in the Commonwealth of Massachusetts.

8. Water Quality & Stormwater Management. The 401 WQC requirement applies to all activities listed under GPs 1-25, unless determined otherwise by MassDEP. Permittees shall also satisfy stormwater management requirements in Massachusetts.

a. General 401 WQC: MassDEP issued a WQC on April 21, 2023 which conditionally certifies all activities in GPs 1 – 24 eligible for SV and PCN so long as the activity is described in 314 CMR 9.03, and is not an activity described in 314 CMR 9.04, and so long as the activity meets all other requirements, terms and conditions of the WQC. The MassDEP WQC also conditionally certifies activities described in GP 25 so long as the activity meets all other conditions of the WQC. Emergency projects described in GP 25 must obtain an emergency certification or otherwise be authorized pursuant to 310 CMR 10.06, qualify under a Severe Weather Emergency Declaration pursuant to 310 CMR 10.06(8) issued by the MassDEP, or meet the requirements of 9.12(2) or (3) in order to be certified under the WQC. Prospective permittees may refer to the following link to determine if their activity is eligible: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/ Massachusetts-General-Permit/. The General 401 WQC is located here, and it provides detailed information regarding what activities are certified and the conditions for certification. Activities listed in 314 CMR 9.03 that are not exempt from the Wetland Protection Act must have a valid Final Order of Conditions (OOC) or Final Restoration Order of Conditions pursuant to 310 CMR 10.00 to be eligible under the General 401 WQC.
b. Individual 401 WQC: Prospective permittees shall contact MassDEP and apply for an individual 401 WQC if their activity does not qualify for a General 401 WQC as outlined above. MassDEP may issue, waive, or deny the individual 401 WQC on a case-by-case basis. All activities listed in 314 CMR 9.04 must obtain an individual 401 WQC from MassDEP to be eligible under these GPs. When an Individual 401 WQC is required for *PCN activities*, the prospective permittee shall submit their Individual 401 WQC application concurrently to MassDEP and USACE to comply with 40 CFR 121.
c. The prospective permittee is responsible for determining the appropriate 401 WQC requirement and submitting this information to the USACE at the time of their PCN application or when completing their SVN. Prospective permittees that are unsure of whether their activity has been certified should contact MassDEP for a determination.
d. As applicable, all activities shall be compliant with the Massachusetts Stormwater Handbook. The Stormwater Handbook can be accessed on the NAE Regulatory website here: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.
e. No work requiring authorization under Section 404 of the CWA may be performed unless (1) the prospective permittee qualifies for coverage under the April 21, 2023 General 401 WQC, (2) the prospective permittee receives an individual Section 401 WQC from the MassDEP, or (3) the MassDEP waives individual Section 401 WQC.

9. Coastal Zone Management. The permittee must obtain CZM consistency concurrence when an activity is located in the coastal zone in order to be eligible under the MA GP. This requirement

shall be satisfied by acquiring one of the following from the Massachusetts Office of Coastal Zone Management (MA CZM):

a. General CZM Federal Consistency Concurrence (General Concurrence): MA CZM has granted General Concurrence for all SV and PCN activities for GPs 1-25. The prospective permittee must obtain all applicable permits and approvals before construction of the authorized activity begins (e.g., before work begins on site). For SVs, General Concurrence is automatically granted and no further action is required from the prospective permittee. For PCNs, the USACE will coordinate with MA CZM to acquire General Concurrence as part of the PCN application review.
b. Individual CZM Federal Consistency Concurrence (Individual Concurrence): In certain cases, MA CZM may elevate any GP activity 1-25 and require Individual Concurrence. The prospective permittee must contact MA CZM and follow the procedures to obtain Individual Concurrence as determined appropriate by MA CZM.
c. Permittees must obtain CZM consistency concurrence as outlined above before commencing work authorized under these GPs.

10. Federal Threatened and Endangered Species

a. No activity is authorized under any GP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any GP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."
b. Other Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If a PCN is required for the proposed activity, the Federal permittee must provide USACE with the appropriate documentation to demonstrate compliance with those requirements. The USACE will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.
c. USFWS ESA-Listed Species: Non-federal applicants shall use the USFWS website, Information for Planning and Consultation (IPAC), to determine if their activity is located within the ESA-listed species range. The IPAC website can be accessed on the NAE Regulatory website: https://www. nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/. Applicants shall ensure they have an updated, valid species list before construction begins. This may require applicants to update their species list in IPAC before the start of construction. Note: Applicants should refer to the NAE Regulatory Website at the link above to determine if they have been designated as a non-federal representative. Applicants shall complete Section 7 consultation according to the guidance document located on the NAE Regulatory Website. After completing the Rangewide Determination Key and reaching the outcome "may affect, not likely to adversely affect", you may be required to wait up to 15 days before that outcome is final and compliance under Section 7 of the ESA is fulfilled.

i. *Self-Verification Criteria*: The activity is SV-eligible if:
   1) The activity is not located within the ESA-listed species range;
   2) Another (lead) Federal agency has completed Section 7 consultation; or
   3) The activity is located within the ESA-listed species range ***and*** USACE has designated the applicant as a non-federal representative under 50 CFR 402.08 of the ESA for all

species within the project's action area. As the non-federal representative, the applicant shall complete consultation through IPAC and reach the outcome of "no effect" or "not likely to adversely affect".

ii. *Pre-Construction Notification Criteria*: The activity requires a PCN if:

1) The activity is located within the ESA-listed species range ***and*** USACE has NOT designated the applicant as a non-federal representative under 50 CFR 402.08 of the ESA for all species within the project's action area;

2) The activity is located in designated or proposed critical habitat; or

3) The activity is located within the ESA-listed species range and completion of the IPAC determination key has resulted in the outcome of "may affect" or "may affect, likely to adversely affect"; or

4) A PCN is required elsewhere in this document.

d. NOAA-Listed Species: Non-federal applicants shall refer to the Section 7 Mapper for federally listed species to determine if any species are mapped as present. When NOAA-listed species are present, the applicant shall generate a species report through the mapper and submit this document as part of their PCN or SVN submission. The NOAA Fisheries' Section 7 Mapper can be accessed here on the NAE Regulatory website here: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.

e. Authorization of an activity by an GP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

11. Essential Fish Habitat (EFH).

a. SV eligible activities have been determined to result in no more than minimal adverse effects, provided the permittee complies with all terms and conditions of the MA GP as appliable to the activity. NMFS has granted General Concurrence [50 CFR 600.920(g)] for all SV eligible activities. These activities do not require project specific EFH consultation.

b. For PCN required activities, the applicant is required to describe and identify potential adverse effects to EFH and should refer to NOAA Fisheries' EFH Mapper (http://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper) and Omnibus Essential Fish Habitat Amendment 2 Volume 2: EFH and HAPC Designation Alternatives and Environmental Impacts (https://www.habitat.noaa.gov/application/efhmapper/oa2_efh_hapc.pdf). If an activity is located within EFH, the PCN application must contain:

1. A description of the action located in EFH.
2. An analysis of the potential adverse effects of the action on EFH and the managed Species.
3. Conclusions regarding the effects of the action on EFH.
4. Proposed mitigation, if applicable (refer to the mitigation thresholds located in Section V).

c. Federal agencies shall follow their own procedures for complying with the EFH requirements of the Magnuson-Stevens Fishery Conservation and Management Act. For activities requiring a PCN, the applicant is responsible for furnishing documentation that demonstrates consultation for EFH has been completed.

d. For PCN activities, no work may commence until EFH consultation as required by the Magnuson-Stevens Act has been completed.

12. National Lands. Activities that impinge upon the value of any National Wildlife Refuge, National Forest, National Marine Sanctuary, National Historic Landmarks or any other area administered by the National Park Service, U. S. Fish and Wildlife Service (USFWS) or U.S. Forest Service (USFS) require a PCN or Individual Permit. Federal land managers seeking authorization for activities located in the above listed National Lands may proceed under SV, unless a PCN is required elsewhere in this document.

13. Wild and Scenic Rivers. The following activities in designated river or study river segments in the National Wild and Scenic River (WSR) System require a PCN unless the Federal agency with direct management responsibility for such river, in Massachusetts this is generally the National Park Service, has determined in writing to the proponent that the proposed work will not adversely affect the WSR designation or study status:

a. Activities that occur in WSR segments, in and 0.25 miles up or downstream of WSR segments, or in tributaries within 0.25 miles of WSR segments;
b. Activities that occur in wetlands within 0.25 miles of WSR segments;
c. Activities that have the potential to alter free-flowing characteristics in WSR segments.

No GP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

As of May 10, 2023, affected rivers in Massachusetts include: the Taunton River (40 miles), Sudbury River (16.6 miles), Assabet River (4.4 miles), Concord River (8 miles), Nashua River (27 miles), Squannacook River (16.3 miles), Nissitissit River (4.7 miles), and the Westfield River, including West Branch, Middle Branch, Gendale Brook, East Branch, Drowned Land Brook, Center Brook, Windsor Jambs Brook, Shaker Mill Brook, Depot Brook, Savery Brook, Watson Brook, Center Pond Brook (78.1 miles). The most up to date list of designated and study rivers and their descriptions may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

14. Historic Properties

a. For all SV and PCN applications, permittees shall follow the guidance set forth in Appendix A, Guidance for NHPA Section 106 Compliance in Massachusetts.

b. No undertaking authorized by these GPs shall cause effects[1] (defined in 36 CFR Part 800 and 33 CFR Part 325, Appendix C, and its Interim Guidance) on properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places (NRHP)[2], including previously unknown historic properties within the permit area, unless the USACE or another Federal action agency has satisfied the consultation requirements of Section 106 of the National Historic Preservation Act (Section 106). If another Federal agency is determined the lead federal agency for compliance with Section 106, applicant must obtain the appropriate documentation and provide this information to the USACE to demonstrate compliance with Section 106. The applicant shall not begin the activity until the USACE notifies them in writing that the documentation provided satisfies Section 106 requirements.

[1] Effect means the alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register of Historic Properties.
[2] See the NAE Regulatory website, National Register of Historic Places link here: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.

c. Many historic properties are not listed on the NRHP and may require identification and evaluation by qualified historic preservation and/or archaeological consultants. The State Historic Preservation Officer (SHPO), Massachusetts Board of Underwater Archaeological Resources (BUAR), local historical societies, certified local governments, general public, and NRHP may also be able to assist with locating information on:

i. Previously identified historic properties; and
ii. Areas with potential for the presence of historic properties.

d. Discovery of Previously Unknown Remains and Artifacts: If any previously unidentified human remains, cultural deposits, or artifacts are discovered while accomplishing the activity authorized by this permit, you must immediately notify the USACE of what you have found, and to the maximum extent practicable, cease work and avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The USACE will initiate the Federal, State and tribal coordination required to determine if the items or remains warrant a recovery effort and/or if the site is eligible for listing in the National Register of Historic Places.

e. Section 110k: Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. § 306113) prevents the USACE from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106, has intentionally significantly adversely effected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the USACE, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the USACE is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties effected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or effects historic properties on tribal lands or effects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

f. Underwater Archaeological Resources: Under Massachusetts General Law Ch. 6, s.'s 179-180, and Ch. 91, s. 63, the BUAR has statutory jurisdiction within state waters and is the sole trustee of the Commonwealth's underwater heritage, charged with the responsibility of encouraging the discovery and reporting, as well as the preservation and protection, of underwater archaeological resources. Underwater archaeological resources located within the waters of the Commonwealth of Massachusetts are property of the Commonwealth, which holds title to these resources and retains regulatory authority over their use. Under Massachusetts General Law, no person, organization or corporation may "remove, displace, damage, or destroy" any underwater archaeological resources located within the Commonwealth's submerged lands except through consultation with the BUAR and in conformity with the permits it issues. https://www.mass.gov/orgs/board-of-underwater-archaeological-resources.

15. USACE Property and Federal Projects. (33 USC §408)

a. USACE projects and property can be found at: https://www.nae.usace.army.mil/Missions/Civil-Works/.

b. In addition to any authorization under these GPs, prospective permittee shall contact the USACE Real Estate Division (https://www.nae.usace.army.mil/Missions/Real-Estate-Division/) at (978) 318-8585 for work occurring on or potentially affecting USACE properties and/or USACE-controlled easements. Work may not commence on USACE properties and/or USACE-controlled easements until they have received any required USACE real estate documents evidencing site-specific permission to work.

c. Any proposed temporary or permanent occupation or alteration of a Federal project (including, but not limited to, a levee, dike, floodwall, channel, anchorage, breakwater, seawall, bulkhead, jetty, wharf, pier, or other work built or maintained but not necessarily owned by the United States),

is not eligible for SV and requires a PCN. This includes all proposed structures and work in, over, or under a USACE federal navigation project (FNP) or in the FNP's buffer zone. The buffer zone is an area that extends from the horizontal limits of the FNP to a distance of three times the FNP's authorized depth. The activity also requires review and approval by the USACE pursuant to 33 USC 408 (Section 408 Permission). The prospective permittee may reach out to the POCs located here: https://www.nae.usace.army.mil/ Missions/Section-408/.
d. Any structure or work constructed in a FNP or its buffer zone shall be subject to removal at the owner's expense prior to any future USACE dredging or the performance of periodic hydrographic surveys.
e. Where a Section 408 permission is required, written verification for the PCN will not be issued prior to the decision on the Section 408 permission request.

16. Navigation
a. No activity may cause more than a minimal adverse effect on navigation.
b. Any safety lights and signals prescribed by the U.S. Coast Guard, must be installed, and maintained at the permittee's expense on authorized facilities in navigable waters of the U.S.
c. There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein, and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein.
d. The permittee understands and agrees that if future U.S. operations require the removal, relocation, or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

17. Permit/Authorization Letter On-Site. For PCNs, the permittee shall ensure that a copy of these GPs and the accompanying authorization letter are at the work site (and the project office) whenever work is being performed, and that all personnel with operational control of the site ensure that all appropriate personnel performing work are fully aware of its terms and conditions. The entire permit authorization shall be made a part of any and all contracts and sub-contracts for work that affects areas of USACE jurisdiction at the site of the work authorized by these GPs. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means these GPs, including GCs and the authorization letter (including its drawings, plans, appendices, special conditions, and other attachments), and any permit modifications. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization shall be included in the contract or sub-contract as a change order. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire authorization letter, and no contract or sub-contract shall require or allow unauthorized work in areas of USACE jurisdiction. For SVs, the permittee shall ensure that a complete and signed copy of the SVN is present on site during construction and is made available for review at any time by USACE and other Federal, State, & Local regulatory agencies. A complete and signed copy of the SVN must be submitted to USACE Regulatory within 30 days of initiating construction of the authorized activity, unless stated otherwise in the applicable GP.

18. Storage of Seasonal Structures. Coastal structures such as pier sections, floats, etc., that

are removed from the waterway for a portion of the year (often referred to as seasonal structures) shall be stored in an upland location, located above MHW and not in tidal wetlands. These seasonal structures may be stored on the fixed, pile-supported portion of the structure that is seaward of MHW. This is intended to prevent structures from being stored on the marsh substrate and the substrate seaward of MHW.

19. Pile Driving and Pile Removal in Navigable Waters.
a. Derelict, degraded or abandoned piles and sheet piles in navigable waters of the U.S., except for those inside existing work footprints for piers, must be completely removed, cut and/or driven to 3 feet below the substrate to prevent interference with navigation, and existing creosote piles that are affected by project activities shall be completely removed if practicable. In areas of fine-grained substrates, piles must be removed by the direct, vibratory or clamshell pull method[1] to minimize sedimentation and turbidity impacts and prevent interference with navigation from cut piles. Removed piles shall be disposed of in an upland location landward of MHW or OHW and not in wetlands, tidal wetlands or mudflats.
b. A PCN is required for the installation or removal of structures with jetting techniques.
c. A PCN is required for the installation of >12 inch-diameter piles of any material type or steel piles of any size in tidal waters, unless they are installed in the dry. If piles are not installed in the dry:
i. Impact pile driving shall commence with an initial set of three strikes by the hammer at 40% energy, followed by a one-minute wait period, then two subsequent 3-strike sets at 40% energy, with one minute waiting periods, before initiating continuous impact driving.
ii. Vibratory pile driving shall be initiated for 15 seconds at reduced energy followed by a one-minute waiting period. This sequence of 15 seconds of reduced energy driving, one-minute waiting period shall be repeated two more times, followed immediately by pile-driving at full rate and energy.
iii. In addition to using a soft start at the beginning of the workday for pile driving as described in 19c(i-ii), a soft start must also be used at any time following a cessation of pile driving for a period of 30 minutes or longer.
d. Bubble curtains may be used to reduce sound pressure levels during vibratory or impact hammer pile driving.

20. Time-of-Year (TOY) Restrictions. Activities that include in-water work must comply with the TOY Restrictions below to be SV eligible, otherwise a PCN is required. PCN submittals shall contain written justification for deviation from the TOY Restrictions. The term “in-water work” does not include conditions where the work site is “in-the-dry” (e.g., intertidal areas exposed at low tide). The term “in-the-dry” includes work contained within a cofferdam so long as the cofferdam is installed and subsequently removed outside the TOY Restriction. The TOY restrictions stated in Appendix B of the MA DMF Technical Report TR-47[2] can apply instead for activities in tidal waters if (1) TOYs are provided for a specific waterbody where the activity is proposed and (2) the TOYs are less restrictive than below. The activity must also not require a PCN elsewhere in this document to be SV eligible.

[1] Direct Pull: Each piling is wrapped with a choker cable or chain that is attached at the top to a crane. The crane then pulls the piling directly upward, removing the piling from the sediment. Vibratory Pull: The vibratory hammer is a large mechanical device (5-16 tons) that is suspended from a crane by a cable. The vibrating hammer loosens the piling while the crane pulls up. Clamshell Pull: This can remove intact, broken or damaged pilings. The clamshell bucket is a hinged steel apparatus that operates like a set of steel jaws. The bucket is lowered from a crane and the jaws grasp the piling stub as the crane pulls up. The size of the clamshell bucket is minimized to reduce turbidity during piling removal.
[2] The MA DMF Technical Report TR-47: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/

	TOY Restriction (No work)
Non-tidal Waters	Defer to TR-47
Tidal Waters	January 15 – November 15

Alternate work windows proposed under a PCN will generally be coordinated with the USFWS and NMFS. Resulting written verifications may include species-specific work allowed windows.

21. Heavy Equipment in Wetlands. Operating heavy equipment (drill rigs, fixed cranes, etc.) within wetlands shall be minimized, and such equipment shall not be stored, maintained, or repaired in wetlands, to the maximum extent practicable. Where construction requires heavy equipment operation in wetlands, the equipment shall:

i. Have low ground pressure (typically ≤3 psi);

ii. Be placed on swamp/construction/timber mats (herein referred to as "construction mats" or "mats") that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation. See GC 22 for information on the placement of construction mats; or

iii. Be operated on adequately dry or frozen wetlands such that shear pressure does not cause subsidence of the wetlands immediately beneath the equipment and upheaval of adjacent wetlands. Construction mats are to be placed in the wetland from the upland or from equipment positioned on mats if working within a wetland. Dragging construction mats into position is prohibited. Other support structures that are capable of safely supporting equipment may be used with written USACE authorization.

22. Temporary Fill, Work & Construction Mats.

a. *Construction mats in non-tidal waters*: Temporary construction mats shall be in place ≤1 year *and* for one growing season or less to be SV eligible. A PCN is required if construction mats are in place >1 year *or* for more than one growing season. Construction mats can be placed in an area of any size in non-tidal waters. The activity may occur in segments to ensure the requirements for SV above are met, otherwise a PCN is required.

b. *Construction mats in tidal waters*: Temporary construction mats placed in an area <5,000 SF in tidal waters are SV eligible, provided those mats are in place ≤6 months. Temporary construction mats placed in an area ≥5,000 SF or in place >6 months in tidal waters require a PCN.

c. *Management of construction mats:* At a minimum, construction mats shall be managed in accordance with the following construction mat best management practices (BMPs):

1. Mats shall be in good condition to ensure proper installation, use, and removal.
2. As feasible, mats shall be placed in a location that will minimize the amount of mats needed for the wetland crossing(s).
3. Inspect mats prior to their re-use and remove any plant debris. Mats are to be thoroughly cleaned before re-use to prevent the spread of invasive plant species.
4. Impacts to wetland areas shall be minimized during installation, use, and removal of the mats.
5. Adequate erosion & sediment controls shall be installed at approaches to mats to promote a smooth transition to, and minimize sediment tracking onto, the mats.
6. In most cases, mats should be placed along the travel area so that the individual boards are resting perpendicular to the direction of traffic. No gaps should exist between mats. Place mats far enough on either side of the resource area to rest on firm ground.

d. A PCN is required for temporary fills in place >2 years. All temporary fills and disturbed soils shall be stabilized to prevent the material from eroding into waters of the U.S. where it is not authorized. Work shall include phased or staged development to ensure only areas under active development are exposed and to allow for stabilization practices as soon as practicable. Temporary fill must be placed in a manner that will prevent it from being eroded by expected high flows.

e. Activities that require unconfined temporary fill and are authorized for discharge into waters of the U.S. shall consist of material that minimizes effects to water quality.
f. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Materials shall be placed in a location and manner that does not adversely impact surface or subsurface water flow into or out of the wetland. Temporary fill authorized for discharge into wetlands shall be placed on geotextile fabric or other appropriate material laid on the pre-construction wetland grade where practicable to minimize impacts and to facilitate restoration to the original grade. Construction mats are excluded from this requirement.
g. Construction debris and deteriorated materials shall not be located in waters of the U.S.
h. Temporary fills, construction mats, and corduroy roads shall be entirely removed as soon as they are no longer needed to construct the authorized activity and the disturbed areas be restored to pre-construction contours and conditions.
i. Construction equipment, such as temporary barges in tidal waters, shall provide clearance above the substrate to avoid grounding onto the substrate during all tides.

23. Restoration of Wetland Areas.
a. Upon completion of construction, all disturbed wetland areas shall be stabilized with a wetland seed mix or plant plugs containing only plant species native to New England, and be appropriate for site conditions, including salinity and frequency of inundation, and shall not contain any species listed in the “Invasive and Other Unacceptable Plant Species” Appendix K of the New England District “Compensatory Mitigation Standard Operating Procedures” found at https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation.aspx.
b. The introduction or spread of invasive plant species in disturbed areas shall be prevented and controlled. Equipment shall be thoroughly cleaned before and after project construction to prevent the spread of invasive species. This includes, but is not limited to, tire treads and construction mats.
c. In areas of authorized temporary disturbance, if trees are cut in USACE jurisdiction, they shall be cut at or above ground level and not uprooted in order to prevent disruption of any kind to the wetland soil structure and to allow stump sprouts to revegetate the work area, unless otherwise authorized.
d. Wetland areas where permanent disturbance is not authorized shall be restored to their original condition and elevation, which under no circumstances shall be higher than the pre-construction elevation. Original condition means careful protection and/or removal of existing soil and vegetation, and replacement back to the original location such that the original soil layering and vegetation schemes are approximately the same, unless otherwise authorized.

24. Bank Stabilization.
a. Projects involving construction or reconstruction/maintenance of bank stabilization within USACE jurisdiction shall be designed to minimize environmental effects, effects to neighboring properties, scour, conversion of natural shoreline to hard armoring, etc. to the maximum extent practicable.
b. Projects involving the construction of new bank stabilization within USACE jurisdiction shall use bioengineering techniques and natural materials in the project design to the maximum extent practicable. Use of hard structures shall be eliminated or minimized unless the prospective permittee can demonstrate that use of bioengineering techniques is not practicable due to site conditions.
c. Where possible, bank stabilization projects shall optimize the natural function of the shoreline, including self-sustaining stability to attenuate flood flows, fishery, wildlife habitat and water quality protection, while protecting upland infrastructure from storm events that can cause erosion as well as impacts to public and private property.
d. No material shall be placed in excess of the minimum needed for erosion protection.
e. No material shall be placed in a manner that will be eroded by normal or expected high flows (properly anchored native trees and treetops may be used in low energy areas).

f. Native plants appropriate for current site conditions, including salinity, must be used for bioengineering or vegetative bank stabilization.
g. The activity must be properly maintained, which may require repairing it after severe storms or erosion events.

25. Soil Erosion and Sediment Controls.
a. Appropriate soil erosion and sediment controls[1] (hereinafter referred to as "controls") must installed prior to earth disturbance and maintained in effective operating condition during construction. Biodegradable wildlife friendly erosion controls should be used whenever practicable to minimize effects to water quality.
b. Activities in streams (rivers, streams, brooks, etc.) and tidal waters that are capable of producing sedimentation or turbidity should be done during periods of low-flow or no-flow, when the stream or tide is waterward of the work area. Controls may also be used to obtain dry work conditions (e.g., coffer dam, turbidity curtain). The prospective permittee must demonstrate in the project plans where the controls are proposed and how these controls would avoid and/or minimize turbidity or sedimentation.
c. A PCN is required for controls that encroach: i) >25% of the stream width measured from OHW in non-tidal diadromous streams from March 15 to June 30; or ii) >25% of the waterway width measured from MHW in tidal waters from Feb. 1 to June 30, or >50% of the waterway width measured from MHW in tidal waters from July 1 to Jan. 14. This is to protect upstream fish passage. Proponents must also maintain downstream fish passage throughout the project.
d. No dewatering shall occur with direct discharge to waters or wetlands. Excess water in isolated work areas shall be pumped or directed to a sedimentation basin, tank or other dewatering structures in an upland area adequately separated from waters or wetlands. Suspended solids shall be removed prior to discharge back into waters or wetlands from these dewatering structures. All discharge points back into waters and wetlands shall use appropriate energy dissipaters and erosion and sedimentation control BMPs.
e. Temporary controls shall be removed upon completion of work, but not until all exposed soil and other fills, as well as any work waterward of OHW or the HTL, are permanently stabilized at the earliest practicable date. Sediment and debris collected by these devices shall be removed and placed at an upland location in a manner that will prevent its later erosion into a waterway or wetland. Controls may be left in place if they are biodegradable and flows and aquatic life movements are not disrupted.

26. Aquatic Life Movements and Management of Water Flows.
a. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies and wetlands shall be:

i. Suitably spanned, bridged, culverted, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species; and
ii. Properly aligned and constructed to prevent bank erosion or streambed scour both adjacent to and inside the crossing.

[1] Appropriate soil erosion, sediment and turbidity controls include cofferdams, bypass pumping around barriers immediately up and downstream of the work footprint (i.e., dam and pump), installation of sediment control barriers (i.e., silt fence, vegetated filter strips, geotextile silt fences, filter tubes, erosion control mixes, hay bales or other devices) downhill of all exposed areas, stream fords, retention of existing vegetated buffers, application of temporary mulching during construction, phased construction, and permanent seeding and stabilization, etc.

b. To avoid adverse impacts on aquatic organisms, the low flow channel/thalweg shall remain unobstructed during periods of low flow, except when necessary to perform the authorized work.
c. For work in tidal waters, in-stream controls (e.g., cofferdams) should be installed in such a way as to not obstruct fish passage.
d. Riprap and other stream bed materials shall be installed in a manner that avoids organism entrapment in rock voids or water displaced to subterranean flow with crushed stone and riprap.
e. To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity shall not restrict or impede the passage of normal or high flows unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

27. Spawning, Breeding, and Migratory Areas.
a. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized under these GPs.
b. Activities in waters of the U.S. that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
c. The applicant is responsible for obtaining any "take" permits required under the USFWS's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The applicant should contact the appropriate local office of the USFWS to determine if such "take" permits are required for a particular activity.
d. Information on spawning habitat for species managed under the Magnuson-Stevens Fishery Conservation and Management Act (i.e., EFH for spawning adults) can be obtained from NAE Regulatory website, Essential Fish Habitat section, at: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.
e. Information regarding diadromous fish habitat can be obtained from the following DMF website at: https://www.mass.gov/info-details/massgis-data-diadromous-fish.

28. Vernal Pools.
a. A PCN is required if a discharge of dredged or fill material is proposed within a vernal pool depression that is also a water of the U.S.
b. Vernal pools must be identified on the plans that show aquatic resource delineations.
c. Adverse impacts to vernal pools shall be avoided & minimized to the maximum extent practicable.

29. Invasive Species.
a. The introduction, spread or the increased risk of invasion of invasive plant or animal species on the project site, into new or disturbed areas, or areas adjacent to the project site caused by the site work shall be avoided. Construction mats shall be thoroughly cleaned before reuse to avoid spread of invasive species.
b. Unless otherwise directed by USACE, all applications for PCN non-tidal projects proposing fill in USACE jurisdiction shall include an Invasive Species Control Plan. Additional information can be found at: https://www.nae.usace.army.mil/Missions/Regulatory/Invasive-Species/, https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation/.

30. Fills Within 100-Year Floodplains. The activity shall comply with applicable Federal Emergency Management Agency (FEMA) approved, Massachusetts Emergency Management

Agency (MEMA) approved and/or local floodplain management requirements. Applicants should contact FEMA and/or MEMA regarding floodplain management requirements.

31. Stream Work and Crossings & Wetland Crossings.
a. When feasible, all temporary and permanent crossings of waterbodies and wetlands (hereinafter referred to as "crossings") shall conform to the "Massachusetts River and Stream Crossing Standards" located at: https://www.mass.gov/doc/massachusetts-river-and-stream-crossing-standards/download or https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/. Projects that do not conform to these guidelines shall be reviewed under PCN or IP procedures.
b. Crossings shall be suitably culverted, bridged, or otherwise designed to withstand and to prevent the restriction of high flows, to maintain existing low flows, maintain water quality, and not obstruct the movement of aquatic life indigenous to the waterbody beyond the duration of construction.
c. Crossings shall be installed in such a manner as to preserve hydraulic capacity and flow, sediment transport, and organism passage at its present level, between the wetlands on either side of the road. The applicant shall take necessary measures to correct any wetland damage resulting from deficiencies in hydraulic capacity, sediment transport and organism passage.
d. Stream crossings shall utilize a natural mixed grain-size streambed material composition that matches upstream and downstream substrates to create a stable streambed. Substrate should function appropriately during normal and high flows without washing out. If natural streambed material is not utilized, a PCN is required.
e. Activities involving open trench excavation in flowing waters require a PCN. Work should not occur in flowing waters (requires using management techniques such as temporary flume pipes, culverts, cofferdams, etc.). Normal flows should be maintained within the stream boundary's confines when practicable. Projects utilizing these management techniques must meet all applicable terms and conditions of the GP, including the GCs in Section IV.

32. Utility Line Installation and Removal
a. Subsurface utility lines must be installed at a sufficient depth to avoid damage from anchors, dredging, etc., and to prevent exposure from erosion and stream adjustment.
b. When utility lines are installed via horizontal directional drilling, a frac-out contingency plan shall be present on site for the duration of construction. As necessary, the applicant shall immediately contain, control, recover, and remove drilling fluids released into the environment.
c. Abandoned or inactive utility lines must be removed and faulty lines (e.g., leaking hazardous substances, petroleum products, etc.) must be removed or repaired. A written verification from the USACE is required if they are to remain in place, e.g., to protect sensitive areas or ensure safety.
d. Utility lines shall not adversely alter existing hydrology, and trenches cannot be constructed or backfilled in such a manner as to drain waters of the U.S. (e.g., backfilling with extensive gravel layers, creating a French drain effect). In wetland areas, structures such as ditch plugs, cut-off walls, clay blocks, bentonite, or other suitable material shall be used within utility trenches to ensure that the trench through which the utility line is installed does not drain waters of the U.S. including wetlands.
e. Stockpiling of tree debris, to the extent where it has the effect of fill material, shall not occur in waters of the U.S. Tree debris shall be removed from waters of the U.S. and placed in uplands without causing additional disturbance to aquatic resources. Failure to meet this condition could change the bottom elevation of the wetland and be considered a discharge of fill material, and depending on the area of alteration, may require a PCN or IP.

33. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

34. Coral Reefs. Impacts to coral reefs are not authorized under these GPs. Coral reefs consist of the skeletal deposit, usually of calcareous or silicaceous materials, produced by the vital activities of anthozoan polyps or other invertebrate organisms present in growing portions of the reef.

35. Blasting. Blasting in waters of the U.S. associated with work such as dredging, trenching, pile installation, etc. is not authorized under these GPs.

36. Inspections. The permittee shall allow USACE to make periodic inspections at any time deemed necessary to ensure that the work is being or has been performed in accordance with the terms and conditions of this permit. To facilitate these inspections, for activities requiring a PCN, the permittee shall complete and return the Certificate of Compliance when it is provided with a PCN verification letter. For SV-eligible activities, the permittee shall complete and submit the SVN to USACE within 30 days of initiating project construction, at which point, USACE may opt to inspect the activity to verify compliance with the terms and conditions of the GP. Post-construction engineering drawings may be required by USACE for completed work. This includes post-dredging survey drawings for any dredging work.

37. Maintenance. The permittee shall maintain the activity authorized by these GPs in good condition and in conformance with the terms and conditions of this permit. Some maintenance activities may not be subject to federal regulation under Section 404 in accordance with 33 CFR 323.4(a)(2). This condition is not applicable to maintenance of dredging projects. Prospective permittees should contact USACE to inquire about maintenance of dredging projects, and its eligibility under these GPs. Maintenance dredging is subject to the review thresholds in GP #7 as well as any conditions included in a written USACE authorization. Maintenance dredging includes only those areas and depths previously authorized and dredged.

38. Property Rights. Per 33 CFR 320.4(g)(6), these GPs do not convey any property rights, either in real estate or material, or any exclusive privileges, nor do they authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations.

39. Transfer of GP Verifications. When the work authorized by these GPs is still in existence at the time the property is transferred, the terms and conditions of these GPs, including any special conditions, will continue to be binding on the entity or individual who received the GP authorizations, as well as the new owner(s) of the property. If the permittee sells the property associated with a GP authorization, the applicant may transfer the GP authorization to the new owner by submitting a letter to USACE to validate the transfer. A copy of the GP authorization letter must be attached to the letter, and the letter must include the following statement: “The terms and conditions of these general permits, including any special conditions, will continue to be binding on the new owner(s) of the property.” This letter shall be signed by both the seller and new property owner(s).

40. Modification, Suspension, and Revocation. These GPs and any individual authorization issued thereof may be either modified, suspended, or revoked in whole or in part pursuant to the policies and procedures of 33 CFR 325.7; and any such action shall not be the basis for any claim for damages against the U.S.

41. Special Conditions. The USACE may impose other special conditions on a project authorized pursuant to these GPs that are determined necessary to minimize adverse navigational and/or environmental effects or based on any other factor of the public interest. Failure to comply with all conditions of the authorization, including special conditions, constitutes a permit violation and may subject the applicant to criminal, civil, or administrative penalties or restoration.

42. False or Incomplete Information. If USACE makes a determination regarding the eligibility of a project under these GPs, and subsequently discovers that it has relied on false, incomplete, or inaccurate information provided by the applicant, the authorization will not be valid, and the U.S. Government may institute appropriate legal proceedings.

43. Abandonment. If the permittee decides to abandon the activity authorized under these GPs, unless such abandonment is merely the transfer of property to a third party, he/she/they may be required to restore the area to the satisfaction of USACE.

44. Enforcement cases. These GPs do not apply to any existing or proposed activity in USACE jurisdiction associated with an on-going USACE or EPA enforcement action, until such time as the enforcement action is resolved or USACE or EPA determines that the activity may proceed independently without compromising the enforcement action.

45. Previously Authorized Activities.

a. Completed projects that received prior authorization from USACE (SV or PCN), shall remain authorized in accordance with the original terms and conditions of those authorizations, including their terms, GCs, and any special conditions provided in a written verification.

b. Activities authorized pursuant to 33 CFR 330.3 (activities occurring before certain dates) are not affected by these GPs.

46. Duration of Authorization.

These GPs expire on June 1, 2028. Activities authorized under these GPs will remain authorized until the GPs expire, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 325.2(e)(2). Activities authorized under GPs 1-25 that have either commenced (i.e., are under construction) or are under contract to commence in reliance upon this authorization will have until June 1, 2029 to complete the work. If requested by USACE, the permittee shall furnish documentation that demonstrates the project was under construction or under contract to commence by June 1, 2028. If work is not completed before June 1, 2029, the permittee must contact USACE. The USACE may issue a new authorization provided the project meets the terms and conditions of the MA GPs in effect at the time. Activities completed under the SV or PCN authorizations of these GPs will continue to be authorized after their expiration date.

SECTION V: MITIGATION STANDARDS

1. Mitigation Types

For all activities, applicants must (a) demonstrate how the project has been designed to avoid or minimize impacts to aquatic resources; and (b) describe measures taken to avoid or minimize impacts to aquatic resources through construction techniques and/or site access. Please see https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation/ for assistance with preparing mitigation in accordance with the 2008 Compensatory Mitigation for Losses of Aquatic Resources; Final Rule (33 CFR 332.3), hereafter referred to as "2008 Mitigation Rule."

Avoidance - Avoidance of impacts (direct and indirect) to aquatic resources means that project activities would not result in the placement of fill material or installation of a structure that could impact the resource area. Avoidance can include, but is not limited to, designing the project to avoid impacts to all or a portion of the aquatic resource areas.

Minimization - Minimization of impacts (direct and indirect) to aquatic resources means that measures are taken to ensure the amount and duration of impacts are limited to the maximum extent practicable. There are many minimization measures that could be implemented, prior to, during, or after the proposed activity, to ensure impacts are minimized. Examples include, but are not limited to:

- Permanent preservation of avoided aquatic features and buffer zone, in perpetuity. In these cases, the preserved area would be under a conservation easement and managed by conservation oriented third-party manager.
- Utilization of best management practices (BMPs) to ensure impacts are limited, and do not result in adverse impacts to the integrity and long-term functions of preserved/avoided features.

Compensatory Mitigation - Compensatory mitigation is generally required for PCN activities in which the impacts to the aquatic resources have been avoided and minimized to the maximum extent practicable but would still result in unavoidable adverse effects to the environment that are considered more than minimal or are contrary to the public interest. *Whatever the case may be, compensatory mitigation is no substitute for avoidance and minimization.*

2. Thresholds for Compensatory Mitigation

The basic objective of compensatory mitigation in the USACE Regulatory Program is to offset environmental losses resulting from unavoidable impacts to waters of the U.S. authorized by Department of the Army permits. **The following compensatory mitigation thresholds apply to all PCN activities that result in loss[1] of the resource area types listed below. Activities[2] in waters of the U.S. associated with the restoration, enhancement, and establishment of tidal and non-tidal aquatic resources are not considered loss and are not subject to the thresholds below.** Thresholds for different resource areas may not be combined to exceed 5,000 SF of total loss of all waters. The USACE will continue to evaluate projects on a case-by-case basis, and may in some cases require compensatory mitigation below these thresholds (e.g. minor impacts that add to a cumulative loss).

[1] See definition of loss in Section VII.
[2] These activities must result in net increases in aquatic resource functions and services to be exempted from the thresholds above.

Compensatory Mitigation Thresholds in Massachusetts		
Resource Area	**Non-Tidal Threshold**	**Tidal Threshold**
Stream	200 LF	200 LF
Bank Stabilization	500 LF	500 LF
Open Water	Project Dependent	Project Dependent
Wetland	5,000 SF	500 SF
Vernal Pool	All	N/A
SAV	Project dependent	25 SF
Mudflat	N/A	1,000 SF
Intertidal	N/A	1,000 SF

These thresholds can be utilized to determine at what point compensatory mitigation is required but are not used to determine how much mitigation may be needed to offset impacts to resources. Per the 2008 Mitigation Rule (33 CFR 332.3(f)(1)) "the amount of required compensatory mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource functions. In cases where appropriate functional or condition assessment methods or other suitable metrics are available, these methods should be used where practicable to determine how much compensatory mitigation is required. If a functional or condition assessment or other suitable metric is not used, a minimum one-to-one acreage or linear foot compensation ratios must be used."

3. Compensatory Mitigation Hierarchy

Compensatory mitigation should follow the hierarchy as outlined in 33 CFR 332.3(b)(2-6) or current regulation. This hierarchy in order of preference includes: (1) Mitigation Bank credits, (2) In-Lieu Fee program credits, (3) permittee-responsible mitigation under a watershed approach, (4) permittee-responsible mitigation through on-site and in-kind mitigation, and (5) permittee-responsible mitigation through off-site and/or out-of-kind mitigation. If the proposed mitigation deviates from this mitigation hierarchy, the applicant **must** justify in writing why the proposed mitigation is environmentally preferable to the preferred method of compensatory mitigation (See 2008 Mitigation Rule). **In order for your application to be considered complete, you must provide a statement that discusses how your project will compensate for the loss or impact to aquatic resources.** If you are proposing permittee responsible mitigation, the 12 components of a mitigation plan (33 CFR 332.4(c)(2-14) must be addressed for your application to be considered complete. Prospective applicants are encouraged to contact USACE with questions at any time. Addressing the 12 components of a mitigation plan is commensurate with the amount of compensatory mitigation required, and USACE can assist prospective applicants with the level of information needed to satisfy each component.

For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee.

4. In-Lieu Fee (ILF)

The purchase of credits from the Massachusetts In-Lieu Fee Program (MA ILFP) is the ***preferred*** method of compensatory mitigation in Massachusetts since, as of the issuance date of this GP, there are no mitigation banks available in Massachusetts. The applicant shall develop a mitigation plan that addresses the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

The MA ILFP is administered by the Massachusetts Department of Fish & Game (DFG) in accordance with the 2008 Mitigation Rule at 33 CFR 332. The Mitigation Rule governs in-lieu fee compensatory mitigation associated with USACE permits under §404 of the Clean Water Act and/or §9 or §10 of the Rivers and Harbors Act of 1899.

MA ILFP Website: https://www.mass.gov/in-lieu-fee-program

Acceptance of an ILF payment into the ILFP established by the 2014 MA ILFP Instrument (link below) is an acknowledgement by DFG that it assumes all legal responsibility for satisfying the mitigation requirements of the USACE (i.e., the implementation, performance, and long-term management and monitoring of the compensatory mitigation project(s) approved under this Instrument and subsequent Compensatory Mitigation Plans). This transfer of legal responsibility is established by: 1) the approval of this In-Lieu Fee Instrument; 2) receipt by the district engineer of a Notice of Credit Sale and Transfer of Legal Responsibility to DFG that is signed by the DFG and the permittee and dated; and 3) the transfer of fees from the permittee to DFG.

MA ILFP Fact Sheet: https://www.mass.gov/files/documents/2017/01/sj/ilfp-fact-sheet-ma-ilfp-fees.pdf

MA ILFP Instrument: https://www.mass.gov/files/documents/2016/08/nd/ilfp-final-instrument-dfg.pdf

5. Permittee-Responsible

The USACE may determine that the proposed permittee-responsible compensatory mitigation is appropriate on a case-by-case basis. As described in the Compensatory Mitigation Hierarchy section above, applicants must justify in writing why the proposed mitigation is environmentally preferable to the purchase of ILF credits. Applicants are encouraged to contact the USACE prior to submission of a permit application to seek further guidance regarding USACE mitigation requirements.

Applicants will demonstrate their proposed compensatory mitigation in writing by addressing the 12 components of a mitigation plan (33 CFR 332.4(c)(2-14). *Please note that all elements must be addressed, or the permit application will be deemed incomplete.* In certain circumstances, the district engineer may determine that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). Guidance on how to address these components can be found on the New England District Mitigation webpage: https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation/

Performance standards will be used to measure the successfulness of the mitigation project. A successful mitigation project is one that is self-sustaining. For a mitigation project that will restore, enhance, or create wetlands, proper performance standards must address hydrology, hydric soils, and hydrophytic vegetation. The mitigation proposal must include an explanation of quantitative methods used to measure the success of performance standards (i.e., percent cover may be measured using vegetation plots, hydrology may be measured using data loggers, soil cores may be taken and evaluated for hydric soil indicators).

Monitoring methods should include quantitative sampling methods following established, scientific protocols. Sampling documentation, as part of monitoring reports, should include maps and coordinates (also shapefiles, if available) showing locations of sampling points, transects, quadrats, etc. In addition, permanent photo stations should be established coincident with sampling locations.

SECTION VI: FEDERAL & STATE AGENCY CONTACT INFORMATION & ORGANIZATIONAL WEBSITES

Federal Agencies

U.S. Army Corps of Engineers
Regulatory Division
696 Virginia Road
Concord, Massachusetts 01742-2751
(978) 318-8338 (phone); (978) 318-8303 (fax)
www.nae.usace.army.mil/missions/regulatory

U.S. Army Corps of Engineers
Navigation Division – Section 408
696 Virginia Road
Concord, Massachusetts 01742-2751
See link below for contact information:
https://www.nae.usace.army.mil/Missions/Section-408/

National Marine Fisheries Service
55 Great Republic Drive
Gloucester, Massachusetts 01930
(978) 281-9300 (phone)
(*Federal endangered species & EFH)*

U.S. Fish & Wildlife Service
70 Commercial Street, Suite 300
Concord, New Hampshire 03301
(603) 223-2541 (phone)
(Federal endangered species)

National Park Service
15 State Street
Boston, Massachusetts 02109
(617) 223-5191 (phone)
(*Wild and Scenic Rivers*)

Bureau of Ocean and Energy Management
1849 C Street, NW
Washington D.C. 20240
202-208-6474 (phone)
(*Offshore Wind Facilities)*

Chief, Risk Analysis Branch
FEMA Region 1
99 High Street, 6th Floor
U.S. Department of Homeland Security
Boston, Massachusetts 02110
(617) 956-7576 (phone)

Commander (dpb)
First Coast Guard District
Battery Building
One South Street
New York, New York 10004-1466
(212) 514-4331 (phone); (212) 514-4337 (fax)
(*Bridge permits*)

U.S. Environmental Protection Agency
5 Post Office Square
Suite 100 (OEP06–3)
Boston, Massachusetts 02109-3912
(617) 918-1692 (phone)

State Agencies in Massachusetts

Massachusetts Department of Environmental Protection (MassDEP)	
DEP Division of Wetlands & Waterways	100 Cambridge Street, Suite 900 Boston, Massachusetts 02114 (617) 292-5695
Northeast Region	150 Presidential Way, Suite 300 Woburn, Massachusetts 01801 (978) 694-3200
Southeast Region	20 Riverside Drive, Route 105 Lakeville, Massachusetts 02347 (508) 946-2800
Central Region	8 New Bond Street Worcester, Massachusetts 01606 (508) 792-7650
Western Region	436 Dwight Street Springfield, Massachusetts 01103 (413) 784-1100

Massachusetts Office of Coastal Zone Management (CZM) Emails may be sent to: czm@mass.gov	
MA Office of Coastal Zone Management	100 Cambridge Street, Suite 900 Boston, Massachusetts 02114 (617) 626-1200
North Shore Region	2 State Fish Pier Gloucester, Massachusetts 01930 (978) 281-3972
South Shore Region	175 Edward Foster Road Scituate, Massachusetts 02066
Cape Cod and Islands Region	3195 Main Street, P.O. Box 220 Barnstable, MA 02630
South Coastal Region	81-B County Road, Suite E Mattapoisett, MA 02739

Massachusetts Historical Commission (MHC)	
Office Location:	220 Morrisey Boulevard Boston, Massachusetts 02125 (617) 727-8470

Massachusetts Board of Underwater Archaeological Resources (BUAR) Emails may be sent to: david.s.robinson@mass.gov	
Office Location:	100 Cambridge Street, Suite 900 Boston, Massachusetts 02114 (617) 626-1014

SECTION VII: Definitions & Acronyms

Artificial or Living Reef: A structure which is constructed or placed in waters for the purpose of enhancing fishery resources and commercial and recreational fishing opportunities.
Attendant Features: Occurring with or as a result of; accompanying.
Biodegradable: A material that decomposes into elements found in nature within a reasonably short period of time and will not leave a residue of plastic or a petroleum derivative in the environment after degradation. In contrast, degradable plastics break down into plastic fragments that remain in the environment after degradation. Examples of biodegradable materials include jute, sisal, cotton, straw, burlap, coconut husk fiber (coir) or excelsior. In contrast, degradable plastics break down into plastic fragments that remain in the environment after degradation. Photodegradable, UV degradable or Oxo-(bio)degradable plastics are not considered biodegradable under this GP.
Boating facilities: These provide, rent or sell mooring space, such as marinas, yacht clubs, boat yards, dockominiums, municipal facilities, land/home owners, etc. Not classified as boating facilities are piers shared between two abutting properties or municipal mooring fields that charge an equitable user fee based on the actual costs incurred.
Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. Must comply with the applicable provisions of 33 CFR 332. See also the New England District Compensatory Mitigation Guidance at http://www.nae.usace.army.mil/Missions/Regulatory/Mitigation.aspx.
Construction mats: Constructions, swamp and timber mats (herein referred to as “construction mats”) are generic terms used to describe structures that distribute equipment weight to prevent wetland damage while facilitating passage and providing work platforms for workers and equipment. They are comprised of sheets or mats made from a variety of materials in various sizes. A timber mat consists of large timbers bolted or cabled together. Corduroy roads, which are not considered to be construction mats, are cut trees and/or saplings with the crowns and branches removed, and the trunks lined up next to one another. Corduroy roads are typically installed as permanent structures. Like construction mats, they are considered as fill whether they are installed temporarily or permanently.
Cumulative Impacts: The impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.1). Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems. See 40 CFR 230.11(g).
Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.
Dredging:
Improvement Dredging: For the purposes of these GPs, this is dredging deeper than previously authorized by the USACE and dredged under that authorization.
Maintenance Dredging: For the purposes of these GPs, this is dredging from an area previously authorized by the USACE and dredged under that authorization. The USACE may require proof of authorization and dredging. Maintenance dredging typically refers to the routine removal of accumulated sediment to maintain the design depths of serviceable navigation channels, harbors, marinas, boat launches and port facilities. Maintenance dredging is conducted for navigational purposes and does not include any expansion of the previously dredged area. The USACE may

review a maintenance dredging activity as new dredging if sufficient time has elapsed to allow for the colonization of SAS, shellfish, etc.

New Dredging: For the purposes of these GPs, this is a) first time the USACE authorizes dredging of a particular location or b) dredging has not occurred for an extended period of time, and this has allowed for aquatic resources (i.e., eelgrass, shellfish, etc.) to redevelop in the area.

Dredged material & discharge of dredged material: These are defined at 33 CFR 323.2(c) and (d). The term dredged material means material that is excavated or dredged from waters of the U.S.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s) but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: A stream with flowing water only during, and for a short duration, after precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Erosion Controls: Appropriate soil erosion, sediment and turbidity controls include cofferdams, bypass pumping around barriers immediately up and downstream of the work footprint (i.e., dam and pump), installation of sediment control barriers (i.e., silt fence, vegetated filter strips, geotextile silt fences, filter tubes, erosion control mixes, hay bales or other devices) downhill of all exposed areas, stream fords, retention of existing vegetated buffers, application of temporary mulching during construction, phased construction, and permanent seeding and stabilization, etc.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area (33 CFR 332.2).

Expansions: Work that increases the footprint of fill, structures, depth of basin or drainage features, or floats, or slip capacity.

Essential Fish Habitat (EFH): The Federal Magnuson-Stevens Fishery Management and Conservation Act broadly defines EFH to include those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. See www.greateratlantic.fisheries.noaa.gov/habitat for more information.

Fill material & discharge of fill material: Material placed in waters of the U.S. where the material has the effect of either replacing any portion of a water of the U.S. with dry land or changing the bottom elevation of any portion of a water of the U.S. Fill material does not include any pollutant discharged into the water primarily to dispose of waste. These are defined at 33 CFR 323.2 (e) & (f).

Federal navigation projects (FNPs): These areas are maintained by the USACE; authorized, constructed and maintained on the premise that they will be accessible and available to all on equal terms; and comprised of USACE Federal anchorages, Federal channels and Federal turning basins. The buffer zone is equal to three times the authorized depth of a FNP. The following are FNPs in MA and more information, including the limits, is provided at www.nae.usace.army.mil/missions/navigation >> Navigation Projects:

- Andrews River, Harwich, MA
- Aunt Lydia's Cove
- Beverly Harbor
- Boston Harbor
- Buttermilk Bay Channel
- Canapitsit Channel
- Cape Cod Canal
- Chatham Harbor
- Cohasset Harbor
- Cross Rip Shoals, Nantucket Sound
- Cuttyhunk Harbor
- Dorchester Bay and Neponset River
- Duxbury Harbor
- Edgartown Harbor
- Essex River
- Fall River Harbor
- Falmouth Harbor
- Gloucester Harbor and Annisquam River
- Green Harbor
- Hingham Harbor
- Hyannis Harbor
- Ipswich River
- Island End River (Chelsea, MA)
- Kingston Harbor
- Lagoon Pond
- Little Harbor Woods Hole

Lynn Harbor
Malden River
Menemsha Creek
Merrimack River
Mystic River
Nantucket Harbor of Refuge
New Bedford and Fairhaven Harbor
Newburyport Harbor
Oak Bluffs Harbor
Pigeon Cove Harbor
Plymouth Harbor
Pollock Rip Shoals, Nantucket Sound
Provincetown Harbor
Red Brook Harbor
Rockport Harbor
Salem Harbor
Sandy Bay Harbor of Refuge
Saugus River
Scituate Harbor
Sesuit Harbor
Taunton River
Vineyard Haven Harbor
Wareham Harbor
Wellfleet Harbor
Westport River and Harbor
Weymouth Back River
Weymouth Fore and Town Rivers
Winthrop Harbor
Woods Hole Channel

Flume: An open artificial water channel, in the form of a gravity chute, which leads water from a diversion dam or weir alongside a natural flow. A flume can be used to measure the rate of flow.
FNP buffer zone: The buffer zone of a USACE Federal Navigation Project (FNP) is equal to three times the authorized depth of the FNP.
Frac out: During horizontal directional drilling (HDD) operations, drilling fluid travels up the borehole into a pit. When the borehole becomes obstructed or the pressure becomes too great inside the borehole, the ground fractures and fluid escapes to the surface and may affect surface waters.
Ground disturbance: Any activity that compacts, relocates, overturns, removes, mixes, or otherwise disturbs the ground, including under water. Ground disturbance can be caused by the use of hand tools (shovels, pick axe, posthole digger, etc.), heavy equipment (excavators, backhoes, bulldozers, dredgers, trenching and earthmoving equipment, etc.), and heavy trucks (large four wheel drive trucks, dump trucks and tractor trailers, etc.). Trenching, bulldozing, dredging, excavating, scraping, and plowing are typical examples of ground disturbance activities.
Height:width ratio: The height of structures shall at all points be equal to or exceed the width of the deck. For the purpose of this definition, height shall be measured from the marsh substrate to the bottom of the longitudinal support beam.
High Tide Line (HTL): The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides 58 that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds. (33 CFR 328). Refer to the highest predicted tide for the current year at the nearest NOAA tide gage. https://tidesandcurrents.noaa.gov/map/index.html
Historic Property: Any prehistoric or historic site (including archaeological sites), district, building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).
Impacts:
Direct Impacts: Effects that are caused by the activity and occur at the same time and place (40 CFR 1508.7).
Indirect impacts: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.
Secondary impacts: Effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material.

Information about secondary effects on aquatic ecosystems shall be considered prior to the time final section 404 action is taken by permitting authorities. Some examples of secondary effects on an aquatic ecosystem are: aquatic areas drained, flooded, fragmented; fluctuating water levels in an impoundment and downstream associated with the operation of a dam; septic tank leaching and surface runoff from residential or commercial developments on fill; and leachate and runoff from a sanitary landfill located in waters of the U.S. See 40 CFR 230.11(h).

Incidental Fallback: Incidental fallback is the redeposit of small volumes of dredged material that is incidental to excavation activity in waters of the U.S. when such material falls back to substantially the same place as the initial removal (33 CFR 323.2(d)(2)(iii)).

In the dry: Work that is done under dry conditions, e.g., work behind cofferdams or when the stream or tide is waterward of the work.

Independent utility: A test to determine what constitutes a single and complete non-linear project in the USACE Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Individual permit: A Department of the Army authorization that is issued following a case-by-case evaluation of a specific structure or work in accordance with the procedures of 33 CFR 322, or a specific project involving the proposed discharge(s) in accordance with the procedures of 33 CFR 323, and in accordance with the procedures of 33 CFR 325 and a determination that the proposed discharge is in the public interest pursuant to 33 CFR 320.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Intertidal: The area in between mean low water and the high tide line.

Living reef: See the definition of “artificial or living reef.”

Living shoreline: A term used to describe a low-impact approach with a substantial biological component to shoreline protection and restoration along coastal shores, riparian zones, lacustrine fringe wetlands, or oyster or mussel reef structures. This approach integrates natural features to restore, enhance, maintain, or create habitat, functions, and processes while also functioning to mitigate flooding or shoreline erosion. Living shorelines may stabilize banks and shores with small fetch and gentle slopes that are subject to low-to mid-energy waves. A living shoreline has a footprint that is made up mostly of native material. It incorporates vegetation or other living, natural “soft” elements alone or in combination with some type of harder shoreline structure (e.g., oyster or mussel reefs or rock sills) for added protection and stability. Living shorelines should maintain the natural continuity of the land-water interface and retain or enhance shoreline ecological processes.

Loss of waters of the United States: Waters of the U.S. that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the U.S. is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for a GP; it is not a net threshold that is calculated after considering compensatory mitigation that maybe used to offset losses of aquatic functions and services. Waters of the U.S. temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the U.S. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the U.S.

Maintenance: The repair, rehabilitation, or in-kind replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3 – "Activities occurring before certain dates," provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Maintenance includes minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make repair, rehabilitation, or replacement are authorized. Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.
Maintenance Exemption: In accordance with 33 CFR 323.4(a)(2), any discharge of dredged or fill material that may result from any of the following activities is not prohibited by or otherwise subject to regulation under Section 404 of the CWA: "Maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design."
Mean high water: Line on the shore reached by the plane of the average high water. Where precise determination of the actual location of the line becomes necessary, it must be established by survey with reference to the available tidal datum, preferably averaged over a period of 18.6 years. Less precise methods, such as observation of the "apparent shoreline" which is determined by reference to physical markings, lines of vegetation, or changes in type of vegetation, may be used only where an estimate is needed of the line reached by the mean high water.
Mechanized land clearing: Land clearing activities using mechanized equipment such as backhoes or bulldozers with sheer blades, rakes or discs constitute point source discharges and are subject to section 404 jurisdiction when they take place in wetlands or waters of the U.S (Regulatory Guidance Letter 90-05).
Metallic mineral: Any ore or material to be excavated from the natural deposits on or in the earth for its metallic mineral content to be used for commercial or industrial purposes. "Metallic mineral" does not include thorium or uranium.
Minor deviations: Deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards, which are necessary to make repair, rehabilitation, or replacement are permitted, provided the adverse environmental effects resulting from such repair, rehabilitation, or replacement are minimal.
Natural Rocky Habitats: Intertidal and subtidal substrates of pebble-gravel, cobble, boulder, or rock ledge and outcrops. Manufactured stone (e.g., cur or engineered riprap) is not considered a natural rocky habitat. Natural rocky habitats are either found as pavement (consolidated pebble-gravel, cobble, or boulder areas) or as a mixture with fines (i.e., clay and sand) and other substrates. Rocky habitats as EFH are defined as follows: (1) All pebble-gravel, cobble, or boulder pavements; (2) Pebble-gravel mixed with fines: mixed substrate of pebble-gravel and fines where pebble-gravel is an evident component of the substrate (either through visual observation or within sediment samples). Sediment samples with a content of 10% or more of pebble-gravel in the top layer (6-12 inches) should be delineated; (3) Scattered cobble, scattered boulder, scattered cobble/boulder: mixed substate of cobble and/or boulder and other substrates. The aerial extent of cobbles and/or boulders should be delineated; and (4) All rock ledge outcrops: area should be delineated along the edge of the ledge/outcrop (as defined by NMFS Habitat and Ecosystems Services Branch, Gloucester, MA).
Navigable waters or Navigable waters of the U.S.: These waters are subject to section 10 of the Rivers and Harbors Act of 1899 and are defined as those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce (33 CFR Part 329). Work or structures in navigable

waters require permits pursuant to §9 and §10 of the Rivers and Harbors Act of 1899. Also see the definition of “waters of the U.S.” below.
Note: Currently the following non-tidal waters have been determined to be navigable waters of the U.S. subject to permit jurisdiction in Massachusetts: Merrimack River, Connecticut River, and Charles River to the Watertown Dam.
Nearshore disposal: This is defined in the USACE Coastal Engineering Manual as “(1) In beach terminology an indefinite zone extending seaward from the shoreline well beyond the breaker zone. (2) The zone which extends from the swash zone to the position marking the start of the offshore zone, typically at water depths of the order of 20m.” A nearshore berm is an artificial berm built in shallow water using dredged material. Often, the berm is intended to renourish the adjacent and downdrift shore over time under the influence of waves and currents.
Non-regulated activity: Only structures or fills that were previously authorized and are in compliance with the terms and condition of the original authorization can be maintained as a non-regulated activity under 33 CFR 323.4(a)(2). Minor deviations from the previously authorized footprint do not qualify as a non-regulated activity and require new authorization from the USACE. The state’s maintenance provisions may differ from the USACE and a project may require reporting and written authorization from the state.
Non-tidal wetlands: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the HTL (*i.e.,* spring HTL). Also see the definition of “Waters of the U.S.” below.
Oil or natural gas pipeline: Any pipe or pipeline for the transportation of any form of oil or natural gas, including products derived from oil or natural gas, such as gasoline, jet fuel, diesel fuel. heating oil, petrochemical feedstocks, waxes, lubricating oils, and asphalt.
Ordinary High Water Mark (OHWM): A line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas. See 33 CFR 328.3(e).
Overall project: The overall project, for purposes of these GPs, includes all regulated activities that are reasonably related and necessary to accomplish the project purpose. Also see the definition of “single and complete linear project.”
Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.
Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.
Permanent impacts: Permanent impacts means waters of the U.S. that are permanently affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent impacts include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody.
Preconstruction notification (PCN): A request submitted by the applicant to the USACE for confirmation that a particular activity is authorized by these GPs. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Preconstruction notification may be required by the terms and conditions of these GPs. A PCN may be voluntarily submitted in cases where PCN is not required and the applicant wants confirmation that the activity is authorized under these GPs.
Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions (33 CFR 332.2).
Real estate subdivision: Includes circumstances where a landowner or developer divides a tract of land into smaller parcels for the purpose of selling, conveying, transferring, leasing, or

developing said parcels. This would include the entire area of a residential, commercial or other real estate subdivision, including all parcels and parts thereof

Reconfiguration zone: A USACE authorized area in which permittees may rearrange pile-supported structures and floats without additional authorizations. A reconfiguration zone does not grant exclusive privileges to an area or an increase in structure or float area.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/ historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in again in aquatic resource area and functions (33 CFR 332.2).

Reference Site: Reference sites - Compensatory restoration, rehabilitation, and creation mitigation projects should seek to duplicate the features of reference aquatic resources or enhance connectivity with adjacent natural upland and aquatic resource landscape elements. Performance standards related to reference sites are encouraged. Mitigation project sites must be selected based on their ability to be, and continue to be, resistant to disturbance from the surrounding landscape, by locating them adjacent to refuges, buffers, green spaces, and other preserved natural elements of the landscape. In general, aquatic resource mitigation projects must be designed to be self-sustaining, natural systems within the landscape and climate in which they are located, with little or no ongoing maintenance and/or hydrologic manipulation.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area (33 CFR 332.2).

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation (33 CFR 332.2).

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Sedimentation: Sedimentation is defined as the process of deposition of a solid material from a state of suspension. Deposited sediments may accumulate and have temporal impacts to aquatic resource areas. See secondary effects definition above. For the purposes of this document, “greater than minimal sedimentation” is generally not considered to occur when using proper erosion controls (GC 25) or when sedimentation is considered “de minimis” 33 CFR 323.2(d)(5).

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/ developer or partnership or other association of owners/developers that includes all crossings of a single water of the U.S. (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for the purposes of these GPs. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete

non-linear project must have independent utility (see the definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in a GP authorization.
Special aquatic sites (SAS): These include inland and saltmarsh wetlands, mud flats, vegetated shallows, sanctuaries and refuges, coral reefs, and riffle and pool complexes. These are defined at 40 CFR 230.3 and listed in 40 CFR 230 Subpart E.
Streambed: The stream substrate between the OHW marks on each side. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the streambed, but outside of the OHW marks, are not considered part of the streambed.
Stream channelization: The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the U.S.
Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.
Temporal loss: The time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site(s) (33 CFR 332.2).
Temporary impacts: Temporary impacts include, but are not limited to, jurisdictional waters that are temporarily filled, flooded, excavated, or drained because of the regulated activity. Impacts are considered temporary when they are removed immediately upon completion of the activity. Note: An impact is considered temporary when the aquatic resource is restored to pre-project conditions, but effects to archaeological and/or cultural resources may be permanent in duration.
Tidal wetlands: A wetland that is subject to the ebb and flow of the tide. See the definition of “Waters of the U.S.” below.
Tide gates: Structures such as duckbills, flap gates, manual and self-regulating tide gates, etc. that regulate or prevent upstream tidal flows.
Turbidity: A measure of the level of particles such as sediment, plankton, or organic by-products, in a body of water. As the turbidity of water increases, it becomes denser and less clear due to a higher concentration of these light-blocking particles. Suspended solids are more likely to carry toxic chemicals, and can also negatively affect aquatic organisms, water temperature, and dissolved oxygen levels.
Utility line: Any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose that is not oil, natural gas, or petrochemicals. A utility line also includes any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term ‘utility line’ does not include activities that drain a water of the U.S., such as drainage tile or French drains, but it does apply to pipes conveying drainage from another area.
Vegetated shallows: Permanently inundated areas that under normal circumstances support communities of rooted aquatic vegetation, such as eelgrass *(Zostera marina)* and widgeon grass (*Rupia maritima*) in marine systems (does not include salt marsh) as well as a number of freshwater species in rivers and lakes. These are a type of SAS defined at 40 CFR 230.43. Vegetated shallows are commonly referred to as submerged aquatic vegetation or SAV. Vegetated shallow survey guidance is located at www.nae.usace.army.mil/missions/regulatory /jurisdiction-and-wetlands. Maps of vegetated shallows in Massachusetts are located at www.nae.usace.army.mil/missions/regulatory/state-general-permits/massachusetts-general-permit.
Vernal pools: For the purposes of these GPs, vernal pools are depressional wetland basins that typically dry up in most years and may contain inlets or outlets, typically of intermittent flow. Vernal pools range in both size and depth depending upon landscape position and parent material(s). In

most years, vernal pools support one or more of the following obligate indicator species: wood frog, spotted salamander, blue-spotted salamander, marbled salamander, Jefferson's salamander and fairy shrimp. However, they should preclude sustainable populations of predatory fish.

Water diversions: Water diversions are activities such as bypass pumping (e.g., "dam and pump") or water withdrawals. Temporary flume pipes, culverts or cofferdams where normal flows are maintained within the stream boundary's confines aren't water diversions. "Normal flows" are defined as no change in flow from pre-project conditions.

Waters of the United States (U.S.) These waterbodies are the waters where permits are required for the discharge of dredged or fill material pursuant to §404 of the CWA. These waters include but are not limited to navigable waters of the U.S. and tidal wetlands and include many non-tidal wetlands and other waterbodies. See definitions for navigable waters of the U.S., tidal wetlands, waterbody, and non-tidal wetlands. (33 CFR 328)

Waterbody: Examples of "waterbodies" include oceans, coastal waters, rivers, streams, ditches, lakes, ponds, and wetlands. If a wetland is adjacent to a waterbody determined to be a water of the U.S., that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

Weir: A barrier across a river designed to alter the flow characteristics. In most cases, weirs take the form of a barrier, smaller than most conventional dams, across a river that causes water to pool behind the structure and allows water to flow over the top. Weirs are commonly used to alter the flow regime of a river, prevent flooding, measure discharge and help render a river navigable.

Wetland: Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. The Corps of Engineers Wetlands Delineation Manual in conjunction with the associated regional supplement should be used to determine if a wetland is present and delineate wetland boundaries.

Acronyms

BMPs	Best Management Practices
BUAR	Massachusetts Board of Underwater Archaeological Resources
CWA	Clean Water Act
CZM	Coastal Zone Management
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
EFH	Essential Fish Habitat
FNP	Federal Navigation Project
GC	General Condition
GP	General Permit
HTL	High Tide Line
IP	Individual Permit
LID	Low impact development
MassDEP	Massachusetts Department of Environmental Protection
MA DMF	Massachusetts Division of Marine Fisheries
MHC	Massachusetts Historical Commission
MHW	Mean High Water
MLLW	Mean Lower Low Water
MLW	Mean Low Water
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
OHW	Ordinary High Water Mark
PCN	Preconstruction Notification
SAS	Special Aquatic Sites
SF	Square Feet
SV	Self-Verification
SHPO	State Historic Preservation Officer
THPO	Tribal Historic Preservation Officer
USFWS	U.S. Fish and Wildlife Service
USCG	U.S. Coast Guard
USFS	U.S. Forest Service
USGS	U.S. Geological Service
WQC	Water Quality Certification

Appendix A: Guidance for NHPA Section 106 Compliance in Massachusetts

1. Purpose & Applicability

Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA) (54 U.S.C § 306108), requires Federal agencies to take into account the effects of their undertakings on Historic Properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. Therefore, in order for an activity to be eligible for authorization under the 2023 Massachusetts General Permit, the USACE must consider the effect the activity may have on historic properties. Historic properties may include, but are not limited to, historic districts, archaeological districts, sites, buildings, structures, objects, sacred sites, traditional cultural places, and traditional cultural landscapes that are included in, or eligible for inclusion in, the National Register of Historic Places (NRHP).

This guidance applies to projects that require authorization under Section 404 of the Clean Water Act (33 U.S.C. § 1344) and/or Section 10 of the Rivers and Harbors Act (33 U.S.C. §403) and will assist applicants when evaluating and documenting the presence of historic properties within or near their project site(s). The prospective applicant will evaluate their proposed project using the criteria below to determine if their project has the potential to affect historic properties and if so, whether or not historic properties are present or are likely to be present. All activities authorized under these GPs shall follow the terms outlined in General Condition 14: Historic Properties and General Condition 6: Tribal Rights & Burial Sites. Prospective applicants shall complete their due diligence according to the procedures below for their application to be deemed complete.

2. No Potential to Affect Historic Properties

Certain activities do not have the potential to cause effects on historic properties, assuming such historic properties were present, based on the nature of the activity and site-specific conditions. Therefore, these activities **do not** require historic property identification efforts or notification of the SHPO, THPOs, and/or BUAR under Section 106. The USACE has determined the following activities within the stated parameters have no potential to affect historic properties:

General Permit	Activity Parameters
1	Temporary buoys, markers and similar structures that are placed during winter events on ice and removed before spring thaw.
2	Repair or rehabilitation of structures that are less than 45 years in age. Any temporary structures or fills or work necessary to complete repairs or rehabilitation must not result in any ground disturbance.
3	Maintenance and replacement of moorings that are less than 45 years in age.
6	Maintenance, repair, replacement, or removal of utility lines, oil or natural gas pipelines, outfall or intake structures, and/or appurtenant features that are less than 45 years in age when all access, staging, and ground disturbance is strictly limited to previously disturbed areas (including any previous ground disturbance). Replacement must be in kind or smaller in size. Installation of tide gates on outfall structures that are less than 45 years in age.
7	Maintenance dredging of previously dredged areas where dredging does not extend beyond the original bottom elevations.

	Disposal of dredged material at an existing established and USACE-approved confined aquatic disposal cell. Beach nourishment in ongoing existing nourishment areas.
11	Fish and wildlife harvesting and attraction devices and activities.
13	Cleanup of hazardous and toxic waste materials, including contaminated sediments, that are less than 45 years in age.
16	Removal of land-based and water-based renewable energy generation facilities and hydropower projects that are less than 45 years in age.
18	Installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures for previously authorized by the USACE and ongoing aquaculture activities. Discharges of dredged or fill material into tidal or non-tidal waters necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities for previously authorized and ongoing aquaculture activities.
20	Maintenance activities for existing living shorelines excluding maintenance activities that require new ground disturbance such as excavation or re-sloping of the bank/shoreline.
22	Reshaping or maintenance of existing drainage ditches less than 45 years in age excluding ditch enlargement.
23	Placement of temporary and removable linear transportation and wetland/stream crossings that have no ground disturbance prior to placement, during placement, and during removal (i.e., placed on the surface and subsequently removed within one year of placement).
24	Placement of temporary and removable crossings and cofferdams that have no ground disturbance prior to placement, during placement, and during removal (i.e., placed on the surface and subsequently removed within one year of placement).
25	Emergency repair of existing structures and/or fills less than 45 years in age.

3. Historic Property Identification

If the activity does not fit under the criteria above, the following historic property identification efforts must be completed to demonstrate compliance with Section 106 of the NHPA. This includes documenting previously identified and unidentified historic properties in the project area.

a. Previously Identified Historic Properties: The prospective applicant shall document if previously identified historic properties are present on or adjacent to the project site by notifying the Massachusetts Historical Commission (MHC) and the Massachusetts Board of Underwater Archaeological Resources (BUAR), as appropriate, of the proposed project. The MHC and BUAR will check their records for the presence of any previously identified historic properties. The following outlines how prospective applicants should notify the MHC and BUAR.

i. The prospective applicant will notify the SHPO and BUAR to identify any previously recorded cultural resources. Applicants shall mail a completed Project Notification Form[18], project narrative, location (coordinates), plans, soil maps, and information on known cultural resources to the MHC. The MHC does not accept submissions via email. Applicants shall email or mail this information to the BUAR when the activity is located in lakes, ponds, rivers, and/or navigable waters in MA. Emailed file attachments should be <10MB. Any files >10MB shall be delivered via a file exchange system or the hard copy documents shall be mailed. Preferred contact information is listed below.

ii. **When sending this information, applicants must also document proof of receipt OR proof the information was delivered.** Proof of receipt constitutes a certified mail receipt, read email receipt, or other mail/email/online tracking services that document the information has reached the intended recipient(s). Proof the information was delivered constitutes a certificate of mailing, email delivery receipt, or other mail/email/online services that document the information was sent at a particular time. When using proof of delivery such (e.g., certificate of mailing), applicants should add 5 days to the 30-day notification period so the mail has time to reach its intended recipient. When using proof of receipt, the applicant may begin the 30-day notification period from the date received by the intended recipient.

iii. When mailing or emailing the application materials, applicants should include the following statement: “Please send responses to this notification directly to the USACE via email: cenae-r-ma@usace.army.mil or address regular mail responses to: Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, Massachusetts 01742-2751.” Email responses to the USACE are strongly preferred. The SHPO and BUAR will contact the USACE and cc the applicant(s) within 30 days of receiving the notification if their records indicate that historic properties are located in the project vicinity, and if additional review and/or surveys are recommended to ensure NHPA compliance. If the SHPO and/or BUAR do not respond within 30 days of receiving the notification, is it presumed that no known historic properties are present.

b. Previously Unidentified Historic Properties: The prospective applicant shall evaluate the project site and determine the sensitivity for the presence of historic properties if the project site has not been previously surveyed for cultural resources within the last 10 years. If the sensitivity is determined to be moderate to high, an intensive archaeological and/or architectural survey is required to investigate the potential presence of historic properties. The individual conducting this survey must meet the Secretary of the Interior’s Standards for Professional Qualifications (48 FR 44738-44739) in the discipline relevant to a particular resource type. For example, archeologists should not document and evaluate buildings or structures and architectural historians should not document and evaluate archaeological sites. The identification and qualifications for those participating in any survey and evaluation of resources should be included with the survey results. The criteria listed below are indicators of low sensitivity for the presence of historic properties for consideration when determining if an archaeological or architectural survey is needed.

Low sensitivity indicators:

- Previous archaeological and/or architectural survey within the last 10 years with negative results.
- In a location created in modern times (i.e., built on fill placed within the last 45 years or within an area excavated within the last 45 years).
- USACE has reviewed the project description and determined that a survey is not warranted based on the proposed activity and its location.

State survey guidance and standards are provided in the September 1995 Historic Properties Survey Manual Guidelines for the Identification of Historical and Archaeological Resources in Massachusetts available. State survey guidance and standards for underwater surveys are provided

[18] https://www.sec.state.ma.us/mhc/mhcform/formidx.htm

in the Board of Underwater Archaeological Resources' 2022 Policy Guidance on Archaeological Investigations and Related Survey Standards for the Discovery of Underwater Archaeological Resources. This guidance is available on the NAE Regulatory website: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.

Please note, a negative result from MHC and/or BUAR does not necessarily mean no historic properties are present. Often proposed project sites have not been previously subject to a survey, so historic properties which may be present have not been previously recorded.

4. Tribal Coordination

Prospective applicants shall mail the Project Notification Form, project narrative, location (coordinates), plans with locus map, soil maps, and information on cultural resources to the Wampanoag Tribe of Gay Head (Aquinnah), Mashpee Wampanoag Tribe, Narragansett Indian Tribe, and/or Stockbridge-Munsee Community Band of Mohican Indians with interests in the project location. Preferred tribal contact information, including their respective areas of interest, can be found below. Applicants shall follow the same procedures as identified in Section 3(a)i-iii above when notifying Tribes of the proposed activity. Applicants shall provide the USACE with any responses received from the tribe(s) with their PCN application. If a tribe does not respond within 30 days of receiving the notification, the applicant shall provide USACE with all documentation of tribal outreach with their SV or PCN submission (e.g., emails, letters, phone call log, etc.). If the tribe indicates the presence of a previously unrecorded cultural resource, including a traditional cultural property (TCP) or traditional cultural landscape (TCL), a PCN is required.

5. Effect Determination

The project may have the potential to affect historic properties and/or tribal resources if 1) notification recipients respond within 30 calendar days of notification with concerns, 2) historic properties eligible for listing, or potentially eligible for listing in the NRHP, are present or 3) tribal resources are known to be present. The USACE may need to further review the project to confirm potential effects to historic properties and/or tribal resources. A PCN is required for any activity that may affect a historic property.

The USACE may determine the project will have 'no effect' on historic properties (i.e., no historic properties affected) when procedures outlined in Section 3 above are followed and no cultural resources are identified. Similarly, if historic properties are identified and will be completely avoided, the USACE may determine 'no effect.'

6. Contact Information:

Massachusetts Historical Commission

The Massachusetts Archives Building
220 Morrissey Boulevard
Boston, Massachusetts 02125

No email. Applicants or their representatives must send project information via certified mail and submit the certified mail receipt to the USACE or send via regular mail and submit proof of delivery.

Area of concern: All of Massachusetts.

Massachusetts Board of Underwater Archaeological Resources (BUAR)

100 Cambridge Street, Suite 900
Boston, Massachusetts 02114
Email: david.s.robinson@mass.gov

Applicants or their representatives must send project information via email (***strongly preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: All waterbodies in Massachusetts.

Wampanoag Tribe of Gay Head (Aquinnah)

Bettina Washington
Tribal Historic Preservation Officer (THPO)
20 Black Brook Road
Aquinnah, Massachusetts 02535
Email: thpo@wampanoagtribe-nsn.gov

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: All of Massachusetts.

Mashpee Wampanoag Tribe

ATTN: David Weeden
Tribal Historic Preservation Officer (THPO)
483 Great Neck Road South
Mashpee, Massachusetts 02649
Email: 106review@mwtribe-nsn.gov
Cc: David.weeden@mwtribe-nsn.gov

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: All of Massachusetts.

Narragansett Indian Tribe

ATTN: John Brown
Tribal Historic Preservation Officer (THPO)
Narragansett Indian Longhouse
4425 South County Trail
Charlestown, Rhode Island 02813
Email: tashtesook@aol.com

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: Massachusetts east of the Connecticut River.

Stockbridge-Munsee Community Band of Mohican Indians

ATTN: Jeff Bendremer
Tribal Historic Preservation Manager
Stockbridge-Munsee Community
Tribal Historic Preservation Extension office
86 Spring Street
Williamstown, Massachusetts 01267
Email: thpo@mohican-nsn.gov

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: West of the Connecticut River and Northfield, Montague, Miller's Falls, Turner's Falls, Sunderland, Amherst, Hadley, South Hadley, Chicopee, Springfield and Longmeadow.

APPENDIX B PRE-CONSTRUCTION NOTIFICATION

U.S. Army Corps of Engineers (USACE), New England District (NAE)

PRE-CONSTRUCTION NOTIFICATION (PCN)

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose The information provided will be used in evaluating activities under Pre-Construction Notification procedures within New England.

Routine Uses This information may be shared with other federal, state, and local government agencies during the application review process. Submission

Disclosure of requested information is voluntary. However, if information is not provided the PCN application cannot be fully evaluated nor can USACE render a permit decision.

Instructions The applicant must complete ALL required sections of this document before their submission to USACE. The PCN submission to USACE shall include one set of drawings which show the location and character of the proposed activity, statements that address each required field below, and documentation that supports each field (e.g., emails, letters, description/narrative, phone calls, surveys, reports, etc.). Electronic submissions to the following address are strongly preferred: cenae-r-ma@usace.army.mil. The email subject line shall contain the following: General Permit #, PCN, City/Town, and date submitted. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY USACE)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (*agent is not required*)
First - Middle - Last -	First - Middle - Last -
Company -	Company -
E-mail Address -	E-mail Address -
6. APPLICANT'S ADDRESS:	9. AGENT'S ADDRESS:
Address-	Address-
City - State - Zip - Country -	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. with AREA CODE	10. AGENT'S PHONE NOs. with AREA CODE
a. Residence b. Business c. Fax d. Mobile	a. Residence b. Business c. Fax d. Mobile

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act on my behalf as my agent in the processing of this general permit PCN application and to furnish, upon request, supplemental information in support of this general permit PCN application.

_____ _____

SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME or TITLE (*see instructions*)

13. NAME OF WATERBODY, IF KNOWN (*if applicable*)	14. PROPOSED ACTIVITY STREET ADDRESS (*if applicable*)
15. LOCATION OF PROPOSED ACTIVITY (*see instructions*)	City: State: Zip:
Latitude: °N Longitude: °W	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (*see instructions*)

State Tax Parcel ID: Municipality:

Section: Township: Range:

17. DIRECTIONS TO THE SITE.

18. IDENTIFY THE SPECIFIC GENERAL PERMIT(S) YOU PROPOSE TO USE:

19. DESCRIPTION OF PROPOSED GENERAL PERMIT ACTIVITY (*see instructions*)

20. DESCRIPTION OF PROPOSED MITIGATION MEASURES (*see instructions*)

21. PURPOSE OF GENERAL PERMIT ACTIVITY (*Describe the reason or purpose of the project, see instructions*)

22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by Proposed General Permit Activity (*see instructions*)

Area (square feet)	Length (linear feet)	Volume (cubic yards)	Duration	Purpose

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.

23. List any other GP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project on any related activity (*see instructions*)

24. If the proposed activity will result in the loss of aquatic resources that exceed those identified in the New England District Compensatory Mitigation Thresholds, explain how the compensatory mitigation requirement will be satisfied. (*see instructions*)

25. Is Any Portion of the General Permit Activity Already Complete? ☐ Yes ☐ No If Yes, describe the completed work:

26. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed GP activity or utilize the designated critical habitat that might be affected by the proposed GP activity. (*see instructions*)

27. List any historic properties that have the potential to be affected by the proposed GP activity or include a vicinity map indicating the location of the historic property or properties. Attach relevant project information, along with any responses received from project notifications to this submittal. (*see instructions*)

28. For a proposed GP activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, identify the Wild and Scenic River or the "study river":

29. If the proposed GP activity also requires permission from the USACE pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, have you submitted a written request for section 408 permission from the USACE district having jurisdiction over that project? ☐ Yes ☐ No

If "yes", please provide the date your request was submitted to the USACE District:

30. Does the activity require a 401 Water Quality Certification (WQC)? If so, specify the type of 401 WQC that is required (general or individual). In cases where an individual 401 WQC is required, provide the date the 401 WQC certification request was submitted to the certifying authority and their contact information.

31. If the terms of the GP(s) you want to use require additional information to be included in the PCN (i.e. sampling and analysis plan), please include that information in this space or provide it on an additional sheet of paper marked Block 30. (*see instructions*)

32. I certify that the information in this pre-construction notification is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

The Pre-Construction Notification must be signed by the person who desires to undertake the proposed activity (applicant) and, if the statement in block 11 has been filled out and signed, the authorized agent.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions for Preparing a

Department of the Army

General Permit (GP) Pre-Construction Notification (PCN)

Blocks 1 through 4. To be completed by the U.S. Army Corps of Engineers.

Block 5. Applicant' Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the PCN, please attach a sheet of paper with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the PCN. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where they can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by the applicant, if an agent is to be employed.

Block 12. Proposed General Permit Activity Name or Title. Please provide a name identifying the proposed GP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 13. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the GP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Activity Street Address. If the proposed GP activity is located at a site having a street address (not a box number), enter it in Block 14.

Block 15. Location of Proposed Activity. Enter the latitude and longitude of where the proposed GP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area requiring evaluation. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality where the site is located.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide a description of the location of the proposed GP activity, such as lot numbers, tract numbers, or you may choose to locate the proposed GP activity site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed GP activity site if known. If there are multiple locations, please indicate directions to each location on a separate sheet of paper and mark as Block 17.

Block 18. Identify the Specific General Permit(s) You Propose to Use. List the number(s) of the General Permit(s) you want to use to authorize the proposed activity (e.g., GP 4).

Block 19. Description of the Proposed General Permit Activity. Describe the proposed GP activity, including the direct and indirect adverse environmental effects of the proposed activity. The description of the proposed activity should be sufficiently detailed for USACE to determine that the adverse environmental effects of the activity will be no more than minimal. Identify the materials to be used in construction, as well as the methods by which the work is to be done.

Provide drawings to show that the proposed GP activity complies with the terms of the applicable GP(s). Drawings should contain sufficient detail to provide an illustrative description of the proposed GP activity, but do not need to be detailed engineering plans. The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 19.

Block 20: Description of Proposed Mitigation Measures. Describe any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed GP activity. The description of any proposed mitigation measures should be sufficiently detailed for USACE to determine how the measures would avoid and minimize adverse environmental effects. If adverse effects exceed the New England District compensatory mitigation thresholds, you must document how compensatory mitigation would be satisfied in Block 24.

Block 21. Purpose of General Permit Activity. Describe the purpose and need for the proposed GP activity. What will it be used for and why? Also include a brief description of any related activities associated with the proposed project. Provide the approximate dates you plan to begin and complete all work.

Block 22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by the Proposed General Permit Activity. For discharges of dredged or fill material into Waters of the U.S., provide the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained by the proposed GP activity. For structures or work in Navigable Waters of the U.S. subject to Section 10 of the Rivers and Harbors Act of 1899, provide the amount of navigable waters filled, dredged, occupied by one or more structures (e.g., aids to navigation, mooring buoys) by the proposed GP activity. The area of impact includes the structures or fills with direct or indirect effects to waters of the U.S. The length of impact includes the length of a stream, including is banks, that are directly affected by the structures or fills. The duration of impact should be identified as temporary (xx days) or permanent. The impact purpose should briefly describe what structure or fill is responsible for the impact.

Block 23. Identify Any Other General Permit(s), Regional General Permit(s), or Individual Permit(s) Used to Authorize Any Part of Proposed Activity or Any Related Activity. List any other GP(s) or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. For linear projects, list other separate and distant crossings of waters and wetlands authorized by these GPs that do not require PCNs. If more space is needed, attach an extra sheet of paper marked Block 23.

Block 24. Compensatory Mitigation Statement for Losses Greater Than the New England District Compensatory Mitigation Thresholds. New England District requires compensatory mitigation at a minimum one for one replacement ratio or greater for all aquatic resource losses that require a PCN and exceed the New England District Compensatory Mitigation Thresholds, unless USACE determines in writing that either some other form of mitigation is more environmentally appropriate or the adverse environmental effects of the proposed GP activity are no more than minimal without compensatory mitigation, and provides an activity specific waiver of this requirement. Describe the proposed compensatory mitigation for wetland losses greater than the New England District Compensatory Mitigation Thresholds or provide an explanation of why USACE should not require wetland compensatory mitigation for the proposed GP activity. If more space is needed, attach an extra sheet of paper marked Block 24.

Block 25. Is Any Portion of the General Permit Activity Already Complete? Describe any work that has already been completed for the GP activity.

Block 26. List the Name(s) of Any Species Listed As Endangered or Threatened under the Endangered Species Act that Might be Affected by the General Permit Activity. If you are not a federal agency, and if any listed species or designated critical habitat might be affected or is in the vicinity of the proposed GP activity, or if the proposed GP activity is located in designated critical habitat, list the name(s) of those endangered or threatened species that might be affected by the proposed GP activity or utilize the designated critical habitat that might be affected by the proposed GP activity. If you are a Federal agency, and the proposed GP activity requires a PCN, you must provide documentation demonstrating compliance with Section 7 of the Endangered Species Act.

Block 27. List Any Historic Properties that Have the Potential to be Affected by the General Permit Activity. If you are not a federal agency, and if any historic properties have the potential to be affected by the proposed GP activity, list the name(s) of those historic properties that have the potential to be affected by the proposed GP activity. Provide all relevant documentation about these historic properties in the PCN submittal. If you are a Federal agency, and the proposed GP activity requires a PCN, you must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

Block 28. List the Wild and Scenic River or Congressionally Designated Study River if the General Permit Activity Would Occur in such a River. If the proposed GP activity will occur in a river in the National Wild and Scenic River System or in a river officially designated by Congress as a “study river” under the Wild and Scenic Rivers Act, provide the name of the river. For a list of Wild and Scenic Rivers and study rivers, please visit http://www.rivers.gov/

Block 29. General Permit Activities that also Require Permission from the USACE Under 33 U.S.C. 408. If the proposed GP activity also requires permission from the USACE under 33 U.S.C. 408 because it will temporarily or permanently alter, occupy, or use a USACE federal authorized civil works project, indicate whether you have submitted a written request for section 408 permission from the USACE district having jurisdiction over that project.

Block 30. 401 Water Quality Certification. As described above, specify if the activity requires a 401 WQC from the certifying authority.

Block 31. Other Information Required For General Permit Pre Construction Notifications. The terms of some of the General Permits include additional information requirements for preconstruction notifications:

* Maintenance – information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.
* Temporary Construction, Access, and Dewatering – a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.
* Repair of Uplands Damaged by Discrete Events – documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration.
* Commercial Shellfish Aquaculture Activities – (1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the species that will be cultivated during the period this GP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area (a detailed survey is not required).Dredging – (1) a proposed sampling and analysis plan shall be provided to USACE for approval prior to its execution. Pre-application meetings are encouraged.
* Beach Nourishment – sediment grain size should be determined for the length of the beach where nourishment is proposed. The frequency and locations of sediment sampling shall be sufficient to identify the sediment composition of the beach profile. This data shall be consolidated to generate a sediment gradation curve for each sampled transect. Each sampled transect should also be identified on the project plans (drawings).

If more space is needed, attach an extra sheet of paper marked Box 31.

Block 32. Signature of Applicant or Agent. The PCN must be signed by the person proposing to undertake the GP activity, and if applicable, the authorized party (agent) that prepared the PCN. The signature of the person proposing to undertake the GP activity shall be an affirmation that the party submitting the PCN possesses the requisite property rights to undertake the GP activity (including compliance with special conditions, mitigation, etc.).

DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by the USACE. The permittee may ask the USACE to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the USACE does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. The 60-day PCN review period will not start until a delineation has been completed.

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross Section Map. Identify each illustration with a figure or attachment number. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient drawings should also be included. Please submit one copy of all drawings on 8½ x 11 inch plain white paper (electronic submissions preferred). Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

ADDITIONAL INFORMATION AND REQUIREMENTS

For proposed GP activities that involve discharges into waters of the United States, water quality certification from the State, Tribe, or EPA must be obtained or waived. Some States, Tribes, or EPA have issued water quality certification for one or more GPs. Please check the New England District website to see if water quality certification has already been issued for the GP(s) you wish to use. For proposed GP activities in coastal states, state Coastal Zone Management Act consistency concurrence must be obtained, or a presumption of concurrence must occur. Some States have issued Coastal Zone Management Act consistency concurrences for one or more GPs. Please check the New England District website to see if Coastal Zone Management Act consistency concurrence has already been issued for the GP(s) you wish to use.

APPENDIX C SELF-VERIFICATION NOTIFICATION

U.S. Army Corps of Engineers (USACE)

SELF-VERIFICATION NOTIFICATION (SVN)

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose This information will be used in evaluating activities under Self-Verification procedures within Massachusetts.

Routine Uses Routine uses will include: (1) Documenting compliance with the terms and conditions of the General Permit (GP) for activities that may require authorization pursuant to one or more of USACE's Regulatory authorities. (2) Records may be referred to other Federal, State, and local agencies for evaluation and enforcement purposes.

Disclosure Failure to fully comply and abide by the GP terms and conditions prior to commencing work and after completion project may result in formal enforcement action, up to and including monetary penalties and/or legal action, pursuant to 33 CFR Part 326.

Instructions The permittee must complete ALL required sections of this document before commencing USACE-regulated activities. A copy of this completed SVN must be kept on site during construction and be made available for review by USACE and other Federal, State, & Local regulatory authorities at any time. Within 30 days of initiating project construction, the permittee shall submit the completed SVN to USACE. The SVN shall be submitted to USACE as **ONE signed document** that includes project plans and documentation that supports each field (e.g., emails, letters, description, phone calls, surveys). Electronic submissions to the following address are strongly preferred: cenae-r-ma-sv@usace.army.mil. The email subject line shall contain the following: GP #, SVN, City/Town, and date submitted.

(ITEMS 1 THRU 3 TO BE FILLED BY USACE)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED

APPLICANT AND AGENT INFORMATION

4. APPLICANT'S NAME	7. AGENT'S ADDRESS:
First - Middle - Last -	First - Middle - Last -
Company -	Company -
E-mail Address -	E-mail Address -
5. APPLICANT'S ADDRESS:	8. AGENT'S ADDRESS:
Address-	Address-
City - State - Zip - Country -	City - State - Zip - Country -
6. APPLICANT'S PHONE NOs. w/AREA CODE	9. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business c. Fax	a. Residence b. Business c. Fax

NAME, LOCATION, AND DESCRIPTION OF PROJECT SITE

10. PROJECT NAME OR TITLE

11. FILE NUMBER(S) OF PREVIOUS USACE ACTIONS ON THE SITE (if applicable)	12. NAME OF WATERBODY
13. PROJECT COORDINATES (in decimal degrees)	14. PROJECT STREET ADDRESS (if applicable)
Latitude: ◦N Longitude: ◦W	Address
	City - State - Zip -

ACTIVITY TYPE, PROJECT IMPACTS, AVOIDANCE & MINIMIZATION

15. GENERAL PERMIT ACTIVITIES (CHECK ALL THAT APPLY)

1 ☐	6 ☐	11 ☐	16 ☐	21 ☐
2 ☐	7 ☐	12 ☐	17 ☐	22 ☐
3 ☐	8 ☐	13 ☐	18 ☐	23 ☐
4 ☐	9 ☐	14 ☐	19 ☐	24 ☐
5 ☐	10 ☐	15 ☐	20 ☐	25 ☐

16. SUMMARY OF PROJECT IMPACTS (*see instructions*)

Area (square feet)	Length (linear feet)	Volume (cubic yards)	Duration

17. PROJECT PLANS (BY CHECKING THE BOXES BELOW, YOU CERTIFY THESE ITEMS ARE COMPLETE) (*see instructions*)

- ☐ a. Plans shall at least contain the following: Vicinity Map, Plan View, and Typical Cross Section View of the proposed activity.
- ☐ b. All direct, indirect and secondary impacts from USACE regulated activities are shown on the project plans.
- ☐ c. The size of the impact area for each activity (acre, square feet, linear feet) are shown on the project plans.
- ☐ d. For discharges of fill material (§404), the volume of fill material is identified on the project plans.
- ☐ e. The duration of each impact, permanent or temporary (X days), is identified on the project plans.
- ☐ f. Do activities with permanent impacts result in the loss of waters? If so, this is identified on the project plans.
- ☐ g. All aquatic resources in the vicinity of the USACE regulated activities are delineated on the project plans.

18. AVOIDANCE & MINIMIZATION (BY CHECKING THE BOXES BELOW, YOU CERTIFY THESE CRITERIA ARE MET) (*see instructions*)

- ☐ a. The project has been designed to avoid and minimize impacts to aquatic resources.
- ☐ b. The footprint of activities in waters of the U.S. has been reduced to only what is necessary to achieve the overall project purpose.
- ☐ c. All practicable measures have been taken to avoid and minimize impacts to aquatic resources through construction techniques and site access (e.g., Best Management Practices, Time of Year Restrictions).
- ☐ d. All temporary impacts from USACE regulated activities will be restored upon completion of construction and the project area will be returned to pre-construction contours and conditions.

COMPLIANCE WITH FEDERAL REGULATIONS & SUPPLEMENTAL INFORMATION

19. DUE DILIGENCE (*see instructions*)

Complete the entries below to document compliance with the following Federal requirements. Construction may NOT begin if a PCN is/may be required, and you must contact USACE to determine permitting requirements. Documentation that demonstrates how the activity complies with each field below shall be submitted to the USACE as noted in the instructions block. See each General Condition (GC) in the GP for how to comply with each requirement.

a. State Historic Preservation Officer	Select Option
b. Massachusetts BUAR	Select Option
c. Tribal Historic Preservation Officers	Select Option
d. Endangered Species Act - NOAA	Select Option
e. Endangered Species Act - USFWS	Select Option
f. Northern Long Eared Bat (ESA)	Select Option
g. Essential Fish Habitat	Select Option
h. Wild & Scenic Rivers	Select Option
i. 401 Water Quality Certification 401	Select Option
	401 WQC/OOC File Number: OOC issued: 401 issued:
j. Section 408 Permission	Select Option
k. Coastal Zone	Select Option
l. Construction Mats	Select Option
m.Time of Year Restrictions	Select Option
n. Vernal Pools	Select Option
o. Sediment & Erosion Controls	Select Option
p. Stream/Wetland Crossings	Select Option

20. AQUACULTURE ACTIVITIES - GP 18 (*see instructions*)

- ☐ a. If required, an Aquaculture Certification from the Massachusetts Division of Marine Fisheries was obtained prior to commencing work.
- ☐ b. Coordination with the U.S. Coast Guard pursuant to Private Aids to Navigation has occurred prior to commencing work.
- ☐ c. If required, a MEPA Certificate was obtained from the Massachusetts Environmental Protection Agency prior to commencing work. Select Option
- ☐ d. The prospective permittee contacted local authorities (e.g. harbormaster, select board, shellfish constable) for authorization of their facility prior to commencing work.

21. ADDITIONAL INFORMATION/ATTACHMENTS (*see instructions*)

- ☐ a. The project plans are enclosed in this SVN submittal (see block 17).
- ☐ b. The activity Select Option funded through the Bipartisan Infrastructure Bill (also known as the Infrastructure Investment and Jobs Act).
- ☐ c. All required state, local and federal approvals were acquired prior to starting construction in USACE jurisdiction.
- ☐ d. After construction of the activity is completed, a complete Certificate of Compliance will be submitted to USACE.

22. IS THERE ANOTHER LEAD FEDERAL AGENCY:

☐ YES ☐ NO

23. STATEMENT OF AUTHORIZATION *(see instructions)*

I certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

24. SIGNATURES *(see instructions)*

I hereby certify that the information in this Self-Verification Notification is complete and accurate. As the applicant or their duly authorized agent, I certify the activity was completed in accordance with the terms and conditions of the GP. This includes all applicable terms, general conditions, and activity-specific GP criteria. I agree to allow the duly authorized representatives of the Corps of Engineers Regulatory Program and other regulatory or advisory agencies to enter upon the premises of the project site at reasonable times to evaluate inspect and photograph site conditions. This consent to enter the property is superior to, takes precedence over, and waives any communication to the contrary. For example, if the property is posted as “no trespassing” this consent specifically supersedes and waives that prohibition and grants permission to enter the property despite such posting.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions for Preparing a
Department of the Army
General Permit (GP) Self-Verification

Blocks 1 through 3. To be completed by the Corps of Engineers.

Block 4. Applicant' Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the self-verification, please attach a sheet of paper with the necessary information marked Block 4.

Block 5. Address of Applicant. Please provide the full address of the party or parties responsible for the self-verification. If more space is needed, attach an extra sheet of paper marked Block 5.

Block 6. Applicant Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 7 through 9. To be completed, if you choose to have an agent.

Block 7. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 8 and 9. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where they can be reached during normal business hours.

Block 10. Proposed General Permit Activity Name or Title. Please provide a name identifying the proposed GP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 11. File Number(s) of Previous USACE Actions on the Site Please provide any known USACE file number. If the activity does not have a known USACE file number, you may state N/A.

Block 12. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the GP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 13. Proposed Activity Coordinates. Please enter the latitude and longitude of where the proposed GP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 13.

Block 14. Proposed Activity Street Address. If the proposed activity is located at a site having a street address (not a box number), enter it in Block 14.

Block 15. General Permit Activity Type. Please select all GP activity types that apply to the proposed activity. A list of GP activity types can be found in Section III of the GP.

Block 16. Summary of Project Impacts. Please provide ALL proposed impacts, both temporary and permanent in duration, that are located in Waters of the United States. The area of impact shall be provided in square feet (SF). When applicable, impacts that result in conversion of stream bank or shoreline must also be identified in linear feet (LF). Dredging or the discharge of dredged or fill material shall also include the volume, cubic yards (CY), of material removed from or placed into Waters of the U.S. If more entries are required, please attach a table matching the desired format in Block 16.

Block 17. Project Plans. Please verify that items a-g are included in the project plans. Three types of illustrations are necessary to properly depict the proposed work. These illustrations or drawings are identified as a Vicinity Map, a Plan View (Aerial view) and a Cross Section Map. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient drawings (longitudinal profile) should also be included. Plans must accurately depict the existing conditions and all aspects of the proposed activity located in waters of the U.S. Please submit one copy of all drawings formatted to print on 8½ x 11 inch or 11 x 17 inch plain white paper. Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross section). While illustrations need not be certified engineering sheets; they should be clear, accurate, contain all necessary information, and depict all proposed work. Each submission must also include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by USACE.

Block 18. Avoidance & Minimization. Please verify that items a-d have been implemented for the proposed activity.

Block 19. Due Diligence. Please complete all the fields and submit documentation to USACE to demonstrate compliance with the above requirements. This Documentation may include emails, letters, meeting notes, phone call log, project narrative, project plans, a species list from the NOAA Section 7 Mapper, a completed copy of the IPAC determination keys, etc. Documentation should be limited to what is necessary to demonstrate how the proposed activity meets each requirement. Refer to the MA GP, Appendix A, for specific guidance on the identification of previously identified historic properties and previously unidentified historic properties. Endangered Species: *The applicant must be designated as the non-federal representative for the purposes of Section 7 consultation to select the Rangewide D-Key options. Otherwise, the applicant shall select the following option when IPAC indicates the NLEB is present: "The activity IS located within the NLEB Species Range (PCN Required)."

Block 20. Aquaculture Activities. Please verify that items a-d have been obtained or completed prior to commencing work in waters of the U.S.

Block 21. Additional Information/Attachments. Please verify that items a-d have been completed prior to commencing work in waters of the U.S.

Block 22. Lead Federal Agency. Please identify if there is another lead federal agency involved with the proposed activity. Enter the lead federal agency name (e.g., the Federal Emergency Management Agency, FEMA) and the agency's designated person of contact for the activity.

Block 23. Statement of Authorization. The applicant shall sign this section for all activities. If an agent is to be employed, the agent shall sign this section.

Block 24. Signatures. The SVN must be signed by the person proposing to undertake the GP activity, and if applicable, the authorized party (agent) that prepared the SVN. The signature of the person proposing to undertake the GP activity shall be an affirmation that the party submitting the SVN possesses the requisite property rights to undertake the GP activity.

US Army Corps of Engineers®
New England District

APPENDIX D: PCN APPLICATION CHECKLIST

The following information shall be submitted for all PCNs for USACE to properly evaluate your application. Some applications may require more information and this checklist is offered as a tool to assist applicants with submitting a complete application.

SECTION 1: GENERAL APPLICATION INFORMATION

1. ☐ Complete the Pre-Construction Notification document (Appendix B).
2. ☐ Specify which local/state/federal authorizations are required for the project and if any have been obtained or applied for at the time of USACE application submittal.
3. ☐ Identify all funding sources the project will receive or has received to date. Provide any relevant information in the application submission.
4. ☐ Is this part of a larger project that is being implemented in phases? If so, describe the project schedule and how each phase will be implemented.
5. ☐ Describe the existing conditions on the site and the general land use in the vicinity of the project at the time application submittal.
6. ☐ Provide any historic information available that you may have of project area, e.g., existing USACE permit numbers, the names under which the permits were obtained if the permit numbers are unknown, construction dates and proof of prior existence (aerials, photos, town hall records, affidavits, state or local permits, etc.) to verify that the project predates regulation and is "vested".[19]
7. ☐ The anticipated start and end dates for construction.

SECTION 2: WETLAND DELINEATION

8. ☐ Data used to support aquatic resource boundary determinations (delineation forms, delineation map(s) that show the locations of each aquatic resource in the project area, aerial and ground photographs, LIDAR imagery, national wetland inventory maps, soil maps, national hydrography dataset maps, floodplain maps, historical imagery, etc.).
9. ☐ Photographs of the wetland(s) and/or waterway(s) where impacts are proposed. Photos at low tide are preferred for work in tidal waters.
10. ☐ Indicate the relationship of the project area to waters of the U.S., i.e., adjacent wetlands, tidal influence or hydraulic connectivity through culverts, or other conveyances, etc.
11. ☐ At minimum the delineation map/figure should include the following:
    a. Contour lines showing topography.
    b. North arrow.
    c. Bar and text scale.
    d. Legend.
    e. Drawn project boundary.
    f. High tide line, mean high water, mean low water, ordinary high water mark, and/or wetland boundaries.
    g. Captions with a unique name for each aquatic resource and the area or length of the aquatic resource within the project area.

[19] Vested is exempt (someone or something) from a new law or regulation.

h. Appropriate landmarks and features (e.g., culverts, special aquatic sites, etc.).
i. Points showing the paired upland and wetland delineation locations for tidal and non-tidal wetlands only.

SECTION 3: AVOIDANCE & MINIMIZATION

12. ☐ Describe specific measures taken to avoid impacts to aquatic resources or describe why aquatic resources could not be avoided while achieving the project purpose and need.
13. ☐ For impacts to aquatic resources that could not be avoided, describe specific considerations/ measures taken to minimize the area of proposed impacts to aquatic resources in designing the project.
14. ☐ Describe specific measures taken to avoid and minimize the proposed direct, indirect, and secondary impacts to aquatic resources and their functions through construction techniques and timing.
15. ☐ If applicable, provide a restoration plan that describes how all temporary fills and structures will be removed and the area restored to pre-impact conditions (see GC 22).
16. ☐ If applicable, provide an Invasive Species Control Plan (see GC 29). For sample control plans, see www.nae.usace.army.mil/missions/regulatory/invasive-species.
17. ☐ If applicable, describe how the proposed wetland/waterbody crossing is compliant with GC 31, Stream Work and Crossings, and Wetland Crossings.

SECTION 4A: PROJECT IMPACTS

18. ☐ Describe the overall project and the activities located in Waters of the U.S. (WOTUS) that you are seeking authorization for.
19. ☐ Identify the following for project impacts in WOTUS:
    a. ☐ Direct, indirect, secondary impacts[20] within WOTUS.
    b. ☐ The size of each impact (square feet or acres, or linear feet).
    c. ☐ For discharges of fill material (§404), specify the volume of fill material to be discharged (cubic yards).
    d. ☐ The impact duration from each activity, permanent or temporary (X days).

SECTION 4B: PROJECT PLANS

20. ☐ Submit project plans that depict all impacts in WOTUS. On the project plans, applicants shall provide:

    General Information

    a. ☐ Plan view and typical cross-section view sheets that show the existing and proposed conditions. These illustrations should each be identified with a figure number, date of the map, the project title, the name of the applicant and the type of illustration (vicinity map, plan view, or cross section).
    b. ☐ Drawings, sketches, or plans that are legible, reproducible (color is encouraged, but features must be distinguishable in black and white), drawn to scale, and no larger than 11”x17” and 10 MB when submitted in digital format. Numeric and graphic/bar scales must agree, and plan details must be measurable using a standard engineer’s scale on printed plans. Reduced plans are not acceptable.
    c. ☐ The north arrow and remove miscellaneous non-wetland or water project related features such as conduits, utility poles, guardrails, etc.

[20] See definitions section for the definitions of direct, indirect, secondary impacts.

d. ☐ Clearly draw the overall limits of work, staging areas, disposal sites, access routes, and any permittee responsible mitigation sites. These areas may include both aquatic resources and upland areas.
e. ☐ Names or numbers of all roads in the site's vicinity and ownership and numbers of abutting parcels.
f. ☐ Datum in plan and elevation views. The horizontal datum shall be in the NAD 83 Massachusetts State Plane Coordinate System (INSERT) in U.S. survey feet. The vertical data in coastal projects shall be referenced to either MLLW or the North American Vertical Datum of 1988 (NAVD 88). Both the distance and depth units shall be U.S. survey feet and specified on the project plans.

Aquatic Resources & Project Impacts

g. ☐ Delineation of all aquatic resource types on site including salt marsh; other special aquatic sites (vegetated shallows, mudflats, riffles and pools, coral reefs, and sanctuaries and refuges); other waters, such as lakes, ponds, vernal pools, natural rocky habitat (tidal only), and perennial, intermittent, and ephemeral streams.
h. ☐ Identify the substrate type (cobble/gravel, organic detritus, sand/shell, silt, mud) and the approximate percentage of each substrate type on site. Grain sizes shall be based on Wentworth grain size classification scale for granules, pebbles, cobbles, and boulders. Sediment samples with a content of 10% or more of pebble-gravel-cobble and/or boulder in the top layer (6-12 inches) should be delineated and material with epifauna/macroalgae should be differentiated from bare pebble-gravel-cobble and boulder.
i. ☐ The direction of ebb and flood in tidal waters and direction of flow in non-tidal waters.
j. ☐ In tidal waters, the project boundary distance from special aquatic sites identified in 20g above if within 25 feet from that resource.
k. ☐ USACE jurisdictional boundaries including ordinary high-water mark (OHWM), high tide line (HTL), mean high water (MHW). Other boundaries include mean low water (MLW), mean lower low water (MLLW), as applicable.
   - Non-tidal: OHWM and/or wetland boundaries.
   - Tidal (structures/work only): MHW, MLW.
   - Tidal (Fill and Structures/work): HTL, MHW, MLW.
   - Tidal (Dredging/Beach Nourishment): HTL, MHW, MLW, MLLW.
l. ☐ Identification of each aquatic resource with a unique name (ex. Wetland 1, Wetland 2, Tributary 1, Beaver Brook, Atlantic Ocean) and the size of each aquatic resource within the project area (square feet or acres).
m. ☐ Impacts to each aquatic resource with captions denoting the size of each impact (square feet, acres, or linear feet) and the duration of the impact (ex. Permanent, Temporary (X days).

SECTION 4C: PROJECT PLANS - SPECIFIC PROJECT INFORMATION

21. ☐ For projects involving Navigation, Structures, Dredging, and/or Beach Nourishment, the applicant shall also address the following:

Navigation

a. ☐ Identify the locations of adjacent Federal navigation project (FNP) and/or state/local navigation projects on the project plans.
b. ☐ Specify the distance between the FNP and proposed project boundary, the authorized depths of the FNP, and state plane coordinates of seaward end(s) of project structures near an FNP.

Structures

a. ☐ Identification of the piling type (steel, timber, concrete) and diameter to be removed and/or installed.
b. ☐ Specify the minimal height of the structures' frame over saltmarsh. To meet the SV threshold, piers must be ≤4 feet in width and this minimal height must achieve a 1.5:1 ratio (i.e., a 4-foot-wide pier is 6 feet above a saltmarsh).
c. ☐ For floats, the methods of securing them (piles, bottom anchors) and for keeping them off substrate (skids, stops) at low water. To meet the SV threshold, a minimum depth of 18-inches of water should be maintained below a floating dock/structure at lower tide levels.

Dredging

a. ☐ The area (SF, acre) and volume (CY) of material to be dredged waterward of MHW for each dredge location.
b. ☐ Dredge boundaries.
c. ☐ Bathymetry for existing, proposed, and historical (include dates and USACE permits) dredge depths.
d. ☐ The likely final angle of repose of the side cuts based on the physical characterization of the material to be dredged and based upon the high/ medium/low, wave or current energy of the location.
e. ☐ Label area whether the dredging is new, maintenance, improvement, or a combination.
f. ☐ Location of the disposal site (include location sheet). NOTE: For projects proposing open water, nearshore disposal, or beach nourishment, contact USACE as early as possible for sampling and testing protocols. Sediment testing, including physical (e.g., grain-size analysis), chemical and biological testing may be required. Sampling/testing of sediments without such contact should not occur and if done, will be at the applicant's risk.
g. ☐ The methods and areas used to retain or prevent dredged material from running back into the wetland or waterway. Provide the capacity of the storage area and points of runback, including the overflow route, into the aquatic system.
h. ☐ For open-water disposal, explain why inland or beneficial reuse sites are not practicable.
i. ☐ Show the finished top elevation of the disposal site.

Beach Nourishment

a. ☐ For beach nourishment, identify the disposal footprint, existing and proposed nourishment profiles (multiple profiles are appropriate if the site is more than 150 feet long or non-contiguous), total fill area (SF) and volume (CY), fill area and volume waterward of the HTL, and delineation of dunes, banks, existing beach vegetation, and contours.
b. ☐ For beach nourishment identify the substrate type (fine sand, sand, cobble, boulder) and/or grain-size of existing material.

SECTION 5: STRUCTURES

22. ☐ For projects with the removal of existing pilings identify the number, type (steel, timber, concrete) and diameter of pilings to be removed and the methodology for removal (cut off at mud line, pulling, vibratory, etc.).
23. ☐ For projects with the installation of new pilings identify the number, type (steel, timber, concrete) and diameter of pilings to be installed and the methodology for installation (vibratory hammer, impact hammer etc.).
24. ☐ Identify any existing structures and moorings in waters adjacent to the proposed activity, their dimensions, and the distance to the limits and coordinates of any proposed mooring field or reconfiguration zone. For reconfiguration zone and mooring fields, provide the coordinates for all

corners based on the Massachusetts State Plane Coordinate System. Specify the maximum number of slips and/or moorings within proposed reconfiguration zones or anchorage areas.

25. ☐ The dimensions of the structure or work and extent of encroachment waterward of MHW and from affixed point on the shoreline or upland.
26. ☐ Shoreline of adjacent properties and property boundary offset for structures. In narrow waterbodies, the distance to opposite shoreline, waterway width, and structures across from proposed work.
27. ☐ For new commercial boating facilities, anchorage areas or reconfiguration zones, provide a description of the type of vessels that would use the facility, and any plans for sewage pump-out facilities, fueling facilities and contingency plans for oil spills.
28. ☐ See Sections 4A-C above.

SECTION 6: AQUACULTURE

29. ☐ Identify the coordinates for lease area corners and gear configuration area on the project plans.
30. ☐ Identify the proposed aquaculture gear type (buoys, floats, racks, trays, nets, lines, tubes, cages, containers, and other structures). Provide the impacts for each aquaculture gear type (see Section 4A 19a-d).
31. ☐ For a GP 18 to be valid, applicants must have (a) their MA DMF Aquaculture Certification letter for licensed shellfish aquaculture sites, (b) documentation that the applicant has coordinated with the U.S. Coast Guard regarding USCG Private Aids to Navigation standards, (c) their MEPA Certificate (if required), and (d) documentation that the applicant has contacted their local authorities (ex. harbormaster, select board, shellfish constable) for authorization of their facility.
32. Provide information on site the operation, maintenance, and access. Will the site be accessed via boat, kayak, etc.? Will cages be removed in the winter? How often will gear be checked on? Is there an operations plan for the proposed aquaculture area?
33. ☐ See Sections 4A-C above.

SECTION 7: DREDGING

34. ☐ Sampling plan requests for new, improvement or maintenance dredging must submit completed **Dredged Material Evaluation checklist found at Dredged Material Evaluation Checklist, Sampling and Analysis Plan Requirements from Applicant (army.mil)** and identify the method of handling/transporting the dredged material.
35. ☐ Identify grain-size of material to be dredged (e.g., silty sand) and provide any existing sediment grain size and bulk sediment chemistry data from the proposed project or nearby projects. Include information on any recent spills of oil and/or other hazardous materials and/or nearby outfalls. Document the information source, e.g., EPA database, the harbormaster or fire chief. If there are none, state “none”.
36. ☐ See Section 4A, 4B and 4C, Dredging 21(a-i) above.

SECTION 8: WETLAND/WATERBODY CROSSINGS

37. ☐ For the stream crossing, identify the crossing methodology on the project plan (e.g., dam and pump, dry, wet, etc.). Submit a waterway crossing sequencing plan with the application.
38. ☐ If the project includes a permanent crossing of a tidal waterway, your project design should be modified to match the velocity, depth, cross-sectional area, and substrate of the existing waterbody adjacent to the crossing and provide documentation (hydraulic analysis including low lying property analysis) that the size of the crossing will not restrict tidal flow over the full natural tide range and will not adversely affect abutting infrastructure.

39. ☐ If the work includes a permanent crossing of a non-tidal stream, your project design should be modified to match the culvert gradient of the existing stream channel profile, provide clearance for ≥1.2 times bank full width and conveyance should be embedded ≥1-2 feet for box culverts and pipe arches or ≥1-2 feet and at least 25 percent for rounded pipes/culverts in accordance with the Massachusetts Stream Crossing Standards. Provide the basis for any variation to this requirement.
40. ☐ If the work includes a permanent crossing of a non-tidal stream, the structure should be designed to include a natural bottom substrate within the conveyance that matches the characteristics of the substrate in the natural stream channel and the character of the banks (mobility, slope, stability, confinement, grain and rock size). The conveyance should be designed with a minimum openness ratio ≥0.82-feet (0.25-meters). For how to calculate openness ratio and stream simulation ecological approach for road and stream crossings, see https://www.nae.usace.army.mil/Missions/Regulatory/Stream-and-River-Continuity/.

SECTION 9: COMPENSATORY MITIGATION

41. ☐ Does the project require Compensatory Mitigation[21] for impacts to Waters of the U.S.? (See Section V in the 2023 Massachusetts General Permit)
42. ☐ If the project requires mitigation, does the selected compensatory mitigation option (i.e., In-Lieu Fee, permittee-responsible mitigation) deviate from the order of the options presented in §332.3(b)(2)-(6)? If so, please explain why. https://www.ecfr.gov/current/title-33/chapter-II/part-332/section-332.3
43. ☐ For any compensatory mitigation that involves preservation, the applicant must use a site protection instrument to preserve the parcel in perpetuity. (Conservation Easement, Deed Restriction, etc.) https://www.mass.gov/service-details/conservation-restriction-review-program.

SECTION 10: HISTORIC PROPERTIES & NOTIFICATIONS TO SHPO, THPOs, BUAR

44. ☐ Notify the SHPO, Massachusetts Historical Commission, of the Project via Certified Mail and include proof of delivery or receipt in the application package (See Appendix A).
45. ☐ As applicable, notify the THPOs, Narragansett Indian Tribe, Wampanoag Tribe of Gay Head (Aquinnah), and Mashpee Wampanoag Tribe, of the Project via email OR mail and include proof of delivery or receipt in the application package (See Appendix A).
46. ☐ As applicable, notify the BUAR via email (*strongly preferred*) OR mail and include proof of delivery or receipt in the application package (See Appendix A).
47. ☐ Include responses to this notification in the permit application.
48. ☐ As applicable, information on historic properties (Tribal and Archaeological) within the project area should be provided in the permit application.

SECTION 11: ENDANGERED SPECIES & ESSENTIAL FISH HABITAT

49. ☐ Provide a USFWS Information for Planning and Consultation (IPaC) Official Species List from https://ecos.fws.gov/ipac and the email of the individual who generated the list (see GC 10 of the 2023 Massachusetts General Permit for more information).
50. ☐ Provide a species list from the NMFS Section 7 Endangered Species Act mapper at https://noaa.maps.arcgis.com/apps/webappviewer/index.html.
51. ☐ Provide a species list from the NMFS Essential Fish Habitat Mapper at https://www.habitat.noaa.gov/apps/efhmapper/?page=page_3.

[21] Your mitigation proposal must be consistent with the December 29, 2020 Compensatory Mitigation Standard Operating Procedures at https://www.nae.usace.army.mil/Portals/74/docs/regulatory/Mitigation/Compensatory-Mitigation-SOP-2020.pdf and 2008 Mitigation Rule.

52. ☐ If the project will generate turbidity, describe the extent of turbidity and if erosion controls will be used to contain turbidity. If turbidity controls are not operationally feasible, explain the basis for your conclusion and identify any other measures that you will implement to minimize resuspension of sediment.
53. ☐ Identify the substrate type and any aquatic resources that will be affected by the proposed action. (SAV, salt marsh, sand, silt/clay, rocky/hard bottom)
54. ☐ For projects which will include the installation of pilings/sheet-piles, identify the substrate at the project site (sand, cobble, silt/mud/clay), the installation method (vibratory hammer, impact hammer, combination) and indicate whether the following “soft start” procedures at beginning of the workday and after a 30-minute period of rest will be deployed:
    a. ☐ Vibratory Pile Installation: pile driving will be initiated for 15 seconds at reduced energy followed by a one-minute waiting period. This sequence of 15 seconds of reduced energy driving, one-minute waiting period will be repeated two additional times, followed immediately by pile-driving at full rate and energy.
    b. ☐ Impact Pile Installation: pile driving will commence with an initial set of three strikes by the hammer at 40% energy, followed by a one-minute wait period, then two subsequent 3-strike sets at 40% energy, with one-minute waiting periods, before initiating continuous impact driving.
55. ☐ If the project involves dredging, describe any dredge history, number of dredge events to be covered by the permit, erosion/sediment controls, dredge type, intake structures (mesh screen size), dredged material disposal site.
56. ☐ For project activities associated with structures, identify the number, type (drill barge, work boat, tugboat, etc.), and size of any temporary vessels that will be used. Specify measures that will be implemented to ensure vessels are not berthed in shallow water or will “ground out” at low tide.
57. ☐ For aquaculture projects identify whether any component of the gear is seasonal (will be removed annually) or will be in place year-round. If gear will be present year-round and will be variably managed (e.g., floating in summer, bottom in winter) identify month/date for such configurations.
58. ☐ For aquaculture projects identify whether the project will involve use of an existing vessel or new vessel. Identify the length for all work vessels and identify the distance round trip from vessel berthing location and aquaculture area.
59. ☐ For project activities associated with docking structures (either commercial, industrial, or recreational) identify the number, type (motorized/non-motorized, jet-ski, sailboat, kayak, canoe, other that will be berthed there and the sizes of each.
60. ☐ Information required for Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act:
    a. Results of an eelgrass survey completed per the INSERT.
    b. Essential Fish Habitat Assessment to determine project-related impacts to essential fish habitat, using guidance developed by the National Marine Fisheries Service.
61. ☐ A document containing the following information (requirements of 50 CFR §600.920(e)(3)):
    a. Description of proposed action.
    b. Analysis of potential adverse effects on essential fish habitat.
    c. Conclusions regarding the effects of the action on essential fish habitat.
    d. If applicable, proposed mitigation.
    e. Analysis of alternatives to the proposed action.
    f. Other:

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DOCUMENT A00855

UNITED STATES DEPARTMENT OF THE INTERIOR

FISH AND WILDLIFE SERVICE

CONSISTENCY LETTER

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 3301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: 03/03/2026 19:05:02 UTC
Project code: 2025-0085188
Project Name: 613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)

Federal Nexus: yes
Federal Action Agency (if applicable): Federal Highway Administration

Subject: Federal agency coordination under the Endangered Species Act, Section 7 for '613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)'

Dear Emily Puglisi:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on March 03, 2026, for '613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)' (here forward, Project). This project has been assigned Project Code 2025-0085188 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements may not be complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (DKey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid. Note that conservation measures for northern long-eared bat and tricolored bat may differ. If both bat species are present in the action area and the key suggests more conservative measures for one of the species for your Project, the Project may need to apply***

the most conservative measures in order to avoid adverse effects. If unsure which conservation measures should be applied, please contact the appropriate Ecological Services Field Office.

Determination for the Northern Long-Eared Bat and Tricolored Bat

Based on your IPaC submission and a standing analysis completed by the Service, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Northern Long-eared Bat (*Myotis septentrionalis*)	Endangered	NLAA
Tricolored Bat (*Perimyotis subflavus*)	Proposed Endangered	NLAA

Federal agencies must consult with U.S. Fish and Wildlife Service under section 7(a)(2) of the Endangered Species Act (ESA) when an action *may affect* a listed species. Tricolored bat is proposed for listing as endangered under the ESA, but not yet listed. For actions that may affect a proposed species, agencies cannot consult, but they can *confer* under the authority of section 7(a)(4) of the ESA. Such conferences can follow the procedures for a consultation and be adopted as such if and when the proposed species is listed. Should the tricolored bat be listed, agencies must review projects that are not yet complete, or projects with ongoing effects within the tricolored bat range that previously received a NE or NLAA determination from the key to confirm that the determination is still accurate.

Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that consultation on the Action is complete for northern long-eared bat and/or tricolored bat and no further action is necessary unless either of the following occurs:

- new information reveals effects of the action that may affect the northern long-eared bat or tricolored bat in a manner or to an extent not previously considered; or,
- the identified action is subsequently modified in a manner that causes an effect to the northern long-eared bat or tricolored bat that was not considered when completing the determination key.

15-Day Review Period

As indicated above, the Service will notify you within 15 calendar days if we determine that this proposed Action does not meet the criteria for a “may affect, not likely to adversely affect” (NLAA) determination for the northern long-eared bat and/or tricolored bat. If we do not notify you within that timeframe, you may proceed with the Action under the terms of the NLAA concurrence provided here. This verification period allows the identified Ecological Services Field Office to apply local knowledge to evaluation of the Action, as we may identify a small subset of actions having impacts that we did not anticipate when developing the key. In such cases, the identified Ecological Services Field Office may request additional information to verify the effects determination reached through the Northern Long-eared Bat and Tricolored Bat DKey.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Proposed Threatened

You may coordinate with our Office to determine whether the Action may affect the species and/or critical habitat listed above. Note that reinitiation of consultation would be necessary if a new species is listed or critical habitat designated that may be affected by the identified action before it is complete.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference Project Code 2025-0085188 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

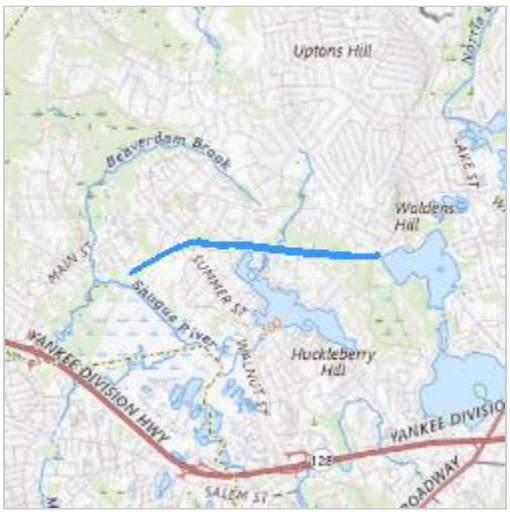
613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)

2. Description

The following description was provided for the project '613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)':

> 613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)
> Phase 1 consists of about 1.8 miles of shared-use path, extending from Ford Avenue in Lynnfield to Nichols Lane in Peabody with two roadway crossings at Summer Street and Pillings Pond Road. The path is 12 feet wide with 2-foot-wide grass shoulders constructed mostly on the former railroad track bed. The project scope also includes minor landscaping, trail amenities (benches, interpretive signage, bicycle racks, etc.), wetland replication, removal of former railroad structures, ADA compliant pedestrian curb ramps at crossings, a pedestrian activated warning beacon, traffic signage, and pavement markings.
>
> Monarch Butterfly: Proposed Threatened Species. Due to MassDOT's enrollment in the Monarch Butterfly Nationwide CCAA, the action is Not Likely to Jeopardize the continued existence of the monarch butterfly.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.53537395,-71.01908928244046,14z



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for a least one species covered by this determination key.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Note for projects in Pennsylvania: Projects requiring authorization under Section 404 of the Clean Water Act and/or Section 10 of the Rivers and Harbors Act would be considered as having a federal nexus. Since the U.S. Army Corps of Engineers (Corps) has issued the Pennsylvania State Programmatic General Permit (PASPGP), which may be verified by the PA Department of Environmental Protection or certain Conservation Districts, the need to receive a Corps authorization to perform the work under the PASPGP serves as a federal nexus. As such, if proposing to use the PASPGP, you would answer ‘yes’ to this question.

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   Yes

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

   No

10. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum or winter roost? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your state wildlife agency.

    Automatically answered

    No

11. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

    No

12. Does the action area contain (1) talus or (2) anthropogenic or naturally formed rock shelters or crevices in rocky outcrops, rock faces or cliffs?

    No

13. Will the action cause effects to a bridge?

    Note: Covered bridges should be considered as bridges in this question.

    No

14. Will the action result in effects to a culvert or tunnel at any time of year?

    Yes

15. Does the culvert or tunnel equal or exceed 23 feet (7.0 meters) in length?

    Yes

16. Do the interior dimensions of the culvert or tunnel **equal or exceed 3.0 feet (0.9 meters) in height (minimum height for tricolored bat)**?

    Yes

17. Has the local Service Field Office confirmed that culvert surveys are not needed because project activities are not expected to impact bats, or because NLEBs and TCBs are not using culverts within the action area?

    No

18. Has a site-specific culvert assessment following USFWS guidelines been completed?

    Note: For information on conducting a bridge/structure assessment, please see Appendix K in the USFWS' Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines at:https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines Additional resources can be found at: https://www.fws.gov/media/bats-and-transportation-structures-references-and-additional-resources and a training video is located at: https://www.youtube.com/watch?v=iuFwkT7q8Ws.

    Yes

    SUBMITTED DOCUMENTS

    - *613163 Lynnfield Culvert Inspection Final.pdf https://ipac.ecosphere.fws.gov/project/EBFJPKMMOZCVJMVLMQK357OQ4Y/projectDocuments/161548583*

19. Was evidence of bat use found during the bridge/structure (e.g., culvert) assessment?

    No

20. Did you coordinate with your local Ecological Services Field Office (ESFO) and receive approval of culvert assessment results? If NO, please contact the appropriate local ESFO before completing this determination key.

    Yes

21. Are trees present within 1000 feet of the action area?

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

22. Does the action include the intentional exclusion of bats from a building or building-like structure? **Note:** Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

    No

23. Does the action involve removal, modification, or maintenance of a human-made building-like structure (barn, house, or other building) **known or suspected to contain roosting bats?**

    No

24. Will the action cause construction of one or more new roads open to the public?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

25. Will the action include or cause any construction or other activity that is reasonably certain to increase average night-time traffic permanently or temporarily on one or more existing roads? **Note:** For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

    No

26. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

27. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

    Note: For information regarding NSF/ANSI 60 please visit https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects

    No

28. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

    No

29. Will the action include drilling or blasting?

    No

30. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use at night)?

    No

31. Will the proposed action involve the use of herbicides or pesticides (e.g., fungicides, insecticides, or rodenticides)?

    No

32. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season?

    Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining.

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

33. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable northern long-eared bat or tricolored bat roosting habitat?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

34. Will the action cause an increase in the extent of suitable forested habitat exposed to artificial lighting?

    No

35. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

    Yes

36. Is the project related to the production of coal, including projects that support the mining of coal, as well as the production and/or distribution of energy produced from coal?

    No

37. Will the proposed action occur exclusively in an already established and currently maintained utility right-of-way?

    No

38. Does the action include emergency cutting or trimming of hazard trees in order to remove an imminent threat to human safety or property? See hazard tree note at the bottom of the key for text that will be added to response letters

    Note: A "hazard tree" is a tree that is an immediate threat to lives, public health and safety, or improved property.

    No

39. Does the project intersect with the 0- 9.9% forest density category?

    Automatically answered
    No

40. Does the project intersect with the 10.0- 19.9% forest density category map?

    Automatically answered
    No

41. Does the project intersect with the 20.0- 29.9% forest density category map?

    Automatically answered
    No

42. Does the project intersect with the 30.0- 100% forest density category map?

    Automatically answered
    Yes

43. Will the action cause trees to be cut, knocked down, or otherwise brought down across an area greater than 100 acres in total extent?

    No

44. Will the proposed action result in the use of prescribed fire?

    Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

    No

45. Does the action area intersect the northern long-eared bat species list area?

    Automatically answered
    Yes

46. [Semantic] Is the action area located within 0.5 miles of radius of an entrance/opening to any known NLEB hibernacula or winter roost? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

47. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats? **Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

48. [Semantic] Is the action area located within 150 feet of a documented northern long-eared bat roost site?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.Have you contacted the appropriate agency to determine if your action is within 150 feet of any documented northern long-eared bat roosts?

    Note: A document with links to Natural Heritage Inventory databases and other state-specific sources of information on the locations of northern long-eared bat roosts is available here. Location information for northern long-eared bat roosts is generally kept in state natural heritage inventory databases – the availability of this data varies by state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited.

    Automatically answered
    No

49. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?
    If unsure, answer "Yes."

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

50. Are any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming suitable for northern long-eared bat roosting (i.e., live trees and/or snags ≥3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities)?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

51. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Fall Swarming season** for northern long-eared bats in the action area? **Note:** Bat activity periods for your state can be found in Appendix 2 of the Service's Northern long-eared Bat and Tricolored Bat Voluntary Environmental Review Process for Development Projects.

    No

52. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Spring Staging** season for northern long-eared bats in the action area? **Note:** Bat activity periods for your state can be found in Appendix 2 of the Service's Northern long-eared Bat and Tricolored Bat Voluntary Environmental Review Process for Development Projects.

    No

53. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Summer Occupancy season** for northern long-eared bats in the action area? **Note:** Bat activity periods for your state can be found in Appendix 2 of the Service's Northern long-eared Bat and Tricolored Bat Voluntary Environmental Review Process for Development Projects.

    No

54. Does the action area intersect the tricolored bat species list area?

    Automatically answered
    Yes

55. Is the action area located within 0.5-mile of radius of an entrance/opening to any known tricolored bat hibernacula or winter roost?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your state wildlife agency.

    Automatically answered
    No

56. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats? **Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

57. Is suitable summer habitat for the tricolored bat present within 1000 feet of project activities?
(If unsure, answer ""Yes."")

Note: If there are trees within the action area that may provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (Tillandsia usneoides), clusters of dead pine needles of large live pines) answer ""Yes."" For a complete definition of suitable summer habitat for the tricolored bat, please see Appendix A in the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

Yes

58. Do any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pine trees)?

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

Yes

59. Will any tree cutting/trimming or other knocking or bringing down of trees be conducted during the Pup Season for tricolored bat? **Note:** Bat activity periods for your state can be found in Appendix 2 of the Service's Northern Long-eared Bat and Tricolored Bat Voluntary Environmental Review Process for Developmental Projects.

No

60. Do you have any documents that you want to include with this submission?

Yes

SUBMITTED DOCUMENTS

- *Lynnfield_613163_memo_20251027.pdf https://ipac.ecosphere.fws.gov/project/EBFJPKMMOZCVJMVLMQK357OQ4Y/projectDocuments/177614733*

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

7.5

IPAC USER CONTACT INFORMATION

Agency: Massachusetts Department of Transportation
Name: Emily Puglisi
Address: 10 Park Plaza
City: Boston
State: MA
Zip: 02116
Email emily.a.puglisi@dot.state.ma.us
Phone: 6178964424

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

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DOCUMENT A00856

Northern Long-Eared Bat (NLEB) Presence/Absence Survey

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October 27, 2025

Dave Paulson
Wildlife and Endangered Species Program Supervisor
Massachusetts Department of Transportation – Highway Division
Ten Park Plaza, Room 7360
Boston, MA 02116-3973
David.J.Paulson@dot.state.ma.us
(857) 262-3378

Project	Bat Presence/Absence Acoustic Survey
MassDOT Project #	613163
MassDOT Project Title	Lynnfield #613163
Town	Lynnfield, Massachusetts
Surveyor Name/Firm	*Alex Pries / Stantec Consulting Services Inc.*
Detector Operation Dates	June 4–June 9, 2025
Acoustic Survey Results	**NLEB NOT CONFIRMED**
Acoustic Survey Results	**PESU CONFIRMED**
Acoustic Survey Results	**MYLU CONFIRMED**
Acoustic Survey Results	**MYLE CONFIRMED**

Dear Mr. Paulson,

This report contains the results of the Massachusetts Department of Transportation (MassDOT) bat summer presence/absence survey performed for the MassDOT Project #613163, in Lynnfield, Massachusetts. Acoustic detectors deployed by Stantec Consulting Services Inc. detected the following species:

- *Did not* detect the presence of federally endangered northern long-eared bat (*Myotis septentrionalis*, hereafter NLEB), as zero calls were confirmed through manual vetting.
- *Did* detect the presence of federally proposed endangered and state endangered tricolored bat (*Perimyotis subflavus*), as seven bat passes were confirmed through manual vetting.
- *Did* detect the presence of state endangered little brown bat (*Myotis lucifugus*), as 39 bat passes were confirmed through manual vetting.
  Did detect the presence of state endangered eastern small-footed bat (*Myotis leibii*), as six bat passes were confirmed through manual vetting.

Sincerely,

Stantec Consulting Services Inc.

Alex Pries

Senior Project Manager
Phone: (603) 260-7434
Alex.Pries@Stantec.com

Attachments: NLEB Survey Report for Lynnfield #613163

To: Dave Paulson
Wildlife and Endangered Species Program Supervisor
(857) 262-3378
David.J.Paulson@dot.state.ma.us
Massachusetts Department of Transportation – Highway Division

From: Alex Pries
Senior Project Manager
Phone: (603) 260-7434
Alex.Pries@Stantec.com
Stantec Consulting Services Inc.

Project/File: 179411306

Date: October 27, 2025

Reference: MassDOT 2025 Bat Presence/Absence Acoustic Survey, Lynnfield #613163

INTRODUCTION

Massachusetts Department of Transportation (MassDOT) Project #613163 (Project) is the proposed construction of a rail trail along an existing railroad bed from Ford Avenue to Nichols Lane in Lynnfield, Massachusetts. Proposed work includes tree and vegetation removal where needed to aid construction activities, including trees that meet the US Fish and Wildlife Service (USFWS) definition of rare bat habitat suitability. MassDOT requested an acoustic survey to determine probable presence or absence of bat species and retained Stantec Consulting Services Inc. (Stantec) to conduct an acoustic bat survey for bats following the *2024 USFWS Range-wide Indiana Bat & Northern Long-eared Bat Survey Guidelines* (USFWS Guidelines).[1]

Stantec followed USFWS Guidelines to evaluate presence or probable absence of state- and/or federally listed and other bat species. The federally endangered Indiana bat (*Myotis sodalis*) is included in the USFWS Guidelines, but is not thought to occur in this part of the state and was not included in the analysis. Stantec provided the USFWS Study Plan Form for Bat Surveys and Monitoring to the USFWS on May 14, 2025, and did not receive a response from USFWS. MassDOT provided instructions to Stantec to proceed with the survey via telephone call. Stantec biologists used four acoustic detectors to complete an acoustic bat survey at the Project. This report is a summary of the acoustic bat survey findings and based on Stantec's field survey efforts conducted in summer 2025.

METHODS

Stantec treated the Project as linear and, following USFWS Guidelines, deployed four full-spectrum acoustic bat detectors (Wildlife Acoustics SMMINI-BAT), one for each kilometer of the Project, each with an internal omnidirectional microphone oriented 45° (angled up) from the ground. Surveys targeted at least four nights with the following suitable weather conditions as specified in the USFWS Guidelines (during the first five hours past sunset): temperatures remain above 50 degrees Fahrenheit, wind speeds do not exceed 9 miles per hour for 30 minutes or more, and precipitation does not occur for 30 minutes or more. Weather conditions were monitored at the nearby weather station: KMALYNNF11.[2]

Stantec programmed the detectors to record bat activity from 30 minutes before sunset until 30 minutes after sunrise as determined by the latitude and longitude of the site. Stantec programmed the detectors using default settings, including a 12-decibel gain, 256-kilohertz (kHz) sample rate, 16-kHz minimum trigger frequency, 3-second trigger window, and 15-second maximum file length. The detectors were powered by

[1] US Fish and Wildlife Service. 2024. Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines. US Fish and Wildlife Service, Region 3, Bloomington, MN. 95 pp.
[2] Weather Underground, Wing - KMALYNNF11, https://www.wunderground.com/dashboard/pws/KMALYNNF11

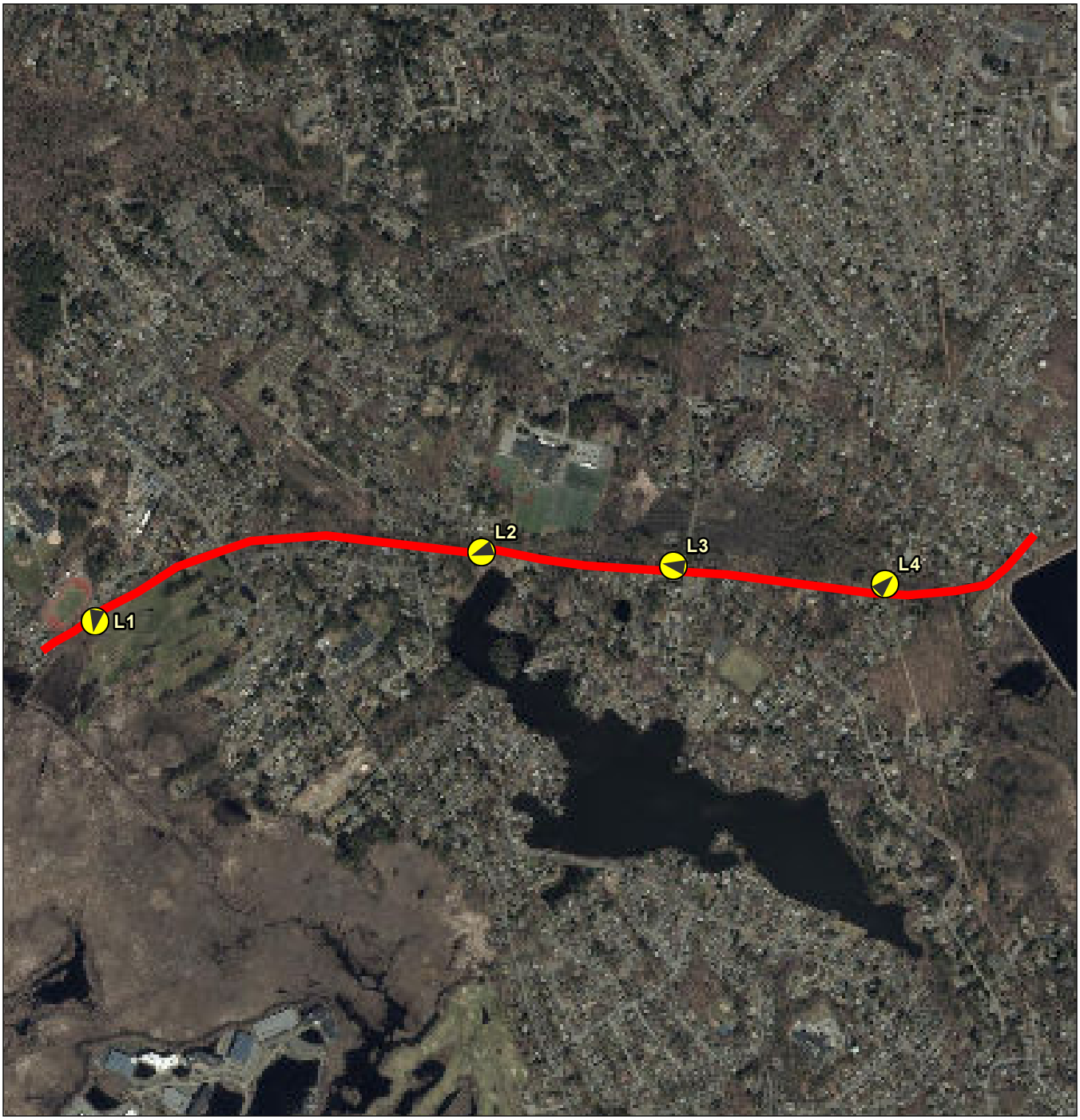
internal alkaline batteries and equipped with a 256-gigabyte SD card. Stantec deployed each detector on a temporary extendable pole at a height of approximately 3 meters above ground level per USFWS Guidelines (see detector datasheet in Attachment A for photos). The detectors were oriented to survey the Project where construction is proposed to occur (Figure 1).

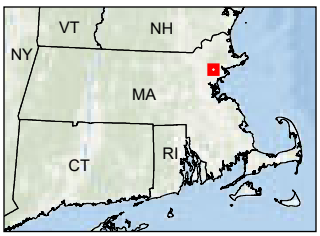
Stantec processed data from all survey nights using Kaleidoscope Pro (Kpro) software (Version 5.7.0) using autoclassifier version 5.7.0 (S/A: -1) with the species set selected for Massachusetts, excluding Indiana bat, which is not known to occur in Essex County. According to USFWS Guidelines, a nightly maximum likelihood estimator (MLE) of less than 0.05 indicates likely presence of a bat species and a nightly MLE equal to or greater than 0.05 indicates unlikely species presence (probable absence). Regardless of nightly MLE, Stantec completed qualitative analysis (visual vetting) of all files classified as a federally listed or candidate for federal listing species (i.e., northern long-eared bat [NLEB; *Myotis septentrionalis*] and tricolored bat [*Perimyotis subflavus*]). Visual vetting evaluated the accuracy of these species' classifications by Kpro per recommendations outlined on the USFWS's *Automated Acoustic Bat ID Software Programs* website.[3] For detector-nights with files classified as federally listed or candidate for federal listing species, Stantec also visually vetted files containing pulses with a characteristic frequency ≥38 kHz to determine possible target species presence. In accordance with the provided 2025 MassDOT Protocol for Visual Vetting (2025 MassDOT Bat Detector Survey Guidance, and Report Documentation & Deliverables), Stantec also visually vetted files classified as state-listed species (i.e., little brown bat [*Myotis lucifugus*] and eastern small-footed bat [*Myotis leibii*]) using the following guidelines:

- If there are under 10 auto-classified calls of an individual state-listed species, manually review and confirm all calls.
- If there are between 11 and 100 auto-classified calls of an individual state-listed species, manually review at least 10 calls and until at least one call is confirmed.
- If there are more than 100 auto-classified calls of an individual species, manually review and confirm at least 10% of the calls and until at least one call is confirmed.

Visual vetting was conducted by biologists who are highly experienced in acoustic bat identification (Laura Berube and JT Layne). Resumes for qualified biologists are included in Attachment B. Determination of species presence each night for target species was based on visual vetting. Stantec also compiled file-level results from Kpro analysis, including visual vetting, to create electronic data compatible with the North American Bat Monitoring Program (NABat) dataset and USFWS Bat Reporting Spreadsheets (electronic deliverable).

[3] USFWS's Automated Acoustic Bat ID Software Programs. Available at: https://www.fws.gov/media/automated-acoustic-bat-id-software-programs. Accessed September 3, 2025.





Legend

- Acoustic Survey Location and Detector Direction
- Project Area

0 1,500 Feet

(At original document size of 8.5x11)
1" = 1,500'

N

Stantec

Notes

1. Coordinate System: NAD 1983 StatePlane Massachusetts Mainland FIPS 2001
2. Data Sources: MassDOT, Stantec
3. Background: Massachusetts 2021 MassGIS Color Orthoimagery

Project Location
Lynnfield, Massachusetts

Prepared by MC on 2025-09-16
TR by GC on 2025-09-16
IR Review by AP on 2025-09-16

Client/Project 179411306
Massachusetts Department of Transportation
2025 Bat Presence/Absence Acoustic Survey

Figure No.
1

Title
2025 Bat Presence/Absence Acoustic Survey Location – Lynnfield 613163

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RESULTS

During the detector deployment, potential suitable bat roosting, traveling, drinking, and foraging habitat was documented in the vicinity of the detectors. Potential habitat surrounding the detector locations included forested habitat interspersed with residential land use and a golf course adjacent to the westernmost detector site (Detector 1; Attachment A).

Acoustic surveys occurred between the nights of June 4 and June 9, 2025 (Table 1). Stantec removed the detectors from the field after surveying for six nights, all of which consisted of suitable weather conditions, for a total of 24 acceptable detector-nights (exceeding the USFWS Guidelines' minimum recommendation of 16 detector-nights). Kpro auto-classification determined significant nightly MLEs (MLE of <0.05) for big brown bat (*Eptesicus fuscus*), eastern red bat (*Lasiurus borealis*), hoary bat (*Lasiurus cinereus*), and silver-haired bat (*Lasionycteris noctivagans*). Kpro auto-classified 126 files as northern long-eared bat, 27 files as tricolored bat, 349 files as little brown bat, 106 files as eastern small-footed, and determined a significant nightly MLE (MLE of <0.05) for each of these species (Table 1).

Visual vetting, per the 2025 MassDOT Protocol for Visual Vetting, concluded the probable presence of tricolored bat within seven files, little brown bat within 39 files, and eastern small-footed bat within six files (Table 1). The NLEB files were visually vetted and did not contain enough information for species-level determination or were produced by big brown bat or eastern red bat (Table 1). Examples of auto-classified files that were recorded at the detector sites during the acoustic survey and were visually vetted can be found in Attachment C.

Table 1. Results of Automated Analysis using Kaleidoscope Pro Software and Visual Vetting of State- and Federally Listed Species (MassDOT Project #613163) for the Acoustic Bat Survey in the town of Lynnfield in Essex County, Massachusetts.

Species	Site	Night of	Met Weather Conditions	# passes (nightly MLE)	Visual vetting notes
eastern small-footed	L1	6/4/2025	yes	1 (1)	Likely presence confirmed in 1 file based on visual vetting.
		6/5/2025	yes	1 (1)	File did not contain enough information for species-level determination based on visual vetting.
		6/6/2025	yes	1 (0.23)	File did not contain enough information for species-level determination based on visual vetting.
		6/7/2025	yes	0 (1)	No files classified.
		6/8/2025	yes	0 (1)	No files classified.
		6/9/2025	yes	0 (1)	No files classified.
	L2	6/4/2025	yes	1 (0.15)	Files did not contain enough information for species-level determination based on visual vetting.
		6/5/2025	yes	1 (0.05)	Files did not contain enough information for species-level determination based on visual vetting.
		6/6/2025	yes	0 (1)	No files classified.
		6/7/2025	yes	0 (1)	No files classified.
		6/8/2025	yes	1 (0.24)	Files did not contain enough information for species-level determination based on visual vetting.
		6/9/2025	yes	1 (0.26)	Likely presence confirmed in 1 file based on visual vetting.
	L3	6/4/2025	yes	0 (1)	No files classified.
		6/5/2025	yes	0 (1)	No files classified.
		6/6/2025	yes	0 (1)	No files classified.
		6/7/2025	yes	0 (1)	No files classified.
		6/8/2025	yes	3 (<0.01)	Likely presence confirmed in 1 file based on visual vetting.
		6/9/2025	yes	0 (1)	No files classified.
	L4	6/4/2025	yes	3 (<0.01)	Files did not contain enough information for species-level determination based on visual vetting.
		6/5/2025	yes	32 (0)	Likely presence confirmed in 1 file based on visual vetting.
		6/6/2025	yes	38 (0)	Likely presence confirmed in 2 files based on visual vetting.
		6/7/2025	yes	4 (<0.01)	Files did not contain enough information for species-level determination based on visual vetting.
		6/8/2025	yes	19 (0)	Files did not contain enough information for species-level determination based on visual vetting.
		6/9/2025	yes	0 (1)	No files classified.
little brown	L1	6/4/2025	yes	37 (0.12)	Files did not contain enough information for species-level determination or contained bat passes produced by eastern red bat based on visual vetting.
		6/5/2025	yes	35 (<0.01)	Likely presence confirmed in 1 file based on visual vetting.
		6/6/2025	yes	23 (1)	Likely presence confirmed in 1 file based on visual vetting.
		6/7/2025	yes	4 (1)	Files did not contain enough information for species-level determination or contained bat passes produced by eastern red bat based on visual vetting.

Species	Site	Night of	Met Weather Conditions	# passes (nightly MLE)	Visual vetting notes
		6/8/2025	yes	26 (0.14)	Likely presence confirmed in 2 files based on visual vetting.
		6/9/2025	yes	3 (0.5)	Files did not contain enough information for species-level determination based on visual vetting.
	L2	6/4/2025	yes	1 (0.52)	Likely presence confirmed in 1 file based on visual vetting.
		6/5/2025	yes	1 (0.12)	Files did not contain enough information for species-level determination based on visual vetting.
		6/6/2025	yes	5 (<0.01)	Files did not contain enough information for species-level determination based on visual vetting.
		6/7/2025	yes	0 (1)	No files classified.
		6/8/2025	yes	3 (<0.01)	Likely presence confirmed in 1 file based on visual vetting.
		6/9/2025	yes	0 (1)	No files classified.
	L3	6/4/2025	yes	1 (0.13)	File did not contain enough information for species-level determination or contained bat passes produced by eastern red bat based on visual vetting.
		6/5/2025	yes	1 (0.61	File did not contain enough information for species-level determination based on visual vetting.
		6/6/2025	yes	1 (0.84)	File did not contain enough information for species-level determination based on visual vetting.
		6/7/2025	yes	0 (1)	No files classified.
		6/8/2025	yes	6 (<0.01)	Likely presence confirmed in 1 file based on visual vetting.
		6/9/2025	yes	3 (<0.01)	Files did not contain enough information for species-level determination based on visual vetting.
	L4	6/4/2025	yes	11 (0.25)	Likely presence confirmed in 5 files based on visual vetting.
		6/5/2025	yes	57 (0)	Likely presence confirmed in 8 files based on visual vetting.
		6/6/2025	yes	67 (0)	Likely presence confirmed in 9 files based on visual vetting.
		6/7/2025	yes	1 (1)	Likely presence confirmed in 1 file based on visual vetting.
		6/8/2025	yes	59 (<0.01)	Likely presence confirmed in 9 files based on visual vetting.
		6/9/2025	yes	4 (1)	Files did not contain enough information for species-level determination based on visual vetting.
northern long-eared	L1	6/4/2025	yes	0 (1)	No files classified.
		6/5/2025	yes	2 (1)	Files did not contain enough information for species-level determination based on visual vetting.
		6/6/2025	yes	0 (1)	No files classified.
		6/7/2025	yes	0 (1)	No files classified.
		6/8/2025	yes	0 (1)	No files classified.
		6/9/2025	yes	0 (1)	No files classified.
	L2	6/4/2025	yes	1 (0.5)	File was determined to contain a bat pass produced by a big brown bat based on visual vetting.
		6/5/2025	yes	0 (1)	No files classified.
		6/6/2025	yes	3 (0.08)	Files did not contain enough information for species-level determination or contained bat passes produced by big brown bat based on visual vetting.
		6/7/2025	yes	0 (1)	No files classified.

Species	Site	Night of	Met Weather Conditions	# passes (nightly MLE)	Visual vetting notes
		6/8/2025	yes	2 (0.25)	Files did not contain enough information for species-level determination based on visual vetting.
		6/9/2025	yes	3 (<0.01)	File did not contain enough information for species-level determination based on visual vetting.
	L3	6/4/2025	yes	2 (0.05)	Files did not contain enough information for species-level determination based on visual vetting.
		6/5/2025	yes	0 (1)	No files classified.
		6/6/2025	yes	1 (0.31)	File did not contain enough information for species-level determination based on visual vetting.
		6/7/2025	yes	0 (1)	No files classified.
		6/8/2025	yes	0 (1)	No files classified.
		6/9/2025	yes	0 (1)	No files classified.
	L4	6/4/2025	yes	0 (1)	No files classified.
		6/5/2025	yes	5 (1)	Files did not contain enough information for species-level determination based on visual vetting.
		6/6/2025	yes	35 (<0.01)	File did not contain enough information for species-level determination based on visual vetting.
		6/7/2025	yes	5 (<0.01)	Files did not contain enough information for species-level determination or contained bat passes produced by eastern red bat based on visual vetting.
		6/8/2025	yes	66 (0)	No files classified.
		6/9/2025	yes	1 (1)	File did not contain enough information for species-level determination based on visual vetting.
tricolored	L1	6/4/2025	yes	2 (1)	Files did not contain enough information for species-level determination or contained bat passes produced by eastern red bat based on visual vetting.
		6/5/2025	yes	0 (1)	No files classified.
		6/6/2025	yes	4 (1)	Files did not contain enough information for species-level determination or contained bat passes produced by eastern red bat based on visual vetting.
		6/7/2025	yes	1 (1)	Files did not contain enough information for species-level determination based on visual vetting.
		6/8/2025	yes	1 (1)	Files did not contain enough information for species-level determination or contained bat passes produced by eastern red bat based on visual vetting.
		6/9/2025	yes	0 (1)	No files classified.
	L2	6/4/2025	yes	3 (<0.01)	Files did not contain enough information for species-level determination based on visual vetting.
		6/5/2025	yes	0 (1)	No files classified.
		6/6/2025	yes	0 (1)	No files classified.
		6/7/2025	yes	0 (1)	No files classified.
		6/8/2025	yes	1 (0.21)	Files did not contain enough information for species-level determination based on visual vetting.
		6/9/2025	yes	0 (1)	No files classified.
	L3	6/4/2025	yes	0 (1)	No files classified.
		6/5/2025	yes	0 (1)	No files classified.
		6/6/2025	yes	0 (1)	No files classified.

Species	Site	Night of	Met Weather Conditions	# passes (nightly MLE)	Visual vetting notes
		6/7/2025	yes	0 (1)	No files classified.
		6/8/2025	yes	0 (1)	No files classified.
		6/9/2025	yes	1 (0.21)	Files did not contain enough information for species-level determination based on visual vetting.
	L4	6/4/2025	yes	3 (1)	Likely presence confirmed in 3 files based on visual vetting.
		6/5/2025	yes	1 (1)	Likely presence confirmed in 1 file based on visual vetting.
		6/6/2025	yes	7 (1)	Likely presence confirmed in 2 files based on visual vetting.
		6/7/2025	yes	0 (1)	No files classified.
		6/8/2025	yes	3 (1)	Likely presence confirmed in 1 file based on visual vetting.
		6/9/2025	yes	0 (1)	No files classified.

Key: MLE = maximum likelihood estimate

CONCLUSIONS

The Project acoustic survey followed USFWS Guidelines using a linear survey approach. Visual vetting followed both the USFWS Guidelines and 2025 MassDOT Protocol for Visual Vetting. The acoustic survey resulted in the findings of probable absence of NLEB at the time of the survey and probable presence for tricolored bat, little brown bat, and eastern small-footed bat through visual vetting. The presence of big brown bat, eastern red bat, hoary bat, and silver-haired bat was also determined through auto-classification by Kpro. Data collected and analysis results from this survey are considered valid for five years.

Stantec Consulting Services Inc.

Alex Pries

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Attachments: Attachment A – Acoustic Bat Detector Datasheets
Attachment B – Resumes for Bat Analysis
Attachment C – Screenshots from Visual Vetting

Electronic Deliverable: USFWS Bat Reporting Spreadsheet

Attachment A – Acoustic Bat Detector Datasheets

Stantec Ground-Based Acoustic Bat Detector Datasheet

Site ID: L1	**Project Number:** 179411301	**Project Name:** MassDOT	
	State: MA	**County:** Essex	**Acoustic Survey Type**
Site Selector: Alex Pries	**Lat:**42.53460224882178	**Long:**-71.04931060773443	Summer - Acoustic
Deployer: Katie Trebilcock	**Notes: NA**		
Date Deployed: June 4, 2025			
Deploy Duration: 4			
Detector #: SMU12285			

Detector Setup

Detector Make:	Wildlife Acoustics	**Detector Model:**	SMMINI-BAT	**Dist to Obstruct (m):**	20
Microphone Model:	Generic Internal	**Directionality:**	Omnidirectional	**Mic Height (AGL; m):**	3
Weatherproofing:	None	**Mic Angle:**	45 (angled up)	**Call Data Type:**	Full Spectrum
Mic Direction (deg):	190	**In-Field Calibration:**	PASS	**Notes:** Micro sited near stream in open understory field edge	

HABITAT DESCRIPTION

VEGETATION CHARACTERISTICS

Habitat Type: Field Edge

Canopy Closure (%): Closed

Habitat Description: Strip of upland forest between golf course and school fields, oak and maple, small stream next to rail bed

Habitat Use:	Roosting, Traveling, Foraging

Habitat Notes: Potential roosts nearby, old barn across field and some potential roost trees

STREAM CHARACTERISTICS

Est. Distance to Water Source (m):	15
Type of Water:	Stream

Detector Startup Notes:
Na

Detector Startup:

Memory A:	0/256
Memory B:	/
Battery:	6.3
Mic 0:	SMMINI-BAT Not visible
Cal Ch 0:	PASS
Going to Sleep Until:	June 4, 2025 7:47 PM

Additional Site Notes:

Stantec Ground-Based Acoustic Bat Detector Datasheet

Site ID: L2	**Project Number:** 195611301	**Project Name:** MassDOT	
	State: MA	**County:** Essex	**Acoustic Survey Type**
Site Selector: Alex Pries	**Lat:**42.5364070905228	**Long:**-71.03527625353092	Summer - Acoustic
Deployer: Katie Trebilcock	**Notes: NA**		
Date Deployed: June 4, 2025			
Deploy Duration: 4			
Detector #: SMU12246			

Detector Setup

Detector Make:	Wildlife Acoustics	**Detector Model:**	SMMINI-BAT	**Dist to Obstruct (m):**	10
Microphone Model:	Generic Internal	**Directionality:**	Omnidirectional	**Mic Height (AGL; m):**	3
Weatherproofing:	None	**Mic Angle:**	45 (angled up)	**Call Data Type:**	Full Spectrum
Mic Direction (deg):	250	**In-Field Calibration:**	PASS	**Notes:** Na	

HABITAT DESCRIPTION

VEGETATION CHARACTERISTICS

Habitat Type: Creek/Riparian

Canopy Closure (%): Closed

Habitat Description: Pond edge with small ephemeral streams and palustrine wetlands. Maple, oak, pine overstory, open understory

STREAM CHARACTERISTICS

Est. Distance to Water Source (m):	10
Type of Water:	Lake

Detector Startup Notes:
Na

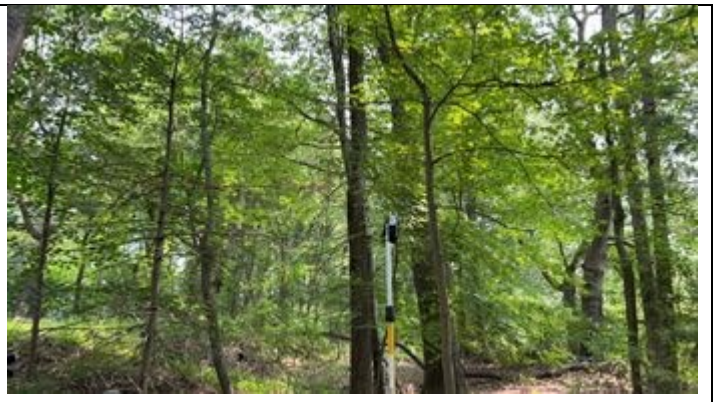
Habitat Use: Roosting, Foraging, Traveling

Habitat Notes: Potential roost tree near detector

Detector Startup:

Memory A:	0/256
Memory B:	/
Battery:	6.2
Mic 0:	SMMINI-BAT Not visible
Cal Ch 0:	PASS
Going to Sleep Until:	June 4, 2025 7:47 PM

Additional Site Notes:



Stantec Ground-Based Acoustic Bat Detector Datasheet

Site ID: L3	**Project Number:** 179411301	**Project Name:** MassDOT	
	State: MA	**County:** Essex	**Acoustic Survey Type**
Site Selector: Alex Pries	**Lat:**42.53601363514386	**Long:**-71.02831706419587	Summer - Acoustic
Deployer: Katie Trebilcock	**Notes: NA**		
Date Deployed: June 4, 2025			
Deploy Duration: 4			
Detector #: SMU12206			

Detector Setup

Detector Make:	Wildlife Acoustics	**Detector Model:**	SMMINI-BAT	**Dist to Obstruct (m):**	10
Microphone Model:	Generic Internal	**Directionality:**	Omnidirectional	**Mic Height (AGL; m):**	3
Weatherproofing:	None	**Mic Angle:**	45 (angled up)	**Call Data Type:**	Full Spectrum
Mic Direction (deg):	280	**In-Field Calibration:**	PASS	**Notes:** Na	

HABITAT DESCRIPTION

VEGETATION CHARACTERISTICS

Habitat Type: Upland Forest

Canopy Closure (%): Closed

Habitat Description: Largely residential, red pine maple and oak, railbed is overgrown so flyway is possible but low quality

Habitat Use: Traveling, Foraging, Roosting

Habitat Notes: Possible roosts in houses, nice quality wetland down the rail trail

STREAM CHARACTERISTICS

Est. Distance to Water Source (m):	60
Type of Water:	Pond

Detector Startup Notes:
Na

Detector Startup:

Memory A:	0/256
Memory B:	/
Battery:	6.3
Mic 0:	SMMINI-BAT Not visible
Cal Ch 0:	PASS
Going to Sleep Until:	June 4, 2025 7:47 PM

Additional Site Notes:

Stantec Ground-Based Acoustic Bat Detector Datasheet

Site ID: L4	**Project Number:** 179411301	**Project Name:** MassDOT	
	State: MA	**County:** Essex	**Acoustic Survey Type**
Site Selector: Alex Pries	**Lat:**42.53548947470029	**Long:**-71.02064194121644	Summer - Acoustic
Deployer: Katie Trebilcock	**Notes: NA**		
Date Deployed: June 4, 2025			
Deploy Duration: 4			
Detector #: SMU12232			

Detector Setup

Detector Make:	Wildlife Acoustics	**Detector Model:**	SMMINI-BAT	**Dist to Obstruct (m):**	50
Microphone Model:	Generic Internal	**Directionality:**	Omnidirectional	**Mic Height (AGL; m):**	3
Weatherproofing:	None	**Mic Angle:**	45 (angled up)	**Call Data Type:**	Full Spectrum
Mic Direction (deg):	45	**In-Field Calibration:**	PASS	**Notes:** Na	

HABITAT DESCRIPTION

VEGETATION CHARACTERISTICS

Habitat Type: Pond

Canopy Closure (%): Open

Habitat Description: Upland near pond, open area with gas pipeline, oak and maple overstory,

Habitat Use:	Roosting, Traveling, Foraging, Drinking

Habitat Notes: Good roost trees nearby, pipeline ROW is good travel way, possible drinking/foraging on pond

STREAM CHARACTERISTICS

Est. Distance to Water Source (m):	15
Type of Water:	Pond

Detector Startup Notes:
Na

Detector Startup:

Memory A:	0/256
Memory B:	/
Battery:	6.3
Mic 0:	SMMINI-BAT Not visible
Cal Ch 0:	PASS
Going to Sleep Until:	June 4, 2025 7:47 PM

Additional Site Notes:

Attachment B – Resumes for Bat Analysis

Laura Berube

Project Environmental Scientist

15 years of experience · Topsham, Maine

Laura is a Project Environmental Scientist for projects involving avian and bat studies for pre- and post-construction projects in the United States and Canada. She is a wildlife biologist and is proficient in acoustic bat analysis including manual vetting of rare and threatened species and the use of automated analysis programs including Kaleidoscope, BCID, EchoClass, and Sonobat. She has performed acoustic bat data analysis for projects ranging from Texas north to Newfoundland, Canada. Laura also has strong bird identification skills and is able to identify bird species by both sight and sound. She has recently performed diverse avian studies for numerous renewable energy projects in the northeastern United States, with field work including visual raptor surveys, eagle point count surveys, nocturnal migrant radar surveys, breeding bird surveys, and acoustic bat surveys. Laura is proficient in data management, analysis, summary, and vigorous QA/QC for a variety of avian wildlife surveys.

Laura is also responsible for conducting vernal pool surveys and natural resource assessments and supporting wetland delineations to assist with the preparation of local, state, and federal permit applications. She has worked on a variety of natural community and rare plant surveys and projects ranging from general reconnaissance observations to quantitative community- and species-specific surveys. These projects have involved natural community mapping and analysis for transportation projects, utility corridors, and development sites.

EDUCATION

Bachelor of Science, Wildlife Ecology, University of Maine, Orono, Maine, 2010

CERTIFICATIONS & TRAINING

Bat Acoustic Workflow and Eastern Call ID Workshop - Bat Conservation Management, Carlisle, Pennsylvania, 2025

Bat Conservation and Management - Acoustic Data Management Workshop, Bat Survey Solutions, LLC (Janet Tyburec and John Chenger), Fairfield, Maine, 2015

40-Hour HAZWOPER Certification, Topsham, Maine, 2014

Wilderness First Aid Certified, SOLO, Topsham, Maine, 2014

PROJECT EXPERIENCE

NATURAL RESOURCE SERVICES

Automated Program Analysis of Acoustic Bat | Topsham, ME | 2014-current | Environmental Scientist

Laura conducted analysis of bat detector data using Kaleidoscope, BCID, and Sonabat software to determine species of bats for multiple project sites for both passive acoustic bat surveys and presence/absence acoustic bat surveys targeting northern long-eared bat (Myotis septentrionalis) and Indiana bat (Myotis sodalis). Analysis results were provided to clients to assist with their project planning and permit applications in compliance with applicable state and federal natural resource regulations.

Hand Analysis of Acoustic Bat Data | Topsham, ME | 2010-2025 | Environmental Scientist

Laura has over ten years of experience conducting analysis of bat detector data to determine species of bats for multiple project sites in eastern United States and Canada. Analysis results were then provided to clients to assist with their project planning and permit applications in compliance with applicable local, state, and federal natural resource regulations.

Data Manager for various Bird and Bat Studies | Topsham, Maine | 2011-2020 | Data Manager

Laura was responsible for managing data related to bird and bat studies conducted by the office. She was also responsible for the retrieval, and placement of data to assist in effective report writing and limiting of possible liability.

Ichthyoplankton Sampling | Penobscot Bay, Maine | 2017 | Field Technician

Laura assisted in ichtyoplankton field sampling to characterize the marine egg and larvae community present and potentially susceptible to impingement and entrainment at the cooling water intake structure of a facility withdrawing cooling water from Penobscot Bay, in support of the Clean Water Act 316(b) for a confidential client. The results of the sampling will be included in 316b report and would be used to inform the design of the impingement control system to be eventually installed.

Schedule Coordinator for Wildlife Surveys | Topsham, Maine | 2015-2017 | Schedule Coordinator

Laura coordinated schedule and logistics for the completion of wildlife surveys to be completed by field staff in support of proposed and existing renewable energy projects.

Proposed Linear Project | New Brunswick, Canada | 2013 | Environmental Scientist

Laura conducted surveys for rare, threatened, and endangered species of plants and wildlife, assessments of existing wildlife habitat values, and mapping of wetland and stream resources.

Eastern Box Turtle Protection Plan and Construction, Brewster, Massachusetts | Brewster, Massachusetts | 2011 | Environmental Scientist

Laura conducted regular fence inspection in accordance with and NHESP-approved Eastern Box Turtle Protection Plan designed to protect box turtles in compliance with MESA during construction of a pump station development project. She was responsible for documenting the presence of any box turtles in the vicinity of the fencing and reporting deficiencies in the fencing to appropriate personnel.

Natural Resource Advisory Role in Oil Spill Response | Large Interstate Oil Spill in Gulf of Mexico | 2010-2011 | Natural Resource Advisor

Laura served as the Natural Resource Advisor (NRA) conducting environmental oversight of oil spill cleanup activities in compliance with an emergency consultation under Section 7 of the Endangered Species Act. NRAs worked directly with operational cleanup crews to implement Best Management Practices (BMPs). These BMPs served as the formal technical guidance issued under the emergency consultation. The objective of this work was to minimize secondary impacts of the cleanup activities on protected resources, including sea turtles, migratory and nesting shorebirds, beach mice, mangrove wetlands, estuaries, coastal wetlands, and dune systems. Implemented BMPs and conducted surveys for piping plover and sea turtles within designated critical habitats. She conducted training and oversight of cleanup crews and prepared daily reports documenting NRA activities. Laura worked closely with cleanup operations to provide education on BMPs and documenting daily compliance for use in USFWS consultation process and evaluation of secondary impacts to protected resources as part of the Natural Resources Damage Assessment (NRDA).

Ecological Characterizations | Coos County, New Hampshire | 2010 | Environmental Scientist

Laura conducted surveys for rare, threatened, and endangered species of plants and wildlife, assessments of existing wildlife habitat values, and mapping of wetland and stream resources in a remote area of New Hampshire.

RENEWABLE ENERGY, WIND

Proposed Wind Projects, Acoustic Passive and Rare Bat Surveys, Northeast US | Northeast USA | 2015-current

Laura conducted passive acoustic bat surveys and presence/absence acoustic bat surveys targeting northern long-eared bat (Myotis septentrionalis), Indiana bat (Myotis sodalis), and tricolored bat (Perimyotis subflavus) following the United States Fish and Wildlife Service Indiana Bat and Northern Long-eared Bat Survey Guidelines for multiple project sites. She conducted analysis of bat detector data using Kaleidoscope, BCID, and Sonabat software to determine species presence and activity trends of bats. Analysis results were provided to clients to assist with their project planning and permit applications in compliance with applicable state and federal natural resource regulations.

Proposed Wind Projects, Nova Scotia and New Brunswick | Nova Scotia and New Brunswick, Canada | 2022-2025 | Environmental Scientist

Laura conducted analysis of nocturnal bird migration radar data and bird data collected using avian recording units. Analysis results were provided to the client to assist with the project's compliance of applicable state and federal natural resource regulations.

Proposed Wind Projects, Offshore (Northeast and Mid-Atlantic) | Northeast and Mid-Atlantic US | 2017-2022 | Environmental Scientist

Laura conducted analysis of bat detector data using Kaleidoscope software and provided quality review of bat call determinations by the software to determine species of bats. Analysis results were provided to the client to assist with planning and permit applications in compliance with applicable state and federal natural resource regulations.

Post-construction Avian Fatality Monitoring at a Developed Wind Project | New Hampshire | 2016-2020 | Task Manager

Laura served as the Task Manager of the post-construction monitoring survey conducted at a developed wind project in New Hampshire. She was responsible for client and agency communication, managing of field staff and field survey completion, and the completion of final reports and delivery to client and applicable state and federal natural resource agencies to assist with the compliance of the permit.

Proposed Wind Projects | Maine | 2015-2020 | Task Manager

Laura was responsible for the staffing and scheduling of field surveys including visual raptor surveys, eagle point count surveys, breeding bird surveys, and acoustic bat surveys. Also responsible for task managing the completion of sections of the final reports to be delivered to clients to assist with their project planning and permit applications in compliance with applicable state and federal natural resource regulations.

Proposed Wind Project | Northern California | 2018-2019 | Environmental Scientist

Laura analyzed crepuscular radar data targeting federally threatened and state endangered marbled murrelets (Brachyramphus marmoratus) and reviewed and managed acoustic bat survey data for reporting purposes related to impact assessment and permitting efforts.

Block Island Wind Farm, Offshore | Rhode Island | 2016-2019 | Environmental Scientist

Laura conducted analysis of bat detector data using Kaleidoscope software and provided quality review of bat call determinations by the software to determine species of bats. Analysis results were provided to the client to assist with the project's compliance of applicable state and federal natural resource regulations.

Rollins Wind Project Invasive Species Monitoring | Lincoln, Maine | 2017 | Environmental Scientist

Laura conducted invasive species surveys along a recently constructed transmission line right-of-way according to the standards and methods developed in the Invasive Species Management Plan.

Record Hill Wind Farm Raptor Surveys | Roxbury, Maine | 2012-2016 | Environmental Scientist

Laura conducted raptor surveys to determine species, locations, and behavior in relation to proposed wind turbines. She analyzed data for reporting purposes related to impact assessment and permitting efforts.

Proposed Wind Project, Down East Maine | Maine | 2016 | Environmental Scientist

Laura conducted pre-construction wind project development surveys and impact assessments for a proposed wind project in Maine. These assessments included raptor surveys, eagle point count surveys, acoustic bat surveys, nocturnal radar surveys, and breeding bird surveys. She analyzed and reported on data for reporting purposes related to impact assessment and permitting efforts.

Proposed Wind Project | Maine | 2015 | Project Manager

Laura served as the Project Manager for proposed wind project requiring pre-construction avian and wildlife surveys. She was responsible for client and agency communication, managing of field staff and field survey completion, and the completion of final reports and delivery to client to assist with their project planning and permit applications in compliance with applicable state and federal natural resource regulations.

Orangeville, Marsh Hill, and Sheldon Wind Projects, Post-Construction Monitoring | Western New York | 2015 | Technician Supervisor

Laura supervised four post-construction monitoring technicians. She was responsible for timecard and expense approval, tracking completion of safety trainings, and communicating with staff about needs while in the field.

Agency Meeting and Site Visit for Proposed Wind Project, Down East Maine | Maine | 2014 | Environmental Scientist

Laura attended a pre-application agency consultation meeting for a proposed wind project in Down East Maine. She also attended a site visit at proposed project area with client and agency representatives. She provided information on pre-construction wildlife field surveys conducted by Stantec at proposed wind project.

Proposed Wind Project, Western New York | Western New York | 2013-2014 | Environmental Scientist

Laura conducted eagle point count surveys to determine eagle locations and behavior in relation to proposed wind turbines. She assisted in survey design, mapping, and implementation. She performed quality assurance and control on data to inform potential collision risk of eagles as a result of the project.

Bull Hill Wind Farm Post-Construction Monitoring | Maine | 2013-2014 | Environmental Scientist

Laura conducted bird and bat mortality ground searches (a requirement of utility-scale wind power developments in Maine). She was responsible for scavenger surveys, which involved the placement and monitoring of carcasses and use of game cameras. She was also responsible for searcher efficiency trials, which involved the placement and monitoring of carcass retrieval by other surveyors.

Groton Wind Farm, Raptor Surveys, Breeding Bird Surveys, Nocturnal Migrant Radar Surveys | Grafton County, New Hampshire | 2013-2014 | Task Manager

Laura was responsible for the staffing and scheduling of field surveys. She was also responsible for task managing the completion of sections of the final report to be delivered to the client. Conducted raptor, breeding bird, and nocturnal migrant radar surveys. Laura analyzed data for reporting purposes related to impact assessment and permitting efforts.

Rollins Wind Farm Post-Construction Mortality Monitoring and Raptor Surveys | Maine | 2012-2014 | Environmental Scientist

Laura conducted bird and bat mortality ground searches (a requirement of utility-scale wind power developments in Maine). She evaluated as having high searcher efficiency scores for the on-the-ground trials. Responsible for scavenger surveys, which involved the placement and monitoring of carcasses and use of game cameras. Laura also conducted raptor surveys to determine species, locations, and behavior in relation to proposed wind turbines, and analyzed data for reporting purposes related to impact assessment and permitting efforts.

Stetson I and II Wind Farms Post-Construction Monitoring | Maine | 2012-2013 | Environmental Scientist

Laura conducted bird and bat mortality ground searches (a requirement of utility-scale wind power developments in Maine). She evaluated as having high searcher efficiency scores for the on-the-ground trials. Laura was responsible for scavenger surveys, which involved the placement and monitoring of carcasses and use of game cameras.

Proposed Wind Project Bird and Bat Surveys, Coye Hill, Connecticut | Coye Hill, Connecticut | 2012 | Environmental Scientist

Laura conducted pre-construction wind project development surveys and impact assessments for a proposed wind project in Connecticut. These assessments included raptor surveys, acoustic bat surveys, and breeding bird surveys.

Wind Project, Eastern Maine | Eastern Maine | 2010-2011 | Environmental Scientist

Laura served as the Project Scientist responsible for organization, progress, and safety of field staff through the field work phase (wetland delineations, vernal pool surveys, and other natural resource mapping) of large-scale wind power development. She was responsible for data management and associated reporting of findings to accompany state and federal permit applications.

Oakfield Wind Project Avian Studies | Maine | 2010 | Environmental Scientist

Laura conducted raptor surveys to determine species, locations, and behavior in relation to proposed wind turbines. She analyzed data for reporting purposes related to impact assessment and permitting efforts.

Beech Hill Wind Project | Aroostook County, Maine | 2010 | Environmental Scientist

Laura assisted in wetland delineations, vernal pool surveys, and Global Positioning System surveys for a proposed 34-turbine wind project and associated 67-mile transmission line. Identified streams and Wetlands of Special Significance based on the criteria in the Maine Department of Environmental Protection's Natural Resource Protection Act. She characterized wetland and waterbody resources based the U.S. Fish and Wildlife Service Classification of Wetlands and Deep Water Habitats of the United States (Cowardin et. al 1979). Laura documented the biological and physical characteristics of potential vernal pool habitat based on the criteria of the Maine Department of Inland Fisheries and Wildlife.

Proposed Wind Project, Central Maine | Central Maine | 2010 | Environmental Scientist

Laura conducted wetland delineations, vernal pool surveys, and Global Positioning System surveys over an area totaling approximately 6,800 acres for a proposed 55-turbine wind project in Central Maine. She determined wetland boundaries using the technical criteria described in the U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987). She identified streams and Wetlands of Special Significance based on the criteria in the Maine Department of Environmental Protection's Natural Resource Protection Act. Laura characterized wetland and waterbody resources based the U.S. Fish and Wildlife Service Classification of Wetlands and Deep Water Habitats of the United States (Cowardin et. al 1979). She documented the biological and physical characteristics of potential vernal pool habitat based on the criteria of the Maine Department of Inland Fisheries and Wildlife.

RENEWABLE ENERGY, SOLAR

Proposed Solar Projects, Acoustic Rare Bat Surveys, Northeast US | Northeast USA | 2015-current | Environmental Scientist

Laura conducted presence/absence acoustic bat surveys targeting northern long-eared bat (Myotis septentrionalis), Indiana bat (Myotis sodalis), and tricolored bat (Perimyotis subflavus) following the United States Fish and Wildlife Service Indiana Bat and Northern Long-eared Bat Survey Guidelines for multiple project sites. She conducted analysis of bat detector data using Kaleidoscope, BCID, and Sonabat software to determine species presence of bats. Analysis results were provided to clients to assist with their project planning and permit applications in compliance with applicable state and federal natural resource regulations.

Proposed Solar and Infrastructure Update Projects | Vermont | 2015-2016 | Project Manager

Laura wrote the proposals and was Project Manager for proposed projects requiring northern long-eared bat (Myotis septentrionalis) surveys. She was responsible for client and agency communication, managing of field staff and field survey completion, and the completion of final reports and delivery to client to assist with their project planning and permit applications in compliance with applicable state and federal natural resource regulations.

Jason Layne M.S.

Wildlife Biologist

18 years of experience · Overland Park, Kansas

As a Wildlife Biologist, Mr. Layne has over 12 years of experience in wildlife monitoring, endangered species surveys, experimental research, and federal and state regulatory permitting and approvals. Mr. Layne is a USFWS permitted bat biologist with experience conducting bat surveys to determine the presence or probable absence of federally threatened/endangered Indiana bat, gray bat, and northern long-eared bat. He is proficient in the identification of all Eastern United States bat species and in the use of various field techniques, including acoustic detector deployment, echolocation call analysis, mist-net and harp trap surveys, habitat analysis, radio-telemetry, roost emergence, and bat banding.

EDUCATION

Master of Science, Wildlife Biology, Missouri State University, Springfield, Missouri, 2009

CERTIFICATIONS & TRAINING

Permitted Biologist for Indiana, Gray, Northern long-eared, Ozark Big-eared, and Virginia Big-eared Bat , USFWS, Nationwide, United States, 2016

MEMBERSHIPS

Member, The Wildlife Society, 2016-Present

Member, North American Society for Bat Research, 2015-Present

PROJECT EXPERIENCE

ENDANGERED SPECIES/SPECIES AT RISK ASSESSMENTS

Federally Threatened & Endangered Bat Surveys, Missouri Department of Conservation* | Northeast, Missouri

Mr. Layne was responsible for leading bat mist-netting and acoustic detector survey efforts for four separate Indiana bat and northern long-eared bat surveys on public lands in summer of 2015. Both federally listed bats were captured and tracked to day roosts.

Indiana Bat Mist-Net and Acoustic Surveys for Proposed Wind Energy Farms | AR, IA, IN, KS, MO, OH

Mr. Layne was responsible for leading mist-netting efforts to determine presence or probable absence of Indiana bats at several confidential projects throughout the Midwest from 2009 through 2012. He oversaw and participated in all aspects of mist-netting, including coordination with land agents, setting up nets, species identification, weighing and measuring individuals, affixing radio transmitters, and surrounding habitat descriptions. He was a crew leader for radio-tracking of Indiana bats, little brown bats, and big brown bats to roost locations and foraging areas. He oversaw and conducted roost emergence counts of radio-tracked species. He managed and implemented acoustic surveys including detector deployment, analysis of calls to species, and reporting at mist-net sites. Species captured include: hoary bats, silver-haired bats, eastern red bats, big brown bats, Indiana bats, northern long-eared bats, little brown bats, evening bats, and tri-colored bats.

Rare Bat Species Surveys, Missouri Department of Conservation* | Southeast, Missouri

Mr. Layne conducted bat mist-netting and acoustic detector survey efforts for rare species surveys on public lands in summer of 2013. He captured and identified the Missouri listed Species of Concern southeastern myotis bat (Myotis austroriparius), and identified a captured Rafinesque's big-eared bat (Corynorhinus rafinesquii) and tracked the bats to day roosts.

Winter Bat Hibernacula and White Nose Syndrome Monitoring* | Missouri

Mr. Layne assisted with population count surveys throughout Missouri for cave/mine roosting species: Indiana bat, northern long-eared bat, gray bat (Myotis grisescens), little brown bat, big brown bat, and tri-colored bat. In 2013 and 2015 he led one of six teams on a population count through a recently discovered hibernacula that is considered the largest congregation of Indiana bats in its range. He collected data for white nose syndrome monitoring, resulting in range map expansions of the disease.

** denotes projects completed with other firms*

WILDLIFE SURVEYS AND STUDIES

Passive Acoustic Detector Surveys for Proposed Wind Energy Farms, Various Sites* | AR, CA, IA, IL, IN, KS, MI, MO, MT, ND, NE, NM, NV, NY, OH, OK, TX

Ms. Layne is responsible for coordinating and implementing remote detector surveys for proposed wind energy development to determine activity of bat species throughout the USA from 2009 through present. Detectors are deployed on meteorological towers at heights above 50 meters. Surveys occur from early spring through late fall. He participates in and oversees all aspects of detector deployment, maintenance of field sampling equipment, quality control of data for presentation in reports and agency meetings, utilization of ArcGIS maps for habitat use by wildlife. Prepares assessment reports on findings, and maintains databases of results. Coordinates with multiple state and federal regulatory agencies on wildlife issues at construction projects.

PUBLICATIONS & WHITEPAPERS

Colatskie, S.N., J.T. Layne, L.W. Robbins. Bat Research News. *Recent Migratory Movements of Gray Bats (Myotis grisescens) in Missouri: Potential to Spread Pseudogymnoascus destructans?*, 2018, pp. Vol. 59, No. 2.

** denotes projects completed with other firms*

Attachment C – Screenshots from Visual Vetting

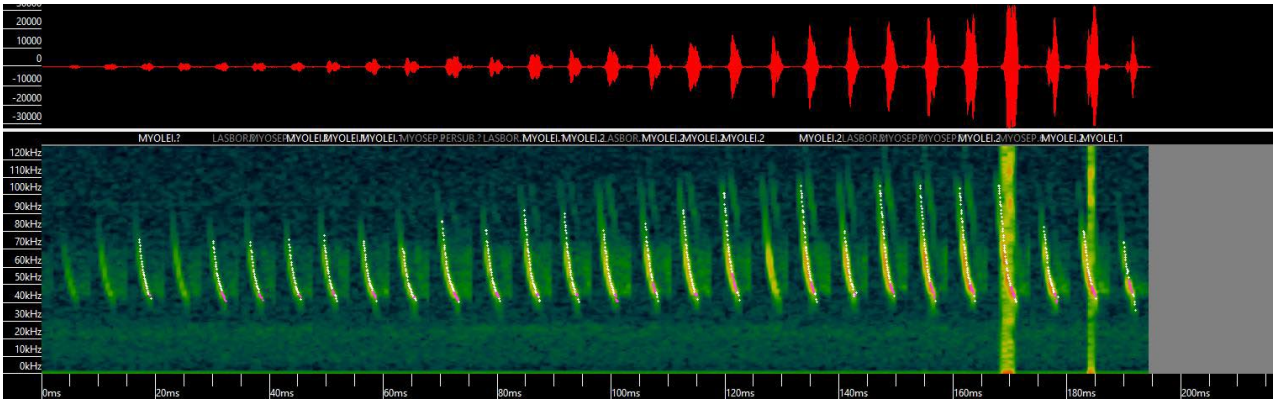


Figure 1. File classified as an eastern small-footed bat by Kaleidoscope Pro automated software and confirmed through visual vetting. Recorded during the MassDOT Project #613163 acoustic bat survey at the Detector 3 site, in the town of Lynnfield in Essex County, Massachusetts.

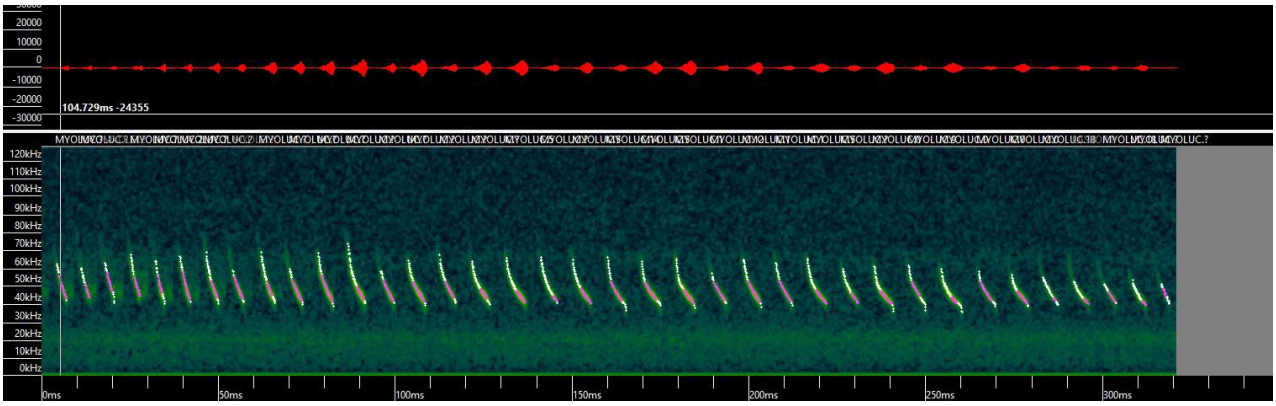


Figure 2. File classified as a little brown bat by Kaleidoscope Pro automated software and confirmed through visual vetting. Recorded during the MassDOT Project #613163 acoustic bat survey at the Detector 4 site, in the town of Lynnfield in Essex County, Massachusetts.

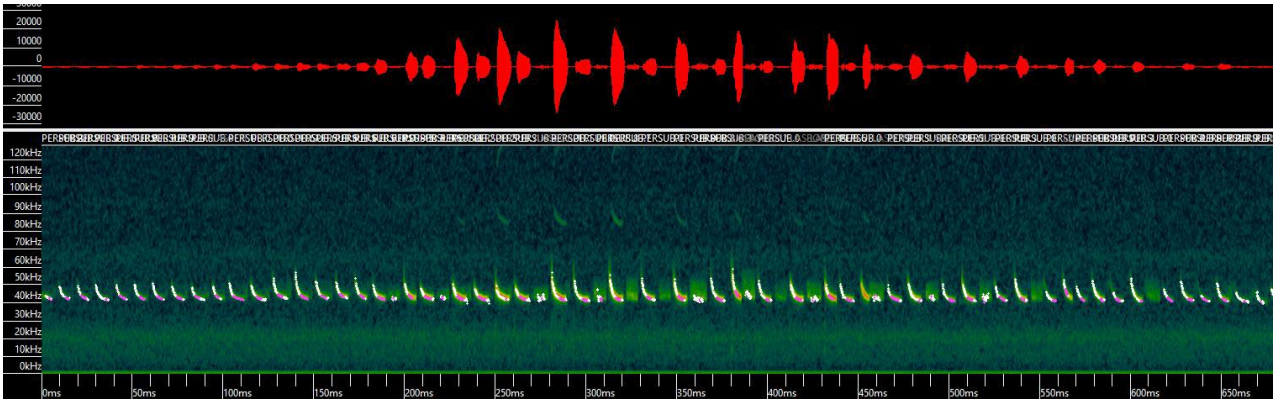


Figure 3. File classified as a tricolored bat by Kaleidoscope Pro automated software and confirmed through visual vetting. Recorded during the MassDOT Project #613163 acoustic bat survey at the Detector 4 site, in the town of Lynnfield in Essex County, Massachusetts.

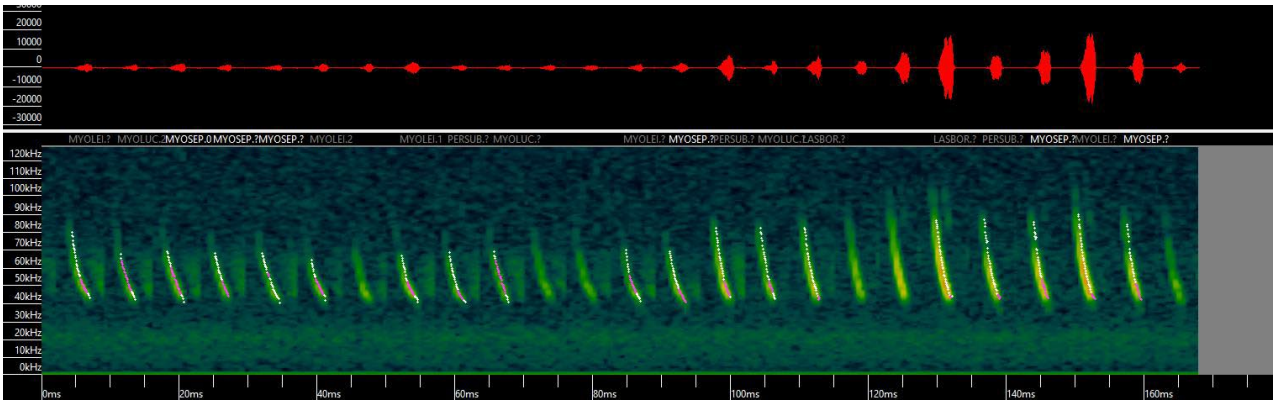


Figure 4. File classified as a northern long-eared bat by Kaleidoscope Pro automated software, but through visual vetting the file was determined to not contain enough diagnostic call characteristics for species-level identification. Recorded during the MassDOT Project #613163 acoustic bat survey at the Detector 4 site, in the town of Lynnfield in Essex County, Massachusetts

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Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbits-Nutt, Secretary and CEO
Jonathan L. Gulliver, Highway Administrator

MassDOT
Massachusetts Department of Transportation
Highway Division

April 30, 2025

Lynnfield (DOT Project #613163) RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1)Bat Habitat Inspection

The MassDOT Wildlife and Endangered Species Unit (WESU) conducted a visual inspection for roosting bats and bat habitat at an unnamed bridge structure associated with MassDOT Project #613163 LYNNFIELD- PEABODY- RAIL TRAIL CONSTRUCTION, FROM FORD AVENUE TO NICHOLS LANE (PHASE 1). The project will consist of about 1.8 miles of shared-use path, extending from Ford Avenue in Lynnfield to Nichols Lane in Peabody with two roadway crossings at Summer Street and Pillings Pond Road. The path is 12 feet wide with 2-foot-wide grass shoulders constructed mostly on the former railroad track bed. The project scope also includes minor landscaping, trail amenities (benches, interpretive signage, bicycle racks, etc.), wetland replication, removal of former railroad structures, ADA compliant pedestrian curb ramps at crossings, a pedestrian activated warning beacon, traffic signage, and pavement markings.. During the inspection, WESU biologists used flashlights, binoculars, and a borescope to search gaps, crevices, and other locations on bridge structures that could potentially hold roosting bats. **No bats, guano, or staining were observed at the bridge during the inspection.**

The unnamed structure is an abandoned rail bridge with steel I-beams and stone abutment walls. (Figures 1-6). Inspection of gaps, weep holes, and any small cracks/crevices of the bridge provided no indication of bat roosting (Figures 2-6). While suitable roosting habitat for several bat species may exist within gaps in the stone blocks, many of the observed gaps are unlikely to provide thermal protection due to their shallow depths and/or large widths. Additionally the open top of the structure would leave possible roosting bats exposed to the elements.

In conclusion, while the MassDOT WESU did observe limited areas of potential roosting bat habitat within gaps and between stone blocking, no roosting bats, or evidence of roosting bats, were observed during the inspection. A completed bridge assessment form are included as Appendix A.

Sincerely,

David Paulson

David Paulson
Wildlife and Endangered Species Unit Supervisor, MassDOT, Environmental Services

Ten Park Plaza, Suite 4160, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
mass.gov/massdot

Figure 1: Unnamed Culvert Covered by Vegetation

Figure 2: Abutment cap on Unnamed Culvert

Figure 3: Abutment cap on Unnamed Culvert

Figure 4: Steel I-Beams and Wood Timbers

Figure 5: Steel I-beam and Stone Blocking

Figure 6: Steel I-beams at Abutment Wall

APPENDIX A. Bridge Assessment Form

APPENDIX D: Bridge/Structure Bat Assessment Form

Bridge/Structure Bat Assessment Form Instructions

- This form will be completed to document bat occupancy or bat use of bridges, culverts, and other structures. This form shall be submitted to the appropriate personnel within the DOT and USFWS for recordkeeping (or uploaded into the Information, Planning, and Consultation (IPaC) Determination Key for use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat) prior to conducting: any activities below the deck surface either from the underside or from above the deck surface that bore down to the underside; any activities that could impact expansion joints; any activities involving deck removal on bridges; or any activities involving structure demolition for bridges, culverts, and/or other structures.
- Assessments must be completed within two (2) years of conducting any work (see the above bullet), regardless of whether assessments have been conducted in the past. Assessments must be completed in appropriate weather conditions, suitable for the assessor to observe common signs of bat use.
- Evidence of bat use may include visual observation (live and/or dead), presence of guano, presence of staining, audible observation, and/or odor observation. Presence of one or more indicators is sufficient evidence that bats may be using the bridge, culvert, and/or other structure.
- If bat use of a bridge, culvert, and/or other structure is noted, additional studies may be undertaken during bat active season to identify the specific bat species utilizing the structure, or protected bat species presence can be assumed, in order to comply with threatened and endangered species regulations. Bat active season dates, typically between April and November, vary regionally and by species, so assessors should consult with their local USFWS Field Office for more specific active season dates.
- For use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat – If the bridge/structure is 1,000 feet or more from suitable bat habitat[1] (e.g., an urban or agricultural area without suitable foraging habitat or corridors linking the bridge to suitable foraging habitat), check the appropriate box and fill out the table below. **No further assessment is required.**

Date & Time of Assessment	**DOT Project #**	**Route/Facility Carried**	**County**
4/30/2025 2:00	613163	Abandoned Rail over bare ground	Essex
Federal Structure ID NA	**Structure Coordinates** (latitude and longitude) 42°32'11.8"N 71° 02'02.6"W	☐ This bridge/structure is 1,000 feet or more from suitable bat habitat[2] Name:_____ Signature: _____	

- Any questions pertaining to assessments or this form should be directed to the local USFWS Field Office.

[1] Refer to the USFWS's summer survey guidance for the definition of suitable habitat (http://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html).

[2] This condition is only for use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat

Bridge/Structure Bat Assessment Form

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
4/30/2025 2:00	613163	Abandoned Rail over bare ground	Essex
Federal Structure ID	**Structure Coordinates** (latitude and longitude)	**Structure Height (approximate)**	**Structure Length**
NA	42°32'11.8"N 71°02'02.6"W	4'	10'

Structure Type (check one)

Bridge Construction Style

- ○ Cast-in-place
- ○ Flat Slab/Box
- ○ Truss (Side View)
- ○ Parallel Box Beam
- ○ Pre-stressed Girder
- ◉ Steel I-beam
- ○ Covered
- ○ Other:

Culvert Type

- ◉ Box
- ◉ Pipe/Round
- ◉ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☐ None	☐ Concrete
☐ Concrete	☐ Concrete	☐ Timber
☒ Timber	☒ Steel	☒ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☐ Other:	☐ Other:	

Culvert Material

- ☐ Metal
- ☐ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Creosote Evidence

- ○ Yes ○ No ○ Unknown

Notes:

Crossings Traversed (check all that apply)

☒ Bare ground	☐ Open vegetation
☐ Rip-rap	☐ Closed vegetation
☐ Flowing water	☐ Railroad
☐ Standing water	☐ Road/trail - Type:
☐ Seasonal water	☐ Other:

Surrounding Habitat (check all that apply)

☐ Agricultural	☐ Grassland
☐ Commercial	☐ Ranching
☒ Residential-urban	☐ Riparian/wetland
☐ Residential-rural	☐ Mixed use
☐ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	**Assessment Notes**	**Evidence of Bats** (include photos if present)
☒ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Concrete surfaces (open roosting on concrete)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Spaces between concrete end walls and the bridge deck	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Crack between concrete railings on top of the bridge deck (Gap / Railing)	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Vertical surfaces on concrete I-beams	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Spaces between walls, ceiling joists	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Weep holes, scupper drains, and inlets/pipes	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All guiderails	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All expansion joints	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Trevor Burns

Signature: Trevor Burns

DOCUMENT A00860

MASSACHUSETTS

DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF INTENT

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LEC WETLANDS WILDLIFE WATERWAYS

Notice of Intent Application

Lynnfield Rail Trail – Phase 1

Lynnfield, Massachusetts

MassDOT Project #: 613163

February 28, 2025

Applicant:
John V. Scenna
Director, Lynnfield Department of Public Works
Lynnfield Center Water District
83 Phillips Road
Lynnfield, MA 01940

Prepared by:
LEC Environmental Consultants, Inc.
380 Lowell Street, Suite 101
Wakefield, MA 01880
781-245-2500

www.lecenvironmental.com

February 28, 2025

Email (ecademartori@town.lynnfield.ma.us)

Lynnfield Conservation Commission
55 Summer Street
Lynnfield, MA 01940

RE: Notice of Intent Application [LEC File #: SI\12-046.02]
Lynnfield Rail Trail – Phase 1
Lynnfield, Massachusetts
MassDOT Project #: 613163

Dear Members of the Commission:

On behalf of the Applicant, the Town of Lynnfield (John V. Scenna, Director, Lynnfield Department of Public Works, Contact), LEC Environmental Consultants, Inc., (LEC), in conjunction with Stantec, is submitting this Notice of Intent (NOI) Application to construct the 1.84-mile "Phase 1" of the "Lynnfield Rail Trail" between Ford Avenue in Lynnfield and Nichols Lane in Peabody. Portions of the proposed work activities are located within Previously Developed Riverfront Area to Bates Brook and the 100-foot Buffer Zone to BVW and Bank as jurisdictional under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131 § 40, the *Act*) and its implementing Regulations (310 CMR 10.00, the *Act Regulations*). Additional work is proposed within non-jurisdictional Isolated Vegetated Wetlands.

Portions of the project within Riverfront Area qualify as a limited project under 310 CMR 10.53(6) for the construction of a bike path "within Riverfront Area but outside other resource areas." The project is not subject to the *Lynnfield Wetlands Protection Bylaw* (Chapter 240, the *Bylaw*) and its *Conservation Commission Regulations* (Chapter 320, the *Bylaw Regulations*) pursuant to Section 240-2, which states: "*This bylaw shall apply only to projects for commercial or industrial use; for residential projects including two or more dwelling units; and for construction of single-family homes on newly created lots*." Project details are depicted on the attached *Notice of Intent Plans* Plan Set, dated February 11, 2025 (*Plan Set*) prepared by Stantec, and a *Stormwater Checklist and Summary Report*, prepared by Stantec, documents the projects compliance with 310 CMR 10.05(6)(k) and the DEP Stormwater Management Policy.

Abutter lists and notification to abutters have been provided. The Town is exempt from State filing fees in accordance with "*BRP WPA Form 3 – Notice of Intent Instructions and Supporting Materials*." Thank you for your consideration of this Application. We look forward to discussing this project with the Commission at the March 19, 2025 Public Hearing. If there are any questions or if additional information is needed, please do not hesitate to contact me in our Wakefield office at 781-245-2500 or dwells@lecenvironmental.com.

Sincerely,

LEC Environmental Consultants, Inc.

Dan Wells
Senior Wildlife/Wetland Scientist

cc: Heidi Davis, MassDEP
Melissa Lenker, MassDOT
Erica Larner, MassDOT
Lily Collins, MassDOT
Stantec

Notice of Intent Application

i. WPA Form 3 – Notice of Intent
ii. Affidavit of Service
iii. Abutter Letter
iv. Notification to Abutters
v. Certified Abutters Lists

Notice of Intent Report

1. Introduction 1

2. General Site Description 2
2.1 Floodplain Designation 3
2.2 Natural Heritage & Endangered Species Program Designation 4
2.3 Additional Regulatory Designations 4

3. Wetland Boundary Determination Methodology 5

4. Wetland Resource Area Descriptions 7
4.1 Bordering Vegetated Wetland 7
4.2 Bank 8
4.3 Bank/Mean Annual High Water Line 8
4.4 Riverfront Area 9

5. Proposed Project 9
5.1 Non-Jurisdictional Isolated Vegetated Wetland Alteration 10
5.2 Riverfront Area Alteration 11
5.3 Buffer Zone Alteration 12

6. Mitigation Measures 12
6.1 Sedimentation and Erosion Control 12
6.2 Stormwater Management 13
6.3 Wetland Replication Plan 13

7. Regulatory Compliance 14
7.1 Riverfront Area 14

8. Summary 15

Literature Referenced

Appendices

Appendix A

Locus Maps

Figure 1-A: USGS Topographic Map with USGS Reading, MA Quad (2024)

Figure 1-B: USGS Topographic Map with USGS Reading, MA Quad (2021)

Figure 2: Orthophoto Map

Figure 3: FEMA FIRMettes

Appendix B

Stormwater Checklist and Summary Report, prepared by Stantec

Appendix C

Site Photographs

Appendix D

DEP Bordering Vegetated Wetland (BVW) Field Delineation Forms

Attachments

Notice of Intent Plans Plan Set, dated February 11, 2025, prepared by Stantec

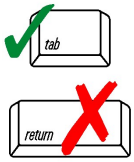
Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Lynnfield
City/Town

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



Note: Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

Ford Ave., Lynnfield to Nichols Ln., Peabody — a. Street Address
Lynnfield — b. City/Town
01940 — c. Zip Code

Latitude and Longitude: From:42.53375 / -71.05129 To:42.53554 / -71.01659

N/A — f. Assessors Map/Plat Number
g. Parcel /Lot Number

2. Applicant:

John — a. First Name
Scenna — b. Last Name
Director, Lynnfield Department of Public Works — c. Organization
83 Phillips Road — d. Street Address
Lynnfield — e. City/Town
MA — f. State
01940 — g. Zip Code
781.334.4374 — h. Phone Number
i. Fax Number
scennaj@lcwd.us — j. Email Address

3. Property owner (required if different from applicant): ☐ Check if more than one owner

a. First Name
b. Last Name
c. Organization
d. Street Address
e. City/Town
f. State
g. Zip Code
h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

Dan — a. First Name
Wells — b. Last Name
LEC Environmental Consultants, Inc. — c. Company
380 Lowell Street, Suite 101 — d. Street Address
Wakefield — e. City/Town
MA — f. State
01880 — g. Zip Code
781.245.2500 — h. Phone Number
i. Fax Number
dwells@lecenvironmental.com — j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

Exempt — a. Total Fee Paid
b. State Fee Paid
c. City/Town Fee Paid

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Lynnfield
City/Town

A. General Information (continued)

6. General Project Description:

Construction of a multi-use rail trail within or along an existing abandoned railroad bed, a portion of which occurs within Riverfront Area and the 100-foot Buffer Zone.

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

1. ☐ Single Family Home
2. ☐ Residential Subdivision
3. ☐ Commercial/Industrial
4. ☐ Dock/Pier
5. ☐ Utilities
6. ☐ Coastal engineering Structure
7. ☐ Agriculture (e.g., cranberries, forestry)
8. ☒ Transportation
9. ☐ Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☒ Yes ☐ No

If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

310 CMR 10.53(6): bike paths in Riverfront Area

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

a. County

b. Certificate # (if registered land)

c. Book

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. ☐ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
2. ☒ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Lynnfield
City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	1. linear feet	2. linear feet
b. ☐ Bordering Vegetated Wetland	1. square feet	2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☐ Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. ☐ Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. ☒ Riverfront Area	Bates Brook - inland 1. Name of Waterway (if available) - **specify coastal or inland**	

2. Width of Riverfront Area (check one):

☐ 25 ft. - Designated Densely Developed Areas only

☐ 100 ft. - New agricultural projects only

☒ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: 42,315 (within project limits)

4. Proposed alteration of the Riverfront Area:

a. square feet within 100 ft.	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.
14,982 (8,800 p; 6,182 temp)	10,103 (5,952 p; 4,151 temp)	4,879 (2,848 p; 2,031 temp)

5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☒ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☒ Yes ☐ No

3. ☐ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f**. above.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Lynnfield
City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. ☐ Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above 1. cubic yards dredged	
l. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4. ☐ Restoration/Enhancement
If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW | b. square feet of Salt Marsh

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings | b. number of replacement stream crossings

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 3 – Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Lynnfield
City/Town

C. Other Applicable Standards and Requirements

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

a. ☐ Yes ☒ No

If yes, include proof of mailing or hand delivery of NOI to:

Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581

8/1/2021
b. Date of map

If *yes*, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

c. Submit Supplemental Information for Endangered Species Review*

1. ☐ Percentage/acreage of property to be altered:

(a) within wetland Resource Area _____ percentage/acreage

(b) outside Resource Area _____ percentage/acreage

2. ☐ Assessor's Map or right-of-way plan of site

2. ☐ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

(a) ☐ Project description (including description of impacts outside of wetland resource area & buffer zone)

(b) ☐ Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see https://www.mass.gov/ma-endangered-species-act-mesa-regulatory-review).
Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Lynnfield
City/Town

C. Other Applicable Standards and Requirements (cont'd)

(c) ☐ MESA filing fee (fee information available at https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review).
Make check payable to "Commonwealth of Massachusetts - NHESP" and ***mail to NHESP*** at above address

*Projects altering **10 or more acres** of land, also submit:*

(d) ☐ Vegetation cover type map of site

(e) ☐ Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing. a. NHESP Tracking # b. Date submitted to NHESP

3. ☐ Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a. ☒ Not applicable – project is in inland resource area only b. ☐ Yes ☐ No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Bourne to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: dmf.envreview-south@mass.gov

North Shore - Plymouth to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: dmf.envreview-north@mass.gov

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

c. ☐ Is this an aquaculture project? d. ☐ Yes ☐ No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Lynnfield
City/Town

C. Other Applicable Standards and Requirements (cont'd)

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

   a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.

   b. ACEC

5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

   a. ☐ Yes ☒ No

6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

   a. ☐ Yes ☒ No

7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

   a. ☒ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

      1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)

      2. ☒ A portion of the site constitutes redevelopment

      3. ☐ Proprietary BMPs are included in the Stormwater Management System.

   b. ☐ No. Check why the project is exempt:

      1. ☐ Single-family house

      2. ☐ Emergency road repair

      3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. ☒ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)

2. ☒ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Lynnfield
City/Town

D. Additional Information (cont'd)

3. ☒ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☒ List the titles and dates for all plans and other materials submitted with this NOI.

Notice of Intent Plans
a. Plan Title

Stantec
b. Prepared By

Aleece D'Onofrio, P.E.
c. Signed and Stamped by

February 11, 2025
d. Final Revision Date

1" = 20'
e. Scale

Stormwater Summary Report
f. Additional Plan or Document Title

2/10/2025
g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. ☐ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. ☐ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. ☐ Attach NOI Wetland Fee Transmittal Form

9. ☒ Attach Stormwater Report, if needed.

E. Fees

1. ☒ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

2. Municipal Check Number

3. Check date

4. State Check Number

5. Check date

6. Payor name on check: First Name

7. Payor name on check: Last Name

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Lynnfield
City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

John Scenna John Scenna, Director of Public Works	2-12-25
1. Signature of Applicant	2. Date
Refer to Page 2 of 15 in the NOI Narrative for a Statement Regarding Property Ownership.	
3. Signature of Property Owner (if different)	4. Date
	2-16-25
5. Signature of Representative (if any)	6. Date

For Conservation Commission:
Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:
One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:
If the applicant has checked the “yes” box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

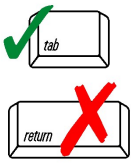
The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

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



A. Applicant Information

1. Location of Project:

Lynnfield Rail Trail - Phase 1	Lynnfield
a. Street Address	b. City/Town
	Exempt
c. Check number	d. Fee amount

2. Applicant Mailing Address:

a. First Name	b. Last Name
c. Organization	
d. Mailing Address	
e. City/Town	f. State / g. Zip Code
h. Phone Number / i. Fax Number	j. Email Address

3. Property Owner (if different):

a. First Name	b. Last Name
c. Organization	
d. Mailing Address	
e. City/Town	f. State / g. Zip Code
h. Phone Number / i. Fax Number	j. Email Address

B. Fees

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

Fee should be calculated using the following process & worksheet. ***Please see Instructions before filling out worksheet.***

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract $12.50. To calculate the city/town share of the fee, divide the total fee in half and add $12.50.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee

Step 5/Total Project Fee: Exempt

Step 6/Fee Payments:

Total Project Fee: _____ a. Total Fee from Step 5

State share of filing Fee: _____ b. 1/2 Total Fee **less $**12.50

City/Town share of filling Fee: _____ c. 1/2 Total Fee **plus** $12.50

C. Submittal Requirements

a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
Box 4062
Boston, MA 02211

b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

AFFIDAVIT OF SERVICE

Under the
Massachusetts Wetlands Protection Act (M.G.L. c. 131, s. 40)
and its implementing *Regulations* (310 CMR 10.00)

I, Sharon A. Sullivan, on behalf of the Town of Lynnfield, hereby certify under the pains and penalties of perjury that on March 3, 2025, I gave notification to abutters in compliance with the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131, s. 40) and its implementing *Regulations* (310 CMR 10.00) in connection with the following matter:

> A Notice of Intent filed under the *Massachusetts Wetlands Protection Act* by LEC Environmental Consultants, Inc., on behalf of the Applicant, the Town of Lynnfield, with the Town of Lynnfield Conservation Commission on February 28, 2025 for Phase 1 of the Lynnfield Rail Trail between Ford Avenue in Lynnfield, Massachusetts and Nichols Lane in Peabody, Massachusetts.

The form of notification, and a list of the abutters to whom it was given and their addresses, are attached to this Affidavit of Service.

Sharon A. Sullivan

Sharon A. Sullivan
Permitting Technician

March 3, 2025
Date

March 3, 2025

Certificate of Mailing

«Name»
«Name2»
«Address»
«City», «State» «Zip»

Re: Notice of Intent Application [LEC File #: SI\12-046.02]
Lynnfield Rail Trail – Phase 1
Lynnfield, Massachusetts

Dear Abutter:

On behalf of the Applicant, the Town of Lynnfield, LEC Environmental Consultants, Inc., (LEC), in conjunction with Stantec, has filed a *Notice of Intent (NOI) Application* with the Lynnfield Conservation Commission Application to construct the 1.84-mile "Phase 1" of the "Lynnfield Rail Trail" between Ford Avenue in Lynnfield and Nichols Lane in Peabody. Portions of the proposed work activities are located within Previously Developed Riverfront Area to Bates Brook and the 100-foot Buffer Zone to BVW and Bank as jurisdictional under the *Massachusetts Wetlands Protection Act* (M.G.L. c. 131 § 40, the *Act*) and its implementing Regulations (310 CMR 10.00, the *Act Regulations*). Additional work is proposed within non-jurisdictional Isolated Vegetated Wetlands.

The *NOI Application* and accompanying site plans are available for review by the public at the Temporary Town Hall Offices at 590 Main Street, Monday through Thursday, 9:00 a.m. – 4:00 p.m., or by contacting the Lynnfield Conservation Commission. Further information regarding this application will be published at least five (5) days in advance in *The Lynnfield Villager*. Notice of the Public Hearing also will be posted at the Temporary Town Hall Office at least 48 hours in advance.

A Conservation Commission Public Hearing will be held on March 19, 2025 at 6:30 p.m. at the Merritt Center, 600 Market Street, in accordance with the provisions of the *Bylaw* and the *Bylaw Regulations*. Please check the Town's website for any updated information on the meeting.

Please do not hesitate to review the materials and/or attend the public hearing should you have questions or concerns about the proposed project.

Sincerely,

LEC Environmental Consultants, Inc.

Daniel L. Wells
Senior Wildlife/Wetland Scientist

Notification to Abutters

By Hand Delivery, Certified Mail (return receipt requested), or Certificates of Mailing

This is a notification required by law. You are receiving this notification because you have been identified as the owner of land abutting another parcel of land for which certain activities are proposed. Those activities require a permit under the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40).

In accordance with the second paragraph of the Massachusetts Wetlands Protection Act, and 310 CMR 10.05(4)(a) of the Wetlands Regulations, you are hereby notified that:

A. A Notice of Intent was filed with the Lynnfield Conservation Commission on February 28, 2025 seeking permission to remove, fill, dredge, or alter an area subject to protection under M.G.L. c. 131 §40. The following is a description of the proposed activity/activities:

Construction of the 1.84-mile "Phase 1" of the Lynnfield Rail Trail between Ford Avenue in Lynnfield and Nichols Lane in Peabody.

B. The name of the applicant is: the Town of Lynnfield.

C. The address of the land where the activity is proposed is: between Ford Avenue in Lynnfield and Nichols Lane in Peabody.

D. Copies of the Notice of Intent may be examined or obtained at the office of the Lynnfield Conservation Commission, located at Temporary Town Hall, 590 Main Street. The regular business hours of the Commission are Monday through Thursday from 9:00 a.m. – 4:00 p.m., and the Commission may be reached at (781) 334-9495.

E. Copies of the Notice of Intent may be obtained from the applicant's representative, LEC Environmental Consultants, Inc. by calling (781) 245-2500 Monday through Friday from 8:00 a.m. – 5:00 p.m. An administrative fee may be applied for providing copies of the NOI and plans.

F. Information regarding the date, time, and location of the public hearing regarding the Notice of Intent may be obtained from the Lynnfield Conservation Commission. Notice of the public hearing will be published at least five business days in advance, in The Lynnfield Villager.

Notification provided pursuant to the above requirement does not automatically confer standing to the recipient to request Departmental Action for the underlying matter. See 310 CMR 10.05(7)(a)4.

0029-0000-2414 165 Summer Street
Town of Lynnfield
Town Hall
55 Summer Street
Lynnfield, MA 01940

0028-0000-2888 3 Ford Avenue
Daniel M. Card, T/E
Teri L. Boticelli, T/E
3 Ford Avenue
Lynnfield, MA 01940

0028-0000-2891 1 Ford Avenue
Philip J. McQueen, T/E
Deanne M. McQueen, T/E
1 Ford Avenue
Lynnfield, MA 01940

0028-0000-2857 85 Perry Avenue
James C. Davie, T/E
Marcia O. Davie, T/E
85 Perry Avenue
Lynnfield, MA 01940

0028-0000-2861 86 Perry Avenue
Debra LaConte
86 Perry Avenue
Lynnfield, MA 01940

0028-0000-1455 505 Main Street
Town of Lynnfield
Middle School
Town Hall
55 Summer Street
Lynnfield, MA 01940

0029-0000-1758 59 Parsons Avenue
Nassrin Tavakola J/T/R/S
Kathleen Harris, J/T/R/S
59 Parsons Avenue
Lynnfield, MA 01940

0029-0000-1858 62 Parsons Avenue
Adam V. Piantedosi, T/E
Sarah J. Piantedosi, T/E
62 Parsons Avenue
Lynnfield, MA 01940

0029-0000-1958 60 Parsons Avenue
Chad Muller, T/E
Rebecca Muller, T/E
60 Parsons Avenue
Lynnfield, MA 01940

0029-0000-2058 58 Parsons Avenue
58 Parson Avenue Realty Trust
Casey Paton TR
58 Parsons Avenue
Lynnfield, MA 01940

0029-0000-0998 56 Parsons Avenue
Deborah A. Breslow
Rober J. Breslow
56 Parsons Avenue
Lynnfield, MA 01940

0029-0000-1073 Summer Street
Sanni Family Trust
15 Center Village
Lynnfield, MA 01940

0029-0000-1059 127 Summer Street
St. Paul's Episcopal Church
127 Summer Street
Lynnfield, MA 01940

0029-0000-1183 2 Westover Drive
Leslie A. McKeough
2 Westover Drive
Lynnfield, MA 01940

0029-0000-1245 4 Westover Drive
Charles P. Ragusa Declaration of Trust
Charles P. Ragusa, TR
4 Westover Drive
Lynnfield, MA 01940

0029-0000-1256 6 Westover Drive
Nicholas L. Connors, T/E
Keri S. Connors, T/E
6 Westover Drive
Lynnfield, MA 01940

0029-0000-1344 8 Westover Drive
Margin V. Vora, T/E
Dhara Buch, T/D
8 Westover Drive
Lynnfield, MA 01940

0029-0000-1357 10 Westover Drive
Booras Realty Trust
William P. Booras, TR
10 Westover Drive
Lynnfield, MA 01940

0029-0000-1383 12 Westover Drive
Sharon A. Marrama
Louis J. Marrama, Jr.
P. O. Box 2844
Woburn, MA 01888

0029-0000-1469 14 Westover Drive
Helen H. Loughlin
Steven F. Loughlin
14 Westover Drive
Lynnfield, MA 01940

0029-0000-1472 16 Westover Drive
John P. Swiatkowski, T/E
Lindsay K. Swiatkowski, T/E
16 Westover Drive
Lynnfield, MA 01940

0029-0000-1484 18 Westover Drive
Nina M. Grava Trust
Nina M. Grave, TR
18 Westover Drive
Lynnfield, MA 01940

0029-0000-1494 20 Westover Drive
James A. Gerace, T/E
Maureen A. Burke, T/E
20 Westover Drive
Lynnfield, MA 01940

0029-0000-1493 22 Westover Drive
22 Westover Drive Revocable Trust
Christopher S. Lambe, TR
22 Westover Drive
Lynnfield, MA 01940

0030-0000-0872 24 Westover Drive
Mark J. & Deborah J. Troisi, Trustees
Troisi Family Trust
24 Westover Drive
Lynnfield, MA 01940

0030-0000-0897 Westover Drive
Jean E. Serio
Frank E. Serio
25 Westover Drive
Lynnfield, MA 01940

0030-0000-0975 28 Rear Westover Drive
Children's Bourque Road Trust
Elizabeth N. DiCesare, TR
125 Bourque Road
Lynnfield, MA 01940

0030-0000-1075 125 Bourque Road
Children's Bourque Road Trust
Elizabeth N. DiCesare, TR
125 Bourque Road
Lynnfield, MA 01940

0029-0000-1125 130 Summer Street
L. Peter Campbell
130 Summer Street
Lynnfield, MA 01940

0029-0000-0597 71 Forest Hill Avenue
Scott E. Carpenter T/E
Christine M. Carpenter T/E
71 Forest Hill Avenue
Lynnfield, MA 01940

0029-0000-0672 10 Underhill Road
Nancy S. Frederick 2016 Revocable Trust
Nancy S. Frederick, TR
10 Underhill Road
Lynnfield, MA 01940

0029-0000-0619 30 Underhill Road
Christopher and Linda Mellen
30 Underhill Road
Lynnfield, MA 01940

0031-0000-1865 537 Off Essex Street
Jane V. Bandini 2019 Trust
Jane V. Bandini, TR
P. O. Box 31
Lynnfield, MA 01940

0030-0000-1361 2 Meservey Lane
Gregory Chang J/T/R/S
Leslie J. Friedrich J/T/R/S
2 Meservey Lane
Lynnfield, MA 01940

0030-0000-1458 4 Meservey Lane
Rosberg Family Irrevocable Trust
Joseph B. Rosberg, Jr., TR
4 Meservey Lane
Lynnfield, MA 01940

0031-0000-0992 Rear Essex-Jordan
Town of Lynnfield
Conservation Commission
Town Hall
55 Summer Street
Lynnfield, MA 01940

0031-0000-1836 Off Essex Street
Paul Trudeau
9 Nichols Lane
Peabody, MA 01960

0030-0000-0812 10 Lovell Road
Cynthia D. Tanner, T/E
Elaine K. Tanner, T/E
10 Lovell Road
Lynnfield, MA 01940

0030-0000-0825 14 Lovell Road
Paul A. Scire, T/E
Shannon M. Scire, T/E
14 Lovell Road
Lynnfield, MA 01940

0030-0000-0837 16 Lovell Road
16 Lovell Road Lynnfield Mass Nominee Trust
Alexander Brezzani, TR
16 Lovell Road
Lynnfield, MA 01940

0030-0000-0839 18 Lovell Road
Peter Murphy Bruton, TE
Emily Rose Ziady
18 Lovell Road
Lynnfield, MA 01940

0030-0000-0918 20 Lovell Road
Jennifer L. Silva
20 Lovell Road
Lynnfield, MA 01940

0030-0000-0929 22 Lovell Road
Raymond and Rose Marie Dorman Family Trust
Raymond J. Dorman, TR
22 Lovell Road
Lynnfield, MA 01940

0030-0000-0333 235 Essex Street
Town of Lynnfield
Lynnfield High School
Town Hall
55 Summer Street
Lynnfield, MA 01940

0030-0000-1145 Pillings Pond Road
Town of Lynnfield
Town Hall
55 Summer Street
Lynnfield, MA 01940

0030-0000-1165 66 Rear Bourque Road
Town of Lynnfield
Town Hall
55 Summer Street
Lynnfield, MA 01940

0030-0000-1257 Rear Bourque Road
Town of Lynnfield
Conservation Commission
Town Hall
55 Summer Street
Lynnfield, MA 01940

0030-0000-1293 25 Pillings Pond Road
Stanley K. Yan T/E
Seolki Yan T/E
25 Pillings Pond Road
Lynnfield, MA 01940

0030-0000-1095 Rear Bourque Road
Town of Lynnfield
Conservation Commission
Town Hall
55 Summer Street
Lynnfield, MA 01940

0030-0000-1811 62 Bourque Road
Drake Realty Trust
Alan K. Dresior, Trustee
P. O. Box 298
Lynnfield, MA 01940

0030-0000-1824 64 Bourque Road
Bourque Road 64 Lynnfield
Alan K. Dresior, Trustee
P. O. Box 298
Lynnfield, MA 01940

0030-0000-1829 66 Bourque Road
Ian James Gemmell, T/E
Melissa Anne Gemmell, T/E
66 Bourque Road
Lynnfield, MA 01940

0030-0000-1862 68 Bourque Road
Melanie Rose Lovell Revoc TR
Scott Lovell Revocable Trust
Scott/Melanie, TR
68 Bourque Road
Lynnfield, MA 01940

0030-0000-1944 70 Bourque Road
Paul A. & Sharon Marchionda Trustees
Marchionda Family Trust
75 Annie's Moonlight Drive
Franconia, NH 03580

0030-0000-1951 72 Bourque Road
Brian J. Moreira, T/E
Karen L. Moreira, T/E
72 Bourque Road
Lynnfield, MA 01940

0030-0000-1935 27 Pillings Pond Road
John M. Shea
27 Pillings Pond Road
Lynnfield, MA 01940

0030-0000-2026 28 Pillings Pond Road
Daniel B. Davis, III J/T/R/S
Nancy Kim J/T/R/S
28 Pillings Pond Road
Lynnfield, MA 01940

0030-0000-2118 2 Wildewood Drive
Stephen MacNichol
2 Wildewood Drive
Lynnfield, MA 01940

0030-0000-2152 4 Wildewood Drive
Antonio & Maria Rosatone
Rosatone Family Irrevocable
4 Wildewood Drive
Lynnfield, MA 01940

0030-0000-2168 6 Wildewood Drive
Lisa M. Vaccaro, T/E
Steven C. Vaccaro, T/E
6 Wildewood Drive
Lynnfield, MA 01940

0031-0000-1555 1 Giugliano Terrace
Giugliano Children Realty TR
S. G. Giugliano Successors
1 Giugliano Terrace
Lynnfield, MA 01940

0031-0000-1685 4 Northway
The 4 Northway Realty Trust
Ilkyo Han, TR
4 Northway
Lynnfield, MA 01940

0031-0000-1665 5 Northway
Elizabeth A. DeLeo, etal, Trustees
Pasquale A. DeLeo Irrev. Trust
c/o Marie E. Lockhart
15 James Millen Road
North Reading, MA 01864

0031-0000-1771 3 Northway
Maria R. Leach Revocable Trust
Maria R. Leach, TR
3 Northway
Lynnfield, MA 01940

0031-0000-1779 6 Lantern Lane
Robert H. Gard Revocable Trust/Robert Gard, TR
Sharon L. Gard Revocable Trust/Sharon Gard, TR
6 Lantern Lane
Lynnfield, MA 01940

0031-0000-1783 10 Lantern Lane
Claflin Family Trust
Mark C. Claflin
10 Lantern Lane
Lynnfield, MA 01940

0031-0000-1759 Rear Lantern Lane
Town of Lynnfield
Conservation Commission
Town Hall
55 Summer Street
Lynnfield, MA 01940

0031-0000-2571 Rear Magnolia Drive
Town of Lynnfield
Conservation Commission
Town Hall
55 Summer Street
Lynnfield, MA 01940

0031-0000-1885 Rear Broadway
New England Power Company
Shannon Larson
40 Sylvan Road
Waltham, MA 02451

0030-0000-1381 1 Meservey Lane
Margaret Lynch Living Trust
John J. Lynch Living Trust
1 Meservey Lane
Lynnfield, MA 01940

0030-0000-1339 3 Meservey Lane
J-S Realty Trust
Jill T. Jorgenson TR
3 Meservey Lane
Lynnfield, MA 01940

0031-0000-0891 483 Rear Essex Street
Town of Lynnfield
Conservation Commission
Town Hall
55 Summer Street
Lynnfield, MA 01940

0031-0000-1832 Off Essex Street
Ralph Weissleder
Anna Petropoulos
11 Nichols Lane
West Peabody, MA 01960

PARCEL ID	OWNERS NAME	MAILING ADDRESS	CITY, STATE ZIP	PROPERTY LOCATION
055-027	RUSSO JOHN L TRUSTEE	6 NICHOLS LN	PEABODY, MA 01960	6 NICHOLS LN
	JLR FAMILY TRUST			
055-028	PAUL TRUDEAU	9 NICHOLS LN	PEABODY, MA 01960	9 NICHOLS LN
055-043	CITY OF PEABODY	24 LOWELL ST	PEABODY, MA 01960	0 WINONA ST-(R)
	WATER TREATMENT PLANT			

LEC

Notice of Intent Application

Lynnfield Rail Trail – Phase 1

Lynnfield, Massachusetts

February 28, 2025

1. Introduction

On behalf of the Applicant, the Town of Lynnfield (John V. Scenna, Contact), LEC Environmental Consultants, Inc., (LEC) is submitting this Notice of Intent (NOI) Application to construct "Phase 1" of a multi-use trail extending approximately 1.84 miles eastward from Ford Avenue in Lynnfield to Nichols Lane in Peabody. The proposed trail is a 10-to-12-foot-wide paved shared-use trail for bicyclists and pedestrians. While the Town of Lynnfield is the Applicant for this NOI Application, the proposed project has been designed according to Massachusetts Department of Transportation (MassDOT) specifications.

Portions of the proposed work activities are located within Previously Developed Riverfront Area associated with Bates Brook, non-jurisdictional Isolated Vegetated Wetlands (IVW), and the 100-foot Buffer Zone to BVW and Bank. Riverfront Area is a Wetland Resource Area jurisdictional under the *Massachusetts Wetlands Protection Act* (M.G.L., c. 131, s. 40, the *Act*) and its implementing *Regulations* (310 CMR 10.00, the *Act Regulations*). Portions of the project qualify as a limited project under 310 CMR 10.53(6) for the construction of a bike path within Riverfront Area but outside other resource areas. Portions of the project are located adjacent to the FEMA mapped 100-year flood plain and associated Bordering Land Subject to Flooding resource area, however all work is located above the associated Base Flood Elevations and out of BLSF. The project is not subject to the *Lynnfield Wetlands Protection Bylaw* (Chapter 240, the *Bylaw*) and its *Conservation Commission Regulations* (Chapter 320, the *Bylaw Regulations*) pursuant to Section 240-2, which states: "*This bylaw shall apply only to projects for commercial or industrial use; for residential projects including two or more dwelling units; and for construction of single-family homes on newly created lots*."

The following narrative provides a description of the site, the associated Wetland Resource Areas, proposed activities, and proposed mitigation measures to prevent and/or minimize potential impacts to Wetland Resource Areas and Buffer Zones, followed by a description of regulatory compliance. Specific project details are depicted on the attached *Notice of Intent Plans*, dated February 11, 2025, prepared by Stantec (*Plan Set*). A *Stormwater Checklist and Summary Report*, prepared by Stantec, documents the project's compliance with 310 CMR 10.05 (6)(k) and the DEP Stormwater Management Policy (Appendix B). A Self Verification Notification (SVN) is being filed with the US Army Corps of Engineers under Section 404 of the Clean Water Act.

Please note the following regarding ownership of the former railroad corridor within which the project will be constructed:

MassDOT does not obtain property owner signatures during the NOI process because the ROW will be acquired for the proposed project before construction begins. If the ROW is not acquired, the project will not move forward as designed. The ROW process is typically not complete until the final stages of design. Furthermore, MassDOT, through the state Right of Way process, has legal authority to conduct projects on parcels that have been acquired temporarily or permanently by the state.

2. General Site Description

The proposed Phase 1 of the Lynnfield Rail Trail extends easterly from Ford Avenue in Lynnfield to Nichols Lane in Peabody, within a roughly 60-foot-wide former railroad corridor (Appendix A, Figure 1-A). The former railroad corridor crosses over Summer Street and Pillings Pond Road before reaching its easterly terminus. The former rail bed is located within an abandoned MBTA-owned railroad corridor, with remnant railroad ties, gravel ballast, and rails throughout most of the project area. The existing former rail bed continues east and west of the project limits.

The railway corridor has not been maintained for at least 20+ years and as a result, dense (mostly non-native invasive) vegetation, fallen trees, and large woody debris render the corridor inaccessible to pedestrians (see Appendix C for representative site photos). Typical vegetation within the existing railway and adjacent upland side slopes includes a tree canopy of Norway maple (*Acer platanoides*), northern red oak (*Quercus rubra*), white ash (*Fraxinus americana*), black cherry (*Prunus serotina*), and eastern white pine (*Pinus strobus*); a shrub layer including multiflora rose (*Rosa multiflora*), black raspberry *(Rubus occidentalis*), common buckthorn (*Rhamnus cathartica*), burning bush (*Euonymus alatus*), Morrow's honeysuckle (*Lonicera morrowii*), and glossy buckthorn (*Frangula alnus*); an herbaceous layer consisting of garlic mustard (*Alliaria petiolata*), enchanter's nightshade (*Circaea canadensis*), Canada goldenrod (*Solidago canadensis*), pokeweed (*Phytolacca americana*), poison ivy (*Toxicodendron radicans*), mugwort (*Artemisia vulgaris*), and white vervain (*Verbena urticifolia*), and entanglements of Virginia creeper (*Parthenocissus quinquefolia*) and Oriental bittersweet (*Celastrus orbiculatus*). Mature mixed forested upland and forested wetland extends outward from the rail bed to the 60-foot-wide undeveloped limits of the ROW.

Between Ford Avenue and Summer Street, residential dwellings are located north of the rail bed corridor, while Reedy Meadow Golf Course is located to the south. Between Summer Street and Nichols Lane, the corridor is bordered by a mixture of residential dwellings and undeveloped forest and wetlands, with exception of Lynnfield High School located immediately west of Pillings Pond Road and north of the rail bed.

The rail bed crosses an intermittent stream west of Summer Street (at approximately STA 149 on the *Plan Set*), and crosses Bates Brook (a perennial stream) southeast of Lynnfield High School (at STA 188+70 on the *Plan Set*). Both streams flow north-to-south through stone culverts that will remain in place. BVW occurs throughout the corridor, generally adjacent to, and at the toe of, steep slopes below the former rail bed where present. The 200-foot Riverfront Area extends laterally from the Bank/Mean Annual High Water (MAHW) Line of Bates Brook within the central portions of the project. The expansive Reedy Meadow wetland system and Beaver Dam Brook are located southwest of the project's western terminus. Pillings Pond is located south of the former rail bed in the area south of Lynnfield High School, and Winona Pond is located in Peabody, southeast of the trail at the eastern project terminus.

LEC inspected soil conditions within the upland areas along the BVW boundary, and generally observed tightly compacted, historic fill material comprised of gravel to fine sandy loam soils, particularly in areas immediately adjacent to the former rail bed, and along slopes descending toward adjacent wetlands. MassDEP BVW Datasheets are provided in Appendix D. The Project is not within an Area of Critical Ecological Concern (ACEC), Outstanding Resource Waters (ORW), Mass Coastal Zone or near a Coldwater Fisheries Resource.

2.1 Floodplain Designation

According to the digital National Flood Hazard Layer FIRMettes representing the July 3, 2012 FEMA Flood Insurance Rate Maps for Lynnfield and Peabody (Panel #s: 25009C0391F and 25009C0392F, Appendix A, Figure 3), the western portion of the project footprint off Ford Avenue (FIRMette 1) is located near a Zone AE Special Flood Hazard Area, with a Base Flood Elevation (BFE) of 73 feet (NAVD 88). The lowest elevation of the existing railroad corridor within the vicinity of this Zone AE is 77.70 feet (according to the profile, Sheet 18 of 34 of the *Plan Set*); therefore, this portion of the project will take place entirely above the BFE elevation, and no Bordering Land Subject to Flooding (BLSF) will be altered.

In the central portion of the project, southeast of Lynnfield High School between STA 186 and 195 on the *Plan Set*, the project footprint is located near a Regulatory Floodway associated with Bates Brook (FIRMette 4), and Zone AE Special Flood Hazard Areas on either side of the railway, with a BFE of 104.3 feet on the north side, and 101.9 feet on the south side. The lowest elevation of the existing railroad corridor within the vicinity of this portion of the project is 106.16 feet (according to the profile, Sheets 22 and 23 of 34 of the *Plan Set*); therefore, the project will take place entirely out of the Regulatory Floodway, above the BFE elevations, and no BLSF will be altered.

To the east of Pillings Pond Road, between STA 207+50 and 211+50 on the *Plan Set*, the project footprint is located near a Zone AE Special Flood Hazard Area with a BFE of 104.3 feet (FIRMette 5). The lowest elevation of the existing railroad corridor within the vicinity of this portion of the project is 109.0 feet at STA 208+42.71 (according to the profile, Sheets 24 and 25 of 34 of the *Plan Set*); therefore, the project will take place entirely out of the Regulatory Floodway, above the BFE elevations, and no BLSF will be altered.

Further to the east of Pillings Pond Road, between STA 213+50 and 226, the project footprint is located near a Zone AE Special Flood Hazard Area with a BFE of 104.3 feet (FIRMette 5). The lowest elevations of the trail within the vicinity of this portion of the project is 108.07 feet at STA 215+74.07 and 105.58 feet at STA 223+54.16 (according to the profile, Sheets 25 and 26 of 34 of the *Plan Set*); therefore, the project will take place entirely out of the Regulatory Floodway, above the BFE elevations, and no BLSF will be altered.

No other portions of the project occur within or near designated flood plain areas.

2.2 Natural Heritage & Endangered Species Program Designation

According to the 15th edition of the Massachusetts Natural Heritage Atlas (effective August 1, 2021) published by the Natural Heritage & Endangered Species Program (NHESP), the project is not located within a *Priority Habitat of Rare Species* or *Estimated Habitat of Rare Wildlife* (Appendix A, Figure 2). No certified or potential vernal pools are located on the site.

2.3 Additional Regulatory Designations

The project is located within multiple areas mapped as a "Zone A" Surface Water Supply Protection Area as designated in the Massachusetts Drinking Water Regulations, 310 CMR 22.00 (Attachment A, Figure 2). Portions of the western and central portions of the trail lie within the "Hawkes Pond" and "Saugus River" Zone A areas, owned by the Lynn Water and Sewer Commission, while the trail's eastern terminus falls within the "Winona Pond Reservoir" Zone A, owned by the Peabody Water Department.

3. Wetland Boundary Determination Methodology

During December 2014 and January 2015, LEC conducted several site evaluations to identify and characterize existing protectable Wetland Resource Areas located on or immediately adjacent to the project footprint. In October and November 2021, and March 2023, LEC revisited the trail corridor and refreshed the wetland flags as needed, to reflect the current observed conditions.

The BVW boundaries were determined through observations of the existing plant communities, using the "fifty percent criteria" to determine dominance of wetland/upland vegetation, the interpretation of soil characteristics, and other indicators of wetland hydrology in accordance with the *Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands* (Second Edition, September 2022), the *Field Indicators for Identifying Hydric Soils in New England* (Version 4, June 2020), and the criteria set forth in 310 CMR 10.55.

The BVW boundaries were demarcated in the field with sequentially numbered blaze orange, surveyor's flagging tape embossed with the words "LEC Resource Area Boundary" in bold, black print, and are depicted in the *Plan Set*, including the following sequences:

- (*Plan Set* Sheets 8-9): Wetland Flags #J-34 to J-46; unflagged wetland extends westward along fence to end of site [south of Ford Avenue and north of existing railway bed]
- (*Plan Set* Sheets 8-9): Wetland Flags #J-33A to J-54A [south of existing railway bed]
- (*Plan Set* Sheet 11): Wetland Flags #L-1 to L-4 [north of existing railway bed]
- (*Plan Set* Sheets 12-13): Wetland Flags #M-1 to M-4 [south of existing railway bed]
- (*Plan Set* Sheets 13-14): Wetland Flags #N-1 to N-6 and #N-14 to N-20 [north of existing railway bed]
- (*Plan Set* Sheets 13-14): Wetland Flags #O-1 to O-17 [south of existing railway bed]
- (*Plan Set* Sheet 15): Wetland Flags #P-1 to P-9 [north of existing railway bed]
- (*Plan Set* Sheets 15-16): Wetland Flags #R-1 to R-10; #R-12 to R-18 and R-19 to R-31 [north of existing railway bed]

- (*Plan Set* Sheet 16): Wetland Flags #S-1 to S-12 [south of existing railway bed]

Appendix D contains *DEP Bordering Vegetated Wetland (BVW) Field Delineation Forms* for a representative transect across the BVW boundary, at wetland flag #J-45. BVW boundaries located on privately-owned properties abutting the MBTA corridor are depicted on the *Plan Set* as approximate based on field observations and MassGIS Wetland Datalayers.

Four non-jurisdictional Isolated Vegetated Wetlands (IVW) were delineated and indicated on the project plans:

- (*Plan Set* Sheets 10-11): Wetland Flags #K-1 to K-22; [south of existing railway bed except for K-9 to K-13] (shaded in orange)
- (*Plan Set* Sheet 11): Wetland Flags #T-1 to T-4; [north of existing railway bed] (shaded in yellow)
- (*Plan Set* Sheet 11): Wetland Flags #U-1 to U-7; [north of existing railway bed] (shaded in yellow)
- (*Plan Set* Sheet 13): Wetland Flags #V-1 to V-8; [within and north of the existing railway bed] (shaded in yellow)

These wetlands are not jurisdictional under the *Act* or *Act Regulations*.

The Bank of an intermittent stream was demarcated through observations of the first observable break in slope or the mean annual flood level, in accordance with 310 CMR 10.54(2)(a). Bank was demarcated in the field with sequentially numbered, blue surveyor's flagging tape, including the following sequence:

- (*Plan Set* Sheets 9-10): Wetland Flags #B-60 to B-63 [south of existing railroad bed]
- (*Plan Set Sheet 17*): The Bank of Winona Pond was demarcated through aerial interpretation.

The Bank/Mean Annual High Water (MAHW) Line of Bates Brook (coincident with Ordinary High Water) was demarcated through observations of the first observable break in slope and/or evidence of bankfull indicators, in accordance with 310 CMR 10.58(2)(a)(2). The boundary of MAHW was demarcated in the field with sequentially numbered, blue surveyor's flagging tape, including the following sequences:

- (*Plan Set* Sheet 13): MAHW #N-7 to N-13 [north of existing railroad bed] and O-5 to O-8 [south of existing railroad bed]

It should be noted that in summer of 2024 the USGS released updated topographic quadrangles throughout Massachusetts, including the most recent map covering the project area (Reading MA Quadrangle, 2024). In addition to Bates Brook, which was identified as a perennial stream in the 2024 map, the 2024 quad shows multiple additional streams and stream segments that are designated as "perennial," which were not identified so in the previous (2021) map (Reading MA Quadrangle, 2021). Attachment A, Figure 1-B shows the USGS topographic map for 2021, which can be compared with the 2024 map (Attachment A, Figure 1-A).

Upon discovery of the newly identified perennial stream within and adjacent to portions of the project area, LEC and Stantec conducted a site walk with Emilie Cademartori, Director of Conservation and Planning for Town of Lynnfield, to inspect these areas newly designated as perennial streams and determine if additional Bank/MAHW delineation was warranted. In all cases where perennial streams were present in the 2024 map but not in the 2021 map, there was no river or stream channel present to have their Bank/MAHW delineated or cast Riverfront onto the project, and therefore the current plans accurately depict the extent of MAHW and Riverfront within the project limits.

4. Wetland Resource Area Descriptions

Jurisdictional Wetland Resource Areas located on or immediately adjacent to the site include BVW, Bank, Bank/MAHW Line, and Riverfront Area. A brief description of each jurisdictional Wetland Resource Area is provided below.

4.1 Bordering Vegetated Wetland

Bordering Vegetated Wetland (BVW) is defined at 310 CMR 10.55 (2) as *freshwater wetlands that border on creeks, rivers, streams, ponds and lakes. The types of freshwater wetlands are wet meadows, marshes, swamps and bogs. Bordering Vegetated Wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The boundary of Bordering Vegetated Wetland is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist.*

BVW occurs intermittently along, but outside of, the former rail bed route, consisting of forested wetland and shrub swamp wetland types. Vegetation within the typical wetland tree canopy is dominated by red maple (*Acer rubrum*), American elm (*Ulmus americana*), tupelo (*Nyssa sylvatica*), and yellow birch (*Betula alleghaniensis*). The

understory contains saplings from the canopy, along with saplings of eastern white pine and patches of sweet pepperbush (*Clethra alnifolia*), highbush blueberry (*Vaccinium corymbosum*), swamp azalea (*Rhododendron viscosum*), arrowwood (*Viburnum dentatum*), silky dogwood (*Cornus amomum*), elderberry (*Sambucus canadensis*), winterberry (*Ilex verticillata*), and spicebush (*Lindera benzoin*). The groundcover contains patches of cinnamon fern (*Osmunda cinnamomea*), sensitive fern (*Onoclea sensibilis*), royal fern (*Osmunda regalis*), poison ivy (*Toxicodendron radicans*), jewelweed (*Impatiens capensis*), sheep laurel (*Kalmia angustifolia*), and sphagnum moss (*Sphagnum* sp.), with various sedges (*Carex* spp.) and rushes (*Juncus* spp.), and seedlings from the overstory.

LEC inspected soil conditions within the BVWs and generally observed a 10-inch deep sapric organic layer (O_a layer), underlain by a 6-inch-deep loamy sand subsoil (C horizon), with a soil matrix color of 10YR 5/1.

4.2 Bank

Bank is defined in 310 CMR 10.54 (2) (c) as *the first observable break in the slope or the mean annual flood level, whichever is lower. The lower boundary of a Bank is the mean annual low flow level.*

The B-series Bank flags are associated with an intermittent stream that flows southerly under the railroad bed (extending from approximately STA 148+70 to STA 150+80 on the *Plan Set*) through a 1.5-foot by 1.5-foot stone box culvert and discharging toward Reedy Meadow Golf Course. The north side of the stream is not confined within an obvious primary channel, but rather flows diffusely through an expansive scrub-shrub swamp system. Aerial imagery was used to indicate bankfull conditions on the north side of the trail, while the B-series flags on the southern side demarcate a well-defined break in slope. As noted above, Bank associated with Winnona Pond was demarcated through aerial interpretations.

4.3 Bank/Mean Annual High-Water Line

The Mean Annual High-Water (MAHW) Line is defined in 310 CMR 10.58 (2)(a)(2) as *the line that is apparent from visible markings or changes in the character of soils or vegetation due to the prolonged presence of water and that distinguishes between predominantly aquatic and predominantly terrestrial land. Field indicators of bankfull conditions shall be used to determine the mean annual high-water line. Bankfull indicators include but are not limited to: changes in slope, changes in vegetation, stain lines, top of pointbars, changes in bank materials, or bank undercuts. In tidal rivers, the*

mean annual high water line is coincident with the mean high water line determined under 310 CMR 10.23 [310 CMR 10.58 (2)(a)2.c.].

The MAHW Line associated with Bates Brook is located north and south of the former rail bed, connected by a 3.5-foot by 4-foot stone box culvert extending beneath the former rail bed. The Brook is confined within a well-defined channel on both sides of the trail, and field bankfull indicators were utilized to determine the MAHW Line.

4.4 Riverfront Area

According to 310 CMR 10.58(2)(a)(3), Riverfront Area is defined as *the area of land between a river's mean annual high-water line measured horizontally outward from the river and a parallel line located 200 feet away….*

Riverfront Area extends 200 feet from the MAHW Line associated with Bates Brook and includes the previously disturbed former rail bed and adjacent scrub-shrub vegetation along the slopes descending from the rail bed. The former rail bed contains compacted fill soils, gravel ballast (considered "degraded"), railroad ties, and iron rails, and dense vegetation dominated by young white pine saplings and a variety of mostly non-native invasive shrubs and vines.

5. Proposed Project

The proposed project includes construction of a new 12-foot wide, paved multi-use trail extending easterly from Ford Avenue in Lynnfield (*Plan Set* Sheet 8) to Nichols Lane in Peabody (*Plan Set* Sheet 17). The trail will be constructed within the footprint of the former railroad bed. A portion of the trail (285± feet in length), between approximately STA 157+75 and 160+60, will be narrowed to 10 feet to avoid and minimize alterations to non-jurisdictional IVW. Types of equipment and other means and methods of construction will be determined by the contractor; however, the trail will be established by rough grading the trail footprint, installing the pavement sub-base and binder, and then installing the final pavement course. The paved trail will be crowned slightly to allow for sheet-flow of stormwater to run off to the adjacent vegetated land. The trail will be flanked by 2-foot-wide grass shoulders. Representative trail cross sections for the length of the project are provided on Sheets 6 and 7 of the *Plan Set*. The shoulders and adjacent temporarily disturbed areas will be stabilized via a native grass seed mix per MassDOT specifications.

Numerous additional accessory project features will be constructed within Buffer Zone areas at various points along the trail, including:

- North of STA 136 to 138 (Sheet 8 of the *Plan Set*) an 8-foot paved trail will connect to the Lynnfield Middle School;
- South of STA 137 to 138 (Sheet 8 of the *Plan Set*) a 12-foot stone dust path will connect to the railroad corridor, leading westward toward Reedy Meadow;
- Wood rail fence will be installed at multiple locations (see details on Sheets 33 and 34); and
- A trailhead area will be created just west of Summer Street (details on Sheet 28 of the *Plan Set*); however, this is located outside of Buffer Zone.

Throughout its course, the trail location has been designed to utilize existing disturbed rail bed and avoid disturbance to Wetland Resource Areas to the maximum extent practical given site constraints, including existing topography and adjacent development.

5.1 **Non-jurisdictional IVW Alteration**

The trail location has been designed to minimize disturbance to Wetland Resource Areas to the extent practical given site constraints, including existing topography, road crossings, and adjacent residential land use. The proposed activities will result in a total of 4,087± square feet of permanent alteration to IVW within four separate wetland series, including three small impacts within the "T," "U" and "V" series and one more substantial area of 3,079± square feet within the "K-series," from STA 155+64 to STA 160+60 (wetland flags #K-6 to K-22; *Plan Set* Sheets 10 and 11). Sheets 10 and 11 include a table and color coding where the K-series IVW alteration is proposed. The following table shows a summary of the IVW alteration and proposed replication.

Isolated Vegetated Wetland

Station	Station	Permanent Impact Area (SF)	Notes
155+65	160+61	3,078	K-Series
158+55	158+94	137	T-Series (Entire System)
159+39	161+12	716	U-Series (Entire System)
184+15	184+26	156	V-Series

Total IVW Permanent Impacts: 4,087 SF

K-Series Isolated Vegetated Wetland Replication Area

Station	Station	Area (SF)	Notes
154+77	155+77	3,092	

Total IVW Replication: 3,092 SF

Although these IVW alterations are not regulated under the *Act* and *Act Regulations* and therefore are not subject to performance standards or mitigation requirements, the project will voluntarily provide replication for the largest of these IVW impact areas (3,079± square feet in the K-series IVW) in accordance with Bordering Vegetated Wetland replication standards. The K-series IVW alteration will be fully mitigated at a slightly larger than 1:1 ratio by the proposed 3,092± square-foot Wetland Replication Area (WRA) located on Sheet 10 of the *Plan Set* between STA 154+77 and 155+77 (details on Sheet 31) as further described below in Section 6.3.

5.2 Riverfront Area Alteration

A portion of the trail located between STA 187+46 to STA 192+31 (Sheet 13 of the *Plan Set*) totaling 14,982± square feet (8,800 permanent and 6,182 temporary) is located within Previously Developed Riverfront Area associated with Bates Brook. Between 0 and 100 feet of the Riverfront Area, a total of 10,103± square feet will be altered (5,952 square feet permanent and 4,151 square feet temporary). In the outer 100 feet of the Riverfront, 4,879± square feet will be altered (2,848 permanent and 2,031 temporary). The total existing Riverfront within the project area is 42,315± square feet. The following tables show a summary of the Riverfront alteration in the 0-100-foot portion, 100-to-200-foot portion and total 0-to-200-foot portion of the Riverfront. Compliance with Riverfront Area performance standards per the *Act Regulations* is discussed below in Section 7.1.

200-ft Riverfront Area

0-ft to 100-ft

Permanent Impact
(Pervious Converted to Impervious)

Station	Station	Area (SF)	Notes
187+47	192+31	5,767	SUP Pavement
188+27	188+62	185	Modified Rockfill Slope

Subtotal Permanent (0-100'): 5,952 SF

Temporary Impact
(Pervious Converted to Pervious or Impervious Converted to Impervious)

Station	Station	Area (SF)	Notes
187+46	192+26	2,411	Pervious to Pervious
187+50	192+32	1,740	Pervious to Pervious

Subtotal Temporary (0-100'): 4,151 SF

200-ft Riverfront Area *(continued)*

100-ft to 200-ft

Permanent Impact
(Pervious Converted to Impervious)

Station	Station	Area (SF)	Notes
186+21	187+50	1,449	SUP Pavement
186+50	186+85	121	Modified Rockfill Slope
192+26	193+37	1,278	SUP Pavement

Subtotal Permanent (100'-200'): 2,848 SF

Temporary Impact
(Pervious Converted to Pervious or Impervious Converted to Impervious)

Station	Station	Area (SF)	Notes
186+16	187+47	683	Pervious to Pervious
186+34	187+51	452	Pervious to Pervious
192+25	193+33	561	Pervious to Pervious
192+31	193+38	335	Pervious to Pervious

Subtotal Temporary (100'-200'): 2,031 SF

Total Permanent Riverfront Area Impacts (0-200'): 8,800
Total Temporary Riverfront Area Impacts (0-200'): 6,182

Total Riverfront Area Impacts (0-200'): 14,982 SF

5.3 Buffer Zone Alteration

The project will alter a total of 116,147± square feet of Buffer Zone (63,845± square feet permanent and 52,302± square feet temporary). Overall, the limit of work has been minimized to the extent practicable to facilitate construction activities and preserve naturally vegetated Buffer Zone. A portion of the Buffer Zone alteration is due to the wetland replication area creation.

6. Mitigation Measures

The Applicant has prepared a comprehensive mitigation plan comprised of erosion controls and wetland replication, as further described below. Compliance with the DEP Stormwater Management regulations is also discussed below in Section 6.2.

6.1 Sedimentation and Erosion Control

A sedimentation and erosion control program will be implemented to protect the adjacent Wetland Resource Areas from sedimentation during the proposed construction activities. As shown throughout the *Plan Set*, and as detailed on Sheet 32 of 34, erosion controls consisting of compost filter tubes or equivalent will be installed along the Limit-of-Work

in the vicinity of Wetland Resource Areas. The actual means and methods of erosion control installation will be determined by the contractor and/or as specified by the Commission in the Order of Conditions. All barriers will remain in place until disturbed areas are stabilized with vegetation.

6.2 Stormwater Management

DEP's Stormwater Management Standards and the Stormwater Best Management Practices (BMPs) provided in the project design are detailed in Appendix B – *Stormwater Checklist and Summary Report* prepared by Stantec. To summarize, the Applicant is required to comply with 310 CMR 10.05 (6)(k) and the DEP Stormwater Management Policy to the greatest extent practicable, considering the type of proposed project.

The project will increase the amount of impervious surface in the Buffer Zone by 63,845 square feet, and in the Riverfront by 8,800 square feet.

New discharges are not proposed under this project. As proposed, the stormwater runoff from the trail will almost immediately infiltrate into the adjacent natural landscape or will be collected in an adjacent vegetated swale (which, along with the existing culverts and infiltration basins, were constructed by the former railroad) where it will be directed to either an existing culvert or infiltration basin.

There are no existing stormwater management facilities associated with the trail project area and considering the relatively narrow width of the proposed impervious area, post-construction peak stormwater run-off rates will approximate existing conditions, with only slight increases because of the paved surfaces.

Since the trail is limited to pedestrian and bicycle traffic, and considering the trail will not be salted or sanded during the winter months, no pollutants or other contamination is anticipated.

6.3 Wetland Replication Plan

As described above in Section 5.1, permanent IVW disturbance within the K-series IVW totaling 3,079± square feet will be voluntarily mitigated (3,092 square feet of proposed mitigation) located southwest of and adjacent to Wetland Series K at flags K-1 through K-3 (see Sheet 10 of the *Plan Set*; details on Sheet 31).

The WRA will be cleared and excavated to sub-grades roughly 12 inches below the elevation of the adjacent wetland and backfilled to proposed finished grades similar to the adjacent wetland with a wetland topsoil suitable for WRAs per MassDOT specifications. Once the topsoil is established, four (4) native trees and thirty-six (36) shrubs will be

installed, including red maple, river birch (*Betula nigra*), highbush blueberry, arrowwood, swamp azalea, and spicebush. The wetland topsoil will then be seeded with a native FACW wetland meadow seed mix and stabilized via hydro-seeding or straw mulch.

Construction of the WRA will be overseen and monitored annually by a qualified Wetland Scientist with Monitoring Reports provided to the Commission after the work is complete for two growing seasons or until 75% coverage by wetland indicator species is achieved. Corrective actions may be recommended, including replacement of dead plantings and invasive species management, if necessary.

7. Regulatory Compliance

Portions of the proposed activities will occur within Previously Developed Riverfront Area. As a result, the project includes measures to ensure compliance with the applicable performance standards enumerated in the *Act Regulations*. As previously noted, portions of the proposed project within Previously Developed Riverfront Area qualify as a limited project under 310 CMR 10.53(6) for the construction of a bike path within Riverfront Area but outside other resource areas. Below are citations of the pertinent performance standards and an explanation of the project's compliance with the performance standards.

7.1 Riverfront Area

The proposed project involves 14,982± square feet of work in the Riverfront Area as described above in Section 5, and is considered a Redevelopment Project in Riverfront. The total existing Riverfront Area within the project area is 42,315± square feet; therefore, the project alters greater than 10% of the Riverfront and does not meet the criteria for No Significant Adverse Impact pursuant to 310 CMR 10.58(4)(d)1. However, according to 310 CMR 10.53(6), Riverfront Area disturbance associated with the trail project meets the criteria to be treated as a limited project:

Notwithstanding the provisions of 310 CMR 10.58, the issuing authority may issue an Order of Conditions for the construction, rehabilitation, and maintenance of footpaths, bikepaths, and other pedestrian or nonmotorized vehicle access to or along riverfront areas but outside other resource areas, provided that adverse impacts from the work are minimized and that the design specifications are commensurate with the projected use and are compatible with the character of the riverfront area. Generally, the width of the access shall not exceed ten feet of pavement, except within an area that is already altered

(e.g., railroad beds within rights of way). Access shall not be located in vernal pools or fenced in a manner which would impede the movement of wildlife.

The portion of the proposed project located within Riverfront Area includes the construction of a 12-foot-wide paved section of the trail over the existing rail bed. While the width of the access is greater than ten feet of pavement, the proposed project complies with this standard by maintaining a 12-foot-wide path within an existing former railroad bed within the MBTA right-of-way. Impacts are minimized as discussed previously herein. The Riverfront Area alteration occurs entirely within Previously Disturbed Riverfront Area. The area of alteration is unavoidable, and will not result in significant impacts to Riverfront Area functions and values, considering that the work will take place in the existing rail bed which contains gravel substrate, railroad ties, and iron rails, with early successional vegetation dominated by non-native species. Access to the trail will not be located in vernal pools, and any wood rail fences installed in Riverfront will not impede the movement of most wildlife.

8. Summary

On behalf of the Applicant, the Town of Lynnfield, LEC is submitting this Notice of Intent Application to construct Phase 1 of a multi-use trail extending from Ford Avenue in Lynnfield to Nichols Lane in Peabody. Portions of the proposed work activities are located within Previously Developed Riverfront Area, non-jurisdictional IVW and the 100-foot Buffer Zone. Riverfront Area is a jurisdictional Wetland Resource Area, and the Buffer Zone is protectable under the *Act* and *Act Regulations*.

The proposed work occurs within the existing former rail bed and immediately adjacent land. A portion of the impacted non-jurisdictional IVW will be voluntarily replicated, and the Riverfront Area alteration complies with the Limited Project performance standards associated with Riverfront impacts as described above. The proposed project has been designed to avoid and minimize impacts to Wetland Resource Areas and associated Buffer Zone to the maximum extent practicable, and is not anticipated to result in an adverse impact to Wetland Resource Areas. Therefore, the Applicant is requesting that the Commission issue an Order of Conditions approving the project as proposed.

Massachusetts Department of Environmental Protection, Division of Wetlands and Waterways. *Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands (Second Edition, September 2022).*

Massachusetts Natural Heritage and Endangered Species Program Atlas of Estimated Habitat of State-listed Rare Wetlands Wildlife. Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, Route 135, Westborough, MA 01581, www.state.ma.us/dfwele/dfw

Massachusetts Wetlands Protection Act (M.G.L. c. 131, §. 40), www.state.ma.us/dep

Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00), www.state.ma.us/dep

National Flood Insurance Program, Federal Emergency Management Agency Flood Insurance Rate Map (*Community Panels* 25009C0391F and 25009C0392F), July 3, 2012.

New England Hydric Soils Technical Committee. 2020 Version 4, *Field Indicators for Identifying Hydric Soils in New England,* New England Interstate Water Pollution Control Commission, Lowell, MA.

Reed, P.B. 1988. *National List of Plant Species that Occur in Wetlands: 1988 Massachusetts*. U.S. Department of the Interior, Fish and Wildlife Service. NERC-88/18.21.

Appendix A

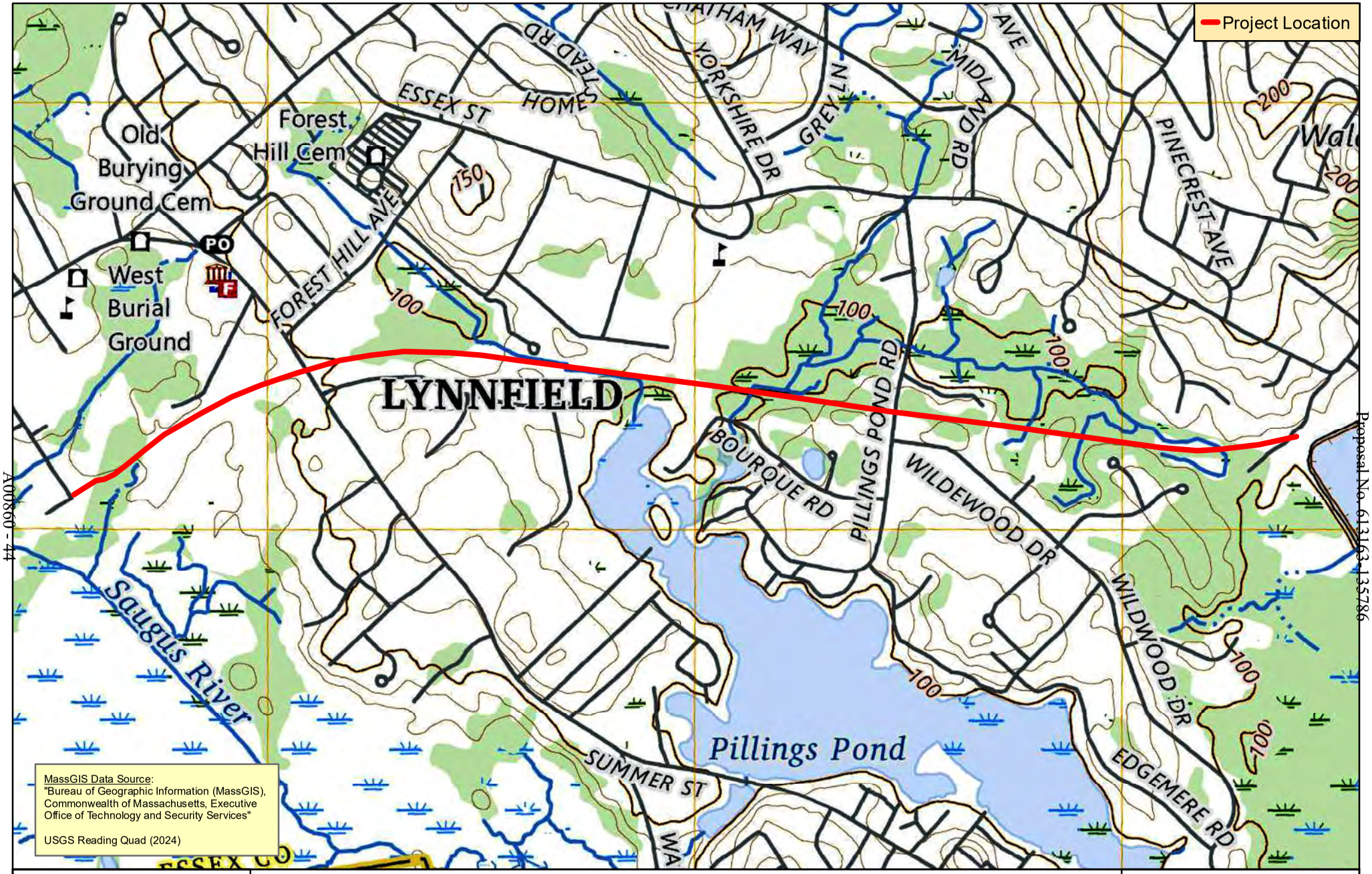
Locus Maps

Figure 1-A: USGS Topographic Map with USGS Reading, MA Quad (2024)

Figure 1-B: USGS Topographic Map with USGS Reading, MA Quad (2021)

Figure 2: Orthophoto Map

Figure 3: FEMA FIRMettes



A00860 - 44

Proposal No. 613163-135786

LEC Environmental Consultants, Inc.
Wakefield, MA 781.245.2500
www.lecenvironmental.com

Figure 1-A
USGS Topographic Map with Reading, MA Quad (2024)

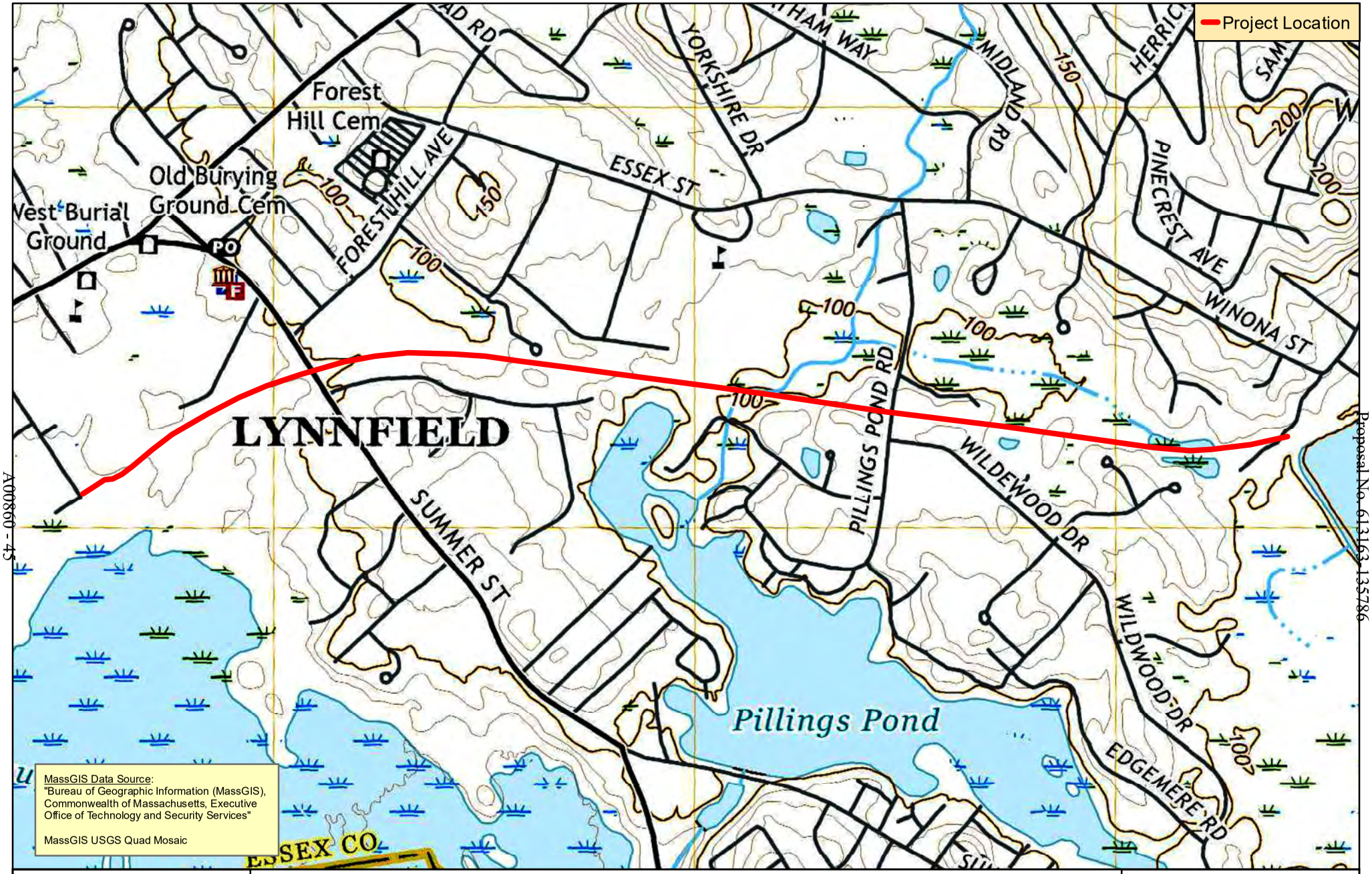
Lynnfield Rail Trail - Phase 1

Date: 12/23/2024

N

1 inch = 985 feet

0 250 500 1,000 Feet



A00860 - 45

Proposal No. 613163-135786

LEC Environmental Consultants, Inc.
Wakefield, MA 781.245.2500
www.lecenvironmental.com

Figure 1-B
USGS Topographic Map with USGS Reading, MA Quad (2021)

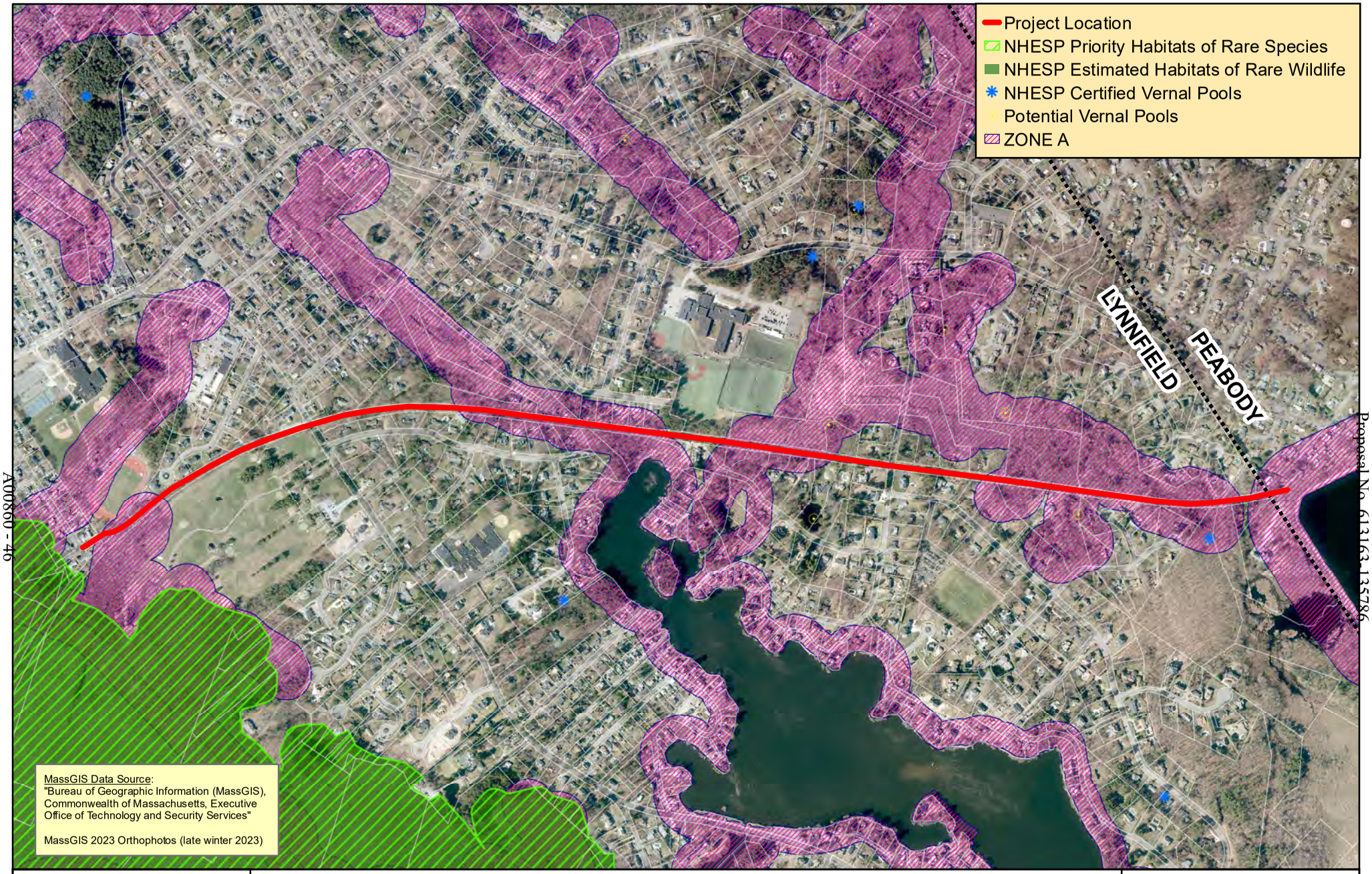
Lynnfield Rail Trail - Phase 1

Date: 12/23/2024

N

1 inch = 1,000 feet

0 250 500 1,000 Feet



A00860 - 46

Proposal No. 613163-135786

Figure 2
Orthophoto Map

Lynnfield Rail Trail - Phase 1

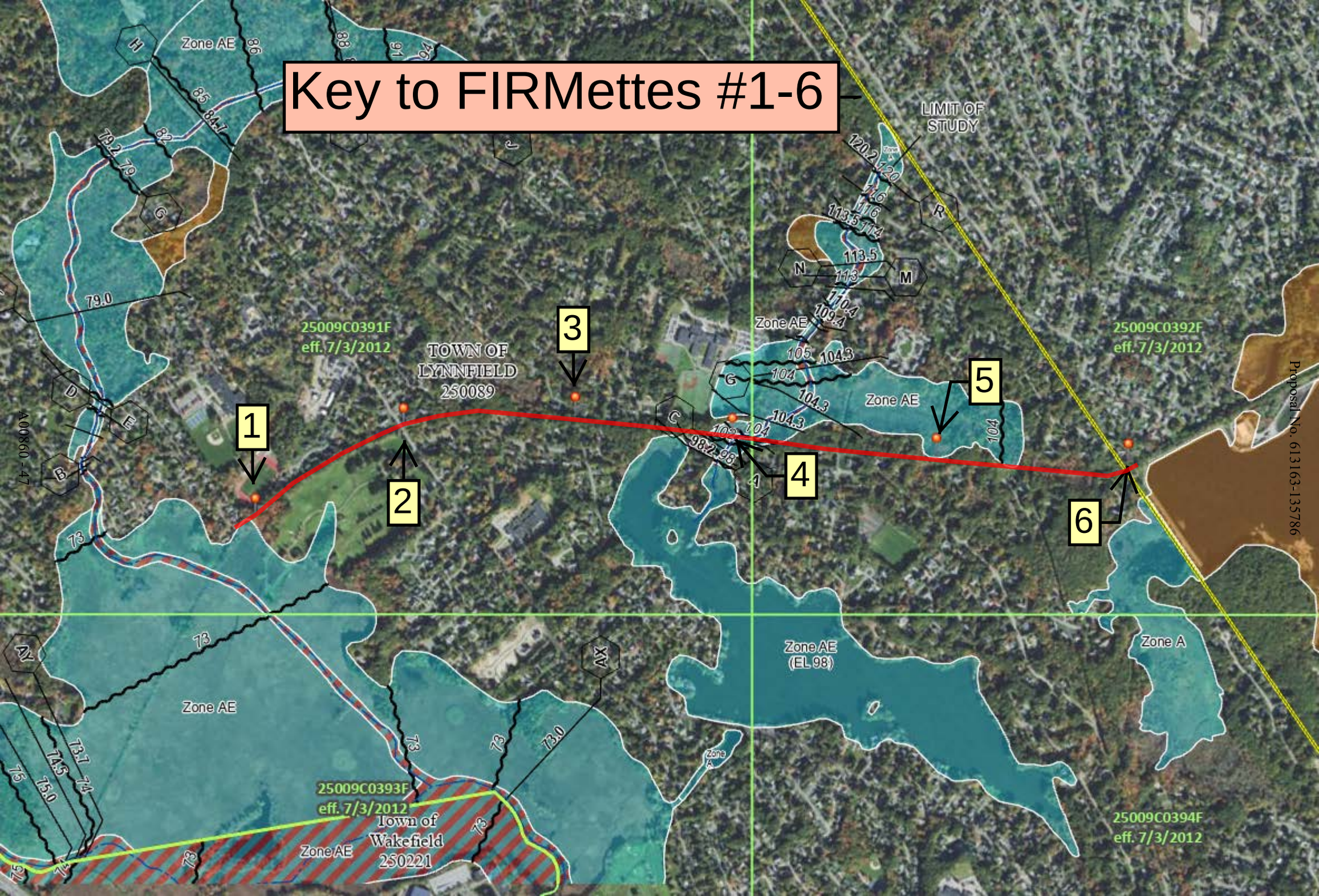
LEC Environmental Consultants, Inc.
Wakefield, MA 781.245.2500
www.lecenvironmental.com

Date: 12/23/2024

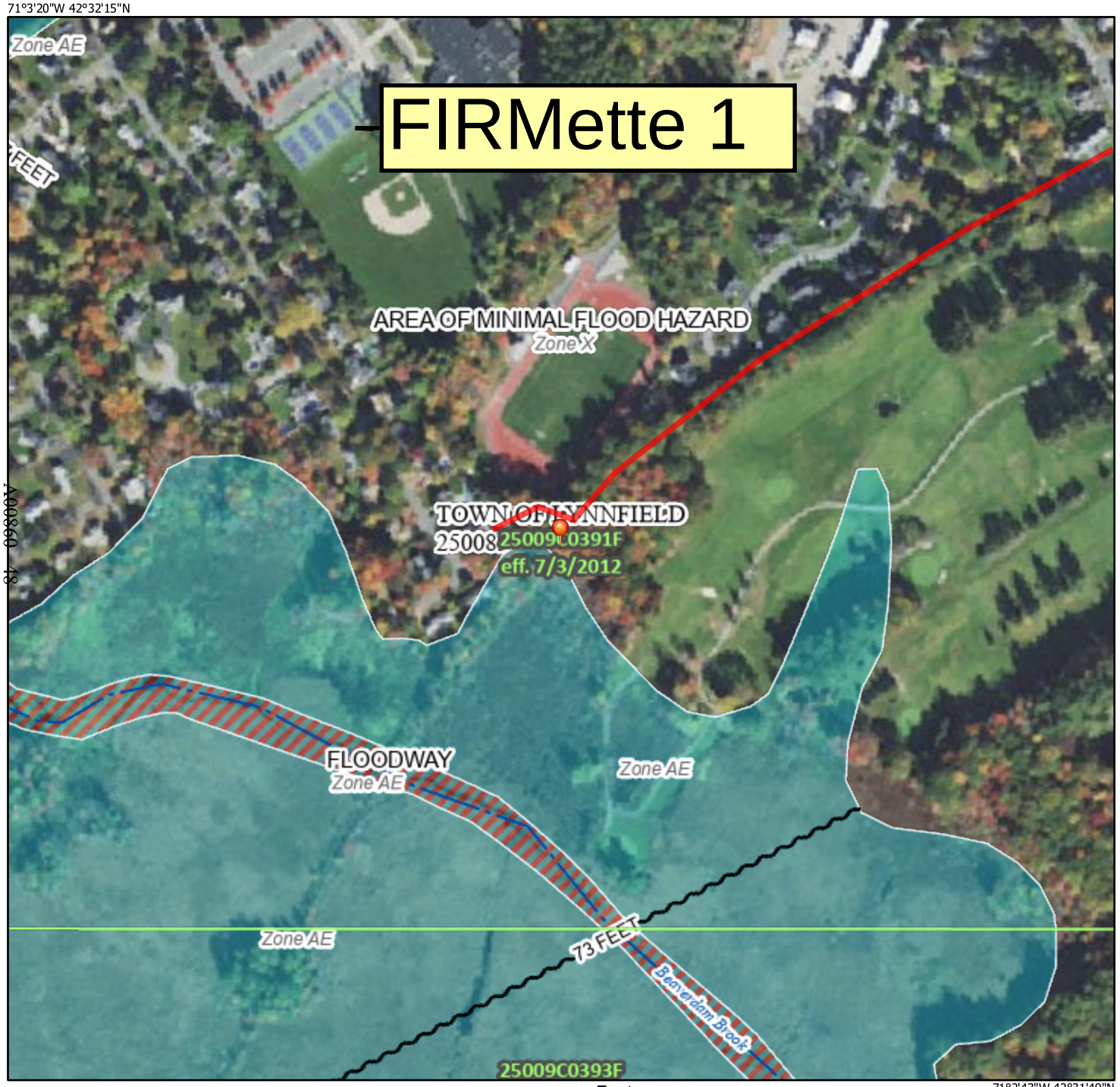
N

1 inch = 1,000 feet

0 250 500 1,000 Feet


Key to FIRMettes #1-6
LIMIT OF STUDY
25009C0391F
eff. 7/3/2012
TOWN OF LYNNFIELD
250089
25009C0392F
eff. 7/3/2012
25009C0393F
eff. 7/3/2012
Town of Wakefield
250221
25009C0394F
eff. 7/3/2012
Zone AE
Zone AE
(EL 98)
Zone A
1
2
3
4
5
6
A00860 - 47
Proposal No. 613163-135786

National Flood Hazard Layer FIRMette



Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/3/2024 at 3:23 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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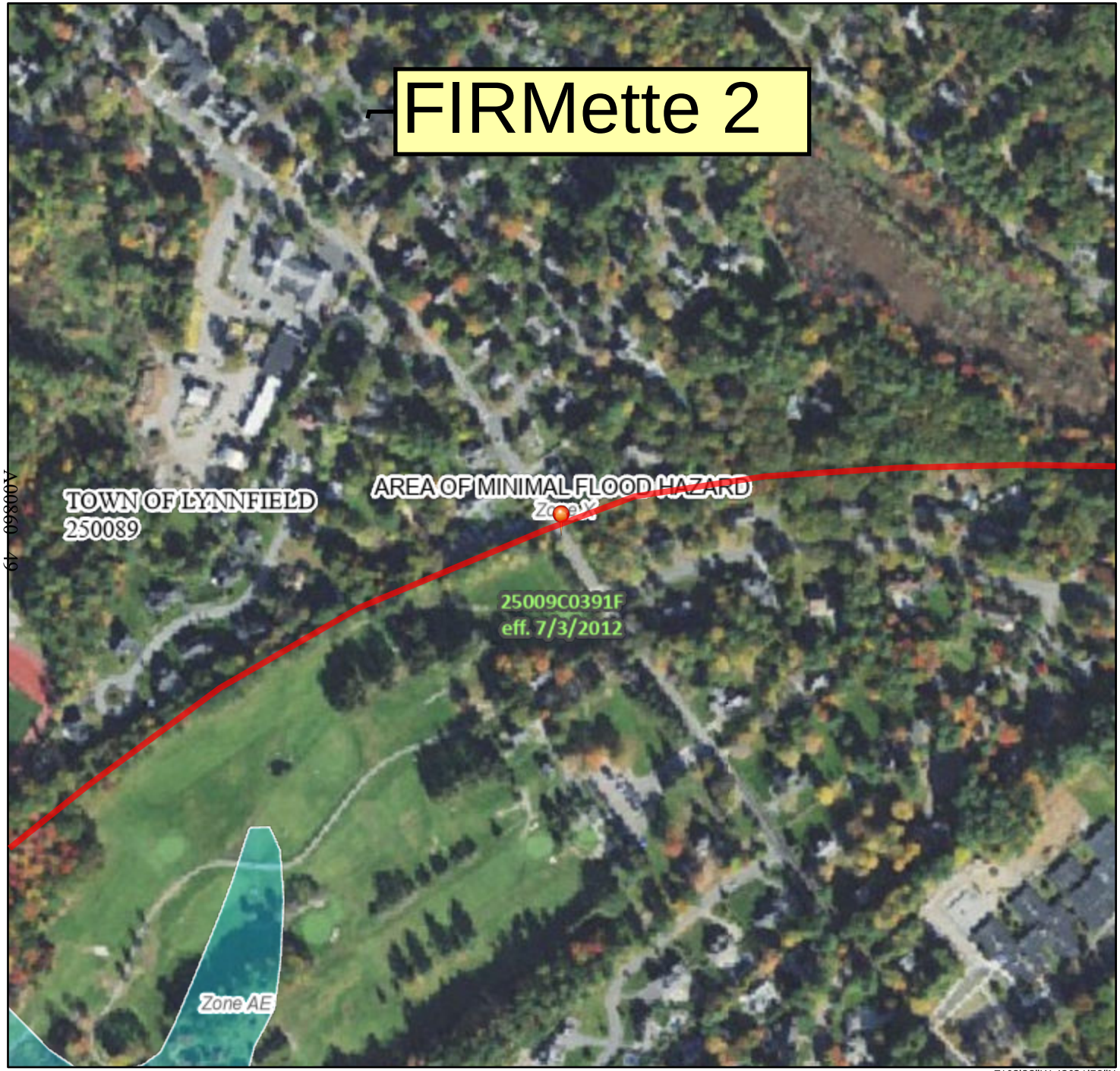
Proposal No. 613163-135786

National Flood Hazard Layer FIRMette

FEMA

71°2'59"W 42°32'25"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

71°2'22"W 42°31'58"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

Proposal No. 613163-135786

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

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National Flood Hazard Layer FIRMette

FEMA

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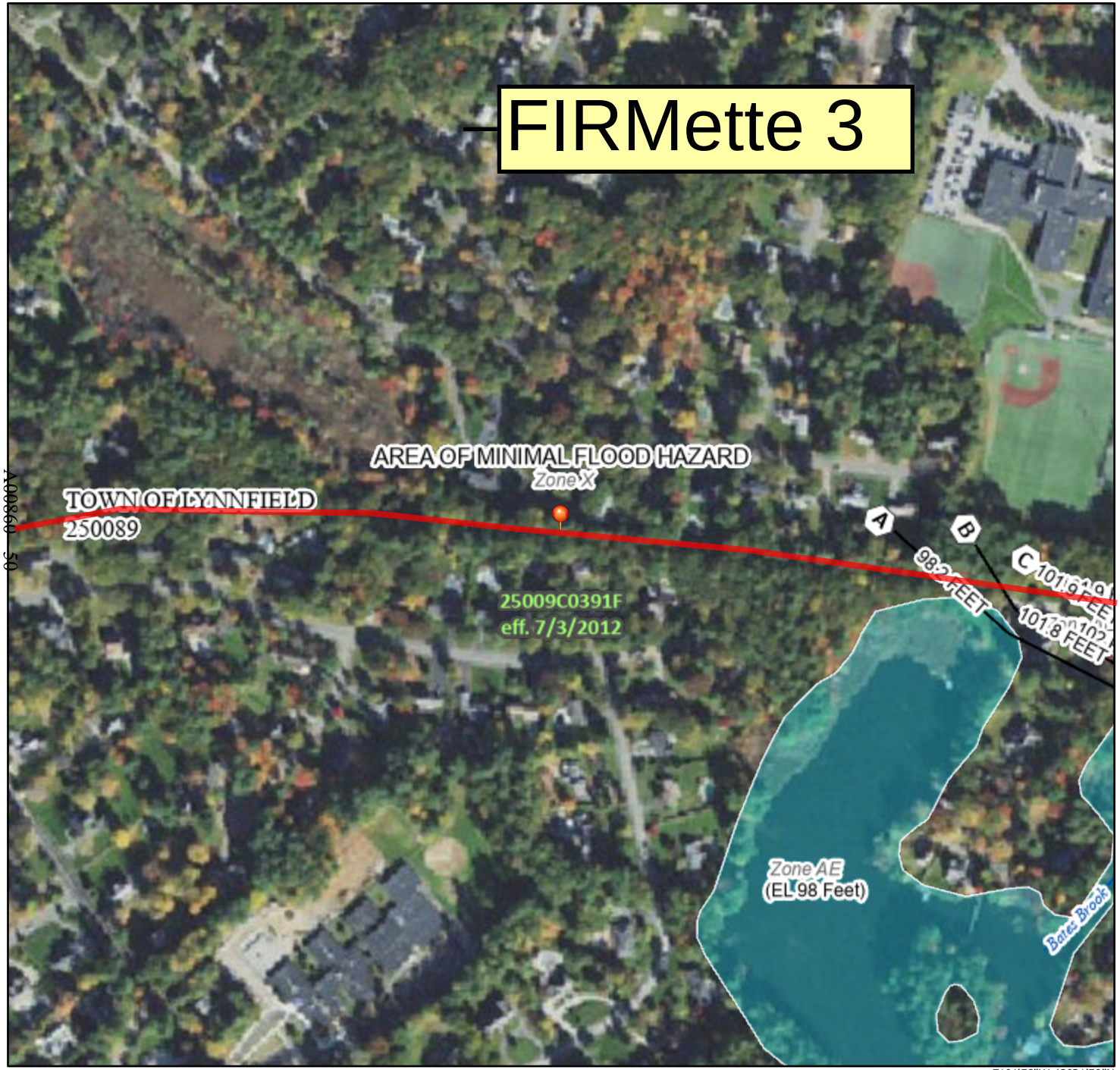

71°1'58"W 42°31'59"N

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1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
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- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
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GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

Proposal No. 613163-135786

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/3/2024 at 3:31 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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National Flood Hazard Layer FIRMette

FEMA

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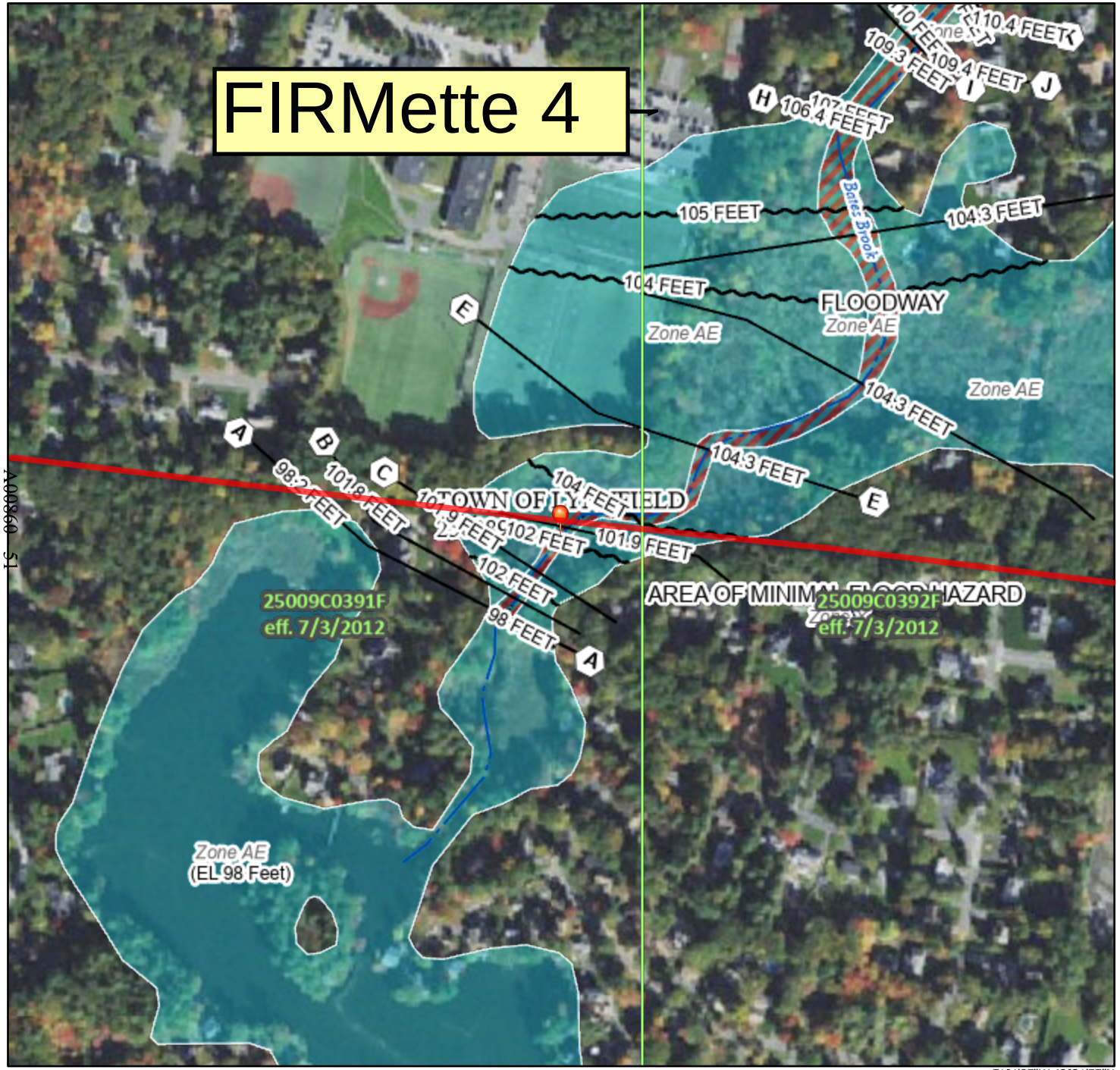

71°1'37"W 42°31'57"N

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1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

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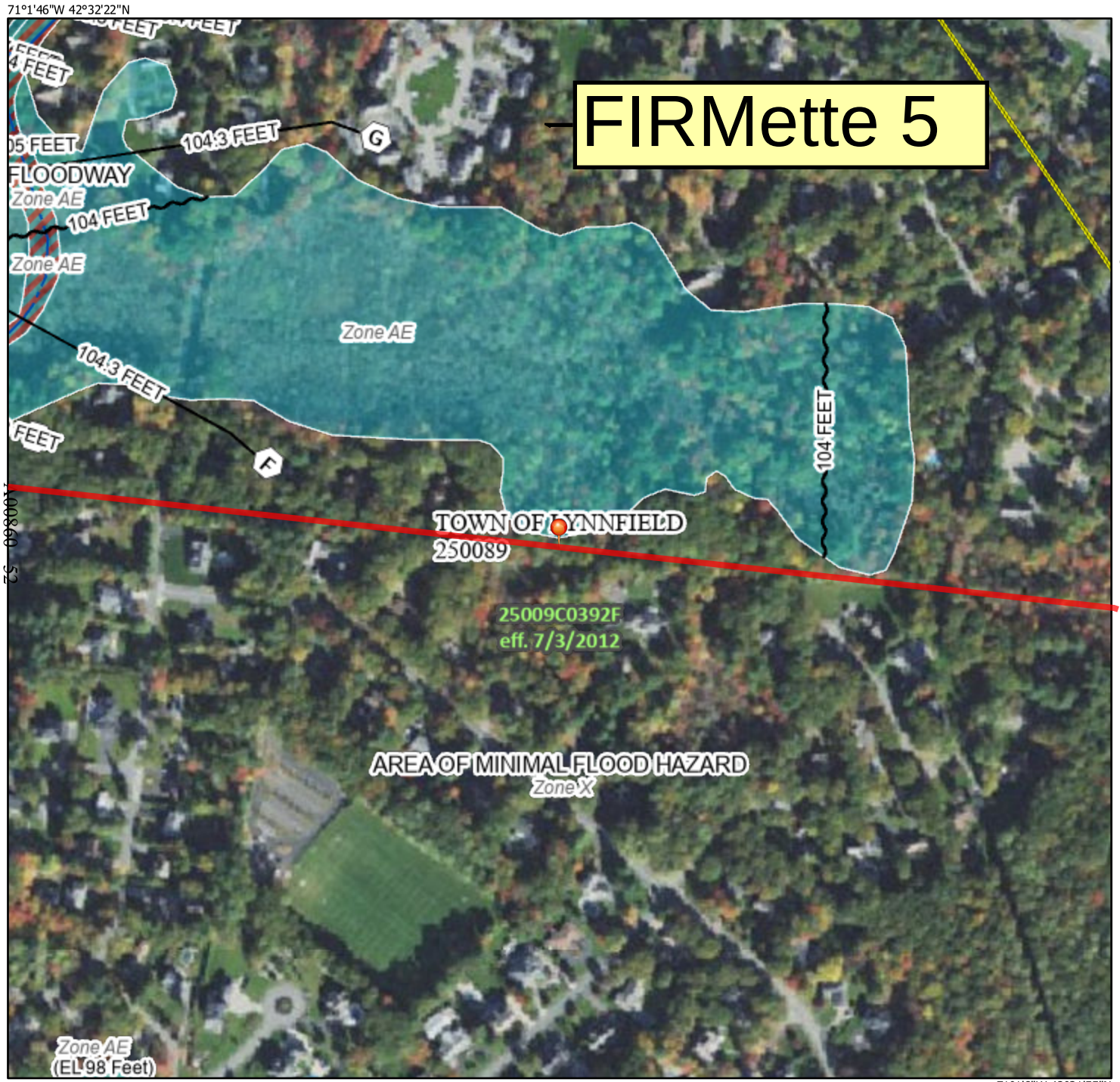
Proposal No. 613163-135786

National Flood Hazard Layer FIRMette



Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

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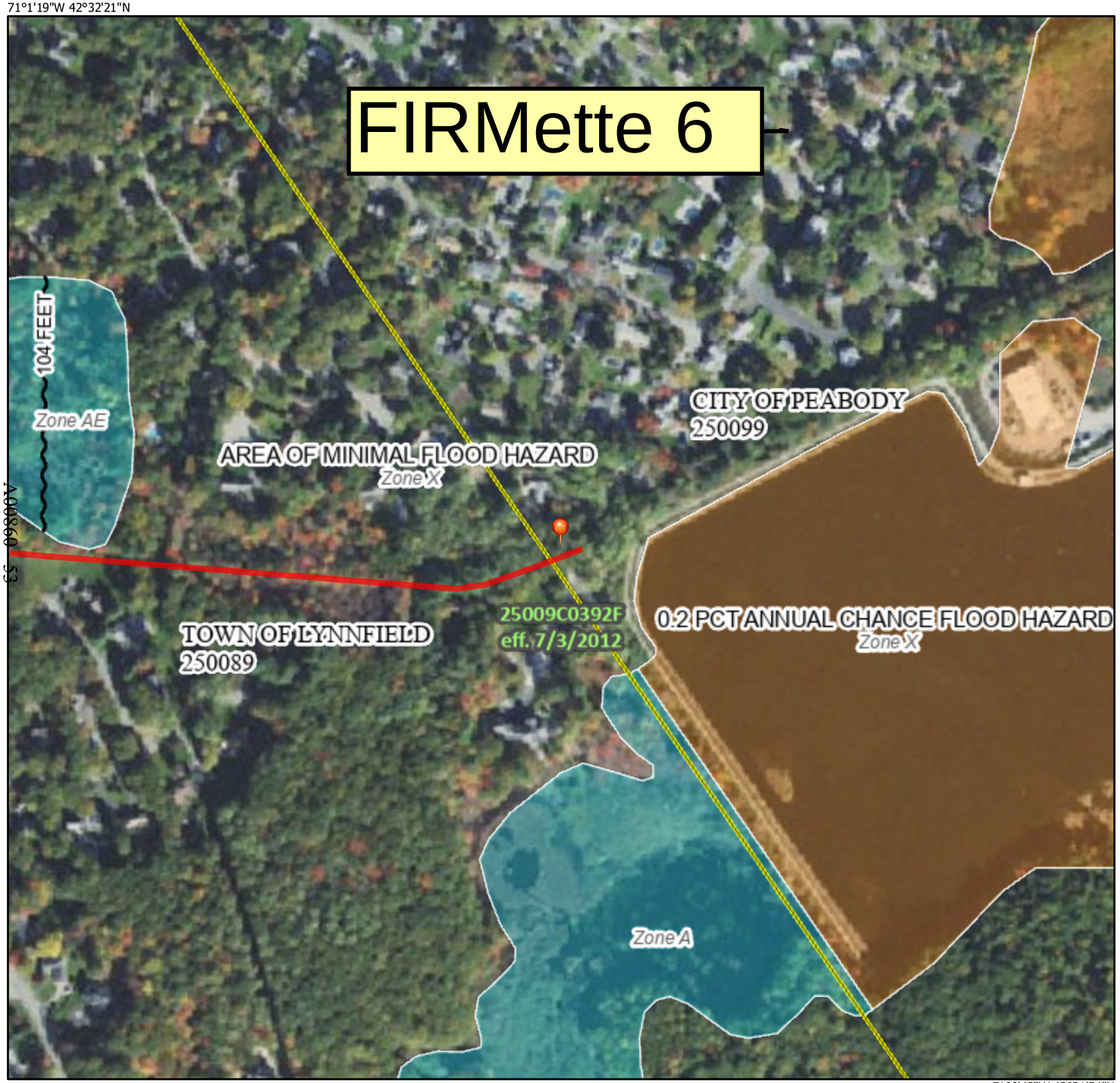
Proposal No. 613163-135786

National Flood Hazard Layer FIRMette



Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
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- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
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- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

Proposal No. 613163-135786

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/3/2024 at 3:36 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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Appendix B

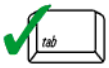
Stormwater Checklist and Summary Report,
prepared by Stantec

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

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



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

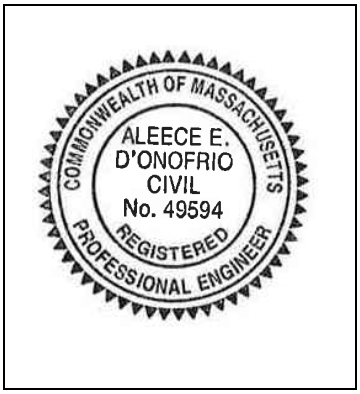
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



2/13/2025

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☐ New development

☐ Redevelopment

☒ Mix of New Development and Redevelopment

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

- ☐ No disturbance to any Wetland Resource Areas
- ☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)
- ☐ Reduced Impervious Area (Redevelopment Only)
- ☒ Minimizing disturbance to existing trees and shrubs
- ☐ LID Site Design Credit Requested:
  - ☐ Credit 1
  - ☐ Credit 2
  - ☐ Credit 3
- ☒ Use of "country drainage" versus curb and gutter conveyance and pipe
- ☐ Bioretention Cells (includes Rain Gardens)
- ☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)
- ☐ Treebox Filter
- ☐ Water Quality Swale
- ☐ Grass Channel
- ☐ Green Roof
- ☐ Other (describe): _____

Standard 1: No New Untreated Discharges **N/A: The project does not include any new untreated discharges**

- ☒ No new untreated discharges
- ☐ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth
- ☐ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation **N/A: The project does not include any discharges**

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☐ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge **N/A: The project does not include any discharges or recharge**

☐ Soil Analysis provided.

☐ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☐ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☐ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☐ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality **N/A: The project does not include any discharges**

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☐ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☐ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☐ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☐ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☐ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☐ The BMP is sized (and calculations provided) based on:

- ☐ The ½" or 1" Water Quality Volume or
- ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs) **N/A: The project is not considered a LUPPHL**

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas **N/A: The project does not include any discharges within critical areas**

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☒ Critical areas and BMPs are identified in the Stormwater Report.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☒ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☒ Bike Path and/or Foot Path
- ☐ Redevelopment Project
- ☐ Redevelopment portion of mix of new and redevelopment.

☒ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☐ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☐ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☒ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☐ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☐ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ☐ Estimated operation and maintenance budget; and
- ☐ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges **N/A: The project does not include illicit discharges**

☐ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☐ An Illicit Discharge Compliance Statement is attached;

☐ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

LYNNFIELD RAIL TRAIL – PHASE 1 – LYNNFIELD & PEABODY STORMWATER SUMMARY REPORT

GENERAL PROJECT DESCRIPTION:

The Lynnfield Rail Trail – Phase 1 project consists of a 12-ft wide asphalt shared-use path with 2-ft wide soft surface (grass) shoulders. The route extends 1.84 miles from Ford Avenue in Lynnfield to Nichols Lane in Peabody with most of the route occupying the former railroad track bed.

In accordance with Volume 1 of the Stormwater Handbook and 310 CMR 10.05 6 (m), "footpaths, bike paths, and other paths for pedestrian and/or non-motorized vehicle access" need to comply with the MassDEP Stormwater Management Standards "to the maximum extent practicable". A summary of the Standards as they relate to this project are provided below:

STANDARD NO. 1 – NO NEW UNTREATED DISCHARGES:

No new discharges are proposed under this project. The stormwater runoff from the trail will almost immediately infiltrate into the adjacent natural landscape or be collected in an adjacent vegetated swale, which, along with the existing culverts and infiltration basins, were constructed by the former railroad. The project has been designed to comply with Standard 1.

STANDARD NO. 2 – PEAK RATE ATTENUATION:

Given the narrow width/area of the proposed impervious surfaces, there is a minimal increase in post-development discharge rates expected because of the paved trail surface. The project has been designed to comply with Standard 2 to the Maximum Extent Practicable.

STANDARD NO. 3 – RECHARGE:

The project will result in a minimal loss of annual recharge to groundwater as a result of the increase in impervious area. As proposed, the stormwater runoff from the trail will infiltrate into the adjacent natural landscape. Therefore, the annual recharge from post-development will be approximately the same as the annual recharge from pre-development conditions. The project has been designed to comply with Standard 3 to the Maximum Extent Practicable.

STANDARD NO. 4 – WATER QUALITY:

The trail will not constitute a pollutant/contaminant-generating impervious surface as traffic will be limited to pedestrians and bicyclists along the trail and the Town of Lynnfield does not anticipate sanding or salting the trail surface. As previously noted, the existing runoff patterns will be maintained under post-development conditions, allowing stormwater to infiltrate into the adjacent natural landscape. Moreover, with the exception of areas to be paved for the trail, areas disturbed within the construction footprint will be stabilized with seeding. The project has been designed to comply with Standard 4 to the Maximum Extent Practicable.

STANDARD NO. 5 – LAND USES WITH HIGHER POTENTIAL POLLUTANT LOADS (LUHPPLS):

Standard 5 does not apply to this Project. Trail construction will not result in increased potential pollutant loads.

STANDARD NO. 6 - CRITICAL AREAS:

The project travels through various Zone A Surface Water Supply Protection Areas. As stated under Standard No. 1, the stormwater runoff from the trail will almost immediately infiltrate into the adjacent natural landscape or be collected in an adjacent vegetated swale, which, along with the existing culverts and infiltration basins, were constructed by the former railroad. It is anticipated that work completed under this project will not adversely impact the Stormwater Critical Areas the project is within.

STANDARD NO. 7 – REDEVELOPMENTS AND OTHER PROJECTS SUBJECT TO THE STANDARDS ONLY TO THE MAXIMUM EXTENT PRACTICABLE:

The applicable stormwater standards 1, 8, 9, and 10 have been met to comply. Stormwater standards 2, 3, and 4 have been met to the greatest extent practicable. Stormwater standards 5 and 6 do not apply to this Project.

STANDARD NO. 8 – CONSTRUCTION PERIOD POLLUTION PREVENTION AND EROSION AND SEDIMENTATION CONTROL:

Silt sacks or similar will be installed within downgradient catch basins and a sedimentation and erosion control program will be implemented to protect the adjacent Wetland Resource Areas from sedimentation during the proposed construction activities. Compost filter tubes or similar will be installed and used to demarcate the limit of work. The controls will be in place prior to the commencement of any work on site and will be inspected and maintained periodically, as required, until such time that all disturbed areas associated with the proposed construction have been stabilized. The Erosion and Sediment controls for this project are shown on the attached Notice of Intent Plans.

STANDARD NO. 9 - OPERATION AND MAINTENANCE PLAN:

The Town of Lynnfield is responsible for the seasonal and long-term operation and maintenance of the trail. The schedule for inspection and maintenance will be according to Lynnfield's annual maintenance program.

STANDARD NO. 10 – PROHIBITION OF ILLICIT DISCHARGES:

The design plans submitted with this report have been designed in full compliance with Standard 10. The project area does not have any known illicit connections.

Appendix C

Site Photographs

Photo 1 – View of existing fence near western end of project, east of Ford Avenue, facing southwest.

Photo 2 – Wetland located along existing wood fence south of Ford Avenue, near wetland flag #J-41, facing southwest.

Photo 3 – Existing abandoned rail west of Summer Street and south of Parsons Avenue, with Reedy Meadow Golf Course on left, facing west.

Photo 4 – Existing railroad tracks just east of Summer Street, facing east.

Photo 5 – View of existing railroad tracks and wetland, near wetland flag K15, facing east (March 2023).

Photo 6 – View of existing railroad tracks and wetland, near wetland flag K17, facing west (March 2023).

Photo 7 – Dense invasive garlic mustard seedlings growing within existing railroad tracks, east of Summer Street.

Photo 8 – View of proposed wetland replication area location, east of Summer Street.

Photo 9 – View of northern side of existing culvert (upstream side) where Bates Brook (perennial stream) crosses under railroad tracks.

Photo 10 – View of southern side of existing culvert (downstream side) where Bates Brook (perennial stream) crosses under railroad tracks.

Photo 11 – Existing abandoned railroad tracks and gravel substrate, above where Bates Brook flows through culvert, facing north.

Photo 12 – Existing railroad tracks west of Pillings Pond Road, facing east.

Photo 13 – Existing abandoned railroad tracks west of Nichols Lane, near wetland flag #S-11, facing west.

Photo 14 – View of project's eastern terminus, east of Nichols Lane in Peabody, facing east (March 2023).

Appendix D

MassDEP Bordering Vegetated Wetland (BVW) Field Delineation Forms

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: Lynnfield Rail Trail - Phase 1 City/Town: Lynnfield Sampling Date: 7/1/2024

Applicant/Owner: Town of Lynnfield Sampling Point or Zone: 20' up-gradient of K-45

Investigator(s): Dan Wells Latitude / Longitude: not recorded

Soil Map Unit Name: Paxton fine sandy loam, 3 to 8 percent slopes NWI or DEP Classification: N/A

Are climatic/hydrologic conditions on the site typical for this time of year? Yes ☐ No ☑ (If no, explain in Remarks)

Are Vegetation ☐, Soil ☐ , or Hydrology ☐ significantly disturbed? (If yes, explain in Remarks)

Are Vegetation ☐, Soil ☐ , or Hydrology ☐ naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes ☐	No ☑	**Is the Sampled Area within a Wetland?** Yes ☐ No ☑
Hydric Soils criterion met?	Yes ☐	No ☑	
Wetlands hydrology present?	Yes ☐	No ☑	

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes ☐	No ☑	Depth (inches)_____
Water Table Present?	Yes ☐	No ☑	Depth (inches)_____
Saturation Present (including capillary fringe)?	Yes ☐	No ☑	Depth (inches)_____

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
☐ Water-stained leaves	☐ Hydrological records	☐ Direct observation of inundation
☐ Evidence of aquatic fauna	☐ Free water in a soil test hole	☐ Drainage patterns
☐ Iron deposits	☐ Saturated soil	☐ Drift lines
☐ Algal mats or crusts	☐ Water marks	☐ Scoured areas
☐ Oxidized rhizospheres/pore linings	☐ Moss trim lines	☐ Sediment deposits
☐ Thin muck surfaces	☐ Presence of reduced iron	☐ Surface soil cracks
☐ Plants with air-filled tissue (aerenchyma)	☐ Woody plants with adventitious roots	☐ Sparsely vegetated concave surface
☐ Plants with polymorphic leaves	☐ Trees with shallow root systems	☐ Microtopographic relief
☐ Plants with floating leaves	☐ Woody plants with enlarged lenticels	☐ Geographic position (depression, toe of slope, fringing lowland
☐ Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Sampling Point 20' up-gradient of K-45

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30-foot

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Norway maple	Acer platanoides	UPL	38.0	Yes	No
2. Red oak	Quercus rubra	FACU	20.5	Yes	No
3.					
4.					
5.					
6.					
7.					
8.					
9.					

58.5 = Total Cover

Shrub/Sapling Stratum Plot size 15-foot

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red maple	Acer rubrum	FAC	3.0	Yes	Yes
2. Basswood	Tilia americana	FACU	3.0	Yes	No
3. Chokecherry	Prunus virginiana	FACU	3.0	Yes	No
4.					
5.					
6.					
7.					
8.					
9.					

9.0 = Total Cover

Herb Stratum Plot size 5' radius

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Poison ivy	Toxicodendron radicans	FAC	3.0	Yes	Yes
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

3.0 = Total Cover

Sampling Point 20' up-gradient of K-45

VEGETATION – continued.

Woody Vine Stratum Plot size 30' radius

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Virginia creeper	Parthenocissus quinquefolia	FACU	20.5	Yes	No
2.					
3.					
4.					
			20.5 = Total Cover		

Rapid Test: Do all dominant species have an indicator status of OBL or FACW? Yes ☐ No ☐

Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants	Do wetland indicator plants make up ≥ 50% of dominant plant species?
	7	2	Yes ☐ No ☑

Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species		X 2	= 0.00
	FAC species		X 3	= 0.00
	FACU species		X 4	= 0.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 0		(B) 0
	Prevalence Index	B/A = 0.00		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☐

Wetland vegetation criterion met? Yes ☐ No ☑

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

Sampling Point 20' up-gradient of K-45

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-10	10YR 2/1	100.00					loam	
10-18	10YR 3/4	100.00					fine sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☐ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: _____ Depth (inches): _____

Remarks:

Hydric Soils criterion met? **Yes** ☐ **No** ☑

BORDERING VEGETATED WETLAND DETERMINATION FORM

Project/Site: Lynnfield Rail Trail - Phase 1 City/Town: Lynnfield Sampling Date: 7/1/2024

Applicant/Owner: Town of Lynnfield Sampling Point or Zone: 20' downgradient of K-45

Investigator(s): Dan Wells Latitude / Longitude: not recorded

Soil Map Unit Name: Freetown muck, 0 to 1 percent slopes NWI or DEP Classification: Wooded swamp deiduous

Are climatic/hydrologic conditions on the site typical for this time of year? Yes [✓] No [ ] (If no, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] significantly disturbed? (If yes, explain in Remarks)

Are Vegetation [ ], Soil [ ], or Hydrology [ ] naturally problematic? (If yes, explain in Remarks)

SUMMARY OF FINDINGS – Attach site map and photograph log showing sampling locations, transects, etc.

Wetland vegetation criterion met?	Yes [✓] No [ ]	**Is the Sampled Area within a Wetland?** Yes [✓] No [ ]
Hydric Soils criterion met?	Yes [✓] No [ ]	
Wetlands hydrology present?	Yes [✓] No [ ]	

Remarks, Photo Details, Flagging, etc.:

HYDROLOGY

Field Observations:			
Surface Water Present?	Yes [ ]	No [✓]	Depth (inches)_____
Water Table Present?	Yes [ ]	No [✓]	Depth (inches)_____
Saturation Present (including capillary fringe)?	Yes [ ]	No [✓]	Depth (inches)_____

Wetland Hydrology Indicators

Reliable Indicators of Wetlands Hydrology	Indicators that can be Reliable with Proper Interpretation	Indicators of the Influence of Water
[✓] Water-stained leaves	[ ] Hydrological records	[ ] Direct observation of inundation
[ ] Evidence of aquatic fauna	[ ] Free water in a soil test hole	[✓] Drainage patterns
[ ] Iron deposits	[ ] Saturated soil	[ ] Drift lines
[ ] Algal mats or crusts	[ ] Water marks	[ ] Scoured areas
[ ] Oxidized rhizospheres/pore linings	[ ] Moss trim lines	[ ] Sediment deposits
[ ] Thin muck surfaces	[ ] Presence of reduced iron	[ ] Surface soil cracks
[ ] Plants with air-filled tissue (aerenchyma)	[ ] Woody plants with adventitious roots	[ ] Sparsely vegetated concave surface
[ ] Plants with polymorphic leaves	[ ] Trees with shallow root systems	[✓] Microtopographic relief
[ ] Plants with floating leaves	[ ] Woody plants with enlarged lenticels	[✓] Geographic position (depression, toe of slope, fringing lowland
[ ] Hydrogen sulfide odor		

Remarks (describe recorded data from stream gauge, monitoring well, aerial photos, previous inspections, if available):

This form is only for BVW delineations. Other wetland resource areas may be present and should be delineated according to the applicable regulatory provisions.

Sampling Point 20' downgradient of K-45

VEGETATION – Use both common and scientific names of plants.

Tree Stratum Plot size 30-foot radius

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Red maple	Acer rubrum	FAC	3.0	Yes	Yes
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

3.0 = Total Cover

Shrub/Sapling Stratum Plot size 15-foot radius

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Black cherry	Prunus serotina	FACU	3.0	Yes	No
2. Glossy buckthorn	Frangula alnus	FAC	3.0	Yes	Yes
3.					
4.					
5.					
6.					
7.					
8.					
9.					

6.0 = Total Cover

Herb Stratum Plot size 5-foot radius

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Cinnamon fern	Osmundastrum cinnamomea	FACW	10.5	Yes	Yes
2. Poison ivy	Toxicodendron radicans	FAC	10.5	Yes	Yes
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

21.0 = Total Cover

Sampling Point 20' downgradient of K-45

VEGETATION – continued.

Woody Vine Stratum Plot size 30-foot radius

Common name	Scientific name	Indicator Status	Absolute % Cover	Dominant? (yes/no)	Wetland Indictor? (yes/no)
1. Virginia creeper	Parthenocissus quinquefolia	FACU	20.5	Yes	No
2.					
3.					
4.					
			20.5 = Total Cover		

Rapid Test: Do all dominant species have an indicator status of OBL or FACW? Yes ☐ No ☐

Dominance Test:	Number of dominant species	Number of dominant species that are wetland indicator plants	Do wetland indicator plants make up ≥ 50% of dominant plant species?
	6	4	Yes ☑ No ☐

Prevalence Index:		Total % Cover (all strata)	Multiply by:	Result
	OBL species		X 1	= 0.00
	FACW species		X 2	= 0.00
	FAC species		X 3	= 0.00
	FACU species		X 4	= 0.00
	UPL species		X 5	= 0.00
	Column Totals	(A) 0		(B) 0
	Prevalence Index	B/A = 0.00		Is the Prevalence Index ≤ 3.0? Yes ☐ No ☐

Wetland vegetation criterion met? Yes ☑ No ☐

Definitions of Vegetation Strata

Tree - Woody plants 3 in. (7.62 cm) or more in diameter at breast height (DBH), regardless of height

Shrub / Sapling - Woody plants less than 3 in. (7.62 cm) DBH and greater than or equal to 3.3 ft. (1 m) tall

Herb - All herbaceous (non-woody plants, regardless of size, and woody plants less than 3.3 ft. (1 m) tall

Woody vines - All woody vines greater than 3.3 ft. (1 m) in height

Cover Ranges	
Range	Midpoint
1-5 %	3.0 %
6-15 %	10.5 %
15-25 %	20.5 %
26-50 %	38.0 %
51-75 %	63.0 %
76-95 %	85.5 %
96-100 %	98.0 %

Sampling Point 20' downgradient of K-45

SOIL

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type[1]	Location[2]		
0-10	10YR 2/1	100.00					Loam	
10-16	10YR 5/1	100.00					sandy loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains [2]Location: PL=Pore Lining, M=Matrix

Hydric Soil Indicators (Check all that apply)		**Indicators for Problematic Hydric Soils**
☐ Histosol (A1)	☐ Polyvalue Below Surface (S8)	☐ 2 cm Muck (A10)
☐ Histic Epipedon (A2)	☐ Thin Dark Surface (S9)	☐ 5 cm Mucky Peat or Peat (S3)
☐ Black Histic (A3)	☐ Loamy Gleyed Matrix (F2)	☐ Iron-Manganese Masses (F12)
☐ Hydrogen Sulfide (A4)	☐ Depleted Matrix (F3)	☐ Mesic Spodic (A17)
☐ Stratified Layers (A5)	☐ Redox Dark Surface (F6)	☐ Red Parent Material (F21)
☑ Depleted Below Dark Surface (A11)	☐ Depleted Dark Surface (F7)	☐ Very Shallow Dark Surface (F22)
☐ Thick Dark Surface (A12)	☐ Redox Depressions (F8)	
☐ Sandy Mucky Mineral (S1)		
☐ Sandy Gleyed Matrix (S4)		
☐ Sandy Redox (S5)		☐ Other (Include Explanation in Remarks)
☐ Stripped Matrix (S6)		
☐ Dark Surface (S7)		

Restrictive Layer (if observed) Type: _____ Depth (inches): _____

Remarks:

Hydric Soils criterion met? **Yes** ☑ **No** ☐

Attachment

Notice of Intent Plans,
dated February 11, 2025, prepared by Stantec

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

PLAN AND PROFILE OF

LYNNFIELD RAIL TRAIL

CONSTRUCTION - PHASE 1

IN THE TOWN & CITY OF

LYNNFIELD & PEABODY

ESSEX COUNTY

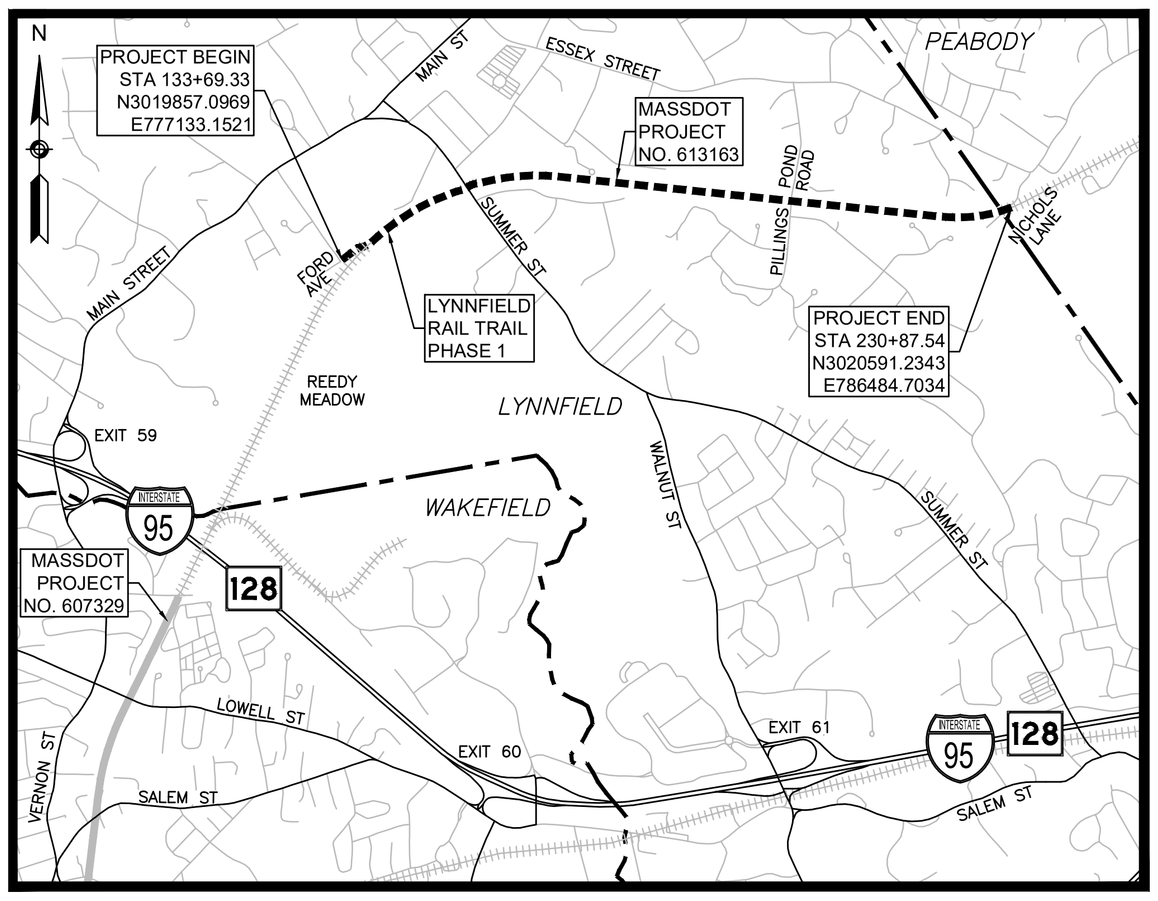
LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	1	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
TITLE SHEET & INDEX

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2	LEGEND & ABBREVIATIONS
3	GENERAL NOTES
4 - 5	KEY PLANS
6 - 7	TYPICAL SECTIONS
8 - 17	CONSTRUCTION PLANS
18 - 27	PROFILES
28 - 30	TRAIL AMENITY PLANS
31 - 32	TRAIL AMENITY DETAILS
33	WETLAND REPLICATION AREA
34 - 37	CONSTRUCTION DETAILS



0 1,500 3,000 4,500 6,000
SCALE: 1" = 1,500'

LENGTH OF PROJECT = 9,718.21 FEET = 1.841 MILES

NOTICE OF INTENT PLANS

FEBRUARY 11, 2025

NOT FOR CONSTRUCTION

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

DATE	DESCRIPTION	REV #
2025-02-11	FINAL NOI	0
2025-01-08	INTERIM DRAFT NOI	0
2024-07-15	DRAFT NOI AT 75% SUBMISSION	0

massDOT
Massachusetts Department of Transportation
Highway Division

APPROVED

CHIEF ENGINEER _____ DATE _____

Stantec
45 BLUE SKY DRIVE | THIRD FLOOR | BURLINGTON, MA 01803

613163_HD(TITLE)_NOI.DWG Plotted on 10-Feb-2025 2:49 PM

Proposal No. 613163-137586

AV68809_90

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED
PROFESSIONAL ENGINEER

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
		CATCH BASIN CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
		POST SQUARE
		POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
		FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
		LIGHT POLE
CO.BD.		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
MON		MONUMENT
SB		STONE BOUND
TB		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
TPL or GUY	TPL or GUY	TROLLEY POLE OR GUY POLE
HTP		TRANSMISSION POLE
UFB	UFB	UTILITY POLE W/ FIREBOX
UPDL	UPDL	UTILITY POLE WITH DOUBLE LIGHT
ULT	ULT	UTILITY POLE W / 1 LIGHT
UPL	UPL	UTILITY POLE
		BUSH
SIZE & TYPE		TREE
		STUMP
		SWAMP / MARSH
WG	WG	WATER GATE
PM	PM	PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
100 99		CONTOURS (ON-THE-GROUND SURVEY DATA)
100 99		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		GUARD RAIL - DOUBLE FACE - STEEL POSTS
		GUARD RAIL - DOUBLE FACE - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT CONTROL BARRIER
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
1	1	CONTROLLER PHASE ACTUATED
		TRAFFIC SIGNAL HEAD (SIZE AS NOTED)
		WIRE LOOP DETECTOR (6' x 6' TYP UNLESS OTHERWISE SPECIFIED)
		VIDEO DETECTION CAMERA
		MICROWAVE DETECTOR
		PEDESTRIAN PUSH BUTTON, SIGN (DIRECTIONAL ARROW AS SHOWN) AND SADDLE
	*	EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		VEHICULAR SIGNAL HEAD, OPTICALLY PROGRAMMED
		FLASHING BEACON
		PEDESTRIAN SIGNAL HEAD, (TYPE AS NOTED OR AS SPECIFIED)
RRSG	RRSG	RAILROAD SIGNAL
OR		SIGNAL POST AND BASE (ALPHA-NUMERIC DESIGNATION NOTED)
	20'	MAST ARM, SHAFT AND BASE (ARM LENGTH AS NOTED)
		HIGH MAST POLE OR TOWER
		SIGN AND POST
		SIGN AND POST (2 POSTS)
	20'	MAST ARM WITH LUMINAIRE
		OPTICAL PRE-EMPTION DETECTOR
		CONTROL CABINET, GROUND MOUNTED
		CONTROL CABINET, POLE MOUNTED
		FLASHING BEACON CONTROL AND METER PEDESTAL
		LOAD CENTER ASSEMBLY
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
	SL	STOP LINE
	CW	CROSSWALK
	SWL	SOLID WHITE LINE
	SYL	SOLID YELLOW LINE
	BWL	BROKEN WHITE LINE
	BYL	BROKEN YELLOW LINE
	DWL	DOTTED WHITE LINE
	DYL	DOTTED YELLOW LINE
	DWLEx	DOTTED WHITE LINE EXTENSION
	DYLEx	DOTTED YELLOW LINE EXTENSION
	DBWL	DOUBLE WHITE LINE
	DBYL	DOUBLE YELLOW LINE

ABBREVIATIONS

GENERAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
ABAN	ABANDON
ADJ	ADJUST
APPROX.	APPROXIMATE
A.C.	ASPHALT CONCRETE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE
BIT.	BITUMINOUS
BC	BOTTOM OF CURB
BD.	BOUND
BL	BASELINE
BLDG	BUILDING
BM	BENCHMARK
BO	BY OTHERS
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CIP	CAST IRON PIPE
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DHV	DESIGN HOURLY VOLUME
DI	DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DW	STEADY DON'T WALK - PORTLAND ORANGE
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EXIST (or EX)	EXISTING
EXC	EXCAVATION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FDN.	FOUNDATION
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HDW	HEADWALL
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HYD	HYDRANT
INV	INVERT
JCT	JUNCTION
L	LENGTH OF CURVE
LB	LEACH BASIN
LP	LIGHT POLE
LT	LEFT
MAX	MAXIMUM
MB	MAILBOX
MH	MANHOLE
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
NIC	NOT IN CONTRACT
NO.	NUMBER
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
P.G.L.	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT
PWW	PAVED WATER WAY

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	2	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
LEGEND & ABBREVIATIONS

ABBREVIATIONS (cont.)

GENERAL

R	RADIUS OF CURVATURE
R&D	REMOVE AND DISPOSE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RDWY	ROADWAY
REM	REMOVE
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RT	RIGHT
SB	STONE BOUND
SHLD	SHOULDER
SMH	SEWER MANHOLE
ST	STREET
STA	STATION
SSD	STOPPING SIGHT DISTANCE
SHLO	STATE HIGHWAY LAYOUT LINE
SW	SIDEWALK
T	TANGENT DISTANCE OF CURVE/TRUCK %
TAN	TANGENT
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TYP	TYPICAL
UP	UTILITY POLE
VAR	VARIES
VERT	VERTICAL
VC	VERTICAL CURVE
WCR	WHEEL CHAIR RAMP
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN
X-SECT	CROSS SECTION

TRAFFIC SIGNAL ABBREVIATIONS

CAB	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY UPRAISED HAND
FDW	FLASHING UPRAISED HAND
FR	FLASHING CIRCULAR RED
FRL	FLASHING RED LEFT ARROW
FRR	FLASHING RED RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
FYL	FLASHING YELLOW LEFT ARROW
FYR	FLASHING YELLOW RIGHT ARROW
G	STEADY CIRCULAR GREEN
GL	STEADY GREEN LEFT ARROW
GR	STEADY GREEN RIGHT ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
GV	STEADY GREEN VERTICAL ARROW
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY CIRCULAR RED
RL	STEADY RED LEFT ARROW
RR	STEADY RED RIGHT ARROW
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALKING PERSON
Y	STEADY CIRCULAR YELLOW
YL	STEADY YELLOW LEFT ARROW

613163_HD(TITLE)_NOI.DWG Plotted on 10-Feb-2025 1:53 PM
Proposal No. 613163-135786
A0080690 - 91

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

GENERAL NOTES

1. EXISTING GROUND SURFACES SHOWN ON PLANS, PROFILES AND CROSS SECTIONS ARE BASED UPON DATA OBTAINED BY FIELD SURVEYS.

2. THE LOCATIONS OF EXISTING SUBSURFACE STRUCTURES, SUCH AS SEWERS, WATER MAINS, DRAINS AND OTHER UTILITIES ARE APPROXIMATE ONLY AND THE ENGINEER DOES NOT GUARANTEE THEIR NUMBER OR LOCATIONS. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES BEFORE EXCAVATING.

3. ALL GAS GATES, ELECTRIC MANHOLES, AND TELEPHONE MANHOLES WITHIN THE LIMITS OF WORK SHALL BE ADJUSTED BY THE OWNING AGENCY. ALL GAS, ELECTRIC, TELEPHONE AND CATV WORK SHALL BE DONE BY THE OWNING AGENCY. THE CONTRACTOR SHALL NOTIFY THE OWNING AGENCIES TO ADJUST AND/OR RELOCATE THESE STRUCTURES TO AVOID IMPACTING THE CONTRACTOR'S SCHEDULE OF OPERATIONS.

4. ANY CLEANING OF CATCH BASINS OR DRAIN PIPES NECESSARY FOR THE PROPOSED WORK SHALL BE COMPLETED BY THE RESPECTIVE MUNICIPALITY INVOLVED.

5. ANY DRAINAGE / SEWER / WATER CASTINGS BROKEN THROUGH NO FAULT OF THE CONTRACTOR SHALL BE SUPPLIED BY THE RESPECTIVE MUNICIPALITY FOR ADJUSTMENT UNDER THE CONTRACT ITEMS.

6. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE UTILITY COMPANIES DOING WORK IN THE SAME AREA. THE CONTRACTOR SHALL ALLOW THE UTILITY COMPANIES AND THEIR REPRESENTATIVES TO ADJUST AND/OR INSTALL THEIR SYSTEMS WITHIN CITY/ STATE OWNED STREETS AND EASEMENTS.

7. CURB SHALL BE FURNISHED AND SET AT LOCATIONS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.

8. CONSTRUCT DRIVEWAYS AND WALKS AS SHOWN ON THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.

9. EXISTING GRANITE CURB AND EDGING SUITABLE FOR REUSE WITHIN THE PROJECT SITE SHALL BE REMOVED AND RESET IN ACCORDANCE WITH THE PLANS AND/OR AS REQUIRED BY THE ENGINEER.

10. SAWCUT EXISTING ASPHALT ROADWAYS, CEMENT CONCRETE SIDEWALKS, AND ASPHALT DRIVEWAYS AS SHOWN ON THE PLANS AND AT THE PROPOSED MATCH LINE.

11. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.

12. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT NO ADDITIONAL COST TO THE OWNER.

13. ALL ACCESSIBLE ROUTES, WALKWAYS, CURB CUTS, RAMPS, SIDEWALKS, DRIVEWAY OPENINGS, CLEARANCES AND SLOPE TOLERANCES SHALL CONFORM WITH THE ARCHITECTURAL ACCESS BOARD (AAB), 521 CMR AND MASSDOT CONSTRUCTION AND TRAFFIC STANDARD DRAWINGS.

14. ITEMS LABELED "REM" SHALL BE REMOVED AND DISCARDED BY CONTRACTOR.

15. THE CONTRACTOR SHALL PROTECT EXISTING SURVEY MONUMENTS AND SHALL RESET ANY MONUMENTATION DISTURBED BY THEIR OPERATIONS.

16. THE CONTRACTOR SHALL INSTALL OTHER NECESSARY TEMPORARY REGULATORY AND WARNING SIGNS DURING CONSTRUCTION AS REQUIRED BY THE ENGINEER FOR OTHER INCIDENTAL CONSTRUCTION ACTIVITIES. ALL SIGNAGE AND TRAFFIC CONTROL DEVICES USED MUST CONFORM TO THE LATEST "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD)

17. THE CONTRACTOR SHALL PERFORM HIS WORK IN A MANNER ACCEPTABLE TO THE ENGINEER SO THAT INTERFERENCE WITH AND INCONVENIENCE TO BUSINESS CONCERNS AND ABUTTERS, ON ACCOUNT OF THE CONSTRUCTION WORK, IS KEPT TO A MINIMUM.

18. THE CONTRACTOR SHALL NOT BE ALLOWED TO PARK EQUIPMENT OR STOCKPILE EQUIPMENT OR MATERIAL ON THE TRAVELED WAYS OVERNIGHT OR WHEN NOT IN USE.

19. THE CONTRACTOR SHALL MAINTAIN SAFE AND REASONABLE ACCESS TO AND FROM ABUTTING PROPERTY, PRIVATE WAYS, DRIVEWAYS AND ALL ALLEYS DURING THE CONSTRUCTION PERIOD.

20. ALL DETECTABLE WARNING PANELS SHALL BE MOUNTED IN CEMENT CONCRETE AND INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARD DETAIL E107.6.5.

SURVEY NOTES

1. COORDINATES, IN U.S. SURVEY FEET, ARE IN THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (MCS), MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983, (NAD 83/2011, EPOCH 2010.00), BASED ON THE KeyNetGPS VIRTUAL REFERENCE SYSTEM (VRS).

2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) BASED ON THE KeyNetGPS VIRTUAL REFERENCE SYSTEM (VRS)

3. SUBSURFACE UTILITY LINES AND FEATURES, AS SHOWN HEREIN, WERE COMPILED FROM FIELD EVIDENCE AND/OR AVAILABLE RECORD INFORMATION (SEE REFERENCES), AND THEIR LOCATIONS ARE ONLY APPROXIMATE. ACTUAL LOCATIONS MUST BE DETERMINED IN THE FIELD.

   DAWOOD ASSUMES NO RESPONSIBILITY FOR DAMAGES INCURRED AS A RESULT OF UTILITIES OMITTED OR INACCURATELY SHOWN.

   BEFORE DESIGNING FUTURE CONNECTIONS, THE APPROPRIATE UTILITIES MUST BE CONSULTED.

   BEFORE CONSTRUCTION, ALL UTILITIES, PUBLIC AND PRIVATE, MUST BE NOTIFIED (SEE MASSACHUSETTS GENERAL LAWS, CHAPTER 82 SECTION 40).

   CALL "DIG SAFE" 1-888-DIG-SAFE. (888-344-7233).

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	3	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
GENERAL NOTES

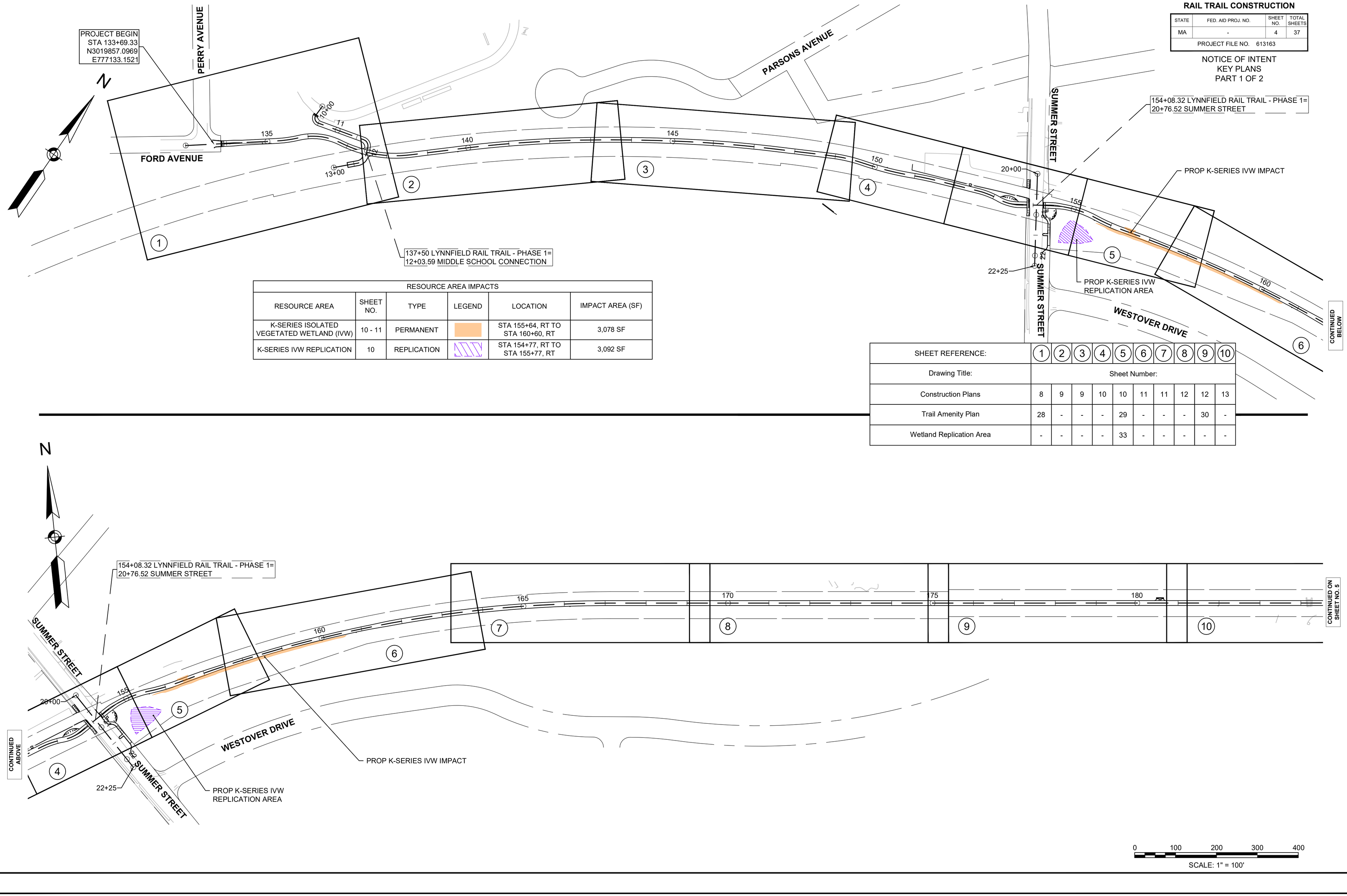
613163_HD(TITLE)_NOI.DWG Plotted on 10-Feb-2025 1:53 PM
Proposal No. 613163-135786
A008069 - 92

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	4	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
KEY PLANS
PART 1 OF 2



RESOURCE AREA IMPACTS					
RESOURCE AREA	SHEET NO.	TYPE	LEGEND	LOCATION	IMPACT AREA (SF)
K-SERIES ISOLATED VEGETATED WETLAND (IVW)	10 - 11	PERMANENT		STA 155+64, RT TO STA 160+60, RT	3,078 SF
K-SERIES IVW REPLICATION	10	REPLICATION		STA 154+77, RT TO STA 155+77, RT	3,092 SF

SHEET REFERENCE:	1	2	3	4	5	6	7	8	9	10
Drawing Title:	Sheet Number:									
Construction Plans	8	9	9	10	10	11	11	12	12	13
Trail Amenity Plan	28	-	-	-	29	-	-	-	30	-
Wetland Replication Area	-	-	-	-	33	-	-	-	-	-

613163_HD(KEY PLAN)_NOI.DWG Plotted on 11-Feb-2025 2:02 PM
Proposal No. 613163-135786
A008060 - 93

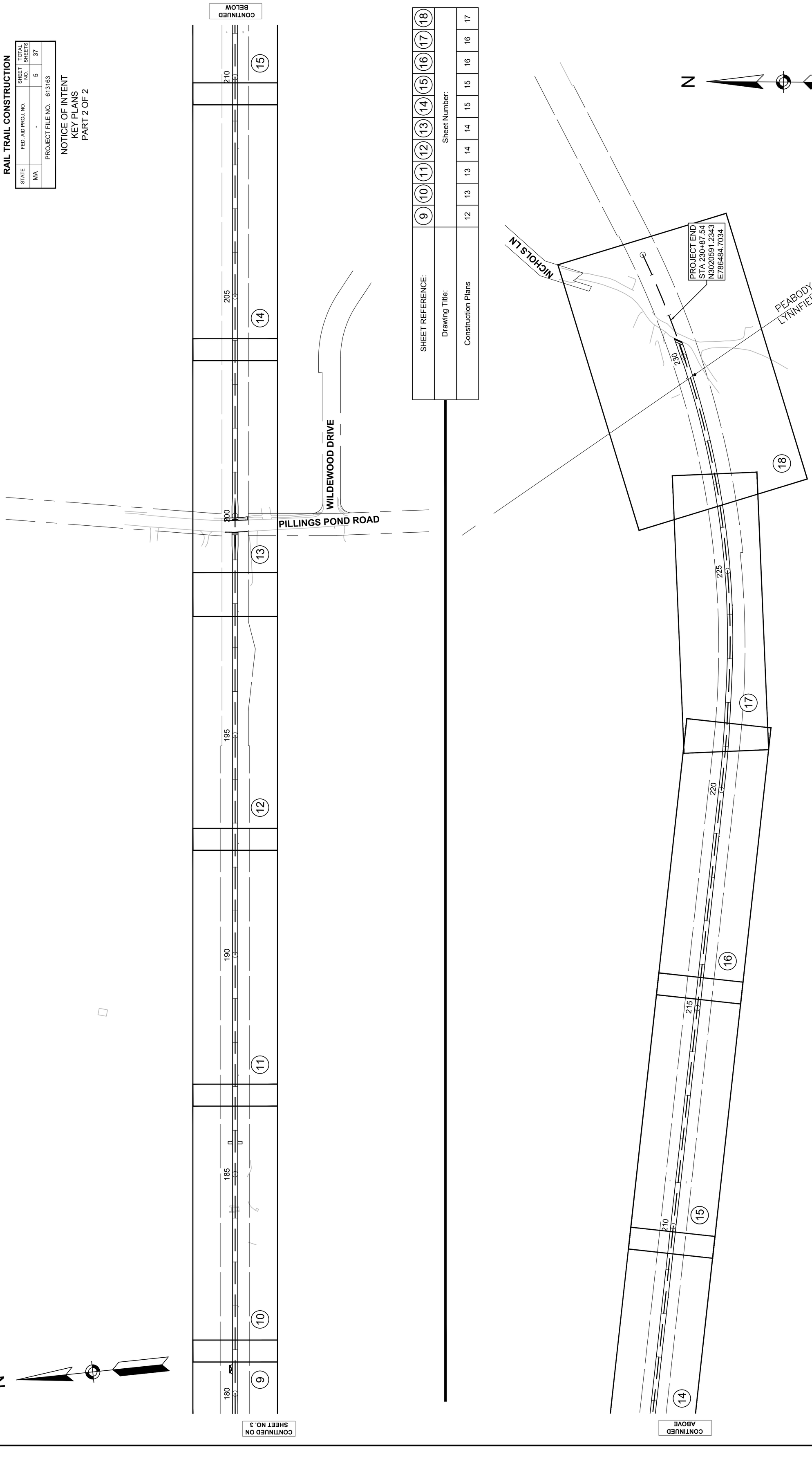
613163_HD(KEY PLAN)_NOI.DWG Plotted on 11-Feb-2025 2:11 PM

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	5	37
	PROJECT FILE NO. 613163		

NOTICE OF INTENT
KEY PLANS
PART 2 OF 2

SHEET REFERENCE:	9	10	11	12	13	14	15	16	17	18
Drawing Title:	Sheet Number:									
Construction Plans	12	13	13	14	14	15	15	16	16	17



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ALEECE E. D'ONOFRIO
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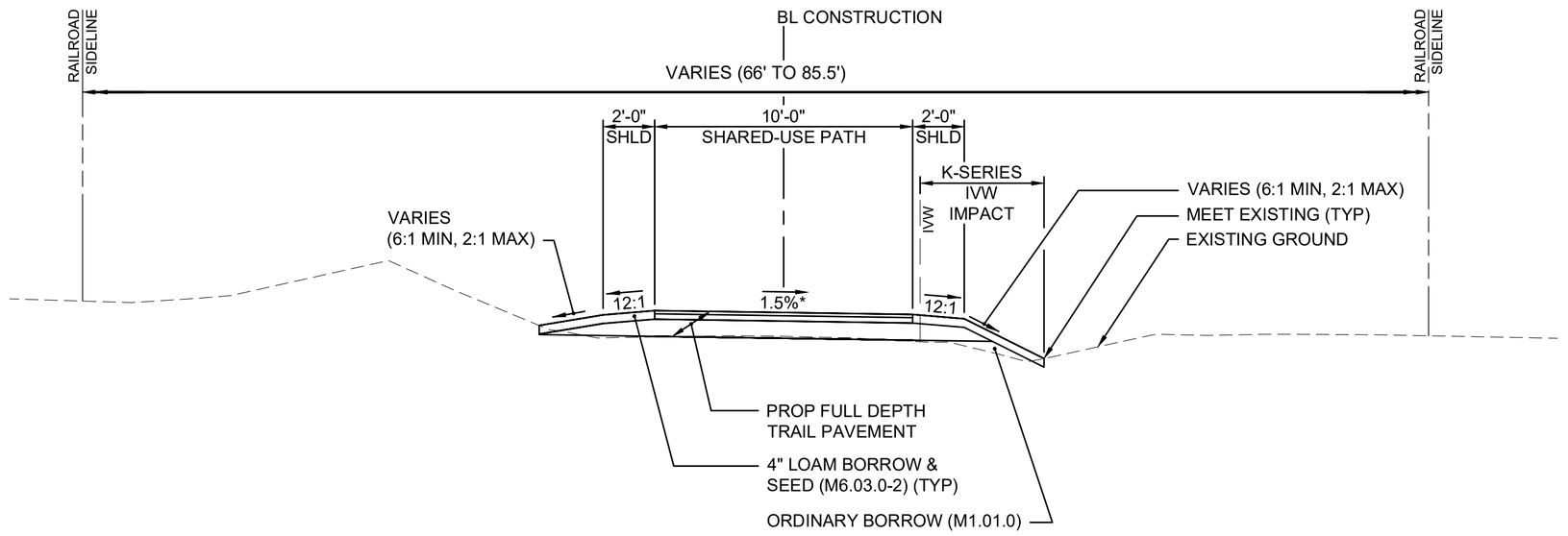
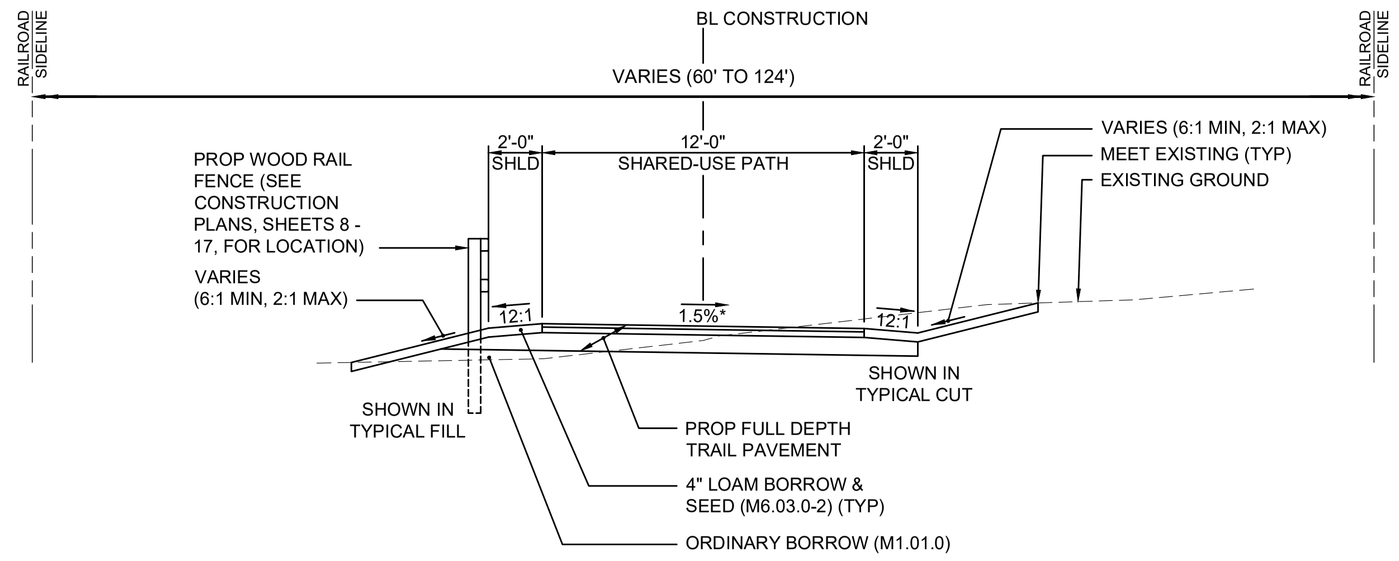


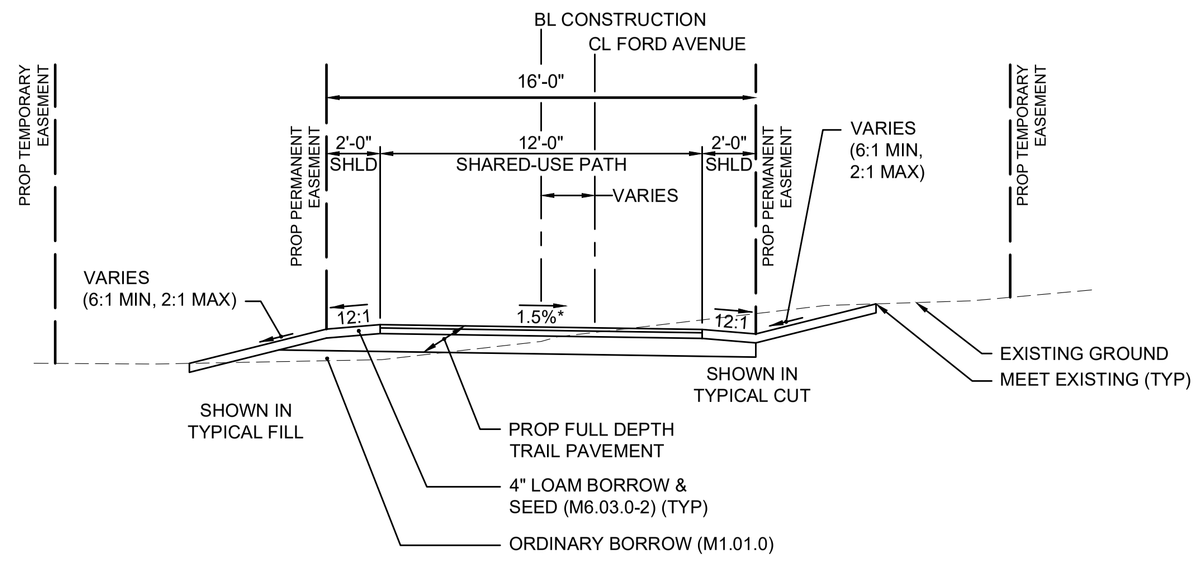
TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 157+38± TO STA 161+20±



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 137+25± (RR CORRIDOR) TO STA 153+85± (SUMMER ST)
STA 154+24± (SUMMER ST) TO STA 157+38±
STA 161+20± TO STA 194+12±



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 133+87± (FORD AVE) TO STA 137+25± (RR CORRIDOR)

*** - TOLERANCE FOR CONSTRUCTION ±0.5% (TYP)**

PAVEMENT NOTES

PROPOSED FULL DEPTH TRAIL PAVEMENT SECTIONS

SURFACE: 1-1/2" SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5)

INTERMEDIATE: 2-1/2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH ROADWAY PAVEMENT SECTIONS (SUMMER STREET PARKING AREA)

SURFACE: 2" SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)

INTERMEDIATE: 2-1/2" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)

BASE: 4" SUPERPAVE BASE COURSE 37.5 (SBC-37.5)
4" DENSE GRADED CRUSHED STONE FOR SUBBASE
8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH STABILIZED STONEDUST SECTIONS

SURFACE: 4" STABILIZED STONEDUST

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH CEMENT CONCRETE SIDEWALK SECTIONS

SURFACE: 4" CEMENT CONCRETE
(4,000 PSI, 3/4", 610 LBS. AIR ENTRAINED)

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH CEMENT CONCRETE PEDESTRIAN CURB RAMP SECTIONS
PROPOSED FULL DEPTH CEMENT CONCRETE DRIVEWAY SECTIONS

SURFACE: 6" CEMENT CONCRETE
(4,000 PSI, 3/4", 610 LBS. AIR ENTRAINED)

BASE: 8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH CURB SETTING PAVEMENT SECTIONS

SEE METHOD OF SETTING GRANITE CURB (AGAINST EXISTING PAVEMENT)

SURFACE: 1-1/2" HOT MIX ASPHALT FOR PATCHING

INTERMEDIATE: 3" HOT MIX ASPHALT FOR PATCHING

BASE: 7.5"± CEMENT CONCRETE
6" (MIN) GRAVEL BORROW, TYPE b

TACK COAT SHALL BE APPLIED BETWEEN ALL PAVEMENT COURSES IN ACCORDANCE WITH SUBSECTION 450.43G2 AND NOTES BELOW.

TACK COAT NOTE:
ASPHALT EMULSION FOR TACK COAT SHALL BE GRADE RS-1H, PER THE SPECIFICATIONS. TACK COAT SHALL BE SPRAY APPLIED AT THE RATE OF:

- **0.06 TO 0.08 GAL/SY OVER NEW HMA SURFACES, NOT OPENED TO TRAFFIC**
- **0.06 TO 0.08 GAL/SY OVER EXISTING TIGHT SMOOTH PAVEMENT**
- **0.07 TO 0.09 GAL/SY OVER MILLED SURFACES**
- **0.06 TO 0.09 GAL/SY OVER NEW HMA PATCHES**

ANCILLARY WORK NOTE:
PREPARATION OF UNDERLYING SURFACE, ASPHALT EMULSION FOR TACK COAT, HMA FOR PATCHING, AND HMA JOINT SEALANT SHALL BE IN ACCORDANCE WITH SECTION 450.

THE EMBANKMENT SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES SECTION 100 EARTHWORK.

WOOD RAIL FENCE NOTE:
REFERENCE CONSTRUCTION PLANS (SHEETS 8 - 17) FOR LOCATIONS OF WOOD RAIL FENCE.

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	6	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
TYPICAL SECTIONS
PART 1 OF 2

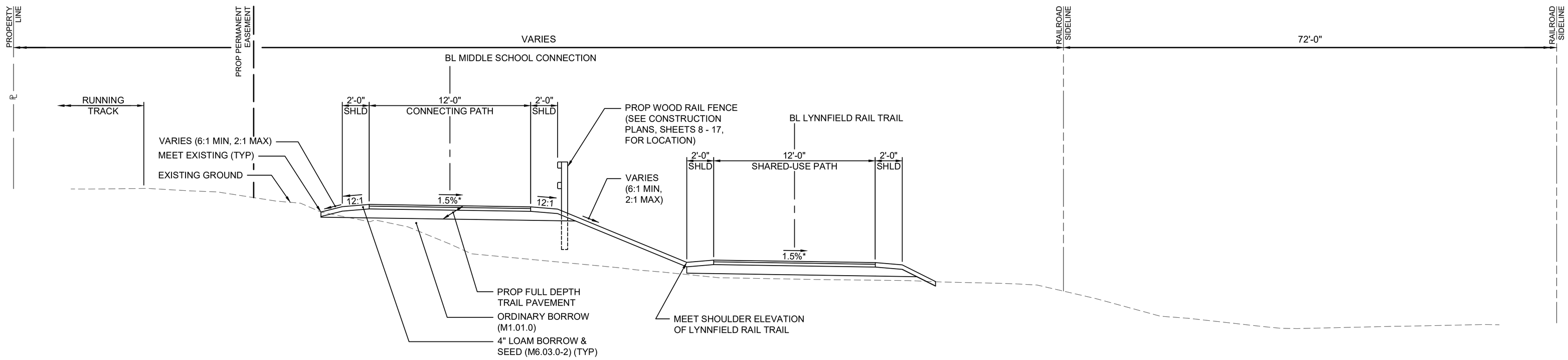
613163_HD(TYPICAL SECTIONS)_NOI.DWG Plotted on 10-Feb-2025 1:54 PM
Proposal No. 613163-137876
AV00869 - 95

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

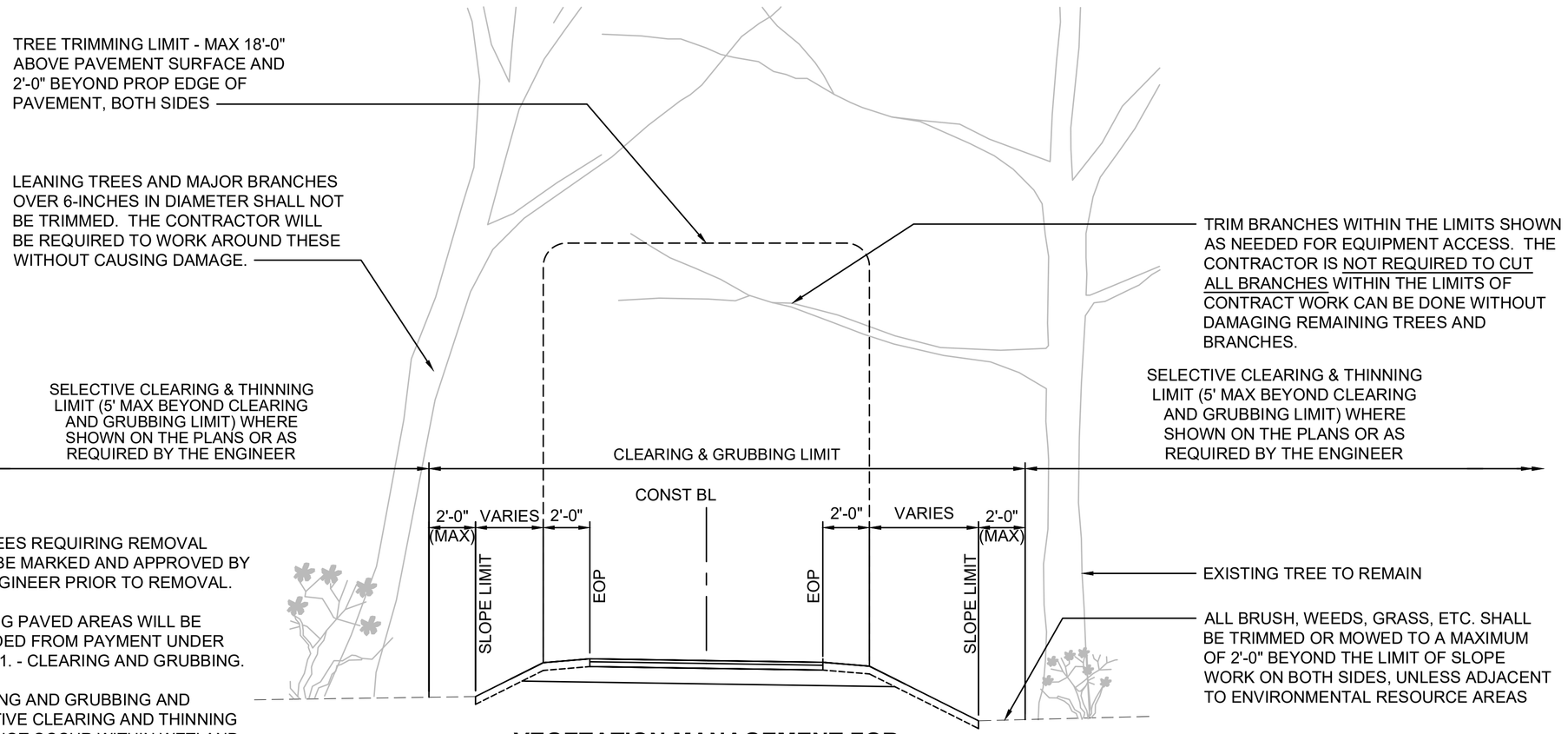
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	7	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
TYPICAL SECTIONS
PART 2 OF 2



TYPICAL FULL CONNECTING PATH SECTION

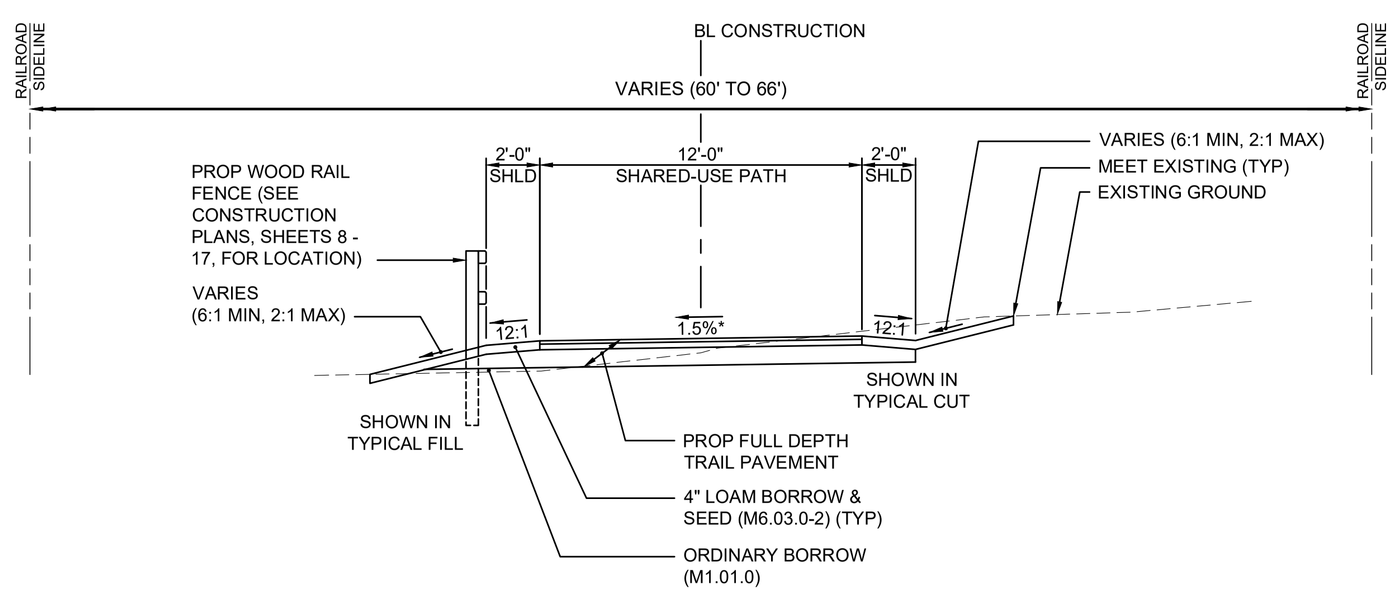
NOT TO SCALE
STA 10+25± TO STA 12+04±



NOTES:
1. ALL TREES REQUIRING REMOVAL SHALL BE MARKED AND APPROVED BY THE ENGINEER PRIOR TO REMOVAL.
2. EXISTING PAVED AREAS WILL BE EXCLUDED FROM PAYMENT UNDER ITEM 101. - CLEARING AND GRUBBING.
3. CLEARING AND GRUBBING AND SELECTIVE CLEARING AND THINNING SHALL NOT OCCUR WITHIN WETLAND RESOURCE AREAS.

VEGETATION MANAGEMENT FOR CONSTRUCTION ACCESS

NOT TO SCALE



TYPICAL FULL DEPTH TRAIL SECTION

NOT TO SCALE
STA 194+12± TO STA 199+57± (PILLINGS POND RD)
STA 199+96± (PILLINGS POND RD) TO STA 230+30± (NICHOLS LN)

*** - TOLERANCE FOR CONSTRUCTION ±0.5% (TYP)**

613163_HD(TYPICAL SECTIONS)_NOI.DWG Plotted on 10-Feb-2025 1:54 PM
Proposal No. 613163-135787
A0080 - 96

COMMONWEALTH OF MASSACHUSETTS
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LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	8	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
CONSTRUCTION PLANS
PART 1 OF 10

APPROXIMATE ZONE 'A' BOUNDARY
PERRY AVENUE (PUBLIC - 40' WIDE)
N/F JAMES C. DAVIE BK/PG 28898/575 85 PERRY AVENUE MAP 28 PARCEL 2857
N/F DEBRA LACONTE BK/PG 13696/9 86 PERRY AVENUE MAP 28 PARCEL 2861 TOTAL PROPERTY AREA=15,300 SQ. FT.
NOTE: THE TOWN OF LYNNFIELD PLANS TO ACCEPT THE REMAINDER OF FORD AVENUE IN THEIR APRIL, 2025 TOWN MEETING.
TOWN OF LYNNFIELD MIDDLE SCHOOL BK/PG 3853/583 505 MAIN STREET MAP/LOT 28/1455
RET EXIST GUY WIRE
PROP SAWCUT LINE
PROJECT BEGIN STA 133+69.33 N3019857.0969 E777133.1521
1953 TOWN LAYOUT
FORD AVENUE (PUBLIC - 40' WIDE)
FORD AVENUE (UNACCEPTED - 40' WIDE)
R&D EXIST CURB
PROP GRAN CURB (TYPE VB)
PROP CEM CONC PCR
PROP 2' WIDE IMPRINT SYSTEM MEDIAN
PROP TRAFFIC SIGN (TYP)
REM EXIST SUMP PUMP OUTLET (BY OTHERS)
PROP CONST BL
APPROX SLOPE LIMITS
PROP 12' HMA TRAIL
PROP LOAM AND SEED (TYP)
PROP INDIVIDUAL TREE PROTECTION (TYP)
RET EXIST FENCE
R&D EXIST FENCE
PROP CLF END POST
PROP FULL DEPTH ROADWAY CONSTRUCTION
R&D EXIST CURB
RET EXIST UP
RET EXIST FENCE
R&D EXIST WELL, SHED & UP (WORK BO)
PROP CLF END POST
PROP PERMANENT EASEMENT
RET EXIST HMA PATH
RET EXIST CLF
PROP CEM CONC PCR
PROP MIDDLE SCHOOL CONNECTION BL
PROP 8' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
PROP WOOD RAIL FENCE (STA 10+30± TO 11+54±)
PROP CLF END POST
APPROXIMATE ZONE 'A' BOUNDARY
100' BUFFER LINE
MATCH LINE STA 137+75
CONTINUED ON SHEET NO. 9
N/F CARD DANIEL M & CARD, TERI L BOTICELLI BK/PG 36370/584 3 FORD AVENUE MAP 28 PARCEL 2888
N/F MCQUEEN PHILIP J. MCQUEEN DEANNA M. BK/PG 27917/562 1 FORD AVENUE MAP 28 PARCEL 2831 TOTAL PROPERTY AREA=15,000 SQ. FT.
TOWN OF LYNNFIELD MIDDLE SCHOOL BK/PG 36442/302 PB/PL 447/91 (PARCEL A) 59 PARSONS AVENUE TOTAL PROPERTY AREA= 3,025 SQ. FT.
MBTA ROW (VAL V.7.3/4)
RR TRACKS (RET)
WF#J-31 A
WF#J-33A
WF#J-34A
WF#J-35A
WF#J-36A
WF#J-37A
WF#J-38A
WF#J-39A
WF#J-40A
WF#J-41A
WF#J-42A
WF#J-43A
WF#J-44A
WF#J-45A
WF#J-46A
WF#J-47A
WF#J-48A
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WF#J-39
WF#J-40
WF#J-41
WF#J-42
WF#J-43
WF#J-44
WF#J-45
WF#J-46
WF#J-47
WF#J-48
APPROXIMATE ZONE 'A' BOUNDARY
N/F MASSACHUSETTS BAY TRANSPORTATION AUTHORITY BK/PG 13117/113 (SOUTH MIDDLESEX REGISTRY OF DEEDS)
TOWN OF LYNNFIELD – LYNNFIELD CENTER BK/PG 24679/171 165 SUMMER STREET MAP/LOT 29/2414
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
BORDERING LAND SUBJECT TO FLOODING (EL 75.1) (TYP)
PROP 12' STONEDUST PATH
R&S EXIST RR TRACKS
R&D 105' EXIST FENCE
R&D 100' EXIST STONE WALL

RESOURCE AREA LEGEND:
- WF#XXXX — WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 200-FT RIVERFRONT AREA (RFA)
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- APPROX ZONE 'A' BOUNDARY
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

0 20 50 100
SCALE: 1" = 20'

613163_HD(CONST PLANS)_NOI.DWG Plotted on 10-Feb-2025 1:54 PM
Proposal No. 613163-1-1586
AV080969 - 97

COMMONWEALTH OF MASSACHUSETTS
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REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

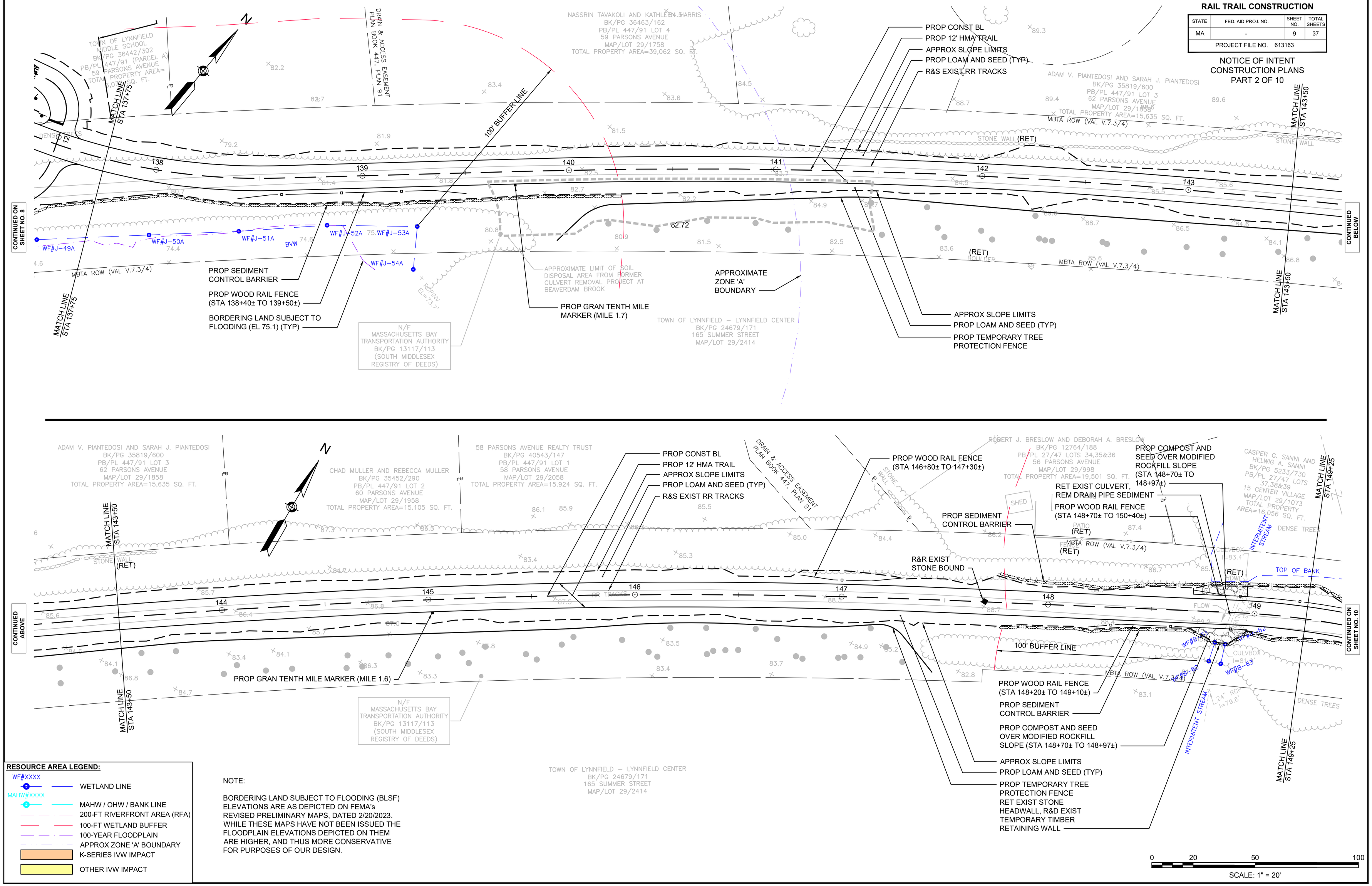
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	9	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT CONSTRUCTION PLANS PART 2 OF 10

613163_HD(CONST PLANS)_NOI.DWG Plotted on 10-Feb-2025 1:54 PM

Proposal No. 613163-135786

AV08600 - 98



RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 200-FT RIVERFRONT AREA (RFA)
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- APPROX ZONE 'A' BOUNDARY
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

0 20 50 100

SCALE: 1" = 20'

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

RESOURCE AREA IMPACTS					
RESOURCE AREA	SHEET NO.	TYPE	LEGEND	LOCATION	IMPACT AREA (SF)
K-SERIES ISOLATED VEGETATED WETLAND (IVW)	10 - 11	PERMANENT		STA 155+64, RT TO STA 160+60, RT	3,078 SF
K-SERIES IVW REPLICATION	10	REPLICATION		STA 154+77, RT TO STA 155+77, RT	3,092 SF

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

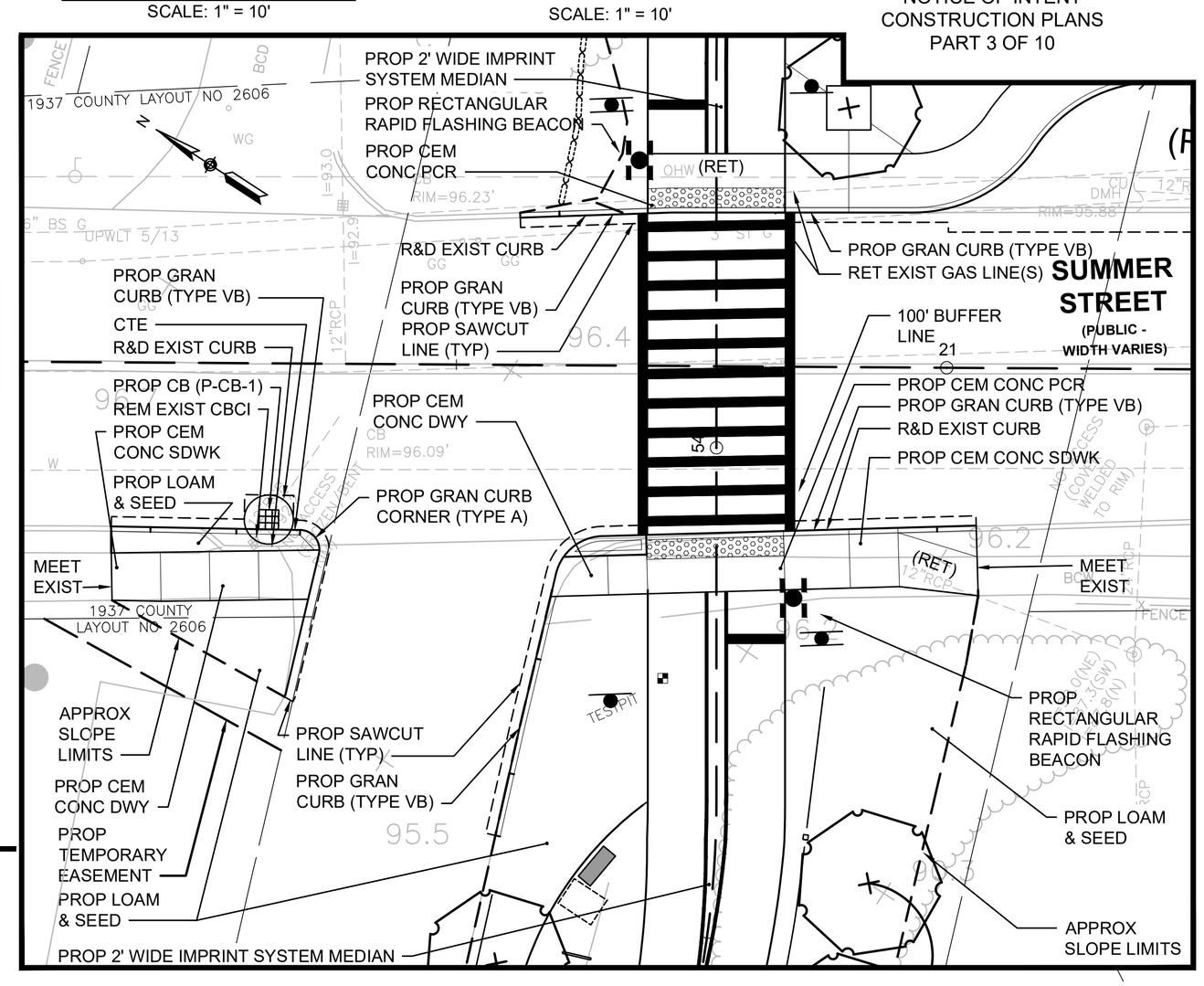
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	10	37
PROJECT FILE NO. 613163			

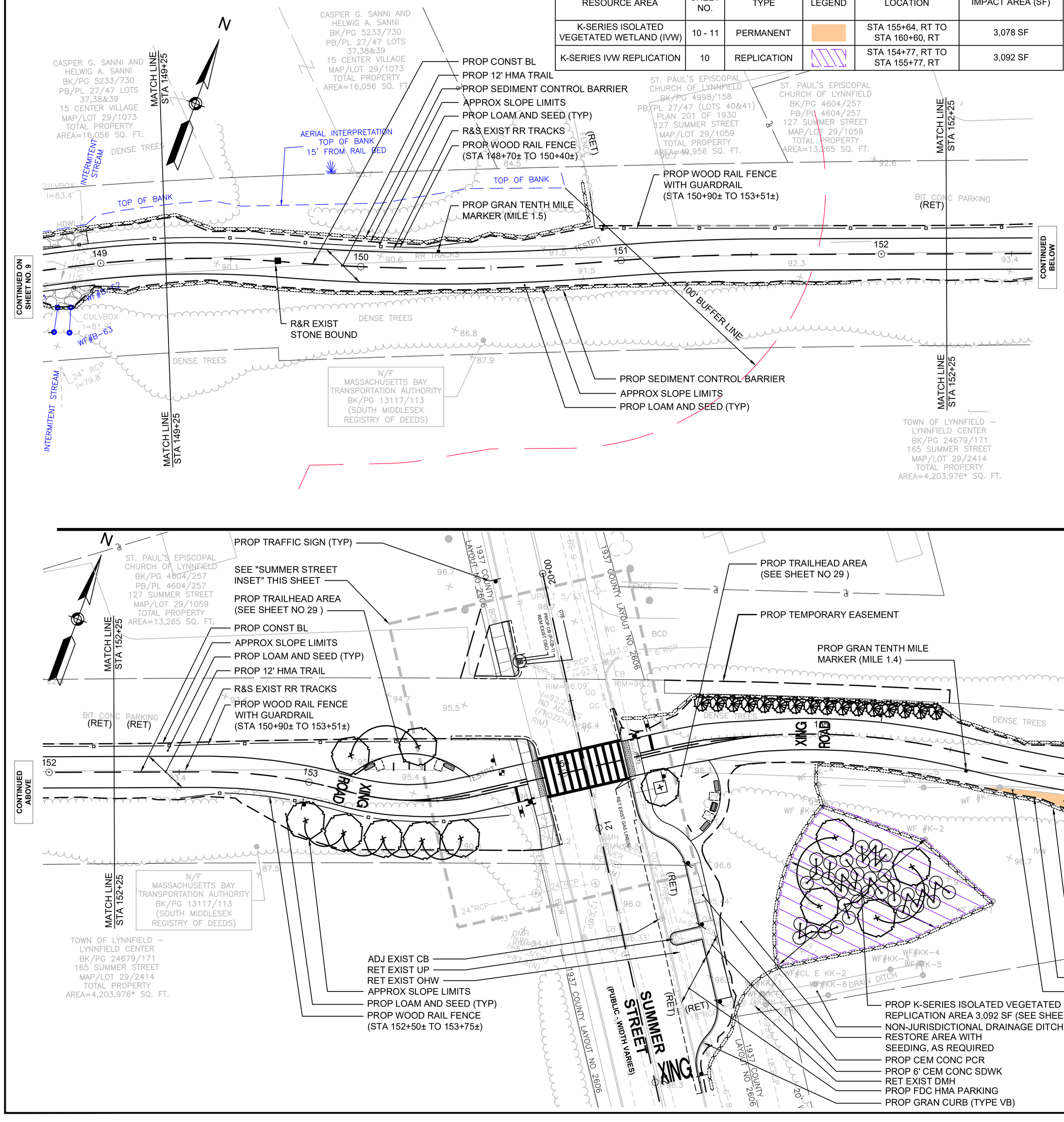
NOTICE OF INTENT
CONSTRUCTION PLANS
PART 3 OF 10

SUMMER STREET INSET

SCALE: 1" = 10'

0 10 20 30 40
SCALE: 1" = 10'





RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 200-FT RIVERFRONT AREA (RFA)
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- APPROX ZONE 'A' BOUNDARY
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

0 20 50 100
SCALE: 1" = 20'

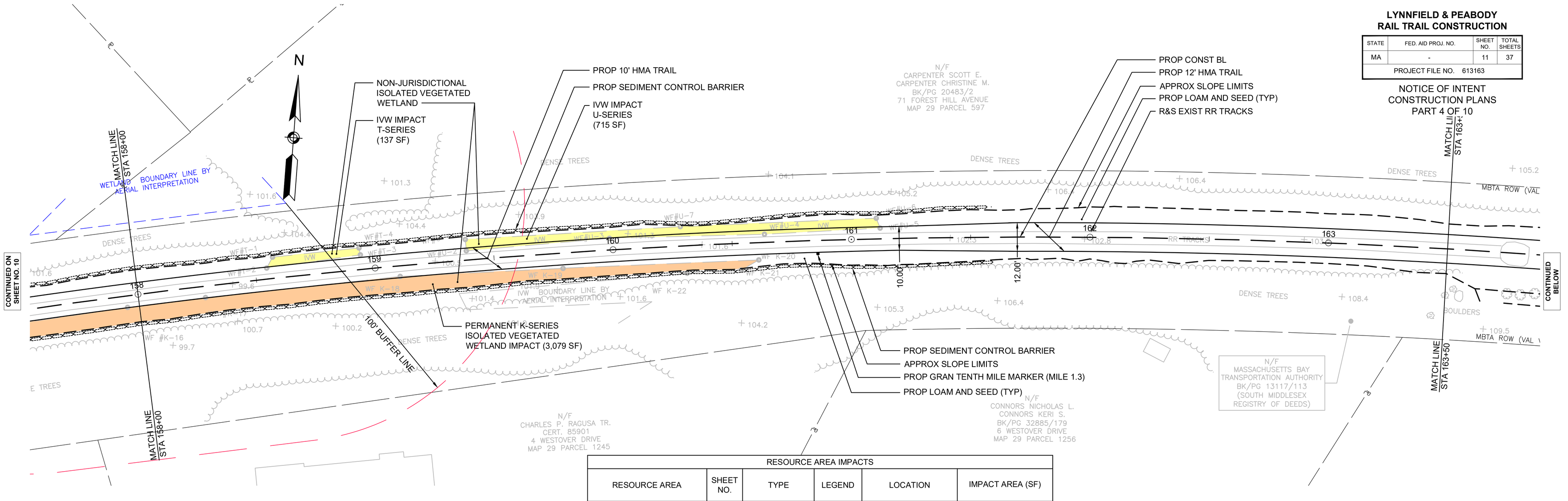
613163_HD(CONST PLANS)_NOI.DWG Plotted on 10-Feb-2025 1:54 PM
Proposal No. 613163-135786
AV08860 - 99

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

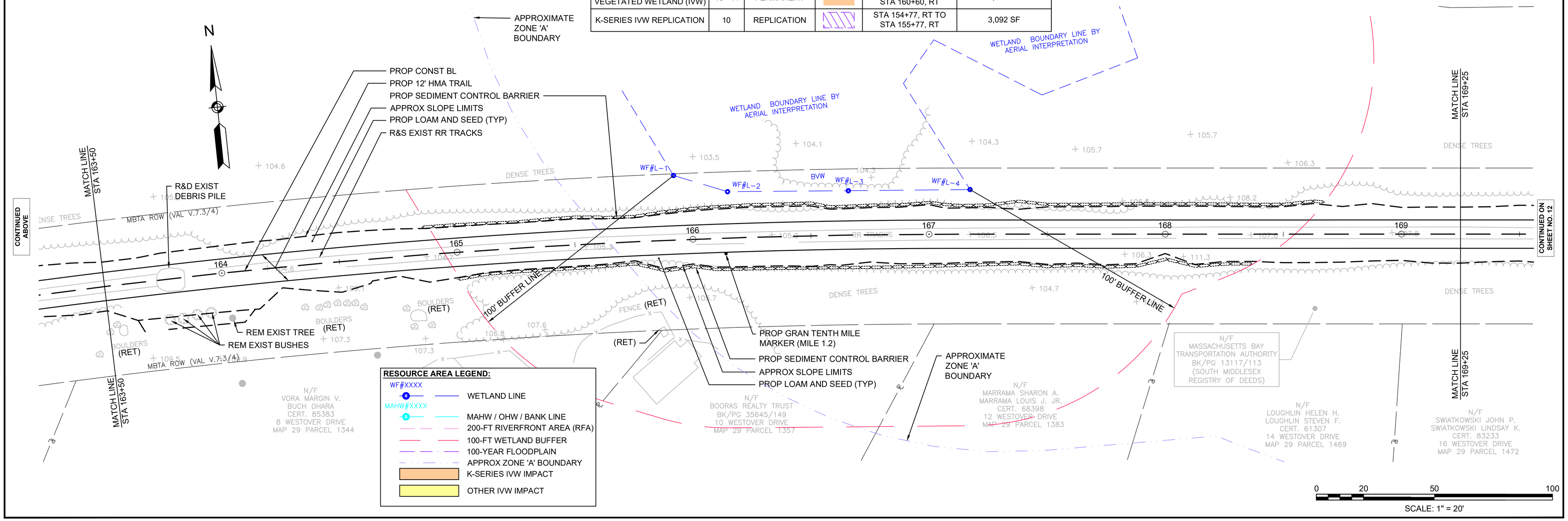
LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	11	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT CONSTRUCTION PLANS PART 4 OF 10



RESOURCE AREA IMPACTS					
RESOURCE AREA	SHEET NO.	TYPE	LEGEND	LOCATION	IMPACT AREA (SF)
K-SERIES ISOLATED VEGETATED WETLAND (IVW)	10 - 11	PERMANENT		STA 155+64, RT TO STA 160+60, RT	3,078 SF
K-SERIES IVW REPLICATION	10	REPLICATION		STA 154+77, RT TO STA 155+77, RT	3,092 SF



613163_HD(CONST PLANS)_NOI.DWG Plotted on 10-Feb-2025 1:55 PM
Proposal No. 613163-135786
A00869 - 001

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	12	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
CONSTRUCTION PLANS
PART 1 OF 10

613163_HD(CONST PLANS)_NOI.DWG Plotted on 10-Feb-2025 1:55 PM
Proposal No. 613163-135786
AV08680 - 101

N

MATCH LINE STA 169+25

N/F
NANCY S FREDRICK 2016
REVOCABLE TRUST
BK/PG 35062/506
MAP 29 PARCEL 672

PROP CONST BL
PROP 12' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS

N/F
MELLEN CHRISTOPHER & LINDA
BK/PG 13783/93
30 UNDERHILL ROAD
MAP 29 PARCEL 619

POOL
SHED
STEPS
RET WALL
(RET)
FENCE

MATCH LINE STA 175+00

DENSE TREES
MBTA ROW (VAL V.7.3/4)
RR TRACKS

CONTINUED ON SHEET NO. 11

CONTINUED BELOW

PROP GRAN TENTH MILE MARKER (MILE 1.1)

APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)

STOCKADE FENCE

CITY 20' WIDE EASEMENT PLAN 33 BOOK 126, PLAN 33

N/F
SWIATKOWSKI JOHN P.
SWIATKOWSKI LINDSAY K.
CERT. 83233
16 WESTOVER DRIVE
MAP 29 PARCEL 1472

N/F
GRAVE RALPH A.
GRAVE NINA M.
CERT. 90831
18 WESTOVER DRIVE
MAP 29 PARCEL 1484

N/F
GERACE JAMES A.
BURKE MAUREEN A.
CERT. 84140
20 WESTOVER DRIVE
MAP 29 PARCEL 1494

N/F
22 WESTOVER DRIVE
REVOCABLE REAL ESTATE TRUST
CERT. 92009
22 WESTOVER DRIVE
MAP 29 PARCEL 1493

N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX
REGISTRY OF DEEDS)

N/F
TROISI DEBORAH J.
TROISI MARK
BK/PG 41753/56
24 WESTOVER DRIVE
MAP 30 PARCEL 872

N

N/F
TANNER CYNTHIA D &
ELAINE K
CERT. 88430
10 LOVELL ROAD
MAP 30 PARCEL 812

N/F
SCIRE PAUL A & SHANNON M
CERT. 91487
14 LOVELL ROAD
MAP 30 PARCEL 825

N/F
16 LOVELL ROAD LYNNFIELD
MASS NOMINEE TRUST
CERT. 90379
16 LOVELL ROAD
MAP 30 PARCEL 837

N/F
BRANDANO WARREN
BRANDANO PAULA
CERT. 76723
18 LOVELL ROAD
MAP 30 PARCEL 839

N/F
SILVA JENNIFER L
CERT. 90879
20 LOVELL ROAD
MAP 30 PARCEL 918

20' WIDE DRAINAGE EASEMENT (LCP 4233-M, CERT NO. 2397)

N/F
RAYMOND J. DORMANN AND
ROSE MARIE
CERT. 91426
22 LOVELL ROAD
MAP 30 PARCEL 929

MATCH LINE STA 175+00

MATCH LINE STA 181+00

PROP GRANITE MILE MARKER POST (1 MI)

PROP CEM CONC BENCH PAD (SEE SHEET NO. 31)

CONTINUED ABOVE

CONTINUED ON SHEET NO. 13

(RET)

RET EXIST 24" RCP

24 RCP
EL=100.8

FLOW

DITCH

PROP WOOD RAIL FENCE
(STA 180+80± TO 181+70±)

100' BUFFER LINE

WETLAND BOUNDARY LINE BY AERIAL INTERPRETATION

APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)

N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX
REGISTRY OF DEEDS)

N/F
CHILDREN'S BOURQUE ROAD TRUST
DICESARE ELIZABETH N. TR.
BK/PG 23983/289
28 READ WESTOVER DRIVE

N/F
TROISI DEBORAH J.
TROISI MARK
BK/PG 41753/56
24 WESTOVER DRIVE
MAP 30 PARCEL 872

N/F
SERIO JEAN E.
SERIO FRANK E.
BK/PG 6215/32
WESTOVER DRIVE
MAP 30 PARCEL 897

RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 200-FT RIVERFRONT AREA (RFA)
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- APPROX ZONE 'A' BOUNDARY
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

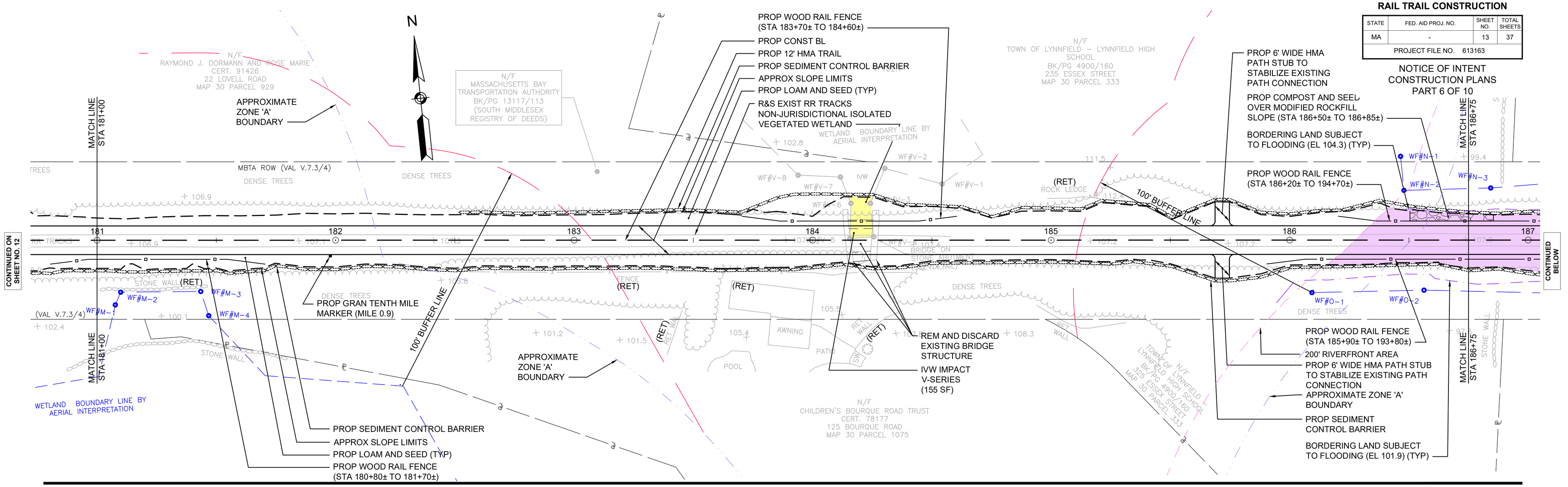
0 20 50 100
SCALE: 1" = 20'

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	13	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT CONSTRUCTION PLANS PART 6 OF 10



NOTE:

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613163_HD(CONST PLANS)_NOI.DWG Plotted on 11-Feb-2025 2:31 PM
Proposed Plan No. 613163-135786
AM98690 - 102

ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	14	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT CONSTRUCTION PLANS PART 7 OF 10

N

MATCH LINE STA 192+50

MATCH LINE STA 198+00

MATCH LINE STA 203+75

CONTINUED ON SHEET NO. 13

CONTINUED BELOW

CONTINUED ABOVE

CONTINUED ON SHEET NO. 15

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

PROP SEDIMENT CONTROL BARRIER

PROP WOOD RAIL FENCE (STA 186+20± TO 194+70±)

APPROXIMATE ZONE 'A' BOUNDARY

PROP CONST BL

PROP 12' HMA TRAIL

APPROX SLOPE LIMITS

PROP LOAM AND SEED (TYP)

R&S EXIST RR TRACKS

PROP WOOD RAIL FENCE (STA 185+90± TO 193+80±)

PROP SEDIMENT CONTROL BARRIER

APPROX SLOPE LIMITS

PROP LOAM AND SEED (TYP)

200' RIVERFRONT AREA

BORDERING LAND SUBJECT TO FLOODING (EL 101.9) (TYP)

100' BUFFER LINE

PROP GRAN TENTH MILE MARKER (MILE 0.7)

PROP GRAN TENTH MILE MARKER (MILE 0.6)

WF#N-15 WF#N-16 WF#N-17 WF#N-18 WF#N-19 WF#N-20

WF#O-16 WF#O-17

MBTA ROW (VAL V.7.3/5)

DENSE TREES

RR TRACKS

N/F TOWN OF LYNNFIELD BK/PG 5378/660 66 REAR BOURQUE ROAD MAP 30 PARCEL 1165

N/F TOWN OF LYNNFIELD CONSERVATION COMM. REAR BOURQUE ROAD MAP 30 PARCEL 1257

N/F YAN STANLEY K & SEOLKI CERT. 94671 25 PILLINGS POND ROAD MAP 30 PARCEL 1293

N/F GEMMELL IAN JAMES & MELISSA ANNE CERT. 87925 66 BOURQUE ROAD MAP 30 PARCEL 1829

N/F LOWELL SCOTT LOWELL MELANIE R. CERT. 89292 68 BOURQUE ROAD MAP 30 PARCEL 1862

N/F BOURQUE ROAD R.T. MARCHIONDA SHARON TR. LCD 646958 70 BOURQUE ROAD MAP 30 PARCEL 1944

N/F MASSACHUSETTS BAY TRANSPORTATION AUTHORITY BK/PG 13117/113 (SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F MOREIRA BRIAN J & KAREN L CERT. 89296 72 BOURQUE ROAD MAP 30 PARCEL 1951

N/F SHEA JOHN M. BK/PG 15073/562 27 PILLINGS POND ROAD MAP 30 PARCEL 1935

RESOURCE AREA LEGEND:

WF#XXXX

MAHW#XXXX

- WETLAND LINE
- MAHW / OHW / BANK LINE
- 200-FT RIVERFRONT AREA (RFA)
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- APPROX ZONE 'A' BOUNDARY
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT
- RFA TOTAL IMPACT

PROP CONST BL

PROP 12' HMA TRAIL

APPROX SLOPE LIMITS

PROP LOAM AND SEED (TYP)

R&S EXIST RR TRACKS

PROP GRAN CURB (TYPE VB) (TYP)

PROP CEM CONC PCR

PROP 2' WIDE IMPRINT SYSTEM MEDIAN

1974 TOWN LAYOUT (LCP 18851-B) (ARTICLE 38)

RET EXIST OHW

MEET EXIST

PROP CEM CONC SDWK

PROP SAWCUT LINE

R&D EXIST CURB

R&D EXIST GUY POLE (PREVIOUSLY ABANDONED) (PAID UNDER ITEM 120.1)

RET EXIST WATER LINE

MEET EXIST

PROP TRAFFIC SIGN (TYP)

PROP GRAN TENTH MILE MARKER (MILE 0.5)

R&R EXIST STONE BOUND

1947 TOWN LAYOUT (ARTICLE 37)

PILLINGS POND ROAD (PUBLIC WAY)

RAMP XING

SHED

OPEN STORAGE

BOULDERS

N/F YAN STANLEY K & SEOLKI CERT. 94671 25 PILLINGS POND ROAD MAP 30 PARCEL 1293

N/F LYNCH MARGARET A. CERT. 95633 1 MESERVEY LANE MAP 30 PARCEL 1381

N/F CHANG GREGORY & FRIEDICH LESLIE CERT. 94692 2 MESERVEY LANE MAP 30 PARCEL 1361

N/F J-S REALTY TRUST CERT. 95309 3 MESERVEY LANE MAP 30 PARCEL 1339

N/F MASSACHUSETTS BAY TRANSPORTATION AUTHORITY BK/PG 13117/113 (SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F DAVIS DANIEL B III & KIM NANCY BK/PG 35267/493 28 PILLINGS POND ROAD MAP 30 PARCEL 2026

N/F MACNICHOL PATRICIA M. MACNICHOL STEPHEN F. BK/PG 14183/95 2 WILDEWOOD DRIVE MAP 30 PARCEL 2118

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

0 20 50 100

SCALE: 1" = 20'

613163_HD(CONST PLANS)_NOI.DWG Plotted on 10-Feb-2025 1:55 PM

Proposal No. 613163-125786

AM08869 - 103

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	15	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
CONSTRUCTION PLANS
PART 8 OF 10

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.

N

PROP CONST BL
PROP 12' HMA TRAIL
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS

PROP SEDIMENT CONTROL BARRIER
PROP COMPOST AND SEED OVER MODIFIED ROCKFILL SLOPE (STA 209+00± TO 209+30±)
PROP WOOD RAIL FENCE (STA 207+50± TO 211+50±)
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)

N/F J-S REALTY TRUST CERT. 95309 3 MESERVEY LANE MAP 30 PARCEL 1339

N/F ROSBERG FAMILY IRREVOCABLE TRUST ROSBERG JOSEPH B. JR. TR. CERT. 86101 4 MESERVEY LANE MAP 30 PARCEL 1458

N/F TOWN OF LYNNFIELD CERT. 67068 483 REAR ESSEX STREET MAP 31 PARCEL 891

MATCH LINE STA 203+75

MATCH LINE STA 209+50

CONTINUED ON SHEET NO. 14

CONTINUED BELOW

DENSE TREES
BOULDERS
(RET)
100' BUFFER LINE
WF#P-1
WF#P-2
WF#P-3
WF#P-4
BVW
204
205
206
207
208
209
R TRACKS
STOCKADE FENCE
APPROXIMATE ZONE 'A' BOUNDARY
PROP WOOD RAIL FENCE (STA 207+50± TO 211+30±)
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
PROP GRAN TENTH MILE MARKER (MILE 0.4)
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
TOE OF SLOI (NOT FLAGGE AERIAL INTERPRE

N/F MASSACHUSETTS BAY TRANSPORTATION AUTHORITY BK/PG 13117/113 (SOUTH MIDDLESEX REGISTRY OF DEEDS)

N/F MACNICHOL PATRICIA M. MACNICHOL STEPHEN F. BK/PG 14183/95 2 WILDEWOOD DRIVE MAP 30 PARCEL 2118

N/F ROSATONE ANTONIO & MARIA BK/PG 10735/294 4 WILDEWOOD DRIVE MAP 30 PARCEL 2152

N/F VACCARO LISA M. VACCARO STEVEN C. BK/PG 24778/289 6 WILDEWOOD DRIVE MAP 30 PARCEL 2168

N/F GUIGLIANO CHILDREN REALTY TR. BK/PG 9659/275 1 GUIGLIANO TERRACE MAP 31 PARCEL 1555

N

N/F TOWN OF LYNNFIELD CERT. 67068 483 REAR ESSEX STREET MAP 31 PARCEL 891

BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
PROP WOOD RAIL FENCE (STA 207+50± TO 211+50±)
ESSEX STREET CONSERVATION AREA
PROP CONST BL
PROP 12' HMA TRAIL
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
R&S EXIST RR TRACKS
PROP GRAN TENTH MILE MARKER (MILE 0.3)
RET EXIST CULVERT, REM DRAIN PIPE SEDIMENT

N/F MASSACHUSETTS BAY TRANSPORTATION AUTHORITY BK/PG 13117/113 (SOUTH MIDDLESEX REGISTRY OF DEEDS)

MATCH LINE STA 209+50

MATCH LINE STA 215+50

CONTINUED ABOVE

CONTINUED ON SHEET NO. 16

MBTA ROW (VAL V.7.3/5)
CULVERT EL=99.7
CULVERT EL=100.4
WF#P-5
WF#P-6
WF#P-7
WF#P-8
WF#P-9
210
211
212
213
214
215
R TRACKS
FLOW
STONE WALL
CATTLEBO
POOL
PATIO
TOE OF SLOPE (NOT FLAGGED) AERIAL INTERPRETATION
RET EXIST CULVERT, REM DRAIN PIPE SEDIMENT
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
PROP WOOD RAIL FENCE (STA 207+50± TO 211+30±)
APPROXIMATE ZONE 'A' BOUNDARY
PROP SEDIMENT CONTROL BARRIER
APPROX SLOPE LIMITS
PROP LOAM AND SEED (TYP)
APPROXIMATE ZONE 'A' BOUNDARY
PROP WOOD RAIL FENCE (STA 213+90± TO 214+50±)
SPACE FENCE POSTS TO AVOID CULVERT
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
BORDERING LAND SUBJECT TO FLOODING (EL 104.3) (TYP)
WF#Q-1
WF#Q-1A
WF#Q-2
WF#Q-3
WF#Q-4
WF#Q-5
WF#Q-6
WF#R-1
WF#R-2
WF#R-3
WF#R-4
WF#R-5
WF#R-6
WF#R-7
WF#R-8
WF#R-9
WF#R-11
RCP/AW EL=103.5'
STONE WALL

N/F GUIGLIANO CHILDREN REALTY TR. BK/PG 9659/275 1 GUIGLIANO TERRACE MAP 31 PARCEL 1555

N/F THE 4 NORTHWAY REALTY TRUST HAN ILKYO TR. BK/PG 32675/387 4 NORTHWAY MAP 31 PARCEL 1685

N/F DELEO ANTHONY C. & ALANA N BK/PG 30658/187 5 NORTHWAY MAP 31 PARCEL 1665

RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 200-FT RIVERFRONT AREA (RFA)
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- APPROX ZONE 'A' BOUNDARY
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

0 20 50 100
SCALE: 1" = 20'

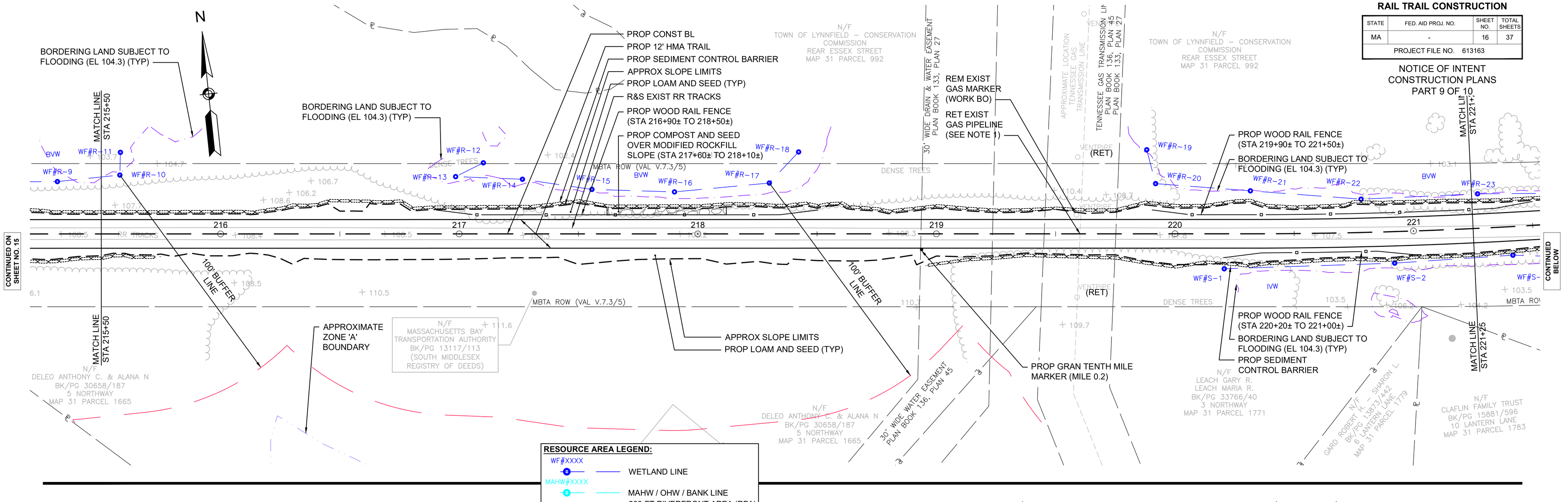
613163_HD(CONST PLANS)_NOI.DWG Plotted on 10-Feb-2025 1:56 PM
Proposal No. 613163-135786
AM0869 - 104

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	16	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT CONSTRUCTION PLANS PART 9 OF 10



RESOURCE AREA LEGEND:

WF#XXXX — WETLAND LINE
MAHW#XXXX — MAHW / OHW / BANK LINE
200-FT RIVERFRONT AREA (RFA)
100-FT WETLAND BUFFER
100-YEAR FLOODPLAIN
APPROX ZONE 'A' BOUNDARY
K-SERIES IVW IMPACT
OTHER IVW IMPACT

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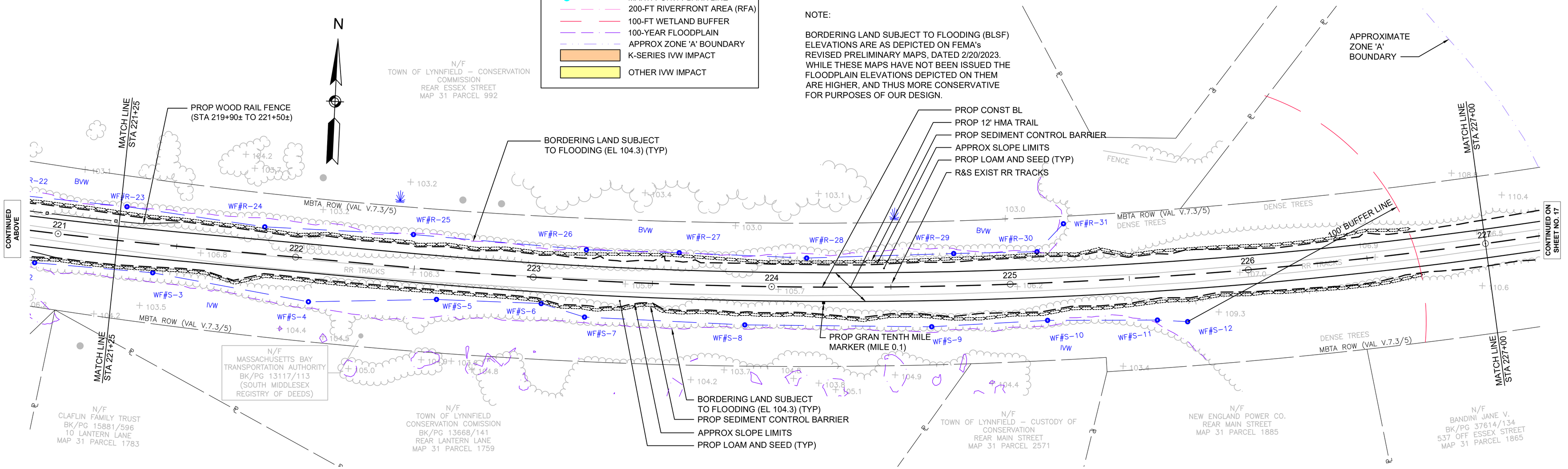

0 20 50 100
SCALE: 1" = 20'

AM08090 - 105
613163_HD(CONST PLANS)_NOI.DWG Plotted on 10-Feb-2025 1:56 PM
Proposal No. 613163-13786

COMMONWEALTH OF MASSACHUSETTS
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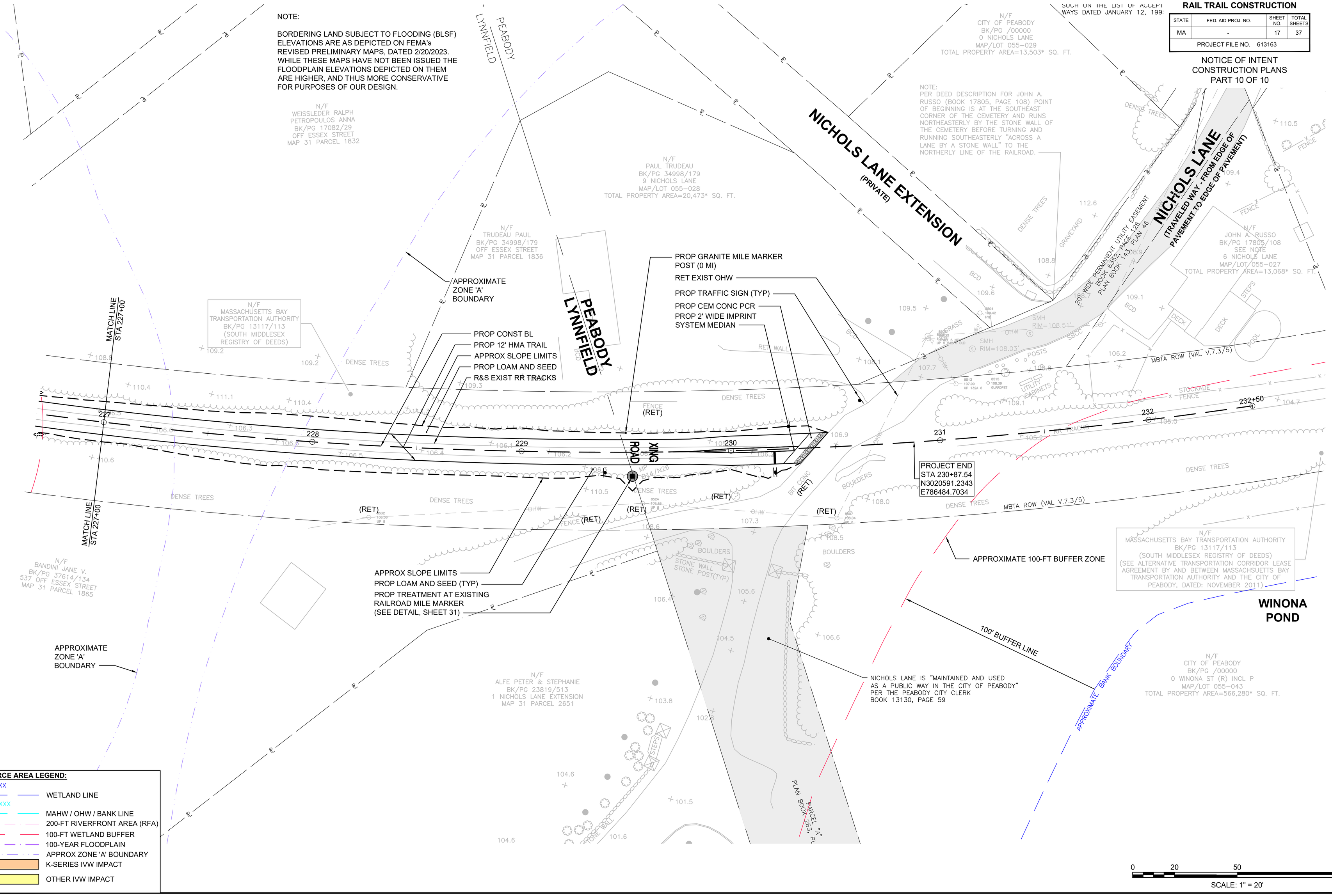
LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	17	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
CONSTRUCTION PLANS
PART 10 OF 10

NOTE:

BORDERING LAND SUBJECT TO FLOODING (BLSF) ELEVATIONS ARE AS DEPICTED ON FEMA's REVISED PRELIMINARY MAPS, DATED 2/20/2023. WHILE THESE MAPS HAVE NOT BEEN ISSUED THE FLOODPLAIN ELEVATIONS DEPICTED ON THEM ARE HIGHER, AND THUS MORE CONSERVATIVE FOR PURPOSES OF OUR DESIGN.



RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- MAHW#XXXX — MAHW / OHW / BANK LINE
- 200-FT RIVERFRONT AREA (RFA)
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- APPROX ZONE 'A' BOUNDARY
- K-SERIES IVW IMPACT
- OTHER IVW IMPACT

0 20 50 100
SCALE: 1" = 20'

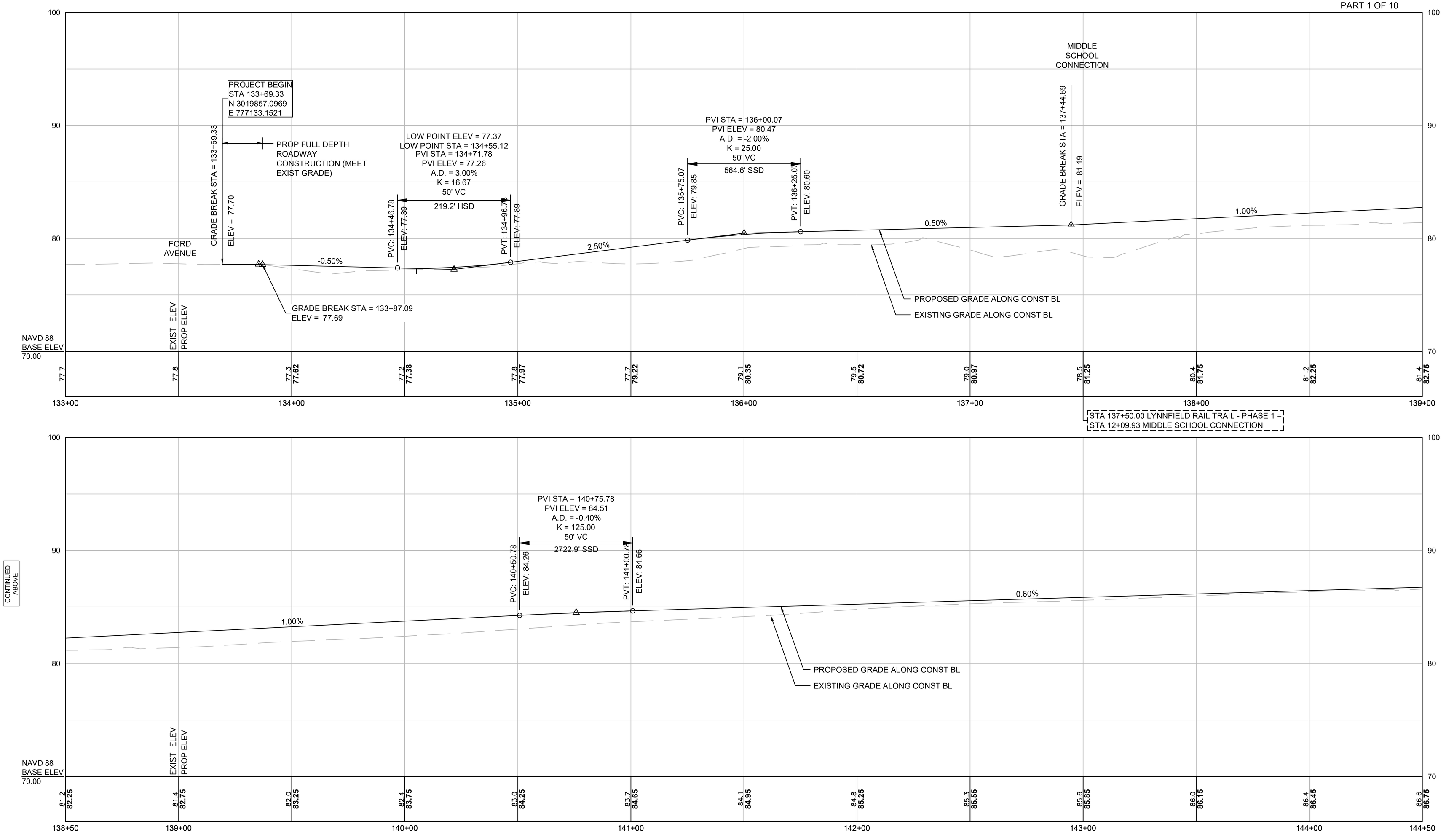
AV08040 - 106
613163_HD(CONST PLANS)_NOI.DWG Plotted on 10-Feb-2025 1:56 PM
Proposal No. 613163-135786

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	18	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
PROFILES
PART 1 OF 10



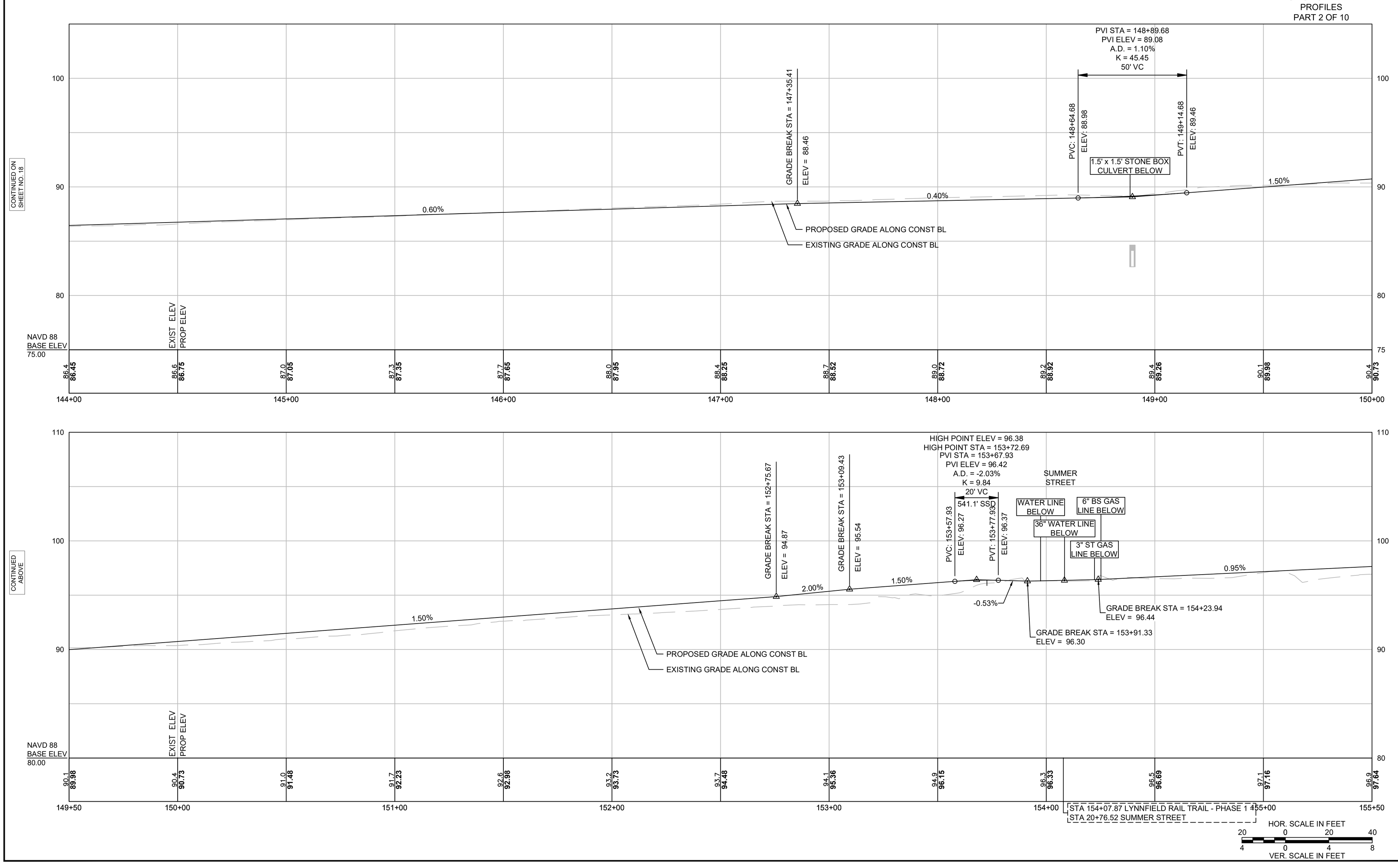
Plotted on 10-Feb-2025 1:56 PM
613163_HD\[PROFILES]_NOI.DWG
Proposal No. 613163-132798
A008860 - 107

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	19	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
PROFILES
PART 2 OF 10



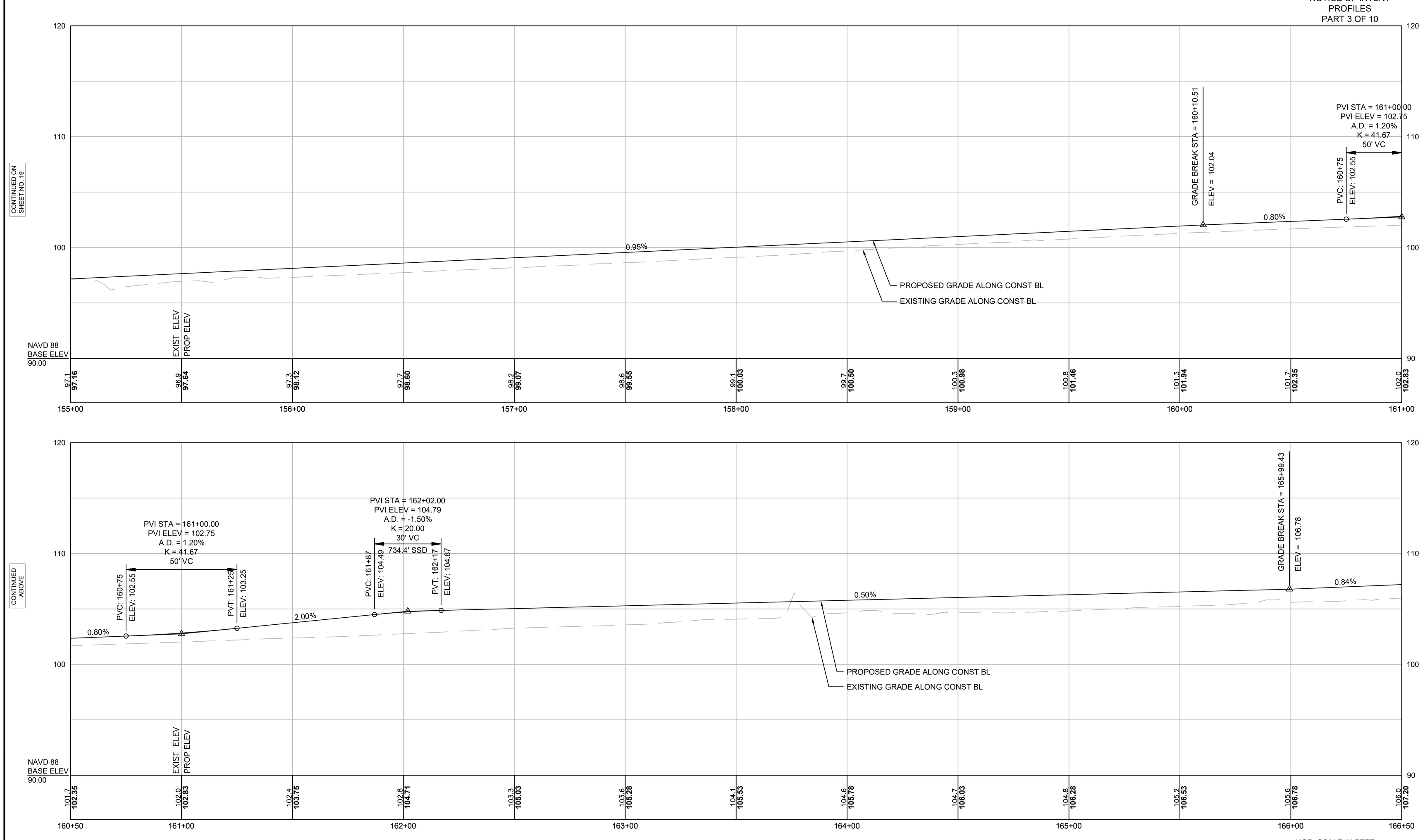
613163_HD\PROFILES_NOI.DWG Plotted on 10-Feb-2025 1:56 PM
Proposal No. 613163-153789
801 - 09080 - 108

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	20	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
PROFILES
PART 3 OF 10



HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

601 - 09808V

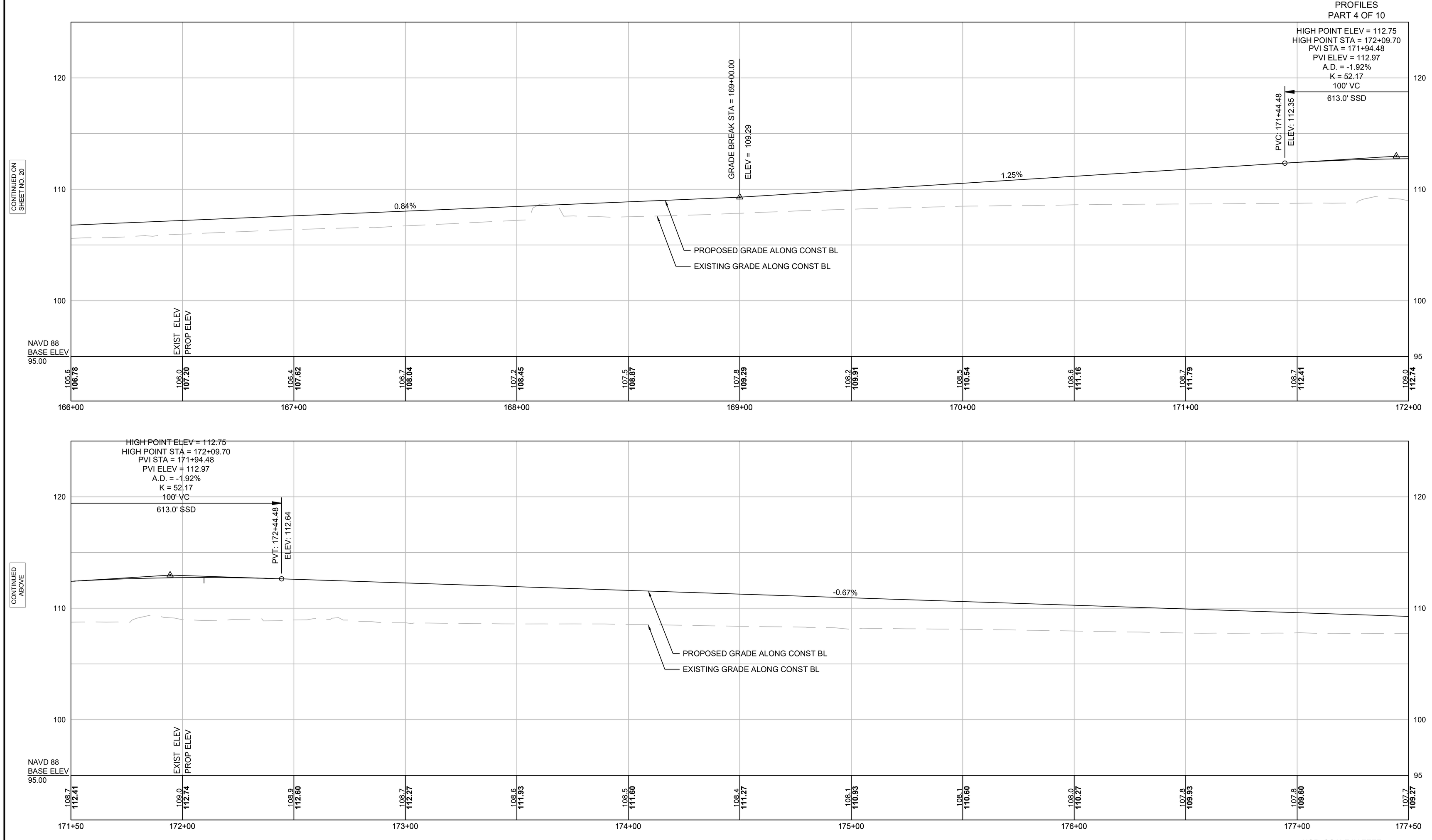
613163_HD(PROFILES)_NOI.DWG Plotted on 10-Feb-2025 1:56 PM
Proposal No. 613163-155786

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	21	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
PROFILES
PART 4 OF 10



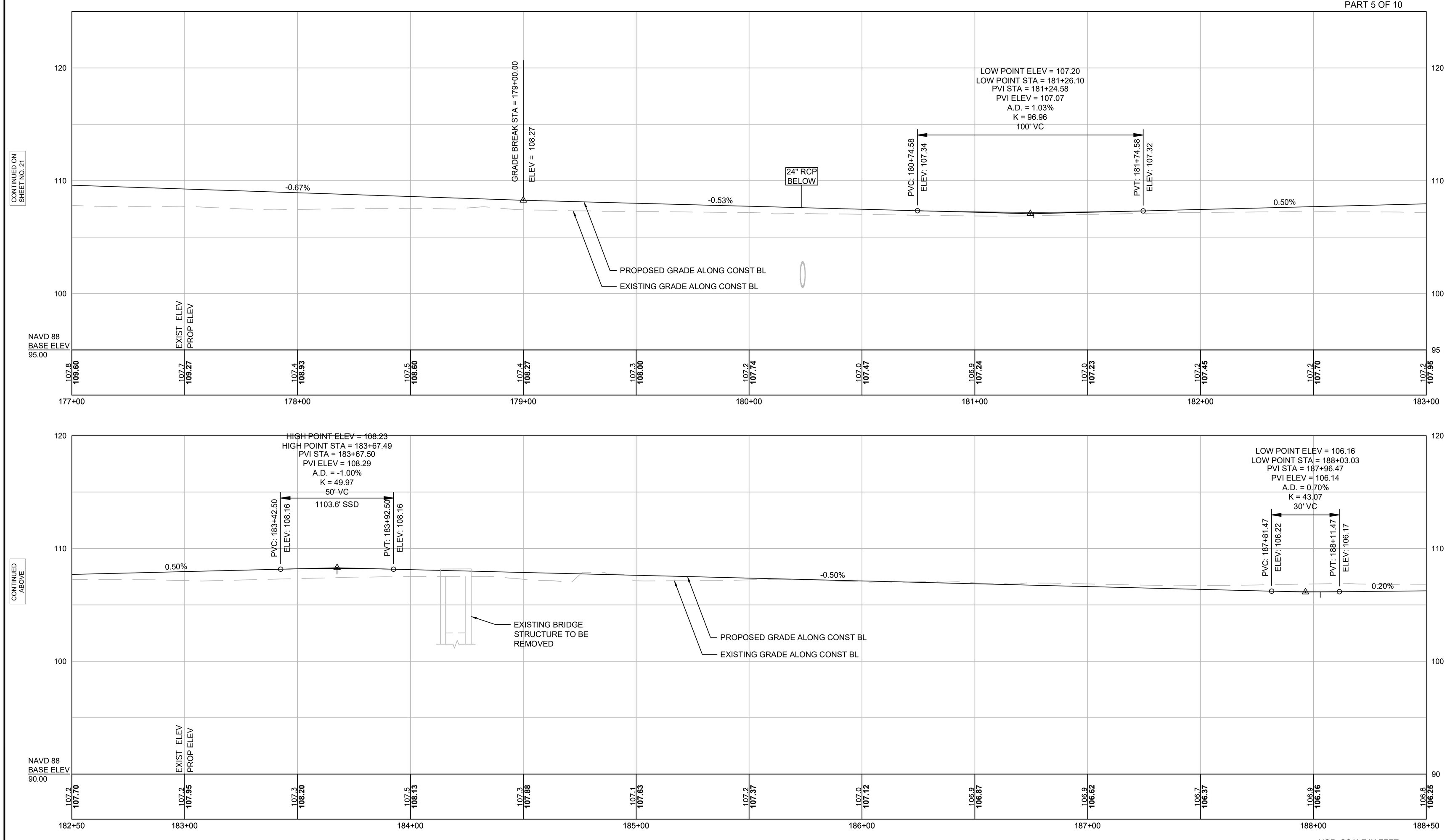
613163_HD\[PROFILES]_NOI.DWG Plotted on 10-Feb-2025 1:56 PM
Proposal No. 613163-157586
AD80860 - 110

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	22	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
PROFILES
PART 5 OF 10



HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

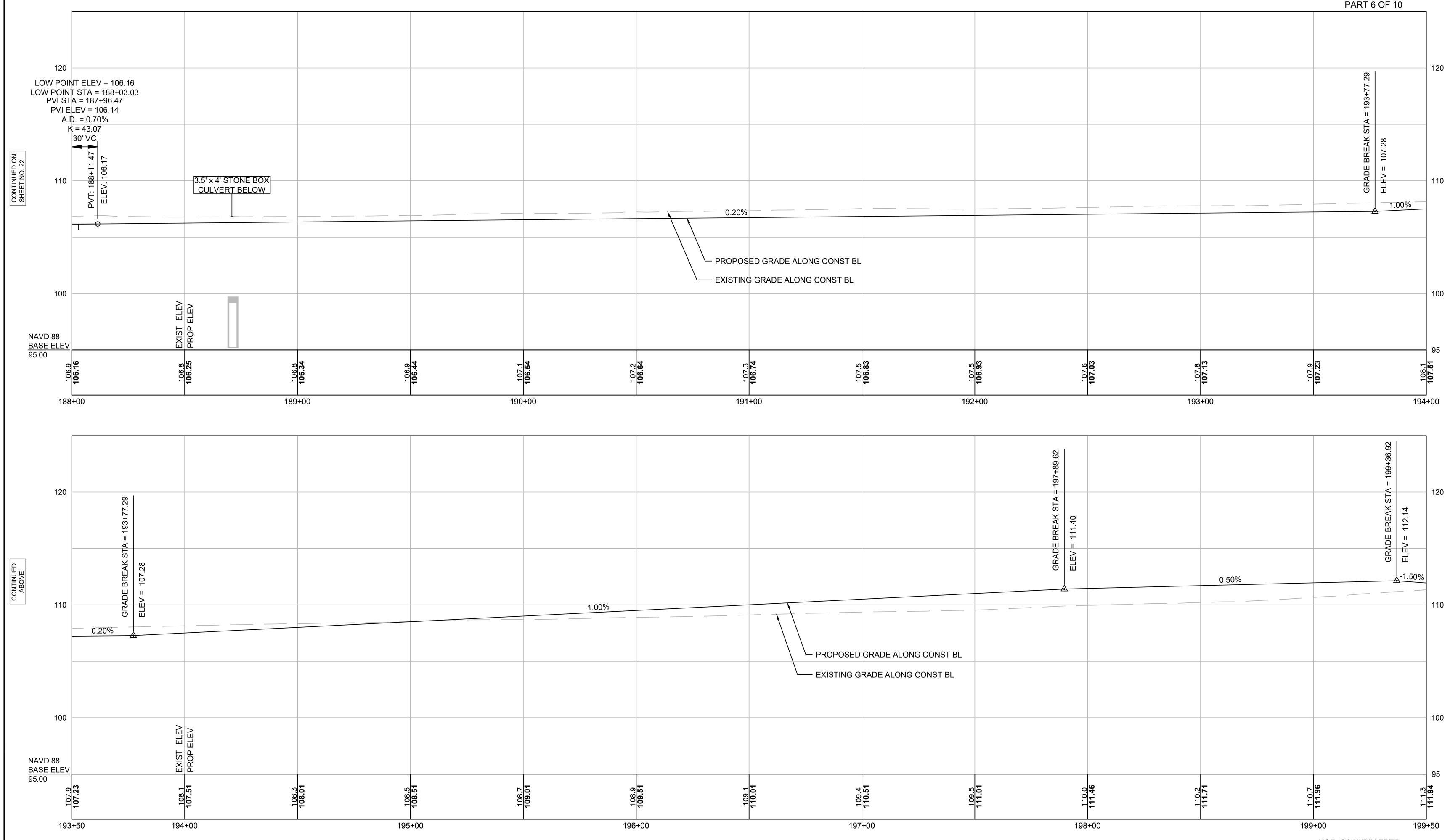
613163_HD(PROFILES)_NOI.DWG Plotted on 10-Feb-2025 1:56 PM
Proposed No. 613163-15786
A00860 - 111

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	23	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
PROFILES
PART 6 OF 10



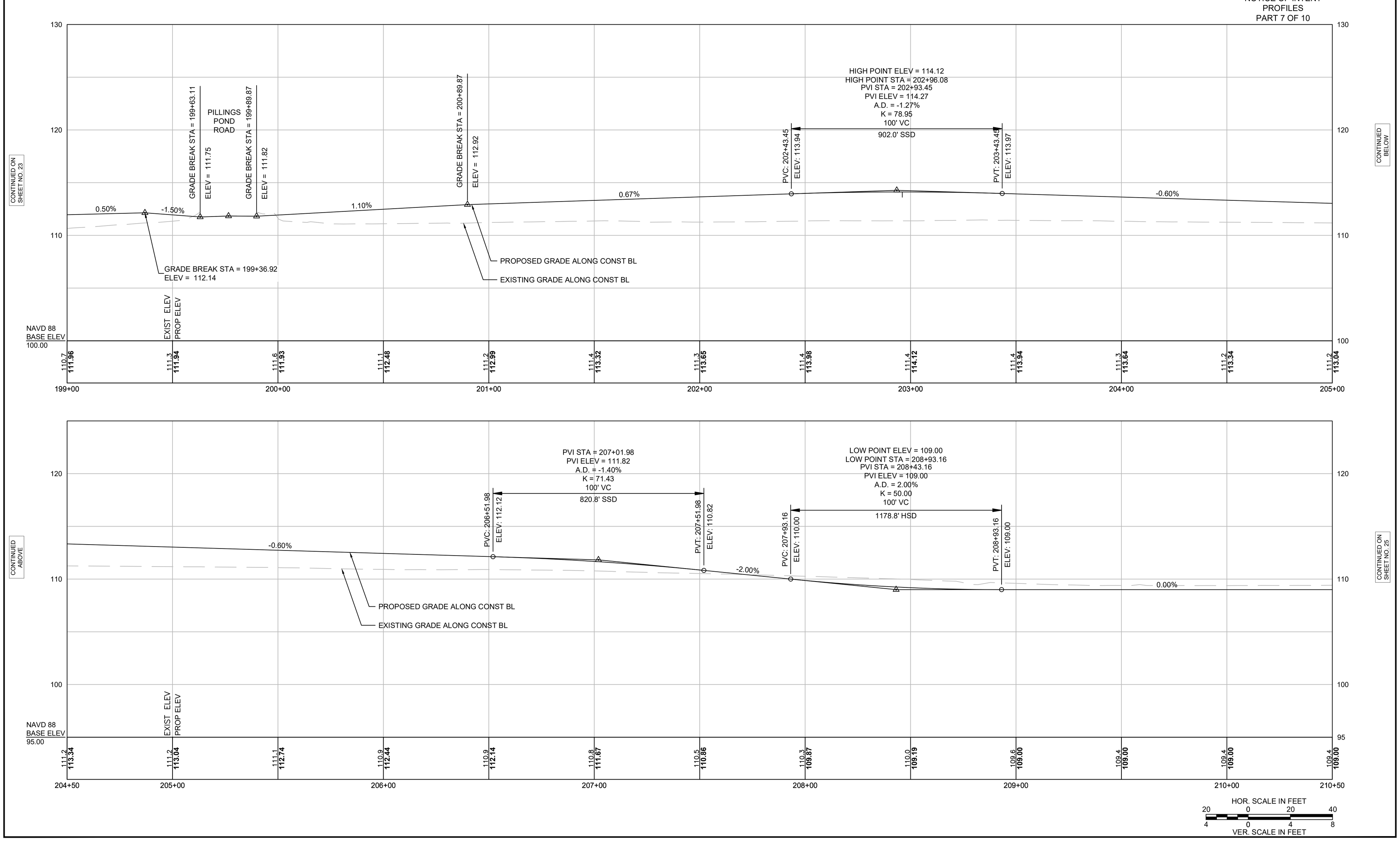
613163_HD(PROFILES)_NOI.DWG Plotted on 10-Feb-2025 1:56 PM
Proposal No. 613163-155786
AV080690 - 112

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	24	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
PROFILES
PART 7 OF 10



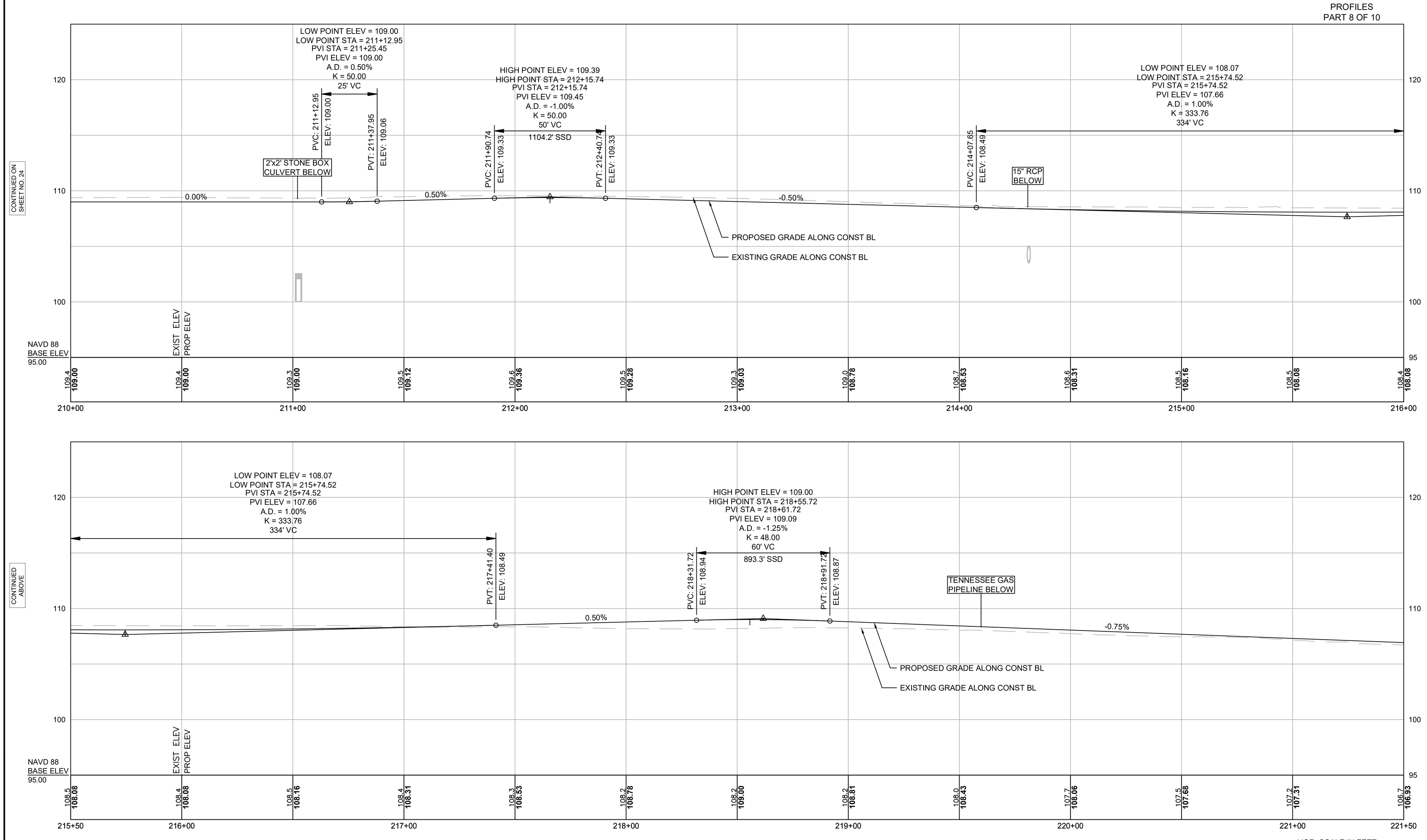
613163_HD\PROFILES_NOI.DWG Plotted on 10-Feb-2025 1:57 PM
Proposal No. 613163-125786
AV080690 - 113

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	25	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
PROFILES
PART 8 OF 10



HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

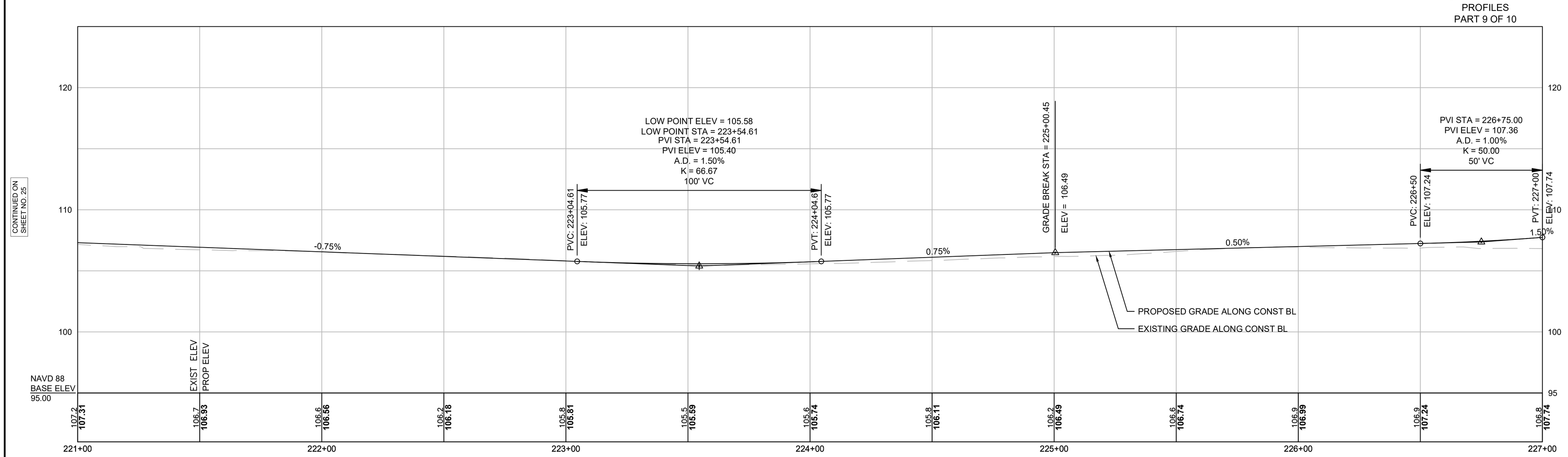
613163_HD(PROFILES)_NOI.DWG Plotted on 10-Feb-2025 1:57 PM
Proposal No. 613163 75789
AW0809 - 11 of 14

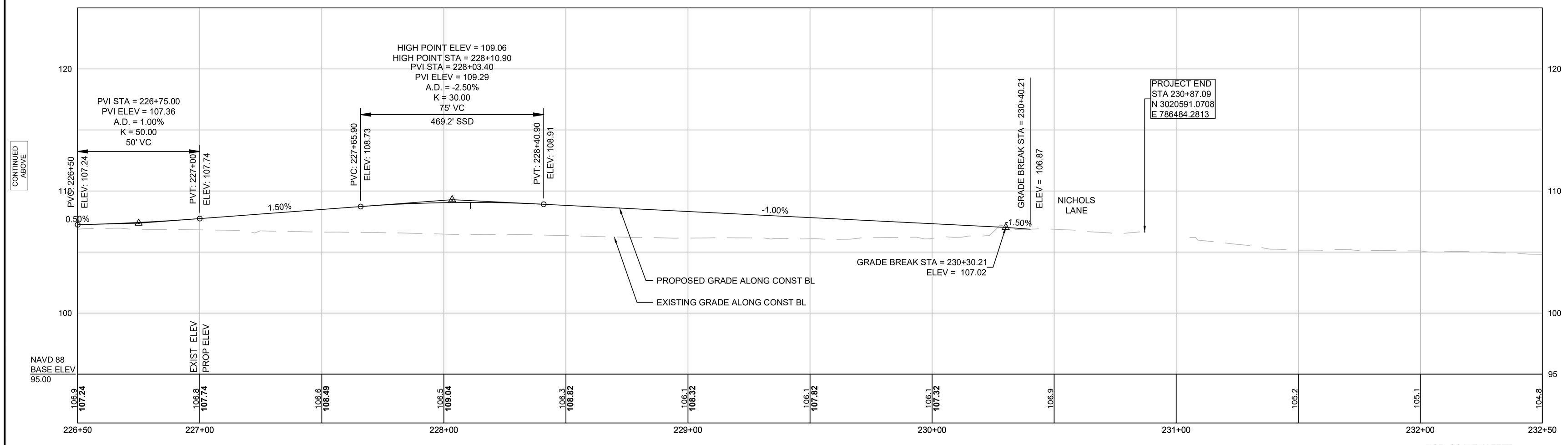
COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	26	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
PROFILES
PART 9 OF 10





HOR. SCALE IN FEET
20 0 20 40
4 0 4 8
VER. SCALE IN FEET

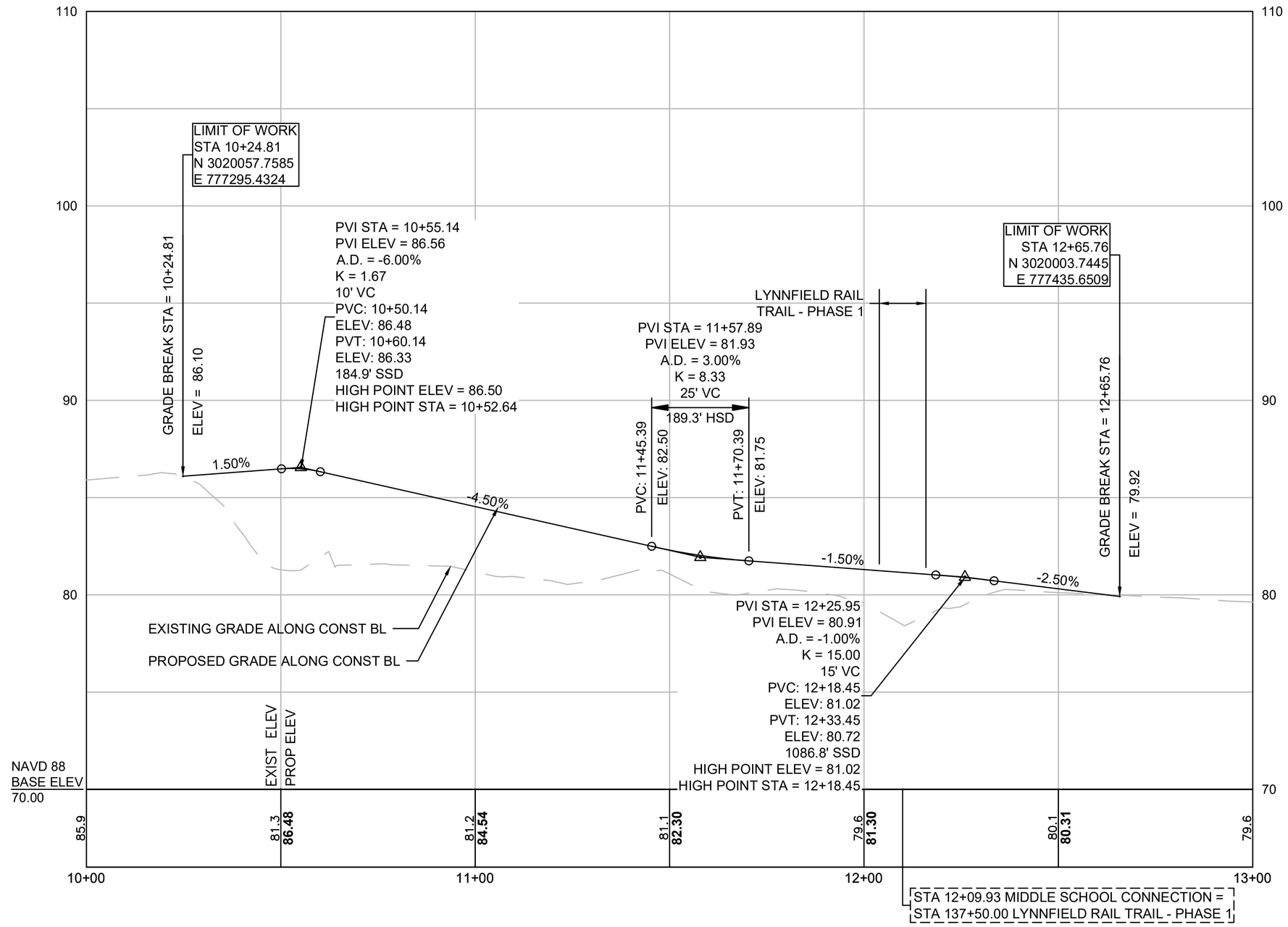
613163_HD\PROFILES_NOI.DWG Plotted on 10-Feb-2025 1:57 PM
Proposal No. 613163-135786
AM0809-09 - 11 - 15

ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED
COMMONWEALTH OF MASSACHUSETTS
PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	27	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
PROFILES
PART 10 OF 10



HOR. SCALE IN FEET
20 0 20 40
VER. SCALE IN FEET
4 0 4 8

911 - 696000V
613163_HD\PROFILES_NOI.DWG Plotted on 10-Feb-2025 1:57 PM
Proposal No: 613163-135786

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

RESOURCE AREA LEGEND:

WF#XXXX — WETLAND LINE
MAHW#XXXX — BANK LINE
200-FT RIVERFRONT AREA
100-FT WETLAND BUFFER
100-YEAR FLOODPLAIN
APPROX ZONE 'A' BOUNDARY

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	28	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
TRAIL AMENITY PLANS
PART 1 OF 3

TRAIL AMENITY PLANTING SCHEDULE*

QTY	ID	BOTANICAL NAME	COMMON NAME	SIZE	COMMENT
TREES					
32	TO	THUJA OCCIDENTALIS	ARBORVITAE	5-6 FEET	

* FOR WETLAND REPLICATION AREA PLANTINGS SEE SHEET 33

N/F
JAMES C. DAVIE
BK/PG 28898/575
85 PERRY AVENUE
MAP 28 PARCEL 2857

N/F
DEBRA LACONTE
BK/PG 13696/9
86 PERRY AVENUE
MAP 28 PARCEL 2861
TOTAL PROPERTY
AREA=15,300 SQ. FT.

PERRY AVENUE
(PUBLIC - 40' WIDE)

FORD AVENUE
(UNACCEPTED - 40' WIDE)

FORD AVENUE
(PUBLIC - 40' WIDE)

NOTE: THE TOWN OF LYNNFIELD PLANS TO ACCEPT THE REMAINDER OF FORD AVENUE IN THEIR APRIL, 2025 TOWN MEETING.

TOWN OF LYNNFIELD MIDDLE SCHOOL
BK/PG 3853/583
505 MAIN STREET
MAP/LOT 28/1455

N/F
MCQUEEN PHILIP J.
MCQUEEN DEANNA M.
BK/PG 27917/562
1 FORD AVENUE
MAP 28 PARCEL 2891
TOTAL PROPERTY AREA=15,000 SQ. FT.

N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX
REGISTRY OF DEEDS)

LYNNFIELD RAIL
TRAIL CONST BL

STATION 2101
N: 3019820.37'
E: 777100.80'
EL: 77.63'
MAG. NAIL SET

1 STORY
WOOD

GATE

SCALE: 1" = 10'

613163_LD(AMENITY PLAN)_NOI.DWG Plotted on 10-Feb-2025 2:11 PM
Proposal No. 613163-135786
A008680 - 117

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	29	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
TRAIL AMENITY PLANS
PART 2 OF 3

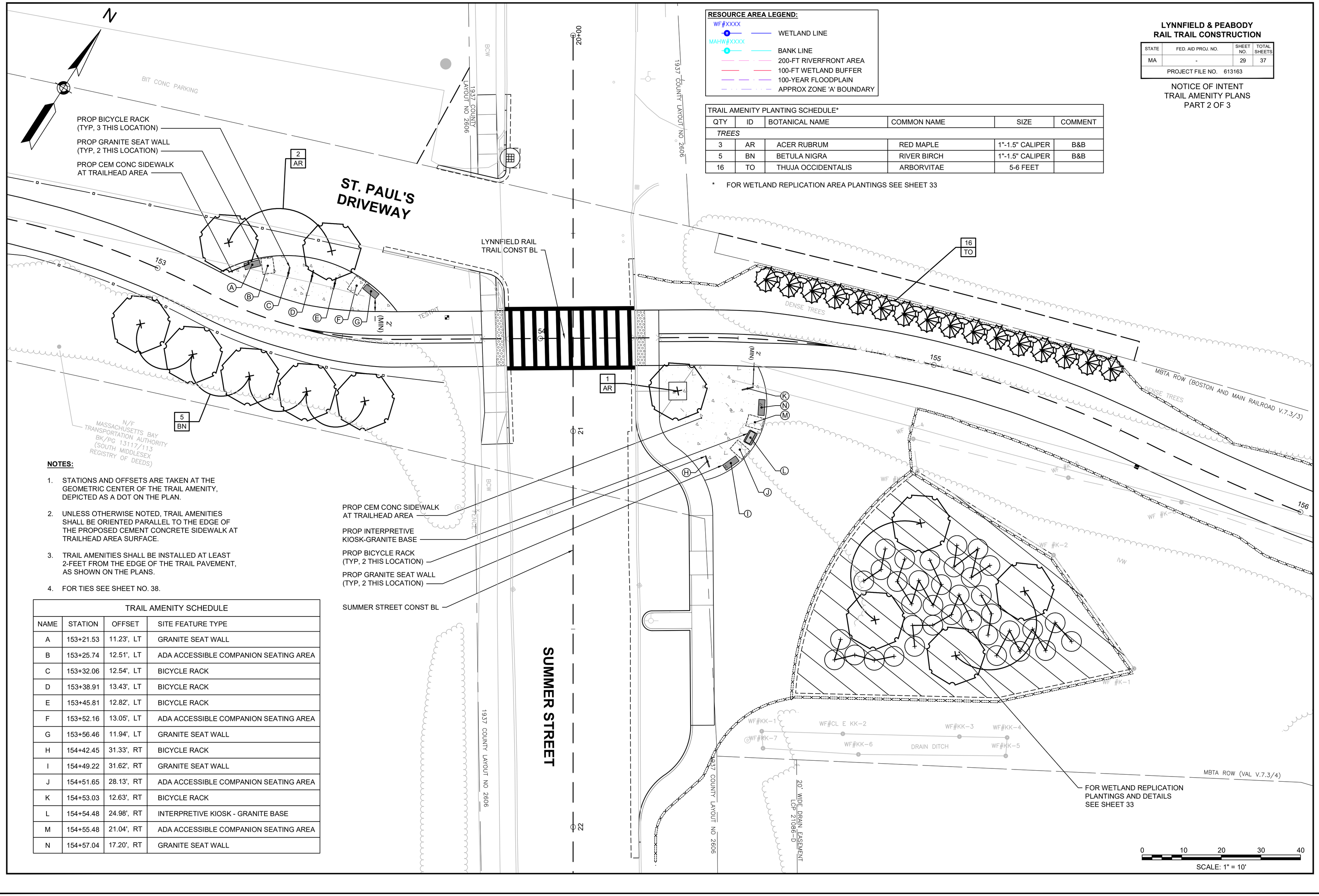
RESOURCE AREA LEGEND:

WF#XXXX — WETLAND LINE
MAHW#XXXX — BANK LINE
200-FT RIVERFRONT AREA
100-FT WETLAND BUFFER
100-YEAR FLOODPLAIN
APPROX ZONE 'A' BOUNDARY

TRAIL AMENITY PLANTING SCHEDULE*

QTY	ID	BOTANICAL NAME	COMMON NAME	SIZE	COMMENT
TREES					
3	AR	ACER RUBRUM	RED MAPLE	1"-1.5" CALIPER	B&B
5	BN	BETULA NIGRA	RIVER BIRCH	1"-1.5" CALIPER	B&B
16	TO	THUJA OCCIDENTALIS	ARBORVITAE	5-6 FEET	

* FOR WETLAND REPLICATION AREA PLANTINGS SEE SHEET 33



NOTES:

1. STATIONS AND OFFSETS ARE TAKEN AT THE GEOMETRIC CENTER OF THE TRAIL AMENITY, DEPICTED AS A DOT ON THE PLAN.
2. UNLESS OTHERWISE NOTED, TRAIL AMENITIES SHALL BE ORIENTED PARALLEL TO THE EDGE OF THE PROPOSED CEMENT CONCRETE SIDEWALK AT TRAILHEAD AREA SURFACE.
3. TRAIL AMENITIES SHALL BE INSTALLED AT LEAST 2-FEET FROM THE EDGE OF THE TRAIL PAVEMENT, AS SHOWN ON THE PLANS.
4. FOR TIES SEE SHEET NO. 38.

TRAIL AMENITY SCHEDULE

NAME	STATION	OFFSET	SITE FEATURE TYPE
A	153+21.53	11.23', LT	GRANITE SEAT WALL
B	153+25.74	12.51', LT	ADA ACCESSIBLE COMPANION SEATING AREA
C	153+32.06	12.54', LT	BICYCLE RACK
D	153+38.91	13.43', LT	BICYCLE RACK
E	153+45.81	12.82', LT	BICYCLE RACK
F	153+52.16	13.05', LT	ADA ACCESSIBLE COMPANION SEATING AREA
G	153+56.46	11.94', LT	GRANITE SEAT WALL
H	154+42.45	31.33', RT	BICYCLE RACK
I	154+49.22	31.62', RT	GRANITE SEAT WALL
J	154+51.65	28.13', RT	ADA ACCESSIBLE COMPANION SEATING AREA
K	154+53.03	12.63', RT	BICYCLE RACK
L	154+54.48	24.98', RT	INTERPRETIVE KIOSK - GRANITE BASE
M	154+55.48	21.04', RT	ADA ACCESSIBLE COMPANION SEATING AREA
N	154+57.04	17.20', RT	GRANITE SEAT WALL

613163_LD(AMENITY PLAN)_NOI.DWG Plotted on 10-Feb-2025 2:11 PM
Proposal No. 613163-135786
A008869 - 118

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

N

NOTES:

1. STATIONS AND OFFSETS ARE TAKEN AT THE GEOMETRIC CENTER OF THE TRAIL AMENITY, DEPICTED AS A DOT ON THE PLAN.
2. UNLESS OTHERWISE NOTED, TRAIL AMENITIES SHALL BE ORIENTED PARALLEL TO THE EDGE OF THE PROPOSED CEMENT CONCRETE SIDEWALK AT TRAILHEAD AREA SURFACE.
3. TRAIL AMENITIES SHALL BE INSTALLED AT LEAST 2-FEET FROM THE EDGE OF THE TRAIL PAVEMENT, AS SHOWN ON THE PLANS.

RESOURCE AREA LEGEND:

- WF#XXXX — WETLAND LINE
- MAHW#XXXX — BANK LINE
- 200-FT RIVERFRONT AREA
- 100-FT WETLAND BUFFER
- 100-YEAR FLOODPLAIN
- APPROX ZONE 'A' BOUNDARY

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	30	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
TRAIL AMENITY PLANS
PART 3 OF 3

TRAIL AMENITY SCHEDULE			
NAME	STATION	OFFSET	SITE FEATURE TYPE
O	180+50	11.21', LT	GRANITE SEAT WALL
P	180+54	10.00', LT	ADA ACCESSIBLE COMPANION SEATING AREA
Q	180+57.50	10.00', LT	ADA ACCESSIBLE COMPANION SEATING AREA
R	180+61.50	11.21', LT	GRANITE SEAT WALL

N/F
SILVA JENNIFER L
CERT. 90879
20 LOVELL ROAD
MAP 30 PARCEL 918

20' WIDE DRAINAGE EASEMENT
(LCP 4233-M, CERT NO. 23973)

N/F
RAYMOND J. DORMANN AND
ROSE MARIE
CERT. 91426
22 LOVELL ROAD
MAP 30 PARCEL 929

MBTA ROW (VAL V.7.3/4)

DENSE TREES

PROP GRANITE SEAT WALL
(TYP, 2 THIS LOCATION)

PROP CEM CONC SIDEWALK
AT TRAILHEAD AREA

LYNNFIELD RAIL
TRAIL CONST BL

O R P Q

2' (MIN)

180 RR TRACKS 181 182

N/F
MASSACHUSETTS BAY
TRANSPORTATION AUTHORITY
BK/PG 13117/113
(SOUTH MIDDLESEX
REGISTRY OF DEEDS)

N/F
CHILDREN'S BOURQUE ROAD TRUST
DICESARE ELIZABETH N. TR.
BK/PG 23983/289
28 READ WESTOVER DRIVE
MAP 30 PARCEL 975

DITCH

STONE WALL

WF#M-1 WF#M-2 WF#M-3 WF#M-4

WETLAND BOUNDARY LINE BY
AERIAL INTERPRETATION

N/F
CHILDREN'S BOURQUE ROAD TRUST
CERT. 78177
125 BOURQUE ROAD
MAP 30 PARCEL 1075

0 10 20 30 40
SCALE: 1" = 10'

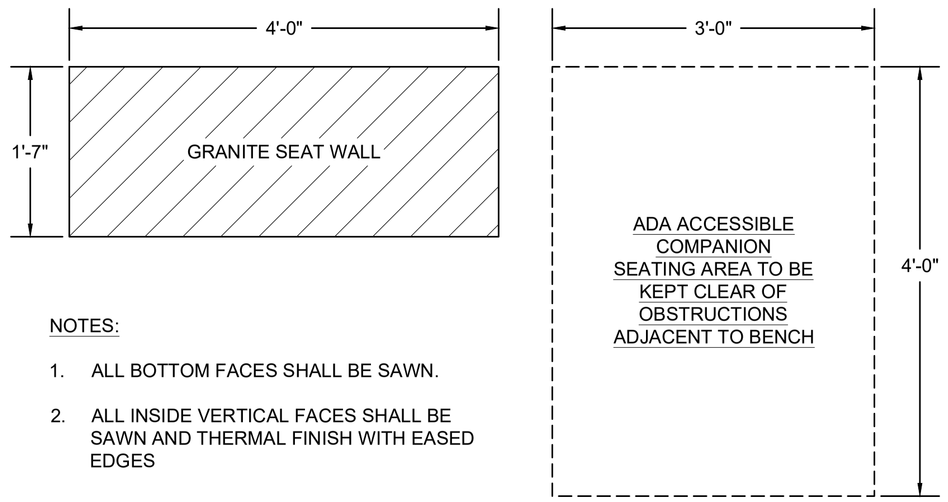
613163_LD(AMENITY PLAN)_NOI.DWG Plotted on 10-Feb-2025 2:12 PM
Proposal No. 613163-137586
A008869 - 611

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

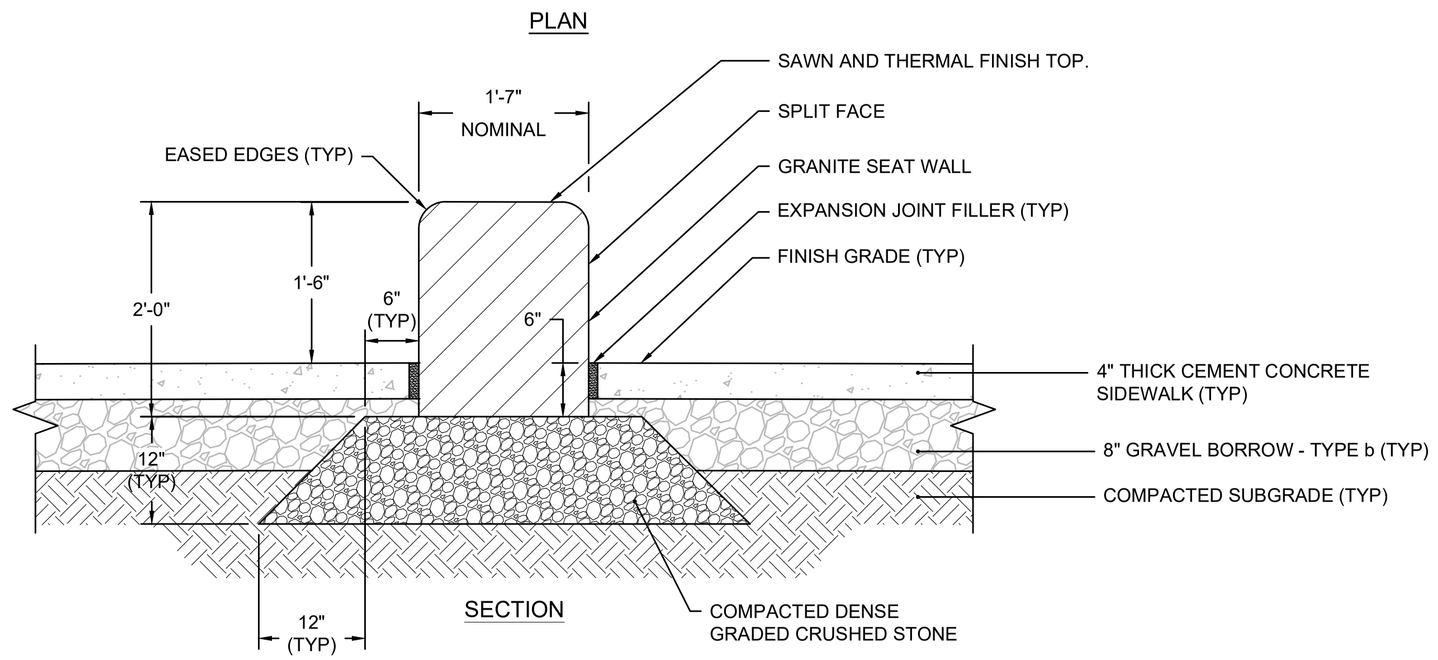
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	31	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
TRAIL AMENITY DETAILS
PART 1 OF 2

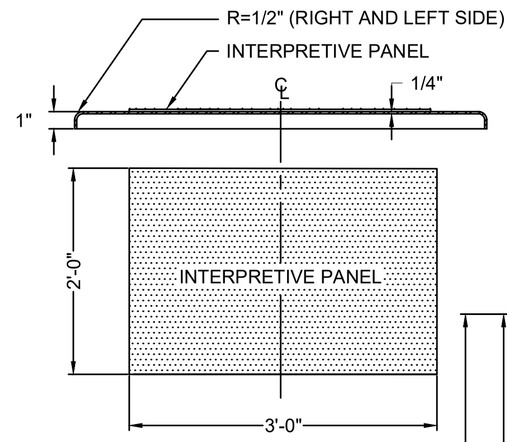


NOTES:

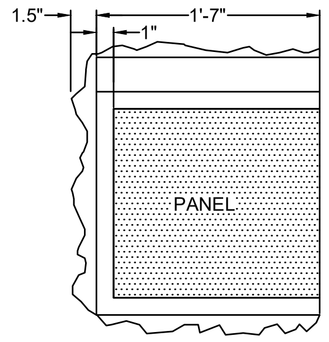
1. ALL BOTTOM FACES SHALL BE SAWN.
2. ALL INSIDE VERTICAL FACES SHALL BE SAWN AND THERMAL FINISH WITH EASED EDGES

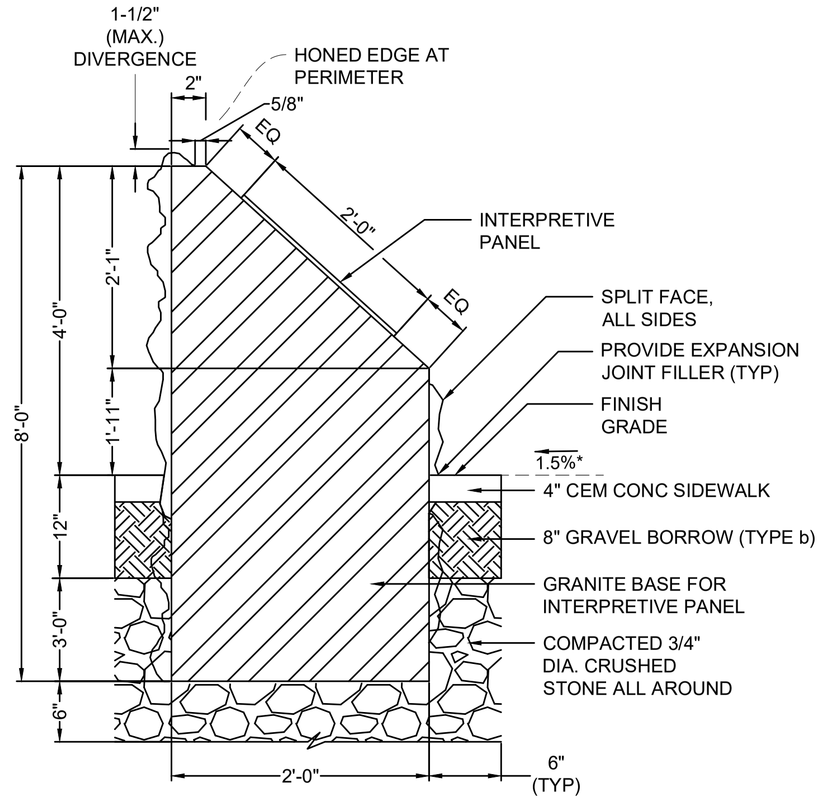


GRANITE SEAT WALL
NOT TO SCALE



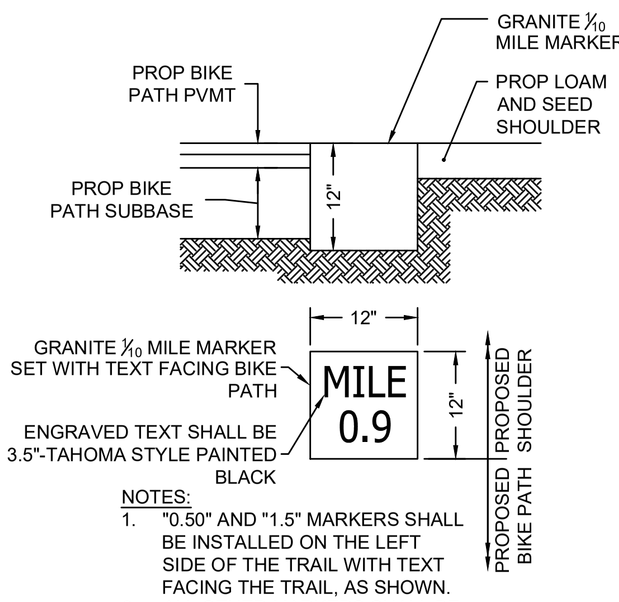
PLAN VIEW





SECTION VIEW

INTERPRETIVE KIOSK-GRANITE BASE
NOT TO SCALE



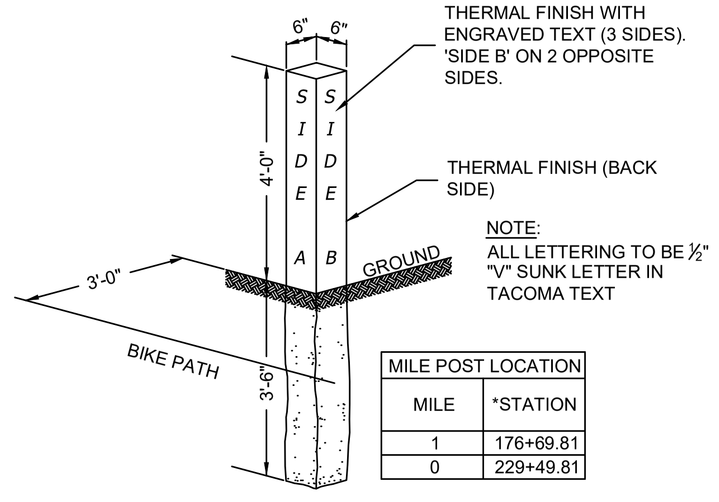
NOTES:

1. "0.50" AND "1.5" MARKERS SHALL BE INSTALLED ON THE LEFT SIDE OF THE TRAIL WITH TEXT FACING THE TRAIL, AS SHOWN.
2. ALL OTHER MARKERS SHALL BE INSTALLED ON THE RIGHT SIDE OF THE TRAIL WITH TEXT FACING THE TRAIL, AS SHOWN.

1/10 MILE MARKER LOCATION	
MILE	*STATION
0.1	224+22
0.2	218+94
0.3	213+66
0.4	208+38
0.5	203+09
0.6	197+82
0.7	192+54
0.8	187+26
0.9	181+98
1.1	171+42
1.2	166+14
1.3	160+86
1.4	155+58
1.5	150+30
1.6	145+02
1.7	139+74

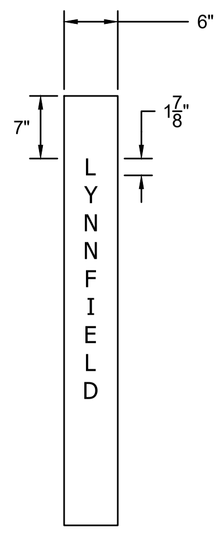
*STATIONING IS APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS PRIOR TO INSTALLATION

GRANITE TENTH MILE MARKER
NOT TO SCALE

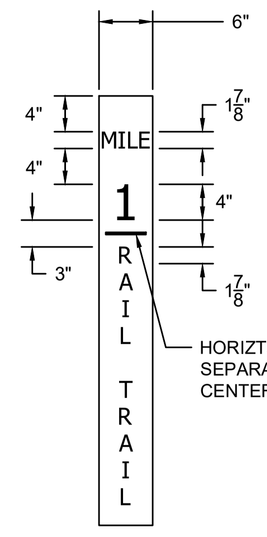


MILE POST LOCATION	
MILE	*STATION
1	176+69.81
0	229+49.81

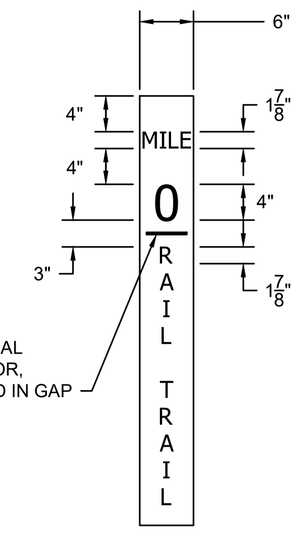
*STATIONING IS APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATIONS PRIOR TO INSTALLATION



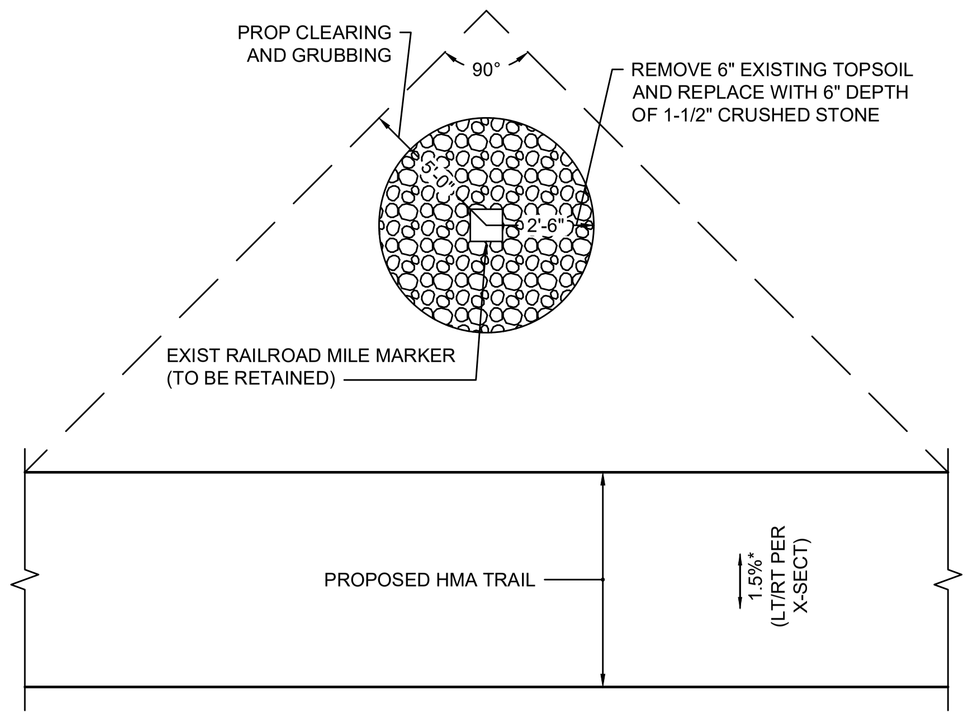
SIDE A



SIDE B (STA 176+69.81)



SIDE B (STA 229+49.81)



TREATMENT AT EXISTING RAILROAD MILE MARKER
(STATION 229+52±, RT)
NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5% (TYP.)

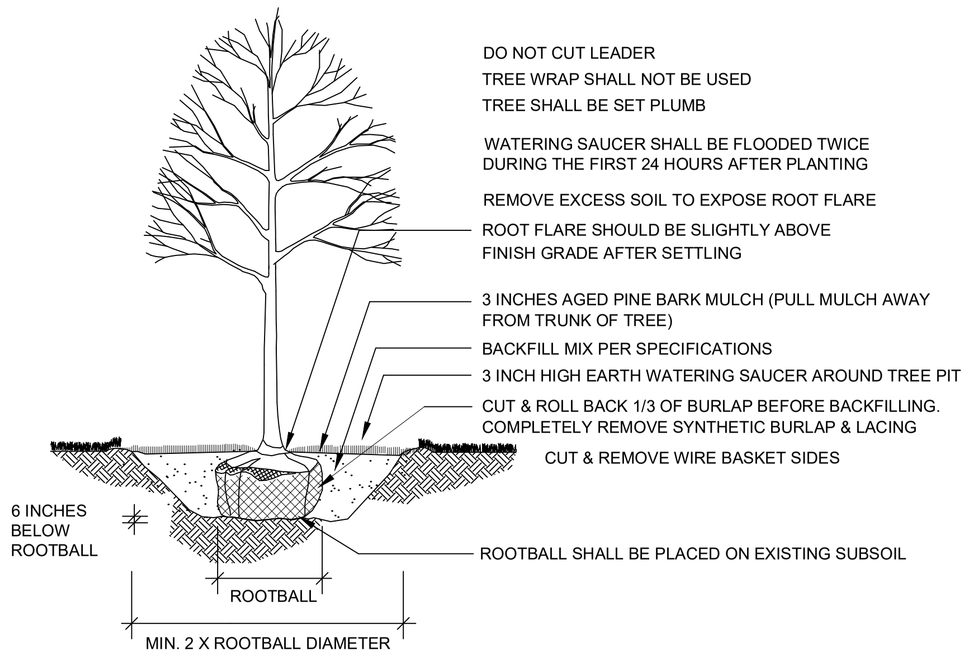
613163_LD(AMENITY DETAILS)_NOI.DWG Plotted on 10-Feb-2025 1:58 PM
Proposal No. 613163-135786
A008869 - 120

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

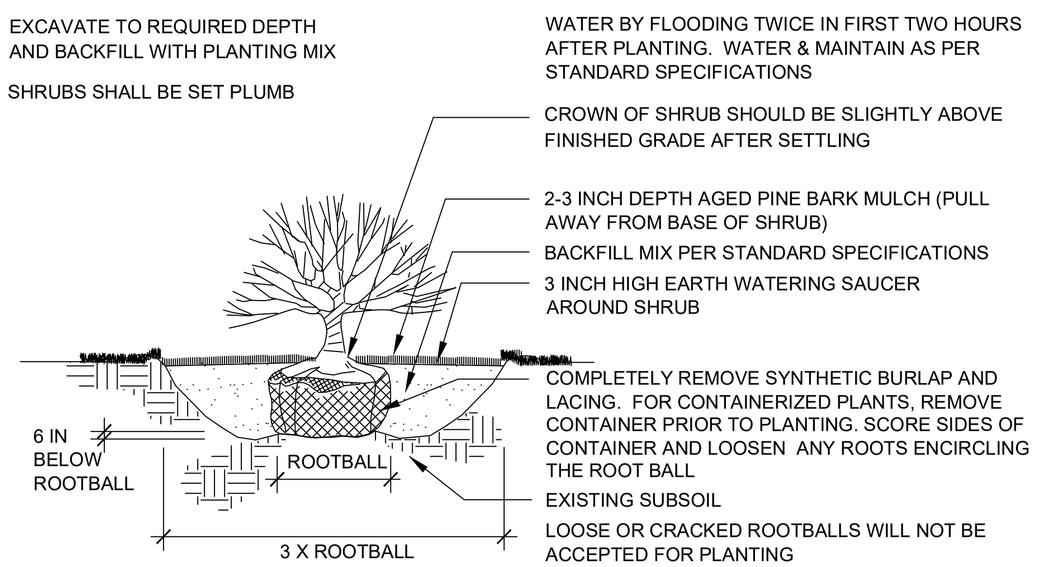
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	32	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
TRAIL AMENITY DETAILS
PART 2 OF 2



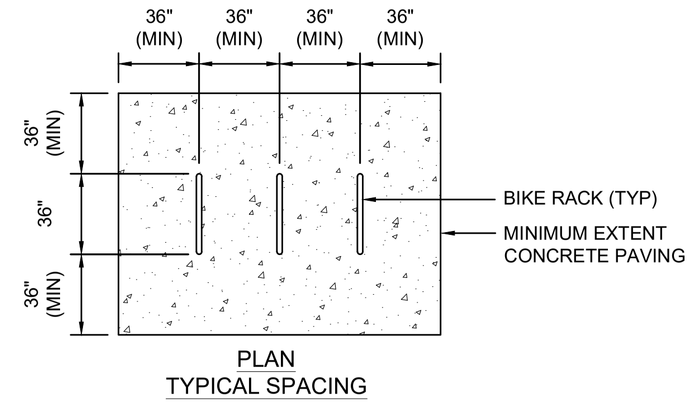
DECIDUOUS TREE PLANTING

NOT TO SCALE

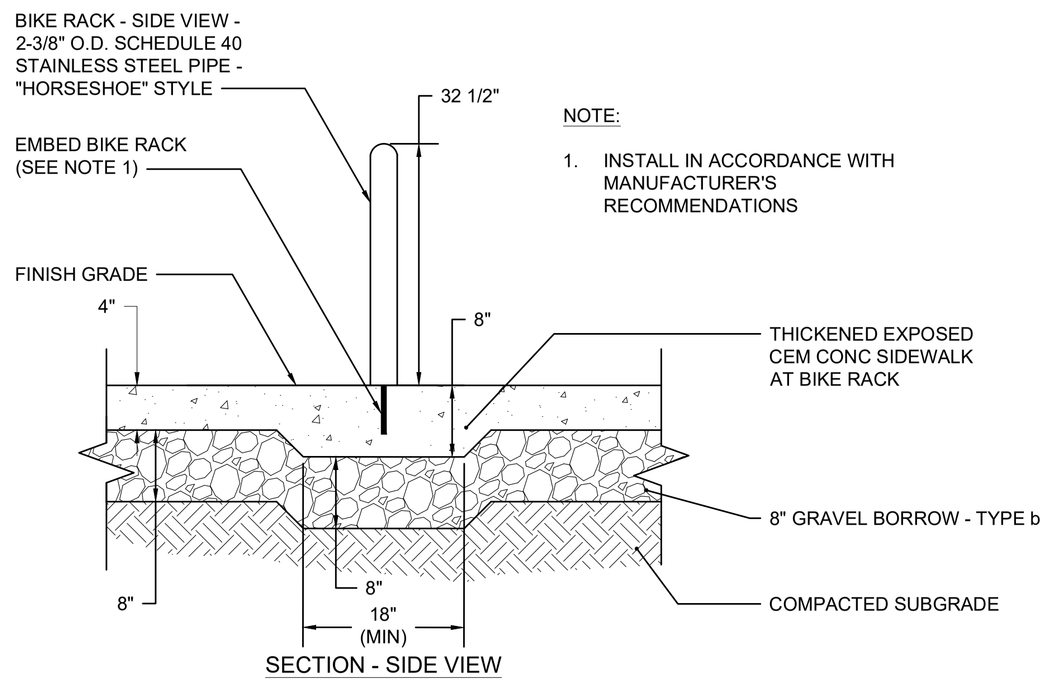


SHRUB PLANTING

NOT TO SCALE



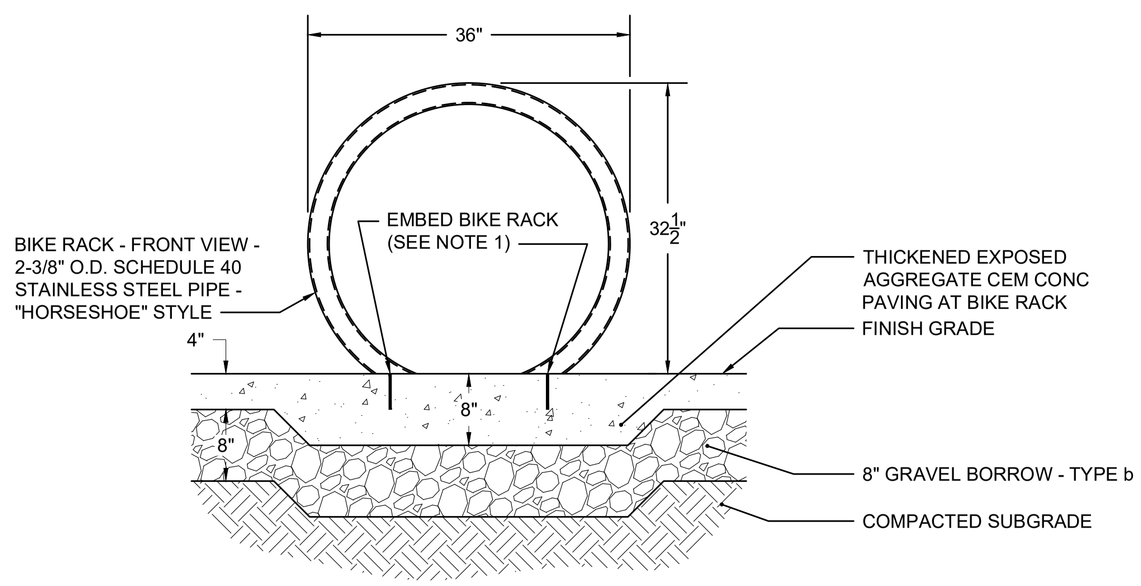
PLAN
TYPICAL SPACING



NOTE:

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

SECTION - SIDE VIEW



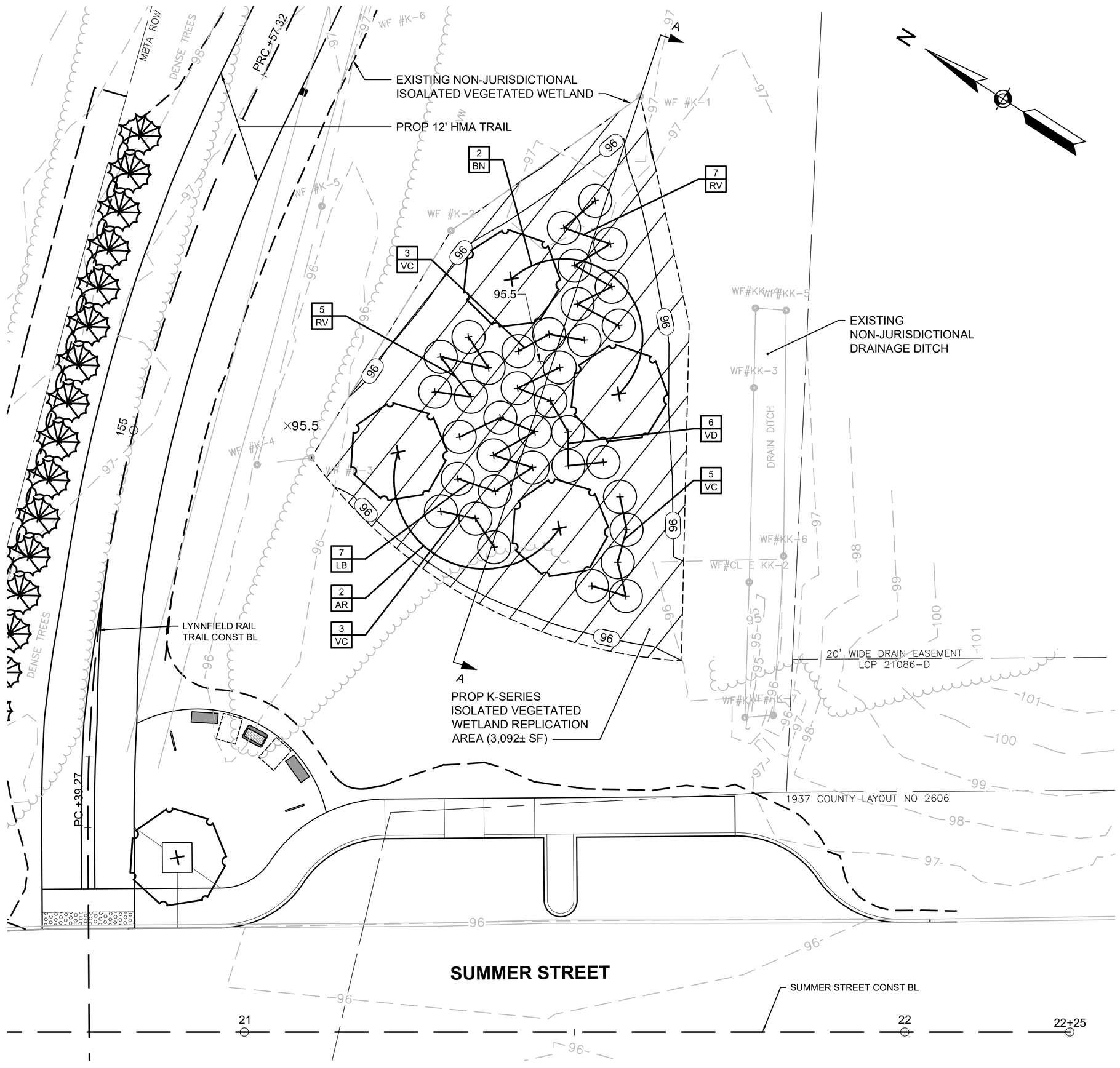
SECTION - FRONT VIEW

BIKE RACK DETAIL
NOT TO SCALE

* TOLERANCE FOR CONSTRUCTION ±0.5% (TYP.)

613163_LD(AMENITY DETAILS)_NOI.DWG Plotted on 10-Feb-2025 1:58 PM
Proposal No. 613163-135786
A008869 - 121

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER



RESOURCE AREA LEGEND:

WF#XXXX — WETLAND LINE
MAHW#XXXX — BANK LINE
200-FT RIVERFRONT AREA
100-FT WETLAND BUFFER
100-YEAR FLOODPLAIN
APPROX ZONE 'A' BOUNDARY

LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	33	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
WETLAND REPLICATION AREA

K-SERIES ISOLATED VEGETATED WETLAND REPLICATION/RESTORATION NOTES:

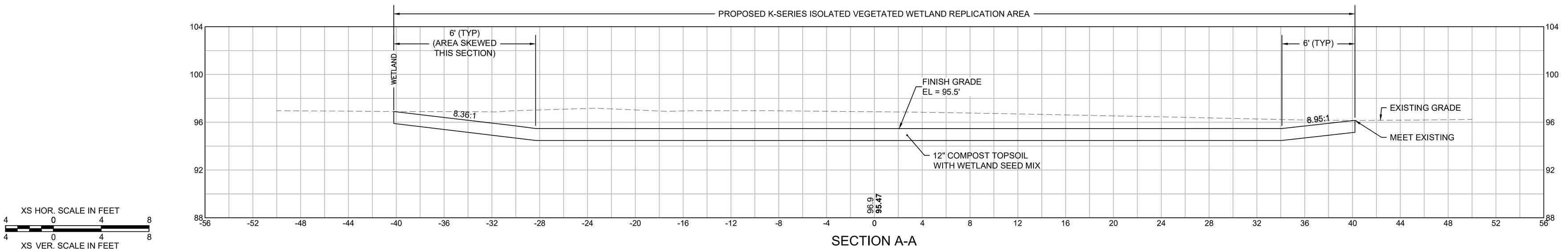
1. ALL WETLAND REPLICATION/RESTORATION SHALL BE CONDUCTED UNDER THE SUPERVISION AND DIRECTION OF THE PROJECT WETLAND SPECIALIST.
2. AREAS OF TEMPORARY WETLAND ALTERATION ASSOCIATED WITH THE PROPOSED CONSTRUCTION, WILL BE RESTORED IN-KIND AT THE DIRECTION OF THE SUPERVISING WETLAND SCIENTIST BY RESTORING NATURAL WETLAND SOIL PROFILES (WHERE NEEDED) AND SEEDING WITH FACW MEADOW MIX. SEEDED AREAS SHALL BE STABILIZED VIA HYDRO-SEEDING, STRAW MULCH, AND/OR EROSION CONTROL BLANKETS AT THE DIRECTION OF THE WETLAND SPECIALIST.
3. WETLAND REPLICATION AREA SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 755.35 OF THE SPECIAL PROVISIONS. EXCAVATE EXISTING SOIL TO TARGET ELEVATIONS. IF EXISTING SUBSOIL IS DETERMINED TO BE UNSUITABLE FOR PLANTING, EXCAVATE TO DEPTH NECESSARY FOR PLANTING AND BACKFILL WITH APPROPRIATE MANUFACTURED SOIL. BACKFILL SHALL BE INSTALLED AS PER MASSDOT STANDARD SPECIFICATIONS.
4. FOLLOWING WETLAND SOIL PLACEMENT, THE WRA SHALL BE PLANTED WITH THE SAPLING TREES AND SHRUBS SPECIFIED HEREIN, AND SEEDED WITH FACW MEADOW MIX.
5. SEEDED AREAS SHALL BE STABILIZED VIA HYDRO-SEEDING, STRAW MULCH, AND/OR EROSION CONTROL BLANKETS AT THE DIRECTION OF THE WETLAND SPECIALIST.
6. SEE SHEET 32 FOR PLANTING DETAILS.

WETLAND REPLICATION AREA PLANTING SCHEDULE

QTY	ID	BOTANICAL NAME	COMMON NAME	SIZE	COMMENT
TREES					
2	AR	ACER RUBRUM	RED MAPLE	1"-1.5" CALIPER	B&B
2	BN	BETULA NIGRA	RIVER BIRCH	1"-1.5" CALIPER	B&B
SHRUBS					
11	VC	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	2'-3' HT.	
6	VD	VIBURNUM DENTATUM	ARROWWOOD	2'-3' HT.	
12	RV	RHODODENDRON VISCOSUM	SWAMP AZALEA	2'-3' HT.	
7	LB	LINDERA BENZOIN	SPICEBUSH	2'-3' HT.	

* FOR TRAIL AMENITY AREA PLANTINGS SEE SHEET 29

0 10 20 30 40
PLAN SCALE: 1" = 10'



SECTION A-A

XS HOR. SCALE IN FEET
4 0 4 8
XS VER. SCALE IN FEET
4 0 4 8

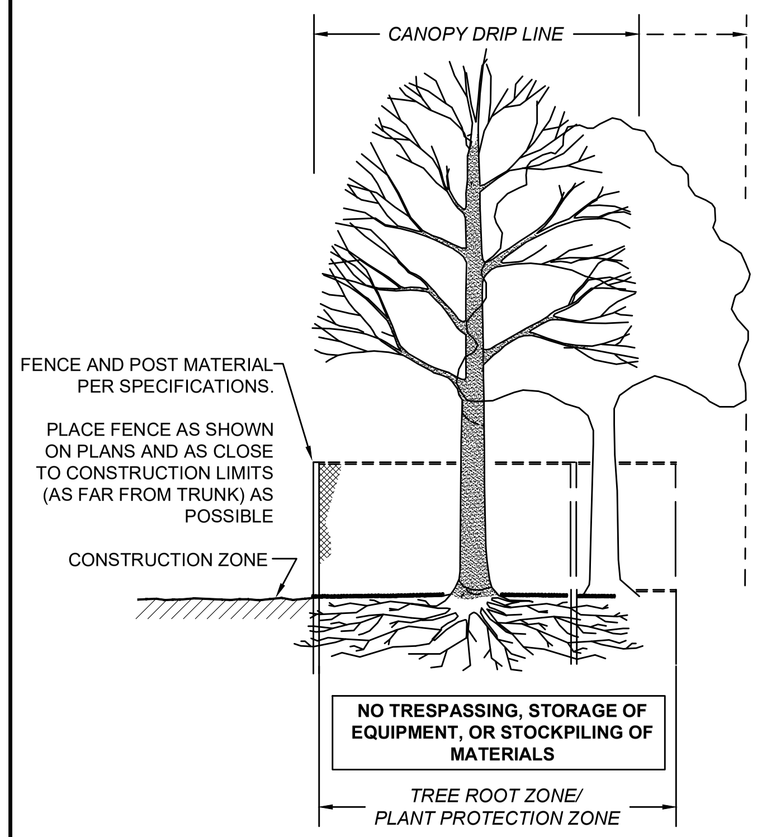
613162_EV(WETLAND REP)_NOI.DWG Plotted on 10-Feb-2025 1:58 PM
Proposal No. 613161-135786
A008869 - 122

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

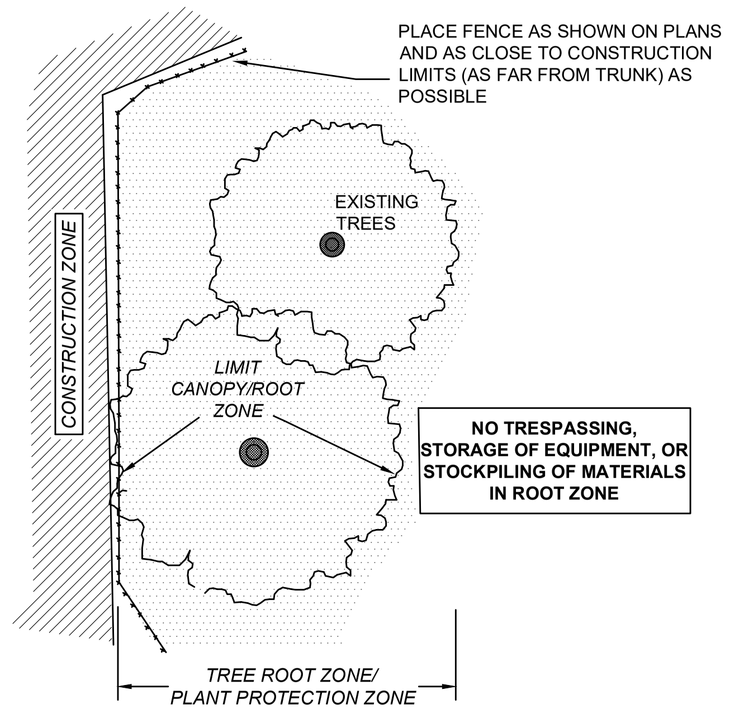
LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	34	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
CONSTRUCTION DETAILS
PART 1 OF 4



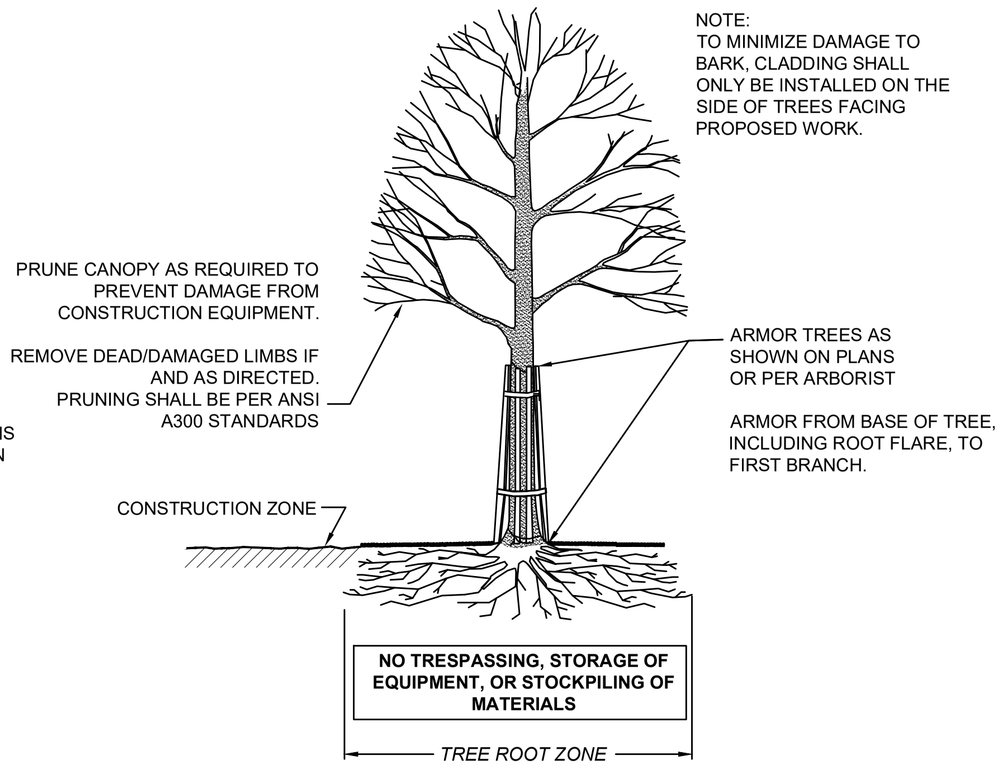
SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION - ROOT ZONE

NOT TO SCALE

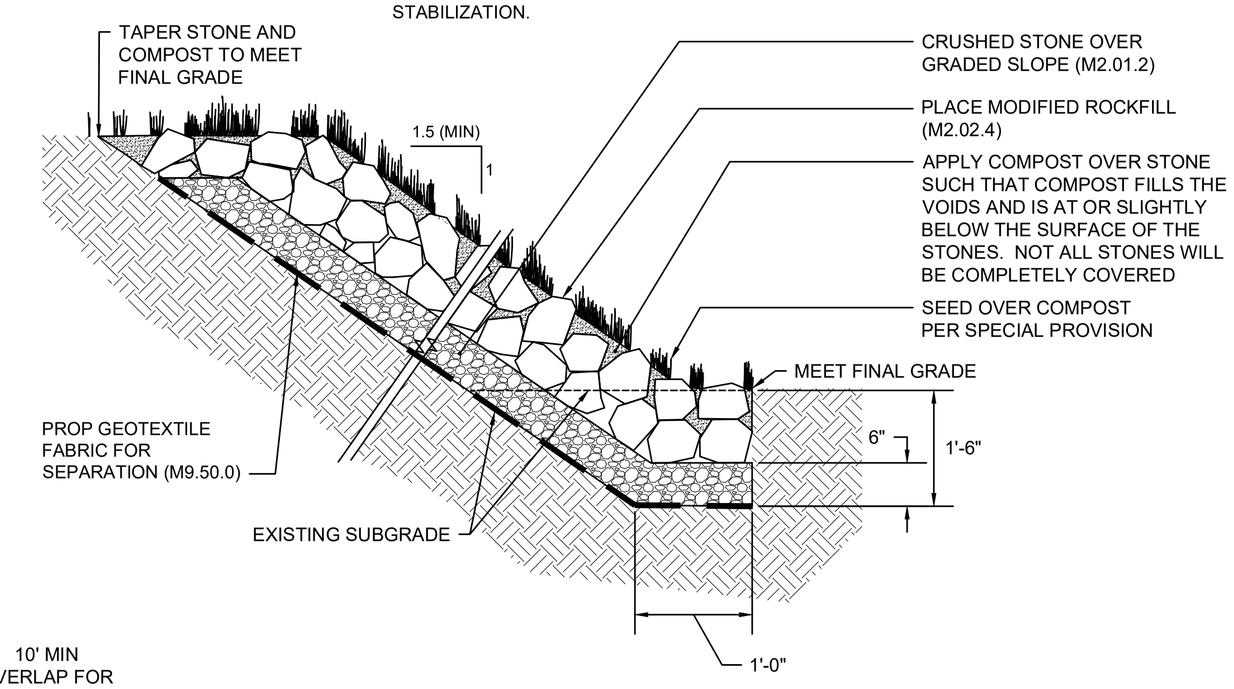


SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION - TRUNK

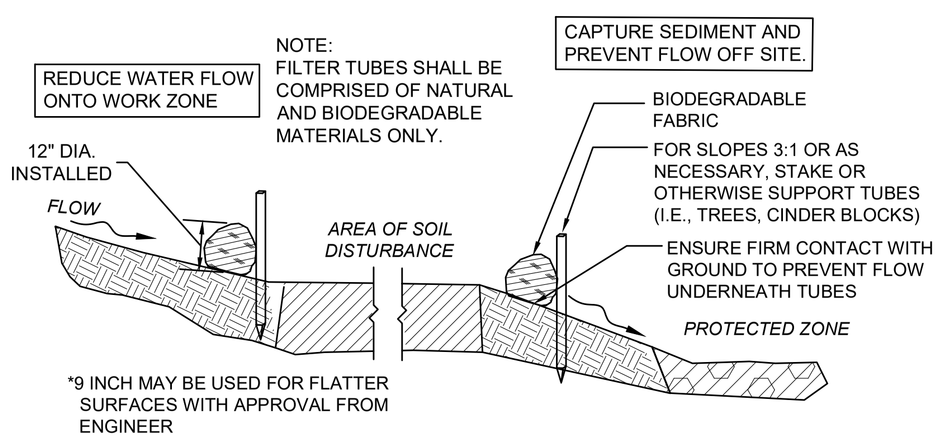
NOT TO SCALE

NOTE: WHERE SLOPES EXCEED 2:1, MODIFIED ROCK FILL IS PROPOSED. SEE CONSTRUCTION PLANS FOR LIMITS OF MODIFIED ROCKFILL SLOPE STABILIZATION.



COMPOST AND SEED OVER MODIFIED ROCKFILL DETAIL

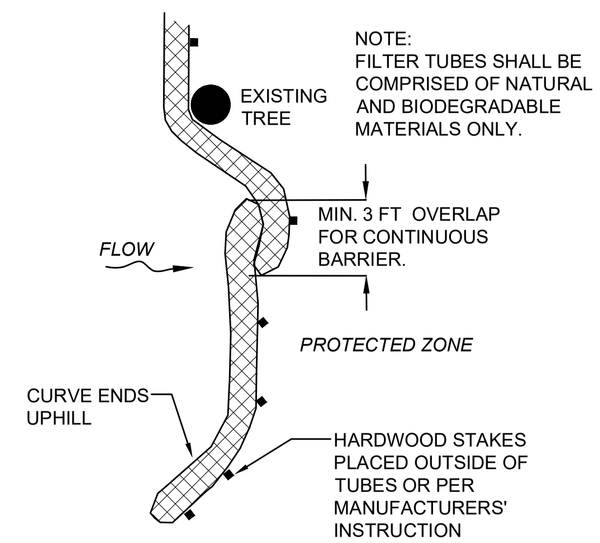
NOT TO SCALE



SECTION

SEDIMENT BARRIERS - COMPOST FILTER TUBES

NOT TO SCALE



PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.

PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE

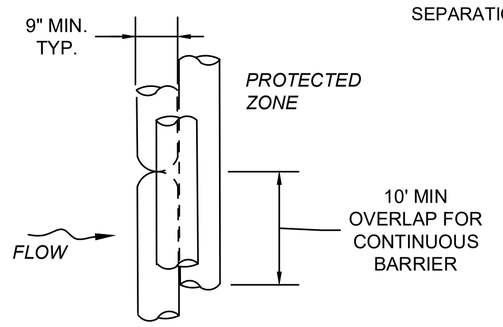
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE.

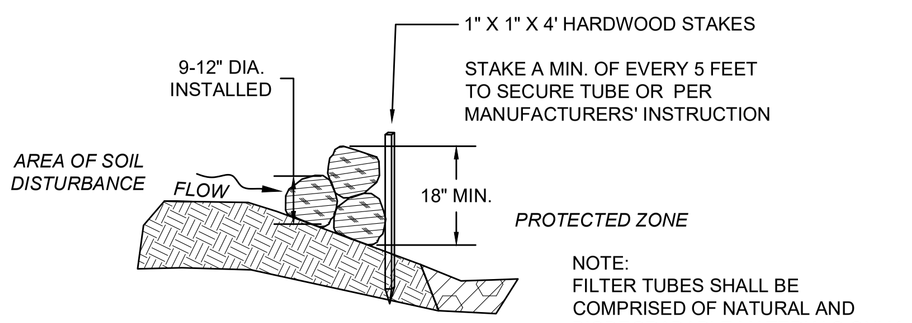
PLAN VIEW

SEDIMENT BARRIERS

NOT TO SCALE



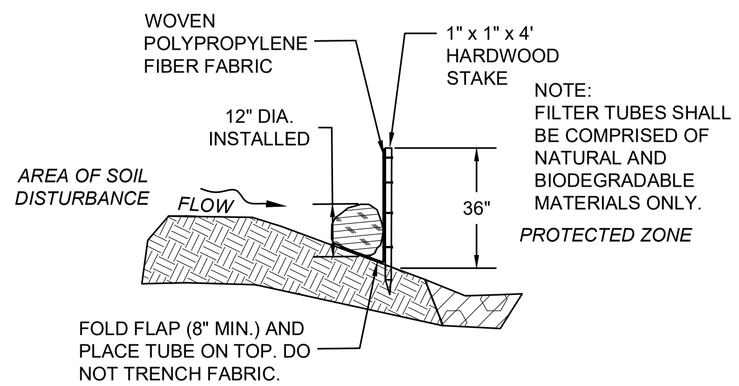
PLAN VIEW



SECTION

COMPOST FILTER TUBE BERM (SLOPES 2:1 OR STEEPER)

NOT TO SCALE



SECTION

COMPOST FILTER TUBE & SILT FENCE

NOT TO SCALE

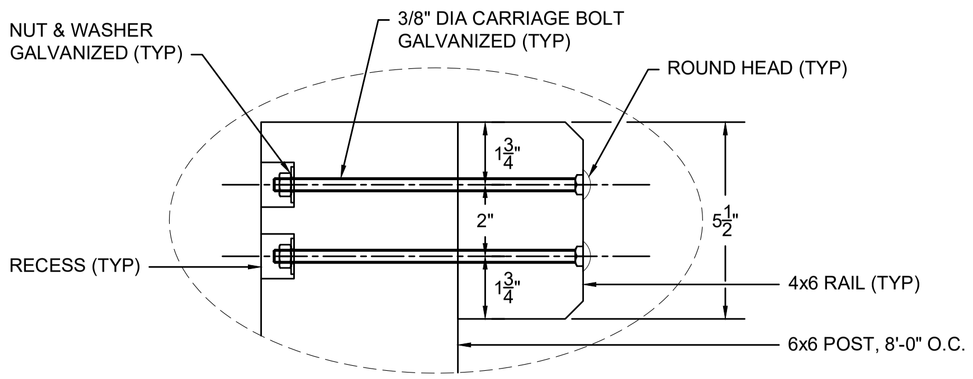
Plotted on 10-Feb-2025 1:58 PM
613163_HD\CONSTRUCTION DETAILS_NOI.DWG
Proposal No. 613163-135786
A00860 - 123

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

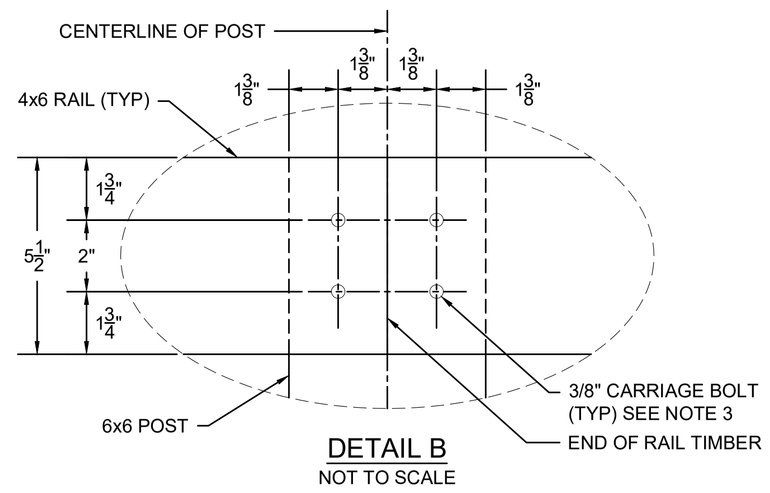
LYNNFIELD & PEABODY RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	35	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
CONSTRUCTION DETAILS
PART 2 OF 4



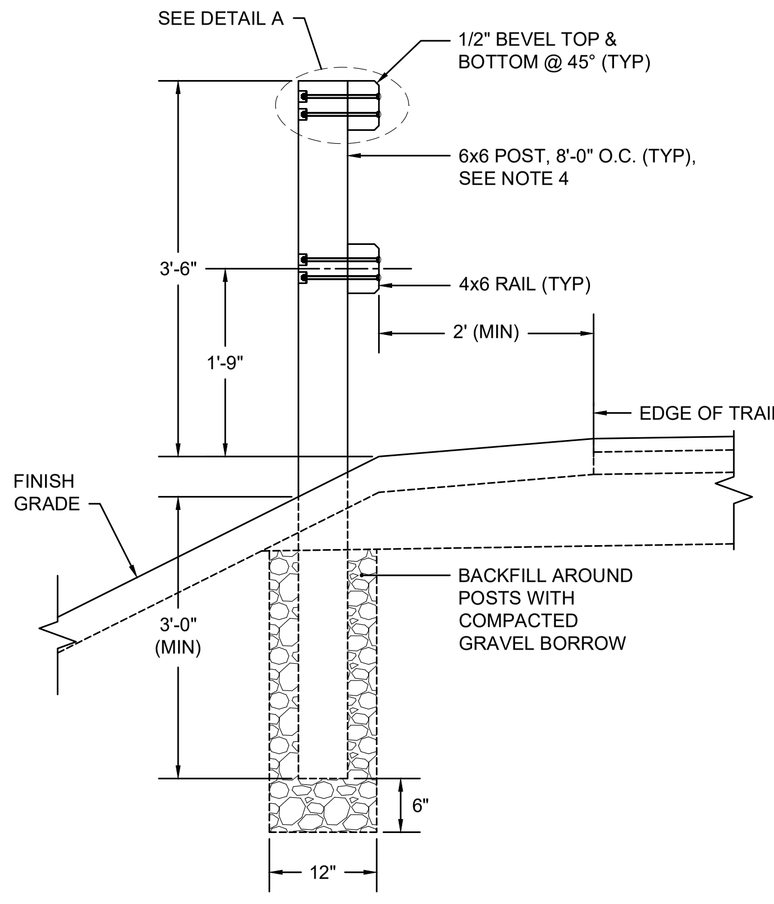
DETAIL A
NOT TO SCALE



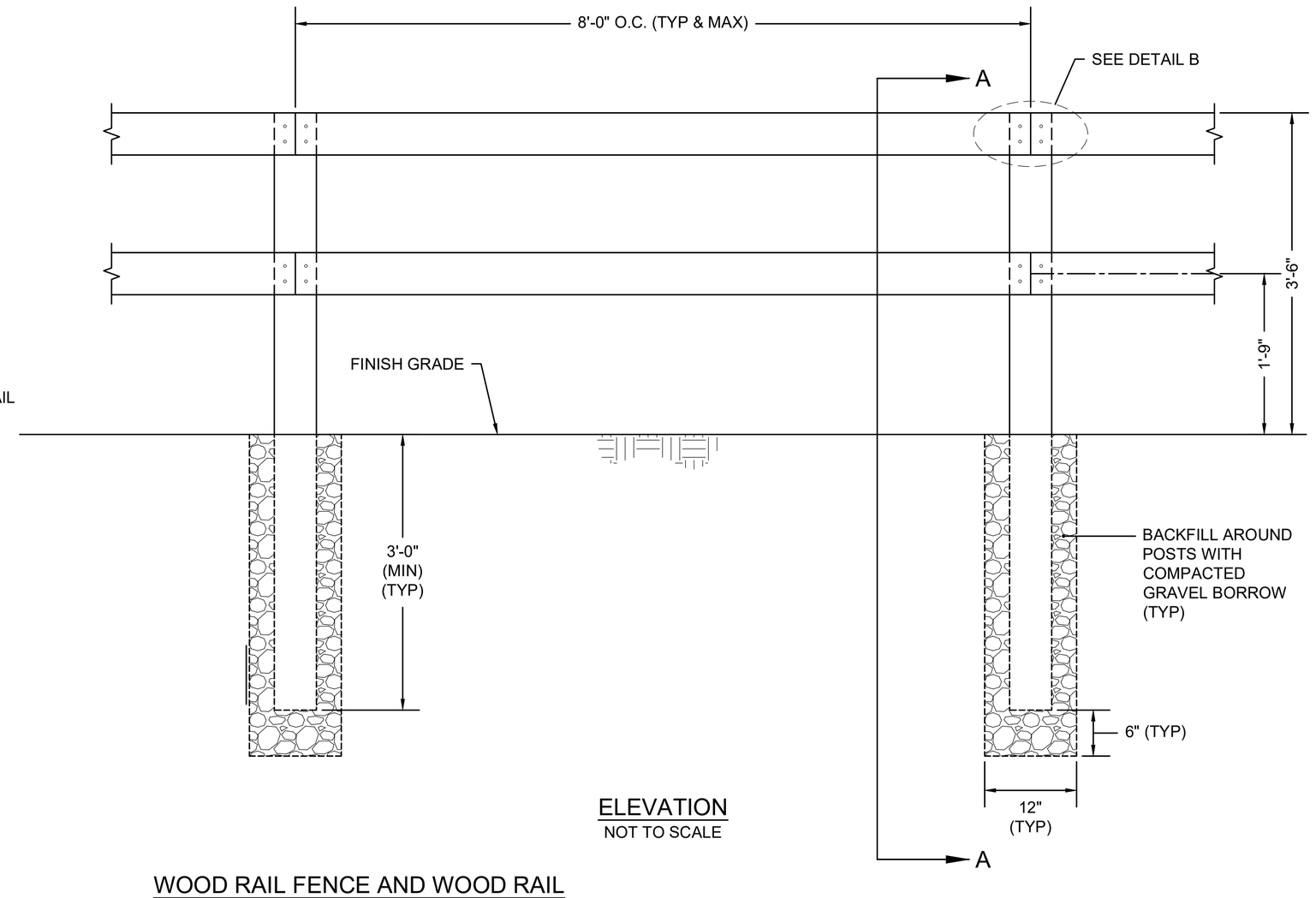
DETAIL B
NOT TO SCALE

NOTES:

1. ALL FENCING MATERIAL SHALL CONFORM TO THE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. MOUNTING FOR UPPER RAIL IS SHOWN IN DETAIL A. MOUNT ALL OTHER RAILS IN A SIMILAR FASHION.
3. IF A RAIL TIMBER IS CONTINUOUS OVER A POST ONLY 2 BOLTS ARE REQUIRED TO ATTACH RAIL TO POST. BOLTS INSTALLED ON CONTINUOUS RAILS SHALL BE CENTERED ON POST.

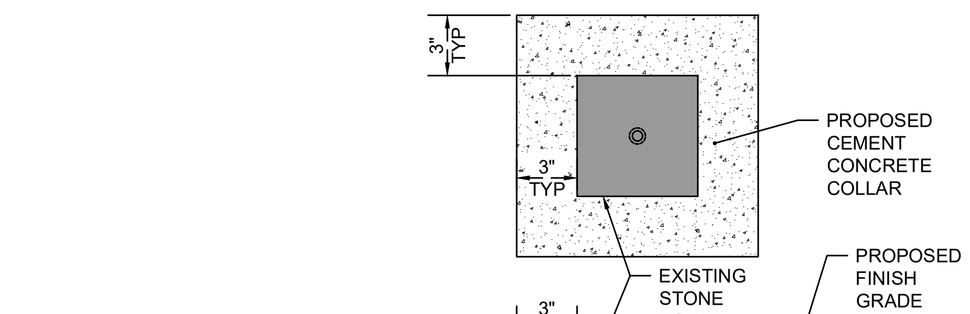


SECTION A-A
NOT TO SCALE



ELEVATION
NOT TO SCALE

WOOD RAIL FENCE AND WOOD RAIL FENCE WITH WIRE MESH DETAIL
NOT TO SCALE



NOTES:

1. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHODS SEE SPECIFICATIONS.
2. BOUNDS TO BE LOCATED WITHIN LIMITS OF PROPOSED HMA PATH SHALL BE SET FLUSH TO FINISH GRADE WITH CEMENT CONCRETE COLLAR.

BOUND RESET IN PAVEMENT DETAIL
NOT TO SCALE

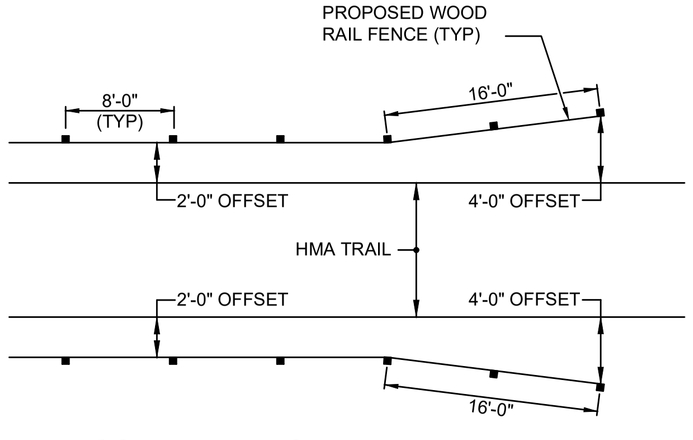
ISOMETRIC VIEW

TOP VIEW

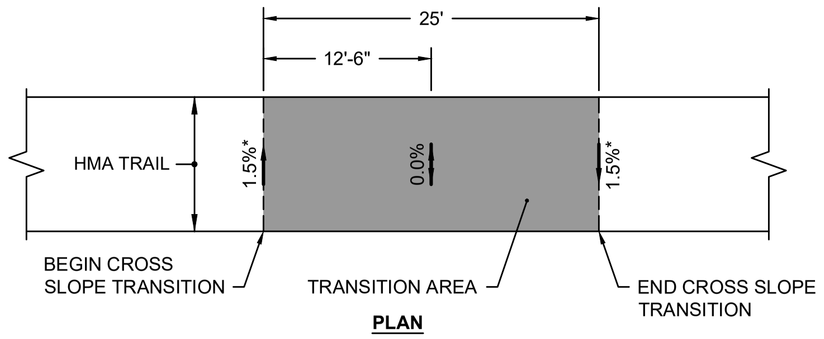
FRONT VIEW

SIDE VIEW

VERTICAL GRANITE TRANSITION CURB TO HMA CURBING AND SLOPED GRANITE EDGING
NOT TO SCALE

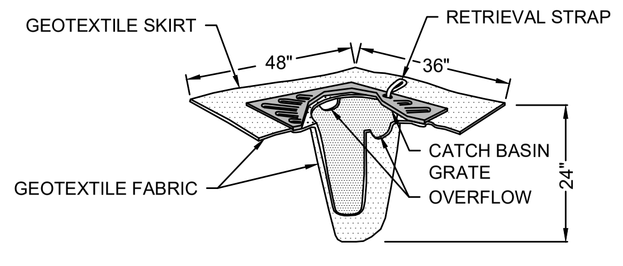


WOOD RAIL FENCE FLARED-END TREATMENT
NOT TO SCALE



PLAN

SHARED-USE PATH CROSS SLOPE TRANSITION DETAIL
NOT TO SCALE



SILT SACK FOR SEDIMENT CONTROL
NOT TO SCALE

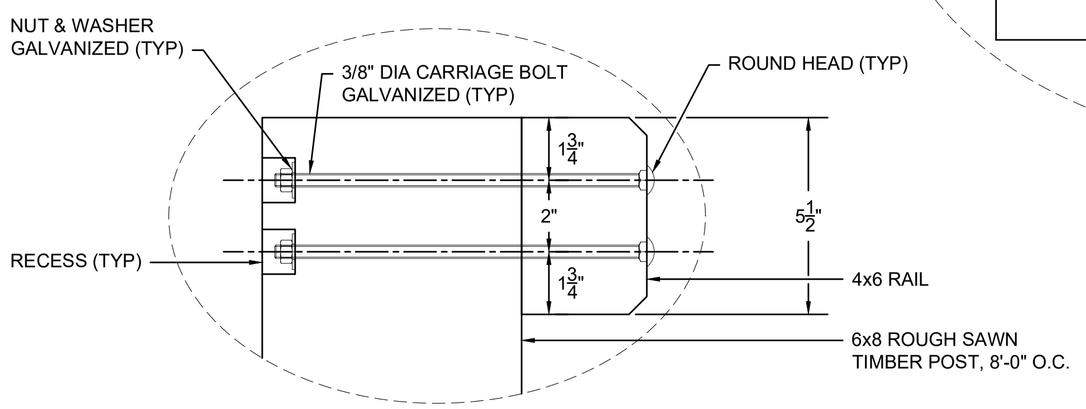
A00860 - 124
Proposal No. 613163-135786
613163_HDI(CONSTRUCTION DETAILS)_NOI.DWG Plotted on 10-Feb-2025 1:59 PM

COMMONWEALTH OF MASSACHUSETTS
ALEECE E. D'ONOFRIO
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

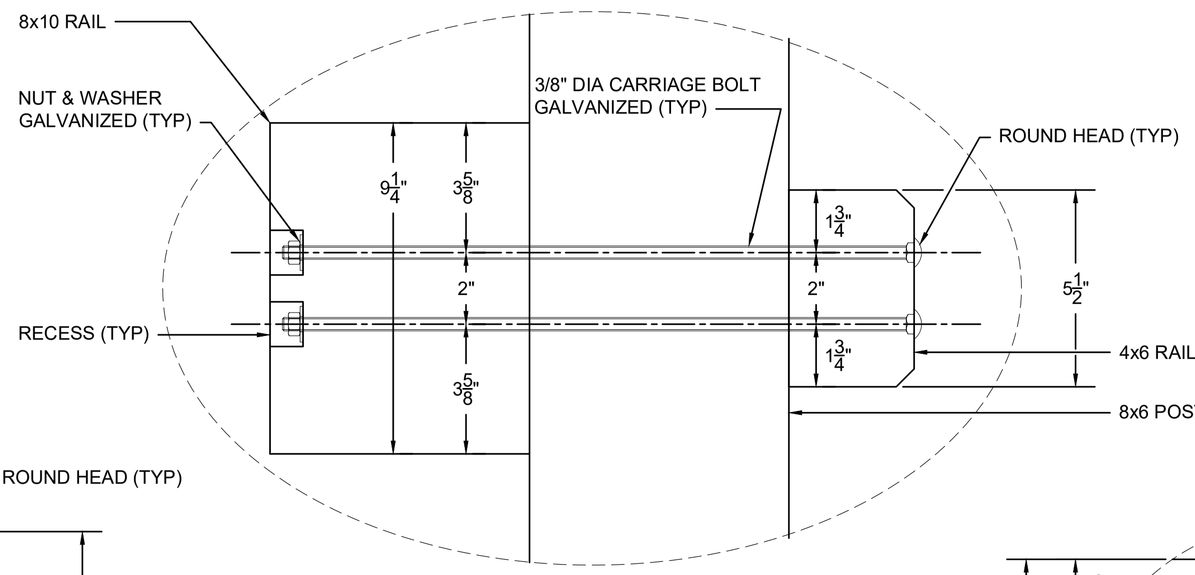
LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	36	37
PROJECT FILE NO. 613163			

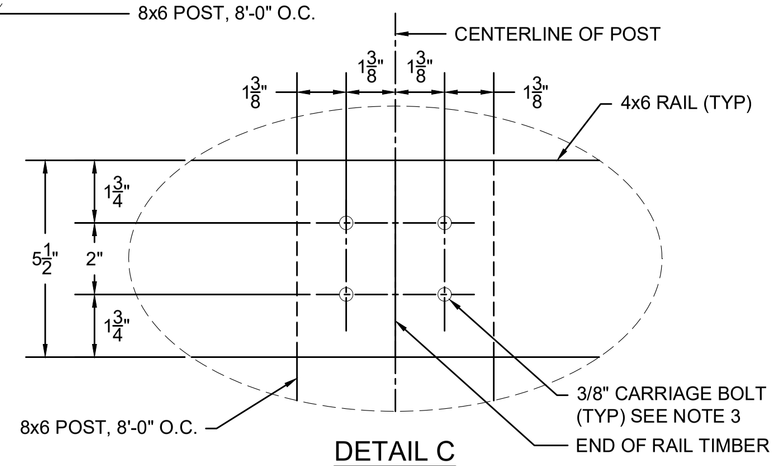
NOTICE OF INTENT
CONSTRUCTION DETAILS
PART 3 OF 4



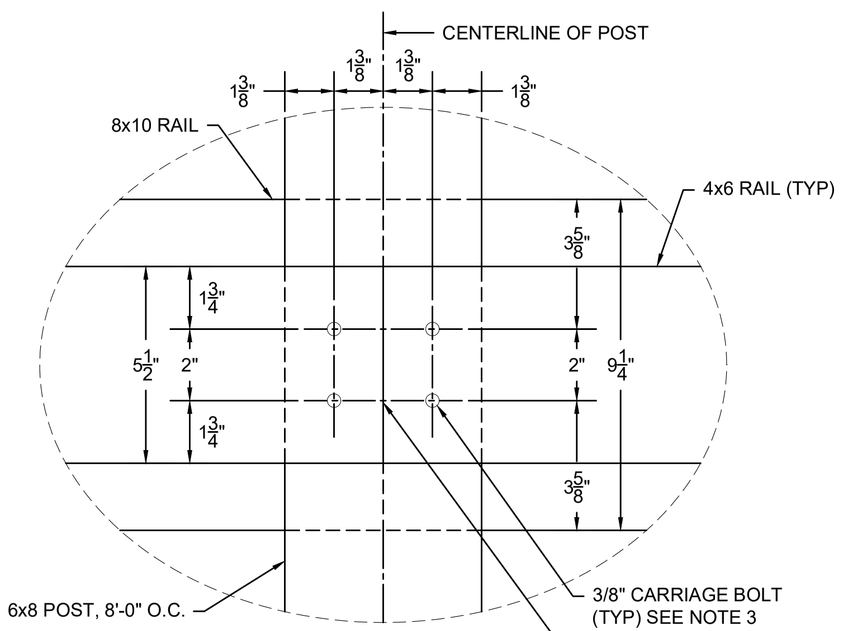
DETAIL A
NOT TO SCALE



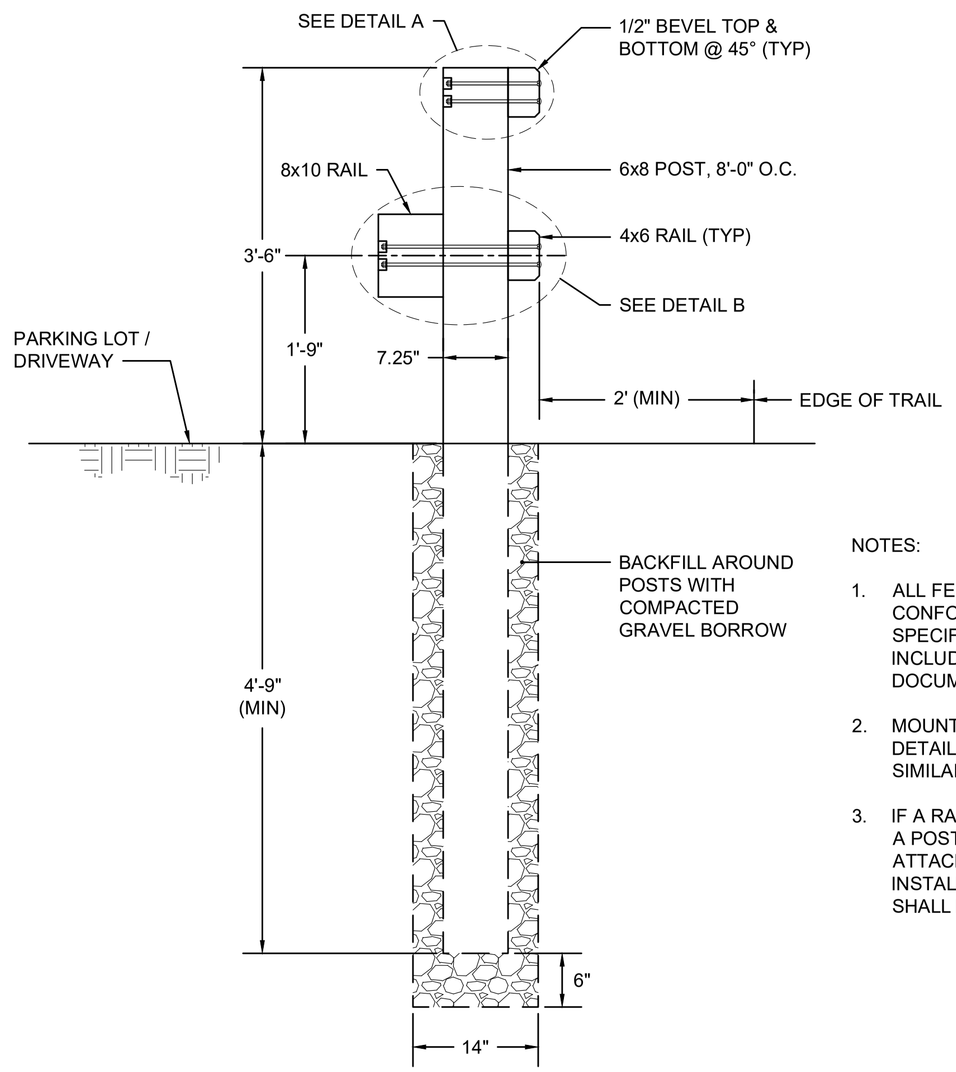
DETAIL B
NOT TO SCALE



DETAIL C
NOT TO SCALE



DETAIL D
NOT TO SCALE

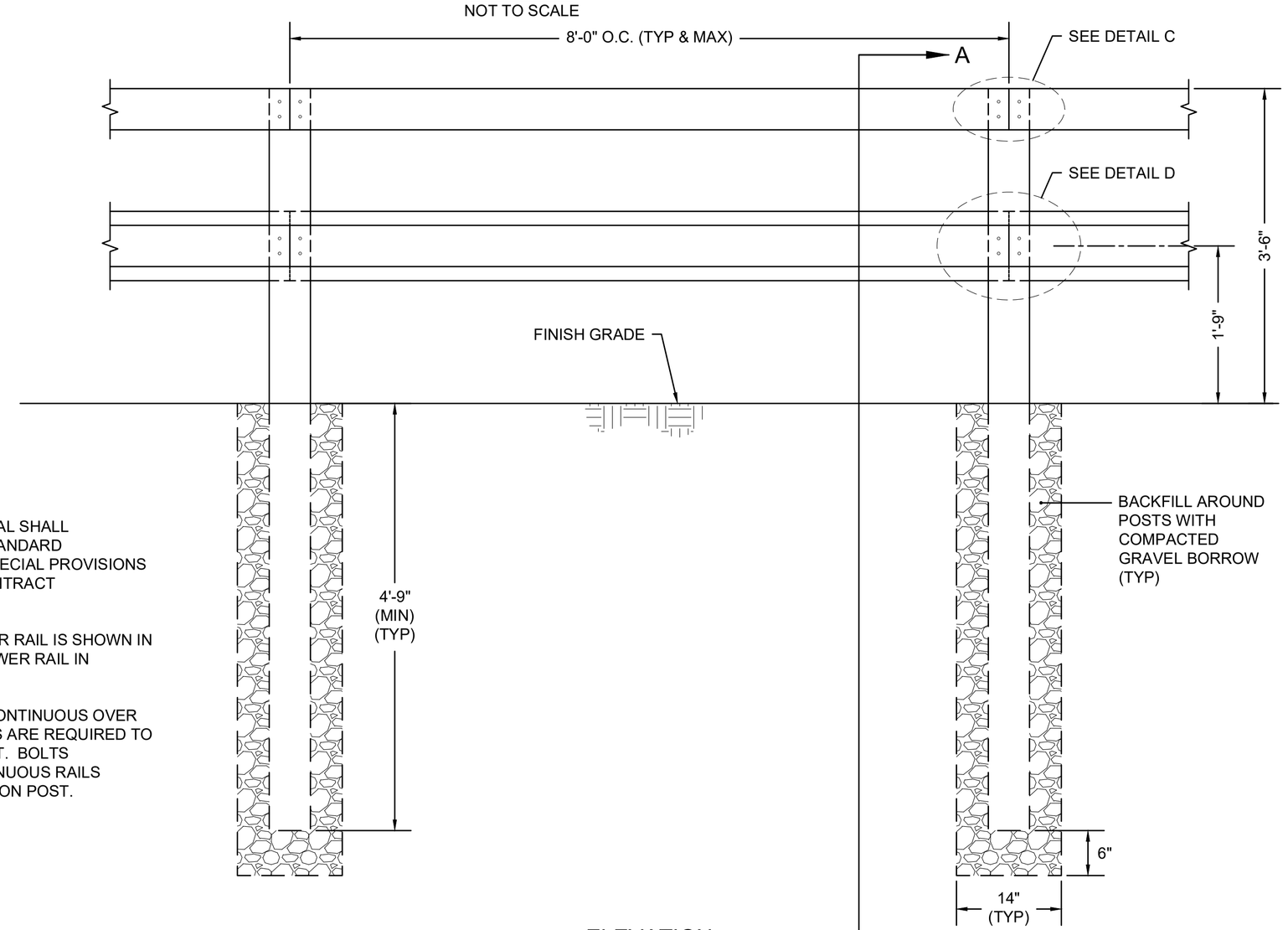


SECTION A-A
NOT TO SCALE

NOTES:

1. ALL FENCING MATERIAL SHALL CONFORM TO THE STANDARD SPECIFICATIONS & SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. MOUNTING FOR UPPER RAIL IS SHOWN IN DETAIL A. MOUNT LOWER RAIL IN SIMILAR FASHION.
3. IF A RAIL TIMBER IS CONTINUOUS OVER A POST ONLY 2 BOLTS ARE REQUIRED TO ATTACH RAIL TO POST. BOLTS INSTALLED ON CONTINUOUS RAILS SHALL BE CENTERED ON POST.

WOOD RAIL FENCE WITH WOOD GUARDRAIL
NOT TO SCALE



ELEVATION
NOT TO SCALE

A00860 - 125
613163_HD\CONSTRUCTION DETAILS_NOI.DWG Plotted on 10-Feb-2025 1:59 PM
Proposal No. 613163-13786

COMMONWEALTH OF MASSACHUSETTS
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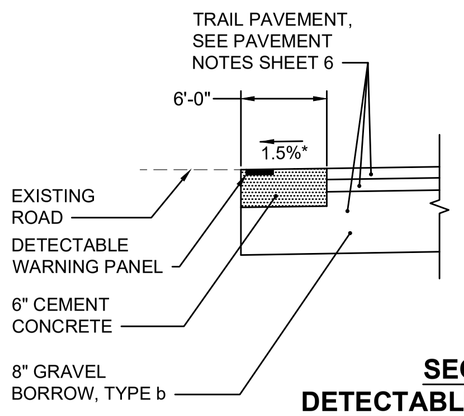
CIVIL
No. 49594
REGISTERED PROFESSIONAL ENGINEER

LYNNFIELD & PEABODY
RAIL TRAIL CONSTRUCTION

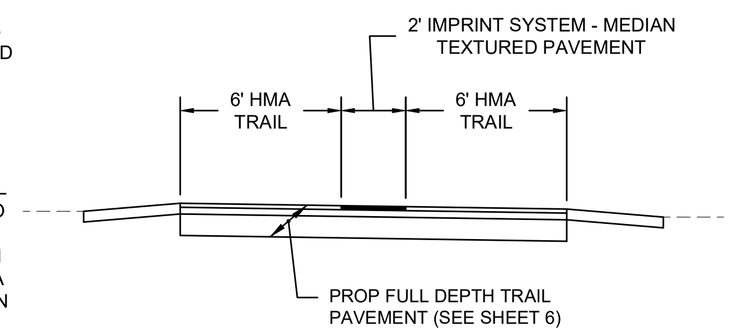
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	-	37	37
PROJECT FILE NO. 613163			

NOTICE OF INTENT
CONSTRUCTION DETAILS
PART 4 OF 4

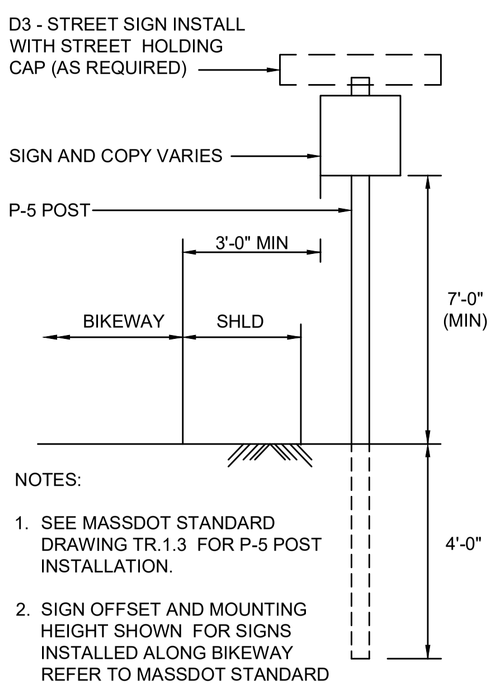


NOTES:
1. ALL DETECTABLE WARNING PANELS (PROJECT WIDE) SHALL BE MOUNTED IN CEMENT CONCRETE.
2. DETECTABLE WARNING PANELS SHALL CONFORM TO MASSDOT STANDARD DETAIL E107.6.5.
3. DETECTABLE WARNING PANELS, AS SHOWN, SHALL BE PROVIDED AT ALL INTERSECTING ROADWAYS THAT DO NOT HAVE AN EXISTING SIDEWALK. INTERSECTING ROADWAYS WITH AN EXISTING SIDEWALKS SHALL HAVE A PEDESTRIAN CURB RAMP AS SHOWN ON THE PLANS.

SECTION A-A
DETECTABLE WARNING PANEL AT TRAIL INTERSECTION
NOT TO SCALE

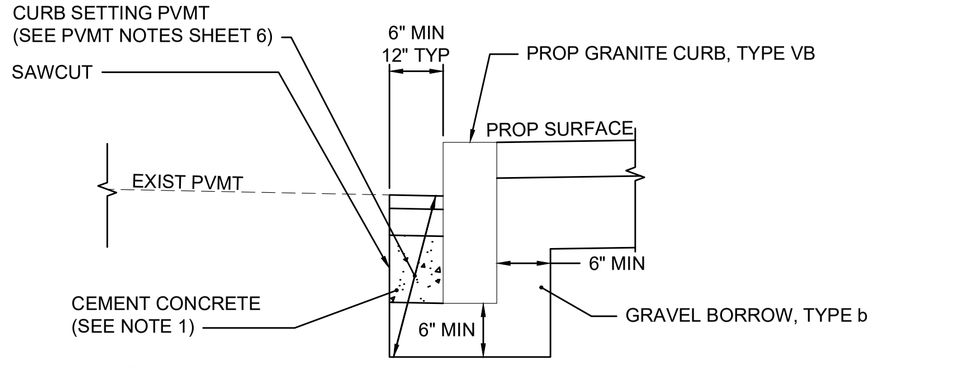


SECTION B-B
IMPRINT SYSTEM - MEDIAN
NOT TO SCALE



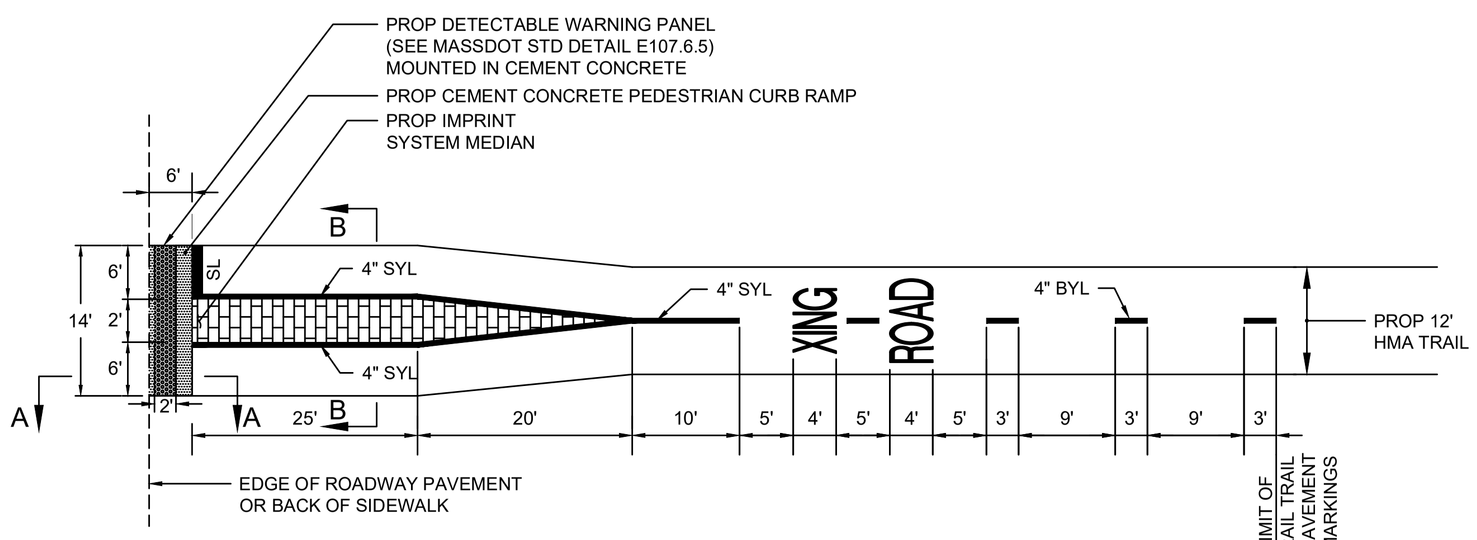
NOTES:
1. SEE MASSDOT STANDARD DRAWING TR.1.3 FOR P-5 POST INSTALLATION.
2. SIGN OFFSET AND MOUNTING HEIGHT SHOWN FOR SIGNS INSTALLED ALONG BIKEWAY REFER TO MASSDOT STANDARD DRAWINGS FOR ROADSIDE SIGN INSTALLATIONS.

TYPICAL SIGN LOCATION
NOT TO SCALE

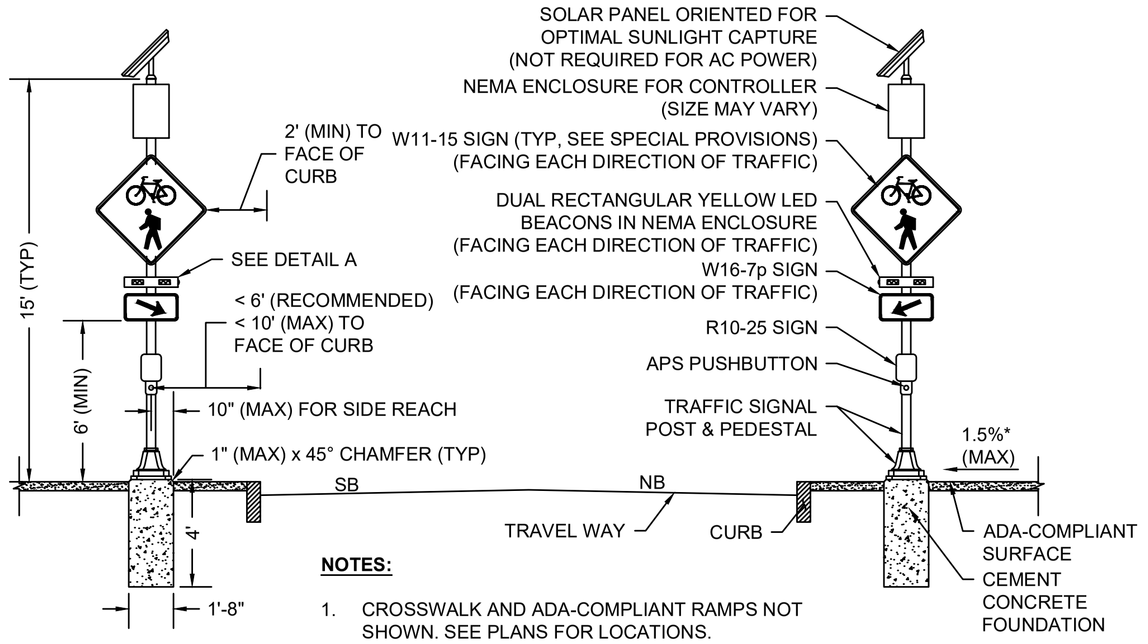


NOTES:
1. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATIONS MAY BE USED; ALL TEST REQUIREMENTS ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE FOR CEMENT CONCRETE.
2. SAWCUTTING EXISTING PAVEMENT SHALL BE INCLUDED IN THE PRICE BID FOR PROPOSED OR RESET GRANITE CURB.
3. CURB SETTING SHALL CONFORM TO MASSDOT STANDARD DETAIL E106.3.0.

METHOD OF SETTING GRANITE CURB
(AGAINST EXISTING PAVEMENT)
NOT TO SCALE



INTERSECTION APPROACH PAVEMENT MARKING DETAIL
NOT TO SCALE

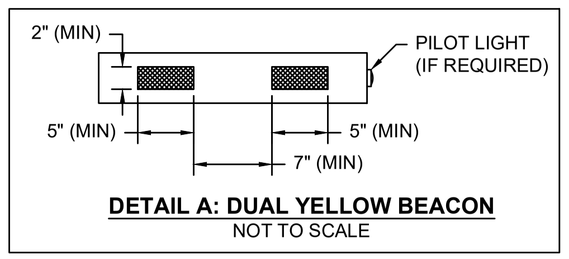


NOTES:
1. CROSSWALK AND ADA-COMPLIANT RAMPS NOT SHOWN. SEE PLANS FOR LOCATIONS.
2. REFER TO THE SPECIAL PROVISIONS FOR SIGN DIMENSIONS.
3. ACCESS TO ALL PEDESTRIAN ACTUATED CONTROLS SHALL BE ADA/AAB COMPLIANT.
4. *0.5% CONSTRUCTION TOLERANCE FOR CROSS-SLOPE.

MAJOR ITEMS LIST

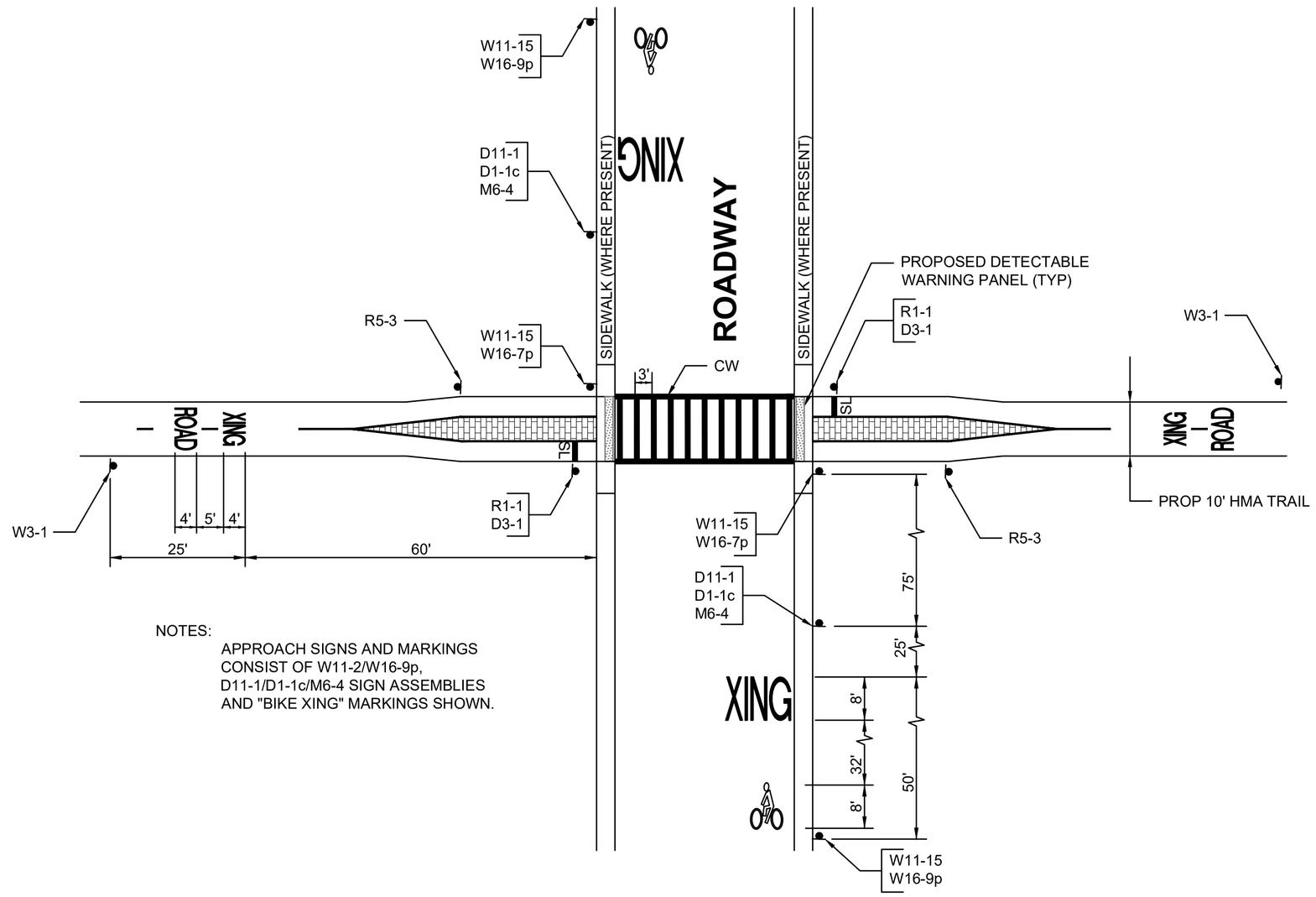
2	CEMENT CONCRETE FOUNDATIONS PER 812.30.1
2	15' TRAFFIC SIGNAL POSTS & PEDESTALS
2	APS PUSHBUTTON SYSTEMS
4	DUAL RECTANGULAR YELLOW LED BEACONS IN NEMA ENCLOSURES
2	R10-25 SIGNS
4	W11-15 SIGNS
2	W16-7PR SIGNS
2	W16-7PL SIGNS
2	SOLAR PANEL SYSTEMS (NOT REQUIRED FOR AC POWER)
2	NEMA ENCLOSURES FOR ALL COMPONENTS NEEDED TO MEET FUNCTIONAL REQUIREMENTS PER SPECIAL PROVISIONS
2	BATTERY SYSTEMS (NOT REQUIRED FOR AC POWER)

PLUS ALL MOUNTING AND SUPPORTING HARDWARE AND WIRING NECESSARY TO COMPLETE A WORKING SYSTEM.



DETAIL A: DUAL YELLOW BEACON
NOT TO SCALE

RECTANGULAR RAPID FLASHING BEACON
NOT TO SCALE



NOTES:
APPROACH SIGNS AND MARKINGS CONSIST OF W11-2/W16-9p, D11-1/D1-1c/M6-4 SIGN ASSEMBLIES AND "BIKE XING" MARKINGS SHOWN.

TYPICAL INTERSECTION SIGNS AND MARKINGS
NOT TO SCALE

613163_HD\CONSTRUCTION DETAILS_NOI.DWG Plotted on 10-Feb-2025 1:59 PM
Proposal No. 613163-135786
AM0860 - 126

DOCUMENT A00861

MASSACHUSETTS

DEPARTMENT OF ENVIRONMENTAL PROTECTION

ORDER OF CONDITIONS

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Town of Lynnfield, Massachusetts

CONSERVATION COMMISSION

55 SUMMER STREET
LYNNFIELD, MA 01940
781-334-9495
FAX 781-334-9509

June 23, 2025

John Scenna
Lynnfield Director of Public Works
55 Summer Street
Lynnfield, MA 01940

RE: ORDER OF CONDITIONS, Lynnfield Rail Trail Phase I DEP #209-0694

Dear Mr. Scenna

Enclosed please find the Order of Conditions for the construction of Phase I of the Lynnfield Rail Trail. The original Order must be recorded at the **Registry of Deeds** with proof of recording bearing the Registry stamp and submitted to the Conservation Commission for our files. This permit **expires** on **June 23, 2028** three years from the date of issuance of your original permit.

It is your responsibility to be aware of all the conditions and requirements contained in this permit. The approved work has been conditioned to prevent adverse impacts to the values of wetland resource areas. The Conservation Administrator will work together with those involved in the project to help ensure that it is completed successfully in compliance with the permit.

Before you begin your project, please contact our office to schedule the pre-construction site visit at (781) 334-9595.

Sincerely,

Emilie Cademartori
Director of Planning & Conservation

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

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

Provided by MassDEP:
209-0694
MassDEP File #

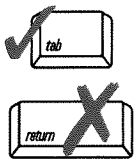
eDEP Transaction #

Lynnfield
City/Town

A. General Information

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

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



1. From: LYNNFIELD
Conservation Commission

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

3. To: Applicant:

John	Scenna
a. First Name	b. Last Name

Lynnfield Department of Public Works
c. Organization

Lynnfield Town Hall 55 Summer Street
d. Mailing Address

Lynnfield	MA	01940
e. City/Town	f. State	g. Zip Code

4. Property Owner (if different from applicant):

MBTA	
a. First Name	b. Last Name

c. Organization

d. Mailing Address

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

5. Project Location:

Ford Ave, Lynnfield to Nichols Lane	Lynnfield
a. Street Address	b. City/Town
n/a	
c. Assessors Map/Plat Number	d. Parcel/Lot Number

Latitude and Longitude, if known: 42.53375/-71.05129d m 42.53554/-71.01659d m

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

Provided by MassDEP:
209-0694
MassDEP File #

eDEP Transaction #

Lynnfield
City/Town

A. General Information (cont.)

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

a. County	b. Certificate Number (if registered land)
c. Book	d. Page

7. Dates:

2/28/2025	4/15/2025	6/23/2025
a. Date Notice of Intent Filed	b. Date Public Hearing Closed	c. Date of Issuance

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Notice of Intent Plan Set
a. Plan Title

Stantec	Aleece D'Onofrio, P.E.
b. Prepared By	c. Signed and Stamped by
June 17, 2025	1"=20'
d. Final Revision Date	e. Scale

Stormwater Checklist & Summary Report, Long Term O&M	2/10/25 & 5/17/25
f. Additional Plan or Document Title	g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

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

a. ☒ Public Water Supply b. ☐ Land Containing Shellfish c. ☒ Prevention of Pollution

d. ☒ Private Water Supply e. ☒ Fisheries f. ☒ Protection of Wildlife Habitat

g. ☒ Groundwater Supply h. ☒ Storm Damage Prevention i. ☒ Flood Control

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

Approved subject to:

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

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

Provided by MassDEP:
209-0694
MassDEP File #

eDEP Transaction #

Lynnfield
City/Town

B. Findings (cont.)

Denied because:

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

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

3. ☒ Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) — 0 a. linear feet

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

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. ☐ Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. ☐ Bordering Vegetated Wetland	a. square feet	b. square feet	c. square feet	d. square feet
6. ☐ Land Under Waterbodies and Waterways	a. square feet	b. square feet	c. square feet	d. square feet
	e. c/y dredged	f. c/y dredged		
7. ☐ Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. ☐ Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. ☒ Riverfront Area	8951 perm 5803 temp 9819	8951 perm 5803 temp 9819		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	4935 g. square feet	4935 h. square feet	i. square feet	j. square feet

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

Provided by MassDEP:
209-0694
MassDEP File #

eDEP Transaction #

Lynnfield
City/Town

B. Findings (cont.)

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

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

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

Provided by MassDEP:
209-0694
MassDEP File #

eDEP Transaction #

Lynnfield
City/Town

B. Findings (cont.)

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

23. ☐ Restoration/Enhancement *:

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

24. ☐ Stream Crossing(s):

a. number of new stream crossings | b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
   a. The work is a maintenance dredging project as provided for in the Act; or
   b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
   c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on 6/23/2028 unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.

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

Provided by MassDEP:
209-0694
MassDEP File #

eDEP Transaction #

Lynnfield
City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act

8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.

9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.

10. A sign shall be displayed at the site not less then two square feet or more than three square feet in size bearing the words,

"Massachusetts Department of Environmental Protection" [or, "MassDEP"]

"File Number 209-0694 "

11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.

12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.

13. The work shall conform to the plans and special conditions referenced in this order.

14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.

15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.

16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.

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

Provided by MassDEP:
209-0694
MassDEP File #

eDEP Transaction #

Lynnfield
City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

19. The work associated with this Order (the "Project")
    (1) ☒ is subject to the Massachusetts Stormwater Standards
    (2) ☐ is NOT subject to the Massachusetts Stormwater Standards

    If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

    a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.

    b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:

    i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;

    ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;

    iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;

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

Provided by MassDEP:
209-0694
MassDEP File #

eDEP Transaction #

Lynnfield
City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement) for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 19(f) through 19(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 19(f) through 19(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.

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

Provided by MassDEP:
209-0694
MassDEP File #

eDEP Transaction #

Lynnfield
City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

g) The responsible party shall:
1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.

h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.

i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.

j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.

k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.

l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

see attached

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.

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

Provided by MassDEP:
209-0694
MassDEP File #

eDEP Transaction #

Lynnfield
City/Town

D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☐ Yes ☒ No

2. The _____ hereby finds (check one that applies):
   Conservation Commission

   a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

   _____ _____
   1. Municipal Ordinance or Bylaw 2. Citation

   Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

   b. ☐ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

   _____ _____
   1. Municipal Ordinance or Bylaw 2. Citation

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.
   The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

SPECIAL CONDITIONS
GENERAL

1-20. See DEP General Conditions pages 5 – 9 of 12 on Form 5, Order of Conditions.

21. When used in this Order of Conditions, the terms below shall have meanings as follows:

    a. The property is defined as the 60-foot-wide former rail corridor, running approximately 1.84 miles from Nichols Lane in Peabody to Ford Avenue in Lynnfield.

    b. The project is defined as: the construction of a 10 -12 ft wide paved shared use trail with 2 ft wide grass shoulders, including removal of railroad ties and iron rails, grading, installing pavement sub base, paving, tree removal and associated soil stabilization and landscaping activities. Additional components include trails to connect to the Lynnfield Middle School and High School, wood fencing at various locations and a trailhead entrance area at Summer Street.

    c. All work is depicted on site plans titled: "Massachusetts Department of Transportation Highway Division Plan & Profile of Lynnfield Rail Trail Construction – Phase I in the Town and City of Lynnfield and Peabody Essex County Notice of Intent Plans dated June 17, 2025 prepared by Stantec. (see plan & documents list)

    d. Resource Areas present include Riverfront, Bordering Vegetated Wetland, Isolated Vegetated Wetland, Bank and 100 ft Buffer to Bordering Vegetated Wetland.

22. Findings: After conducting a public hearing with multiple sessions (3/19/2025, 4/15/25, 5/20/25 & 6/17/25) and two group site walks (3/25/25, 4/26/25) (Additional site walks were conducted by the Conservation Administrator on multiple dates), the Conservation Commission has found as fact that this project is subject to the Wetlands Protection Act but not the Town of Lynnfield Wetland Protection Bylaw. Portions of the proposed work activities are located within previously developed Riverfront Area to Bates Brook and the 100 ft Buffer to Bordering Vegetated Wetland and Bank. Activity is also proposed within non-jurisdictional Isolated Vegetated Wetland. In the Commission's opinion, the listed resource areas are accurately shown on the approved plans.

    In reviewing this project, the Town of Lynnfield Conservation Commission worked with the applicant, their engineers and environmental consultant to revise portions of the site design to mitigate the Commission's and abutters' concerns relative to overall limit of disturbance, tree preservation, and impacts on drainage on surrounding properties.

    The Commission finds that portions of the proposed project occurring within previously developed Riverfront qualify as a limited project under 310 CMR 10.53(6) for the construction of a bike path within Riverfront but outside other resource areas, as the adverse impacts from the work have been minimized by the design specifications. The project will not result in significant impacts to Riverfront Area functions and values.

    The Lynnfield Conservation Commission finds that the project, as shown on the approved plans referenced in this Order of Conditions, meets the standards of the Massachusetts Wetlands Protection Act and the Wetlands Protection Act Regulations, 310 CMR 10.00 et. seq as well as the requirements of the Massachusetts Department of Environmental Protection Stormwater Regulations and Handbook.

23. DEP has issued file number 209-0694 for this project. Per General Condition 10 of this Order, a sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words "MA DEP **# 209-0694**".

24. No work shall commence on-site until all appeal periods have elapsed. After the expiration of all appeal periods in accordance with General Condition 8 on page 5 of this Order and prior to commencement of any work on the affected property, this Order of Conditions must be recorded at the Southern Registry District of the Essex County Registry of Deeds. Failure to record this Order of Conditions will result in automatic revocation of this Order as provided by General Condition 1 of this Order of Conditions.

25. The Commission shall be notified in writing within 30 days of all transfers of title that take place prior to the issuance of the Certificate of Compliance for the project. In conjunction with the transfer of ownership, interest, or control of the property subject to this Order and/or transfer of contract to perform the work conditioned by this Order, the applicant shall submit to the Conservation Commission a statement signed by the successor(s) in ownership, interest or control of the property or contract to perform the work that she/he is aware of an Outstanding Order of Conditions and has accepted responsibility required by General Condition 16 of this Order of Conditions.

26. This Order shall be made part of all construction contracts and subcontracts dealing with the work proposed, and the requirements of this Order of Conditions shall supersede any conflicting contract requirements. The contractor responsible for the project's completion shall be notified and understand the requirements of this Order of Conditions. Any person performing work or the activity that is the subject of this Order of Conditions is individually responsible for understanding and complying with the requirements of this Order of Conditions. The contractor shall have a copy of this Order of Conditions, as well as all approved plans and documents referenced in Section A 8 of this Order available on-site upon commencement of any site work and shall make the plans and documents available to any person doing work on the site at all times.

27. **Prior to any work being done on the project site**, the applicant shall inform the Conservation Commission in writing of the names, addresses, business, mobile and home telephone numbers of the contractor who will be responsible for ensuring on-site compliance with this Order. The notification shall occur at least 48 hours prior to commencement of work on the site. The 48 hours shall not be over weekends or holidays. The applicant shall also notify the Commission in writing of any changes in this information.

28. All work shall be conducted in strict accordance with the Notice of Intent and above-referenced plans and supporting documentation unless otherwise specified in this Order of Conditions, which shall be the controlling document. Any other or additional activity in areas within the jurisdiction of the Commission will require separate review and approval by the Commission.

29. If the Conservation Commission finds, by majority vote, changes as referenced in General Conditions 13 of this Order of Conditions to be significant and/or to deviate from the original plans, the Notice of Intent, or this Order of Conditions, the applicant shall provide written notice of the Conservation Commission for approval prior to implementing the change in the field. The Commission shall determine whether the change is significant enough to require a new Public Hearing and/or the filing of a new Notice of Intent within 21 days. If a new public hearing is required or a new Notice of Intent is required, these shall all be at the expense of the applicant in order to take testimony from all interested parties. Within 21 days of the close of said hearing, the Commission shall issue an amended or new Order of Conditions.

30. Any errors found in the plans or information submitted by the applicant shall be considered as changes, and the procedures outlined in Special Condition 29 above shall be followed.

31. The applicant agrees with the Conservation Commission's position that the Order of Conditions as written, individually or as a group, protects the Interests of the Act. In the event that an Enforcement Order is issued to the applicant and/or the property owner and the applicant and/or the property owner fails to act after ten business days from the receipt of said Enforcement Order, the Commission may satisfy the requirements of the Enforcement Order and the applicant agrees to reimburse the Commission for all administrative costs and other expenses required to satisfy the Enforcement Order including but not limited to all costs incurred by the Town due to the use of its own resources or the use of outside resources including the employment of experts, specialized contractors or any other individual or organization it deems necessary to satisfy the requirements of the Enforcement Order.

32. The Administrator or members of the Conservation Commission or their designees may enter and inspect the property and the project pursuant to Condition 15, with or without probable cause or prior notice, and until a Certificate of Compliance is issued. The Commission or its designee will follow on-site check-in and safety procedures.

33. It is the responsibility of the applicant to satisfy all procedural requirements of all agencies having jurisdiction over the activity that is the subject of this Order, and to obtain all required licenses, permits, or authorizations. These include but are not limited to the following: a) Massachusetts Department of Environmental Protection Approval of the SWPPP/Erosion Control Plan and other approvals, if required, b) NPDES Stormwater Pollution Prevention Permit, including post construction Operation & Maintenance Plan, c)Lynnfield ZBA approval for all signs as may be required. Copies of all such licenses, permits and authorizations shall be provided to the Town of Lynnfield Conservation Commission immediately upon receipt.

PRIOR TO CONSTRUCTION

34. Prior to the commencement of any construction or activity on the project site, an **on-site Preconstruction Meeting** will be held with the contractor, designated agent, and Conservation Administrator to review this Order of Conditions to ensure that all the conditions of this Order are understood and review the construction sequencing.

35. **Prior to the Preconstruction Meeting**, the proposed limit of work and erosion control lines shall be clearly marked with stakes, flags, or fencing. These shall be approved by the Conservation Administrator at the preconstruction meeting. Such markers shall be maintained until all work on the site's perimeter is complete. All workers shall be informed that no activity is to occur beyond this line at this time.

36. **At the Preconstruction Meeting**, the Applicant shall submit the construction sequencing plan and construction schedule. The sequence shall be consistent with the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan. **The proposed planting plan for Ford Avenue shall be submitted for review approval.**

37. No clearing of vegetation, including trees, or disturbance of soil on any areas within 100 feet of any wetland resource area shall occur prior to the Preconstruction Meeting, except such minimal disturbance required in order to stake the required erosion control lines.

38. **After the Preconstruction Meeting** and prior to any construction at the site, all erosion control devices and tree protection, as detailed on Construction Detail Sheet 1 of 4, shall be installed to prevent erosion and protect all retained trees. Erosion control shall be installed with minimal disturbance to vegetation. Upon installation, the Commission shall be contacted in order to conduct a follow-up inspection to ensure that all preventative measures have been properly installed. No other work on the project may occur until the installed measures have been inspected and approved.

DURING CONSTRUCTION

39. Accepted engineering and construction standards shall be followed in the completion of this project. This includes proper installation and maintenance of Erosion & Sediment Control (E&SC) Best Management Practices (BMPs) per applicable DEP, US Department of Agriculture Natural Resource Conservation Service (NRCS), and/or manufacturers' guidelines.

40. The erosion controls shall be maintained per General Condition 18 of this Order of Conditions until the referenced stabilization efforts are inspected and approved by the Conservation Administrator. Upon completion of the project, the applicant shall request permission from the Conservation Commission to remove and discard all E&SC materials determined to be detrimental to the resource areas and restore the soil and vegetation beneath the barriers to pre-disturbance condition.

41. The applicant and or contractor must maintain erosion control devices and check on a weekly basis and after any rain event totaling more than 0.5" of precipitation over any 24-hour period. Accumulated sediment upgradient of erosion control devices shall be removed immediately if its depth exceeds six (6) inches or every two weeks during construction.

42. The erosion control specifications provided in the Notice of Intent and the erosion control provision in the Order will be the minimum standards for this project. Erosion control devices may be modified based upon

experience at the site. Additional or modified erosion control measures may be required by the Conservation Administrator at any time before, during and after construction. These will be maintained until the Applicant's Engineer and a member or agent of the Commission agree that they are not longer needed, at which time they will be removed, using mutually satisfactory removal procedures. The area where the erosion control devices are removed from shall be stabilized and seeded immediately after the devices are removed.

43. All equipment shall be operated and maintained so as to prohibit alterations of wetlands not allowed by this Order of Conditions and to minimize disturbance in Buffer zones to those areas clearly identified on the plans, demarcated in the field, and permitted by this Order of Conditions. No equipment is to enter or cross any wetland resource area at any time. Equipment shall not be stored and or parked in the 100 ft Buffer or any Wetland Resource Area when not in use.

44. **Grading shall be performed in accordance with the final approved plans for the project and shall not direct runoff to the property of others, unless such conditions already exist. Any grading shall not increase runoff, nor cause flood or storm damage to abutters or the property of others.**

45. After proper grading, all disturbed areas shall be brought to final finished grade and stabilized permanently against erosion. This shall be done either by sodding, or by loaming with a minimum of six (6) inches of topsoil, seeding, and mulching according to E&SC Guidelines for Urban and Suburban Areas (DEP & NRCS, 1997). If the latter course is chosen, achievement of stabilization is considered to be when the surface shows complete vegetative cover. This shall be measured by at least 80% coverage by established vegetation.

46. **Any trees larger than 8" caliper that are removed within any Wetland Resource Area or Buffer shall be replaced at 1:1 ratio with native species. All retained trees shall be protected from damage. Particular care shall be taken for trees, including their roots, in close proximity to equipment access routes, material stockpile areas and grading work.**

47. The area of construction shall remain in an environmentally stable condition at the close of each construction day.

48. Bare ground in the Buffer Zone that cannot be permanently stabilized within thirty (30) days shall be stabilized by a temporary cover of rye or other grass following U.S. Natural Resource Conservation Service (NRCS) procedures to prevent erosion and sedimentation. If the season is not appropriate for plant growth, exposed surfaces shall be stabilized by straw, jute netting, or other NRCS approved methods. Any stabilization materials such as jute netting shall be firmly anchored to prevent them from being washed from slopes by rain or flooding.

49. All debris, fill and excavated material shall be stockpiled as far away from Resource Areas as possible and surrounded by a double row of staked straw bales to prevent sediment from surface runoff entering the resource areas. At no time shall any debris or other waste material be buried or disposed of within a Wetland Resource Area or Buffer Zone.

50. No unsuitable material of any kind (stumps, roots, trash, debris, etc.) may be buried, placed or dispersed within a Wetland Resource Area or Buffer Zone.

51. Concrete trucks and other vehicles shall not be washed out in any Wetland Resource Area, Riverfront area or Buffer zone, or into any stormwater drainage system components. Any deposit of cement or concrete products into a buffer zone, riverfront area or wetland resource area shall be immediately removed.

52. **During and after work on this project**, there shall be no discharge or spillage of fuel, oil, or other pollutants into any Wetland Resource Area or Buffer zone. Also, there shall be no refueling of mechanical equipment within a Wetland Resource or within the 100 foot Buffer zone. Equipment for fuel storage and refueling operations shall be located outside all areas within the jurisdiction of the Commission. The applicant shall take all reasonable precautions to prevent the release of pollutants by ignorance, accident, or vandalism. No fuel, oil, or other pollutants shall be stored in any Resource Area or the Buffer zone thereto.

53. **During and after work on this project,** no herbicides shall be applied in any Wetland Resource Area or Buffer zone without prior approval from the Commission. This condition shall remain in perpetuity.

CERTIFICATE OF COMPLIANCE

54. Upon completion of the work on the project, the applicant shall request in writing a Certificate of Compliance from the Conservation Commission and shall submit the following information with the request:

    a. A written statement from the engineering firm certifying compliance with the approved plans referenced above and this Order of Conditions and setting forth deviations, if any exist.

    b. Two sets of field surveyed as-built site plans prepared, signed and stamped by a Massachusetts Registered Professional Land Surveyor or a Massachusetts Registered Professional (Civil) Engineer. The as-built plan shall include, at a minimum, and as applicable to the project, limits of clearing, grading and fill; all structures, pavement and spot elevations and two-foot contour elevations within 100 feet of wetlands boundaries; locations of wetland boundaries; all alterations within wetland resource areas; all wetland replication areas; and all dates of fieldwork.

    c. Post-construction photographs demonstrating compliance with the Order of Conditions, including established vegetation where required.

Final Documents List

- Project Narrative, LEC Environmental Consultants February 28, 2025
- Lynnfield Rail Trail – Phase I Impact Area Table of Wetland Buffer and Riverfront Impacts 2/11/25 revised thru 5/12/25
- Massachusetts Department of Transportation Highway Division Plan & Profile of Lynnfield Rail Trail Construction – Phase I in the Town and City of Lynnfield and Peabody Essex County Notice of Intent Plans dated June 17, 2025 prepared by Stantec
- Stormwater Checklist & Summary Report, prepared by Stantec 2/10/25 including
  - Construction Pollution Prevention Plan and Erosion and Sedimentation Control
  - Operation & Maintenance Plan and Long-term Pollution Prevention Plan – Town of Lynnfield May 17, 2025

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

Provided by MassDEP:
209-0694
MassDEP File #

eDEP Transaction #

Lynnfield
City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

6/23/25
1. Date of Issuance

Please indicate the number of members who will sign this form.
This Order must be signed by a majority of the Conservation Commission.

7
2. Number of Signers

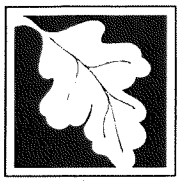
The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Lynnfield

Signature	Printed Name
	Don Gentile, Chair
	Kirk Mansfield, Vice Chair
	Jared Yagjian
	Bryce Foote
	K. Erin Hohmann
	Maria Fernandez- Donovan
	John Michalski

☒ by hand delivery on 6/23/2025
Date

☐ by certified mail, return receipt requested, on
Date



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

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209-0694
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Lynnfield
City/Town

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

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

Provided by MassDEP:
209-0694
MassDEP File #

eDEP Transaction #

Lynnfield
City/Town

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Lynnfield
Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Lynnfield
Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Ford Ave to Nichols Lane — Project Location
209-0694 — MassDEP File Number

Has been recorded at the Registry of Deeds of:

Essex — County
Book
Page

for: _____ Property Owner

and has been noted in the chain of title of the affected property in:

Book
Page

In accordance with the Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

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

DEP File Number:

Provided by DEP

A. Request Information

1. Location of Project

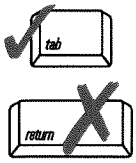
Ford Ave to Nichols Lane
a. Street Address

Lynnfield
b. City/Town, Zip

c. Check number

d. Fee amount

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



2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town | State | Zip Code

Phone Number | Fax Number (if applicable)

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

John Scenna, Lynnfield Department Public Works
Name

Lynnfield Town Hall 55 Summer Street
Mailing Address

Lynnfield | MA | 01940
City/Town | State | Zip Code

781-334-9500
Phone Number | Fax Number (if applicable)

4. DEP File Number:

209-0694

B. Instructions

1. When the Departmental action request is for (check one):

☐ Superseding Order of Conditions – Fee: $120.00 (single family house projects) or $245 (all other projects)

☐ Superseding Determination of Applicability – Fee: $120

☐ Superseding Order of Resource Area Delineation – Fee: $120

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

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

DEP File Number:

Provided by DEP

B. Instructions (cont.)

Send this form and check or money order, payable to the *Commonwealth of Massachusetts,* to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see https://www.mass.gov/service-details/massdep-regional-offices-by-community).

4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

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DOCUMENT A00870

TOWN OF LYNNFIELD

LANDSCAPE MAINTENANCE AGREEMENT

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TOWN OF LYNNFIELD
DEPARTMENT OF PUBLIC WORKS
TOWN HALL
55 SUMMER STREET
LYNNFIELD MA 01940-1843

JOHN SCENNA, DIRECTOR
JOHN TOMASZ , DEPUTY DIRECTOR & TOWN ENGINEER
CHRIS RAIS, FACILITIES SUPERINTENDENT

PHONE: 781-334-9500
FAX: 781-334-9509

MassDOT District 4
Paul Stedman, District Highway Director
519 Appleton Street, Arlington, MA 02476

January 29, 2025

Re: Project File No.: 613163
Lynnfield- Rail Trail Construction, From Ford Avenue to Nichols Lane (Phase 1)
Lynnfield & Peabody, MA

Dear Mr. Stedman:

As requested by MassDOT (Landscape Section) this letter serves as a commitment for maintenance of the landscape as designed and installed within the project area upon completion of construction and plant warranty period. The project area is located within Lynnfield and Peabody, MA, with plantings being provided at the Lynnfield Rail Trail Intersection with Summer Street in Lynnfield, MA.

The scope of the landscape elements proposed for this project includes the following.

- Tree Plantings on the South Approach to the Summer Street Crossing
- A Trailhead Area with Bike Racks and Benches on the South Side of the Summer Street Crossing
- Tree Plantings on the North Approach to the Summer Street Crossing
- A Trailhead Area with an Informational Kiosk, Bike Racks, and Benches on the North Side of the Summer Street Crossing
- A Wetland Replication Area with plantings on the North Side of the Summer Street Crossing

Lynnfield agrees to perform tasks described in the attached guidance titled **MassDOT Basic Plant Care for Healthy Establishment**.

Please feel free to call me at the above telephone number with any questions or comments.

Sincerely,

John Scenna

Director of Public Works

Cc: Robert Dolan, Town Administrator, John Tomasz, Deputy Director & Town Engineer
Emilie Cademartori, Director of Planning & Conservation
Vince Inglese, Friends of Lynnfield Rail Trail
Joseph Rubino, John Hendrickson, Stantec Engineering
Shahpar Negah, P.E., M.B.A., MassDOT Project Manager
George Batchelor, MassDOT Landscape Architecture Section Head
File

BASIC PLANT CARE FOR HEALTHY ESTABLISHMENT

New plantings need extra care to adapt to a new location and to develop new roots and foliage so that they can be self-sustaining and out-compete weeds. Good care following planting (considered the plant establishment phase) will reduce plant loss and future weed infestation. The two most critical requirements for care during this period are watering and weed management.

It takes 2-3 years after planting for trees and mixed planting beds to become well-established (self-sufficient). Several factors affect the duration. Smaller sized trees and shrubs establish more quickly. Regular watering helps plants establish more quickly. A higher density of plants in mixed beds will reduce weed pressures more quickly, allowing a planting bed to be self-sustaining sooner.

Watering

- The amount and frequency of watering will depend on size of plants when installed, soil conditions, and the weather. A week of significant rain will substitute for watering, whereas drought conditions may increase the amount of water needed.
- A 5 gallon contractor bucket is a quick and easy way to measure water (or the time required per gallon).
- Watering beyond the area of the root ball encourages roots to spread outward and increase future access to nutrients and moisture.
- If watering bags are used, they should be placed on a minimum of 2 stakes adjacent to the trees, not on the tree trunk. Bags placed on the tree trunks for an extended time can damage the bark and surface roots and cause rot. Create a simple system to monitor the bags to ensure that they are kept filled during the growing season and removed during the winter months or when they are no longer needed.

Recommended Schedule (May 15 - September 15)		
Gallons/Week/Per Plant	**Duration of Routine Watering for Establishment (Minimum)**	**Watering After Plants are Well-Established (Minimum)**
Trees: 15-25	3 years	During drought*
Shrubs: 10-15	1-2 years (depending on species & size)	During drought*
Perennials: 3-5	1 year	As necessary (i.e, drought)

* Drought is defined herein as any 2-5 week period without at least 1 inch of water

Weed Management

- Weed removal or cutting should be prior to weed species going to seed. See ***Weed Management*** for recommendations regarding types of weeds**.** At a minimum the following schedule is recommended:
  - ♦ Late spring (May-June) to remove cool season weeds
  - ♦ Mid-summer (August) to remove warm season weeds
- Dense, healthy desirable plants are the best prevention against weed competition. Encourage healthy growth. Infill if planting is too sparse. This may cost will be more initially, but will be cheaper long-term.
- Mulch to reduce weed growth during establishment. For woody plants, apply wood chips or bark mulch at a depth no greater than 3 inches. Apply 1 inch of bark mulch or, preferably, straw mulch for perennials. Pull mulch back from the base of all plants. See ***Mulching*** for additional recommendations.
- Weed fabric is not recommended as silt and soil accumulate on top of the fabric providing a growing medium for weeds. Exposed fabric is also unsightly.
- See ***Perennial Care*** for management specific to perennials.

BASIC LONG-TERM PLANT CARE FOR MANAGED LANDSCAPES

All landscape plantings require some level of care over time, particularly those in urban environments. With a good design and proper plant selection, once plants are well-established, long-term plant and planting bed care should be minimal. However, as a living system, the landscape will change over time. Weeds may encroach and plants will grow, change, and die. Therefore, care requirements will change. Below are basic expectations and recommendations for long-term general plant and planting bed care once plants are established (typically 2-3 years after planting).

Watering

- Plan to water plants during **drought** (2-5 week period without at least an inch of water) .
- Ideally plants should be watered during **dry periods** (any 10-day period without rain).
- See ***Watering Schedule*** under Establishment for quantity of water required per plant.
- Mixed planting beds will typically need less water than isolated trees or shrubs.
- Street trees may need more water due to heat from pavement and less moisture in tree pit soils.

Weed Management

- **Single Trees:** Aged pine bark mulch or wood chips applied annually will help prevent weed growth around trees and protect trees from mower damage to the trunk. Planting low-maintenance groundcovers around trees (i.e., Pennsylvania sedge or low shrubs) eliminates the need for annual mulching, protects the trunk from mowers, and creates a healthier and more attractive landscape.
- **Mixed Planting Beds:** When properly designed (dense, layered planting) mulching for weed control should not be necessary after 2-3 years except for new plants or for gaps while slower growing plants mature. If plant spacing is too far apart, weeds will be problematic in the gaps. In-fill with additional plants to reduce the need for and cost of annual mulching. See ***Mulching*** for additional information.
- Learning to distinguish aggressive weeds (i.e., mugwort, Japanese knotweed) from less problematic and early successional species (annuals) will help prioritize the need.
- See ***Perennial Care*** for weed management specific to perennials.

Fertilizing

- With proper plant selection (using plants adapted to site and soil conditions) and a good design, plants should not require synthetic fertilizers. If additional nutrients are needed, apply a 1/2-1 inch of compost (compost blanket) around the plants.
- Leaving naturally occurring organic matter (twigs, leaf litter, dead wood) will provide nutrients for free. As material is broken down by fungi and micro-organisms over time, nutrients are release. Organic matter also provides good habitat for beneficial insects.

Plant Replacement for Mixed Planting Beds

- Naturalized, mixed planting beds should tolerate some plant loss without creating weed problems or significant visual impact. Substantial loss should be replanted with appropriate species to prevent weeds from invading. If designs are dependent on specific plants or a formal pattern or are highly visible, dead plants should be replaced as soon as possible during the appropriate season.

Tree Pruning

- Tree limbs should be properly pruned if broken or damaged to prevent rot from entering the wood.

Landscape Repairs

- Urban landscapes are susceptible to damage from errant vehicles, utility work, or other activities. Dead plants should be immediately replaced and bare soils mulched to prevent the encroachment of weed species. Neglecting to repair the damage can jeopardize the entire planting area.

Mulch: Purpose and Benefits

Mulch helps with plant establishment by retaining moisture, protecting soil, and by inhibiting the growth of weeds. Mulches should be applied for plant establishment rather than for ornamental purposes.

- **Trees lawns:** Applying bark mulch or wood chips will protect tree trunks from mower damage as well as reduce weed growth and retain moisture. A cover of bark mulch or wood chips provides more optimal conditions than turf grasses as moisture is retained in the wood whereas lawn grasses take up moisture at the soil surface. A larger area of wood chips or mulch may also encourage greater root expansion.

  Wood chips are generally cheaper than bark mulch and provide the additional benefit of slowly feeding a tree's root system as the wood breaks down and nutrients are release for uptake.

- **Mixed planting beds:** Once there is sufficient shrub and/or perennial groundcover to outcompete weeds, applying annual mulch is no longer be necessary. Plant litter and twigs that accumulate over time will provide a natural layer of mulch—as well as provide habitat for insects and beneficial fungi.

- **Living Mulches:** If the planting is too sparse to provide sufficient groundcover over time, consider infilling with additional low-growing shrubs or perennials to fill the gaps. Drought tolerant, rapid spreaders such as 'Gro-Low' sumac or Pennsylvania sedge are a great way to create an understory groundcover. Junipers are excellent as a long-term evergreen groundcover, but are slow growing. Infilling between junipers with perennials is a good way to reduce weed growth while the junipers grow.

Mulching Recommendations

- 👍 Woody plants: Apply bark mulch or wood chips to a depth of 3 inches.
- 👍 Perennials: Straw or leaf mulch is preferable over bark mulch. If using bark mulch, mulch should be carefully placed and at a depth no deeper than 1 inch. Over-mulching will smother shoots and discourage the growth of perennials.
- 👍 Pull mulch back from the crowns of all plants, particularly perennials.
- 👍 Use natural bark mulches or wood chips for woody plants. Avoid dyed mulch.
- 👍 Replace lost plants rather than convert the planting bed into a mulch bed.

- 👎 **Don't use mulch made from wood palette and recycled wood product.** These can create anaerobic conditions which will kill the root systems of plants, particularly perennials.
- 👎 **Don't use pre-emergence herbicides** with mulch. Pre-emergence herbicides will prevent desirable shrubs and perennials from spreading vegetatively and prevent desirable perennials from spreading by re-seeding. Colonization and re-seeding by desirable plants provides long-term groundcover, eliminating the need for costly annual applications of bark mulch.
- 👎 **Don't over-mulch.** "Mulch volcanos" create excessive moisture and heat leaving the bark susceptible to disease and decay. Over-mulching can also suffocate roots and block rain from reaching the soil.
- 👎 **Don't turn the landscape into a mulchscape.** Mulch should be used to help plants establish and grow, not to replace plants that die. Mulchscaping is costly and does not provide stormwater management, insect habitat, or the natural beauty that living plants provide.

Weed Management

- **Annuals**, which die at the end of the season, may be pulled (roots are typically shallow) or cut prior to flowering to prevent re-seeding. Annual plants are not so much a concern as is their capacity to spread by re-seeding.
- **Perennials, vines, and many woody species** may spread vegetatively, by seed, or both. Those that resprout will require removal or killing of the root system to prevent regrowth. Girdling or repeat cutting to deplete the root system over time can be used in lieu of herbicides. Plants that spread by seed should be cut or removed prior to reseeding.
- **Invasive plants** with deep or extensive root systems, such as Japanese knotweed, may require herbicide to completely eradicate the plant or population. Invasive plants should be addressed as quickly and effectively as possible and while populations are small and still manageable. Those that spread by seed should be cut, treated, or removed prior to going to seed to prevent spread.
- Herbicide treatment should only be done by a licensed and knowledgeable applicator.

Caring for Perennial Plantings

The following are recommendations for low maintenance perennial plantings where the goal is to allow the plants to completely fill in the area to create a perennial garden, "pocket meadow", or perennial edge rather than maintaining the plants as isolated clumps in a mulch bed.

- **Watering:** Once established, properly selected grasses and perennials should not require watering except perhaps during drought. If aesthetics is a priority, watering will help plants look fuller and may result in better blooms.
- **Weed Management:** Perennial beds need weeding primarily during the first 3 years of establishment. When planted densely and allowed to reseed and expand, weeding should be minimal after the third year (but will still be necessary). Differentiating weeds from desired plants is necessary for management that allows perennials to infill naturally over time.
- **Mulching:** Mulching perennials is helpful for weed control and moisture retention immediately after planting. After the first growing season plants will spread vegetatively and by re-seeding (if allowed) and mulch should no longer be needed. Straw mulch or a similar light mulch is best for perennials. Bark mulch prevents desirable seeds from germinating and, if applied too deep and too close to the crowns, will rot stems and smother new shoots. Leaving cut foliage on the soil at the end of the season is the best and cheapest method of mulching perennials.
- **End of Season Cut:** Grasses and perennials may need to be cut back in spring or at the end of the season for neatness or to allow for healthy regrowth. The following is recommended:
    - Cut foliage in the spring rather than fall as the foliage provides habitat and visual interest.
    - Cut high if cutting in fall or very early spring in order to preserve insect nesting habitat.
    - Leave cut stems and foliage on site to serve as mulch and to provide habitat. Allow seed heads to remain on site if re-seeding is desired.
- **Replacements:** Plants that die or that are eaten by animals should be replaced to avoid bare soil which will be susceptible to weeds. Replant with species that are less likely to be eaten. Planting densely and having a high diversity of plants will reduce the visual and ecological damage to the landscape (and thus the need for replacements) when plants are lost.

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DOCUMENT A00875

POLICY DIRECTIVE P-22-001
AND
POLICY DIRECTIVE P-22-002

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massDOT Massachusetts Department of Transportation Highway Division

Number: P-22-001
Date: 9/23/22

POLICY DIRECTIVE

Jonathan Gulliver (signature on original)
HIGHWAY ADMINISTRATOR

Off-Site Stockpiling of Soil from MassDOT Construction Projects

Purpose

The purpose of this Policy Directive is to formally establish a policy and procedures for managing and stockpiling soil generated and transported from MassDOT construction projects. This Policy Directive does not supersede any Federal, State, or Local regulations.

Date of Effect

This Policy Directive is effective immediately for all projects, including active construction projects.

For active construction projects and for other projects advertised prior to October 15, 2022, changes to the contract documents needed to implement the requirements of this Policy Directive will be considered on a case-by-case basis and shall be approved by the District Highway Director, as necessary.

For projects advertised on or after October 15, 2022, MassDOT will include the requirements and implementation procedures of this Policy Directive in the construction contract documents.

Policy Requirements

This policy is intended to prevent the off-site relocation of excavated soil generated from MassDOT projects to areas near residential receptors and to control potential fugitive dusts and/or contaminants. To that end, excavated soil may not be moved from the project site without knowledge of the content of the material. Knowledge may include visual field observations for presence of staining, odor, and/or debris, screening with a photoionization detector (PID), laboratory analysis, and/or site history. Pavement millings and other non-soil materials are not subject to the requirements of this Policy Directive.

Moving soil from a MassDOT project site to a temporary off-site storage location must be approved in writing by the District Highway Director.

The Contractor must select a storage location that is at least 500 feet away from residential receptors, as defined herein to include, but not be limited to, residential dwellings, residentially

zoned property, schools, daycare facilities, playgrounds, parks, recreational areas, hospitals, elderly housing and convalescent facilities.

Temporary off-site storage of excavated soil from a MassDOT project is only permissible at a location approved and permitted by MassDOT. The temporary storage location should be located within the same municipality where the soil was excavated, where possible. Stockpiled soil must be securely covered, and appropriate measures must be taken to minimize fugitive dust and erosion.

Signs indicating the source of the soil, the date the soil was generated, and contact information must be erected and maintained until the stockpiled soils are transported to a disposal facility or reused on the project site.

Implementation Procedures

To ensure that off-site storage of excavated soils is managed properly on MassDOT projects, this policy requires the following:

1. **Off-Site Stockpile Storage Locations**
    a. The Contractor shall provide proposed off-site storage locations to the Engineer for approval at least 30 days prior to transporting soil off site. Off-site storage locations should be in the same municipality as the work site.
    b. The Contractor shall keep excavated soil on site until adequately characterized to the satisfaction of the Engineer.
    c. The Contractor shall provide notification of the approved off-site storage location to the local Board of Health and the Town Manager's/Mayor's Office at least 7-days prior to transporting soil off site.
    d. The Contractor shall provide the Engineer with at least 3-days' notice prior to transporting soil off site.
    e. For off-site storage locations on MassDOT property, the Contractor is required to obtain an Access Permit through the District Permits Office prior to storage of soil or other materials. MassDOT will issue these permits at no cost to the Contractor. Information to be submitted by the Contractor as part of the permit application shall include:
        i. A description of material to be stored off-site, including available analytical data;
        ii. A figure of the location with distances to residences and residential receptors; and
        iii. Anticipated duration of temporary storage.
    f. Stockpile locations should not be within 500 feet of residential receptors (e.g., residential dwellings, residentially zoned property, schools, daycare facilities, playgrounds, parks, recreational areas, hospitals, elderly housing and convalescent facilities).
        i. If the stockpile location must be within 500 feet of residential receptors, then soil must be less than RCS-1 (per 310 CMR 40.1600) and free of potentially hazardous or regulated items.

g. For off-site storage locations on non-MassDOT property, the Contractor must notify the property owner(s) at least 7 days prior to transporting material.
h. Exceptions to these rules will be reviewed by MassDOT and may be approved by the District Highway Director on a case-by-case basis.

2. Off-Site Stockpile Management

a. The Contractor shall keep soil stockpiles on impermeable surfaces (e.g., asphalt or concrete) or on 10-mil polyethylene sheeting.
b. The Contractor shall cover soil stockpiles with 10-mil polyethylene sheeting and surround with a berm made of hay bales, straw wattles, or similar.
    i. Piles that are actively being worked on must be covered and re-secured at the end of the work shift.
c. The Contractor shall label stockpiles with signs, including:
    i. Location of origin (including any Release Tracking Numbers)
    ii. Stockpile ID number (including MassDOT District office-assigned tracking ID, if different)
    iii. Date of initial accumulation
    iv. Applicable telephone numbers for the Contractor and MassDOT.
d. The Contractor shall mitigate fugitive dust at storage locations under the direction of an appropriately trained/certified environmental professional.
e. The Contractor shall remedy noncompliance with this policy within 48 hours.
f. The Contractor shall remedy noncompliance with this policy on the SAME DAY for potentially hazardous material, as determined by the Engineer.
g. The Contractor shall handle excavated soil according to federal, state, and local regulations.
h. The Contractor shall use appropriate shipping documents for all movements of excavated soil on public roadways (e.g., Bill of Lading, Material Shipping Record, Manifest, Asbestos Waste Shipment Record, etc.).

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massDOT Massachusetts Department of Transportation Highway Division

Number: P-22-002
Date: 9/23/22

POLICY DIRECTIVE

Jonathan Gulliver (signature on original)
HIGHWAY ADMINISTRATOR

Use of MassDOT Property for Staging and other Construction-Related Operations

Purpose

This Policy Directive is intended to address the use of MassDOT property by MassDOT Contractors for construction staging and other construction-related operations that are not specifically defined in the construction contract. Such use of MassDOT property will only be allowed if permitted by the District Office in accordance with 700 CMR 13.00, Approval of Access to MassDOT Highways and Other Property. This includes the use of MassDOT property for staging, laydown, and storage of equipment and materials, including soil excavated from a project site.

This Policy Directive requires the Contractor/applicant to obtain a Non-Vehicular Access Permit from MassDOT to use MassDOT property for these purposes.

This Policy Directive is effective immediately and applies to all MassDOT construction projects.

General Permit Considerations and Conditions

In addition to other normal MassDOT Access Permit procedures, MassDOT shall consider the following during the application, review, implementation and monitoring processes of Access Permits required by this Policy Directive:

- Storage and placement of the Contractor's equipment and materials should not be allowed within the clear zone of the roadway.
- Stockpiled soils should not be located within 500 feet of residential receptors, as defined herein to include, but not be limited to, residential dwellings, residentially zoned property, schools, daycare facilities, playgrounds, parks, recreational areas, hospitals, elderly housing and convalescent facilities.
- The Contractor/applicant shall identify the access/egress locations of the proposed storage areas. MassDOT will only approve locations determined to be safe for roadway users, construction workers and the general public.
- The Contractor may be required to submit a Traffic Management Plan and/or Lighting Plan for MassDOT review and approval as part of the permit application, depending on the proposed use of the area.

- The Contractor shall submit the permit application through MassDOT's online State Highway Access Permit System (SHAPS).
- MassDOT will waive the permit application fee for any application received from a MassDOT Contractor for any permit required by this Policy Directive and will waive any subsequent amendment and extension fees that may otherwise be required.
- MassDOT will review the permit application in accordance with applicable standard procedures and will apply standard permit terms and conditions, as necessary.
- The Resident Engineer will verify that the permit is approved before allowing the Contractor to use the affected area for the requested purpose.
- Areas permitted are for use by the approved applicant only and are not to be shared with or used by other vendors. Subcontractors specifically engaged with the applicant working on the specific MassDOT project will be allowed to use the area in accordance with the terms of the permit.
- Permits are issued on an annual basis and will require the Contractor to file for an extension each year to continue use.

Exemptions from Permit Requirements

Equipment and materials being used for active construction operations and located within the work zone of the construction contract are exempt from this permit requirement, provided they do not interfere with the safety or operation of the roadway or the work zone. Examples of these types of exempt uses are:

- Equipment and materials parked or stored within a protected (barriered) work zone.
- Materials placed in the work zone prior to same-day installation or use.
- Soils excavated temporarily and scheduled to be replaced, such as for trenching operations or for installation of drainage structures.

DOCUMENT B00420

PROPOSAL

LYNNFIELD

For: **Rail Trail Construction, from Ford Avenue to the Peabody City Line**

COMMONWEALTH OF MASSACHUSETTS

LOCATION

The work referred to herein is in the Town of LYNNFIELD in Essex County, in the Commonwealth of Massachusetts, and is shown by the locus map (Document 00331) in the Proposal Pamphlet, the work locations extend as follows:

Lynnfield Rail Trail

Beginning – Station 133+57.92.00 +/-
Ending –Station 229+45.00 +/-

The contract prices shall include the furnishing of all materials (except as otherwise herein specified), the performing of all the labor requisite or proper, the providing of all necessary machinery, tools, apparatus and other means of construction, the doing of all the abovementioned work in the manner set forth, described and shown in the specifications and on the drawings for the work, and in the form of contract, and the completion thereof within **614 CALENDAR DAYS** upon receipt of a Notice to Proceed,

The Work of this project is described by the following Items and quantities.

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Project # 613163	Contract # 135786			
Location : LYNNFIELD				
Description : Rail Trail Construction, from Ford Avenue to the Peabody City Line				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
101.	5.2	CLEARING AND GRUBBING AT _____ PER ACRE		
102.	2.4	SELECTIVE CLEARING AND THINNING AT _____ PER ACRE		
102.001	5	TREE TRIMMING CREW AT _____ PER DAY		
102.511	25	TREE PROTECTION - ARMORING AND PRUNING AT _____ EACH		
102.513	600	AIR EXCAVATION AND ROOT PRUNING AT _____ PER FOOT		
102.521	2,270	TREE AND PLANT PROTECTION FENCE AT _____ PER FOOT		
102.55	60	ARBORIST AT _____ PER HOUR		
114.4	1	DEMOLITION OF FORMER RAILROAD BRIDGE AT _____ LUMP SUM		
120.	4,000	EARTH EXCAVATION AT _____ PER CUBIC YARD		

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121.	105	CLASS A ROCK EXCAVATION AT _____ PER CUBIC YARD		
129.5	9,600	TRACK EXCAVATION AT _____ PER FOOT		
141.1	130	TEST PIT FOR EXPLORATION AT _____ PER CUBIC YARD		
142.	10	CLASS B TRENCH EXCAVATION AT _____ PER CUBIC YARD		
144.	40	CLASS B ROCK EXCAVATION AT _____ PER CUBIC YARD		
146.	1	DRAINAGE STRUCTURE REMOVED AT _____ EACH		
150.	920	ORDINARY BORROW AT _____ PER CUBIC YARD		
151.	5,550	GRAVEL BORROW AT _____ PER CUBIC YARD		
156.	51	CRUSHED STONE AT _____ PER TON		

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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
170.	22,300	FINE GRADING AND COMPACTING - SUBGRADE AREA AT _____ PER SQUARE YARD		
180.01	1	ENVIRONMENTAL HEALTH AND SAFETY PROGRAM AT _____ LUMP SUM		
180.02	40	PERSONAL PROTECTION LEVEL C UPGRADE AT _____ PER HOUR		
180.03	40	LICENSED SITE PROFESSIONAL SERVICES AT _____ PER HOUR		
181.11	210	DISPOSAL OF UNREGULATED SOIL AT _____ PER TON		
181.12	520	DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY AT _____ PER TON		
181.13	210	DISPOSAL OF REGULATED SOIL - OUT-OF-STATE FACILITY AT _____ PER TON		
181.14	105	DISPOSAL OF HAZARDOUS WASTE AT _____ PER TON		
184.1	600	DISPOSAL OF TREATED WOOD PRODUCTS AT _____ PER TON		

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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
201.	2	CATCH BASIN AT _____ EACH		
220.	1	DRAINAGE STRUCTURE ADJUSTED AT _____ EACH		
220.7	1	SANITARY STRUCTURE ADJUSTED AT _____ EACH		
222.1	1	FRAME AND GRATE - MASSDOT CASCADE TYPE AT _____ EACH		
227.3	7	REMOVAL OF DRAINAGE STRUCTURE SEDIMENT AT _____ PER CUBIC YARD		
227.31	155	REMOVAL OF DRAINAGE PIPE SEDIMENT AT _____ PER FOOT		
242.18	2	18 INCH REINFORCED CONCRETE PIPE FLARED END AT _____ EACH		
244.18	45	18 INCH REINFORCED CONCRETE PIPE CLASS V AT _____ PER FOOT		
358.	1	GATE BOX ADJUSTED AT _____ EACH		

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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
381.3	1	SERVICE BOX ADJUSTED AT _____ EACH		
402.	20	DENSE GRADED CRUSHED STONE FOR SUB-BASE AT _____ PER CUBIC YARD		
440.	133,200	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL AT _____ PER POUND		
443.	95	WATER FOR ROADWAY DUST CONTROL AT _____ PER 1000 GALLONS		
450.22	1,160	SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5) AT _____ PER TON		
450.23	20	SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) AT _____ PER TON		
450.32	1,950	SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) AT _____ PER TON		
450.42	40	SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5) AT _____ PER TON		
451.	5	HMA FOR PATCHING AT _____ PER TON		

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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
452.	975	ASPHALT EMULSION FOR TACK COAT AT _____ PER GALLON		
453.	1,085	HMA JOINT ADHESIVE AT _____ PER FOOT		
472.	10	TEMPORARY ASPHALT PATCHING AT _____ PER TON		
504.2	8	GRANITE CURB TYPE VA4 - SPLAYED END AT _____ EACH		
506.	150	GRANITE CURB TYPE VB - STRAIGHT AT _____ PER FOOT		
506.1	75	GRANITE CURB TYPE VB - CURVED AT _____ PER FOOT		
509.	120	GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - STRAIGHT AT _____ PER FOOT		
509.1	10	GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - CURVED AT _____ PER FOOT		
516.	1	GRANITE CURB CORNER TYPE A AT _____ EACH		

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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
594.	340	CURB REMOVED AND DISCARDED AT _____ PER FOOT		
595.	1	CURB INLET REMOVED AND DISCARDED AT _____ EACH		
628.304	2	TEMPORARY IMPACT ATTENUATOR, NON-REDIRECTIVE, TL-2 AT _____ EACH		
645.072	25	72 INCH CHAIN LINK FENCE (PIPE TOP RAIL) (LINE POST OPTION) AT _____ PER FOOT		
652.072	4	72 INCH CHAIN LINK FENCE END POST AT _____ EACH		
655.3	4,050	WOOD RAIL FENCE AT _____ PER FOOT		
655.5	290	WOOD RAIL FENCE WITH GUARDRAIL AT _____ PER FOOT		
657.	340	TEMPORARY FENCE AT _____ PER FOOT		
669.	85	FENCE REMOVED AND STACKED AT _____ PER FOOT		

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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
697.1	9	SILT SACK AT _____ EACH		
698.3	155	GEOTEXTILE FABRIC FOR SEPARATION AT _____ PER SQUARE YARD		
701.	200	CEMENT CONCRETE SIDEWALK AT _____ PER SQUARE YARD		
701.1	15	CEMENT CONCRETE SIDEWALK AT DRIVEWAYS AT _____ PER SQUARE YARD		
701.2	95	CEMENT CONCRETE PEDESTRIAN CURB RAMP AT _____ PER SQUARE YARD		
703.4	55	IMPRINT SYSTEM - MEDIAN AT _____ PER SQUARE YARD		
704.	10	STONE DUST WALKS AT _____ PER TON		
707.9	5	BICYCLE RACK AT _____ EACH		
710.4	1	BOUND - PLAIN GRANITE AT _____ EACH		

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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
710.52	6	GRANITE SEAT WALL AT _____ EACH		
710.53	1	INTERPRETIVE KIOSK – GRANITE BASE AT _____ EACH		
711.	10	BOUND REMOVED AND RESET AT _____ EACH		
716.1	1	INTERPRETIVE SIGN PANEL AT _____ EACH		
720.	2	GRANITE MILE MARKER POST AT _____ EACH		
720.2	16	GRANITE TENTH MILE MARKER AT _____ EACH		
722.2	1	SCHEDULE OF OPERATIONS (TYPE B) - FIXED PRICE $37,500 AT Thirty Seven Thousand Five Hundred Dollars LUMP SUM	$37,500.00	$37,500.00
740.	20	ENGINEER'S FIELD OFFICE AND EQUIPMENT (TYPE A) AT _____ PER MONTH		
748.	1	MOBILIZATION AT _____ LUMP SUM		

Project # 613163	Contract # 135786			
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751.	1,660	LOAM FOR ROADSIDES AT _____ PER CUBIC YARD		
751.7	15	COMPOST BLANKET AT _____ PER CUBIC YARD		
755.35	1	INLAND WETLAND REPLICATION AREA AT _____ LUMP SUM		
755.75	40	WETLAND SPECIALIST AT _____ PER HOUR		
756.	1	NPDES STORMWATER POLLUTION PREVENTION PLAN AT _____ LUMP SUM		
765.	11,800	SEEDING AT _____ PER SQUARE YARD		
767.121	11,100	SEDIMENT CONTROL BARRIER AT _____ PER FOOT		
772.1	16	MIXED EVERGREEN PLANTINGS AT SUMMER STREET AT _____ EACH		
772.2	34	MIXED EVERGREEN PLANTINGS AT FORD AVENUE AT _____ EACH		

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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
776.525	5	MAPLE - RED - 1-1.5 INCH CALIPER AT _____ EACH		
778.157	7	BIRCH - RIVER 1-1.5 INCH CALIPER AT _____ EACH		
793.714	7	COMMON SPICEBUSH 2-3 FEET AT _____ EACH		
796.769	12	SWAMP AZALEA 2-3 FEET AT _____ EACH		
796.771	11	HIGHBUSH BLUEBERRY 2-3 FEET AT _____ EACH		
796.772	6	ARROWWOOD 2-3 FEET AT _____ EACH		
799.1	1	TREE REMOVAL AND REPLACEMENT REPORTS WITHIN WETLAND RESOURCE AREAS AT _____ LUMP SUM		
799.11	10	TREE-DECIDUOUS 4-5 FEET HT AT _____ EACH		
799.12	10	TREE-DECIDUOUS-5-6 FEET HT AT _____ EACH		

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Description : Rail Trail Construction, from Ford Avenue to the Peabody City Line				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
799.13	10	TREE-EVERGREEN 4-5 FEET HT AT _____ EACH		
825.21	1	RRFB (2-POST ASSEMBLY SYSTEM) AT _____ EACH		
832.	155	WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A) AT _____ PER SQUARE FOOT		
847.1	40	SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY - STEEL AT _____ EACH		
850.41	40	ROADWAY FLAGGER AT _____ PER HOUR		
852.	550	SAFETY SIGNING FOR TRAFFIC MANAGEMENT AT _____ PER SQUARE FOOT		
852.11	100	TEMPORARY PEDESTRIAN BARRICADE AT _____ PER FOOT		
852.12	2	TEMPORARY PEDESTRIAN CURB RAMP AT _____ EACH		
853.1	4	PORTABLE BREAKAWAY BARRICADE TYPE III AT _____ EACH		

Project # 613163	Contract # 135786			
Location : LYNNFIELD				
Description : Rail Trail Construction, from Ford Avenue to the Peabody City Line				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
854.1	58	PAVEMENT MARKING REMOVAL AT _____ PER SQUARE FOOT		
856.060	50	ARROW BOARD (TYPE B) AT _____ PER DAY		
856.12	90	PORTABLE CHANGEABLE MESSAGE SIGN AT _____ PER DAY		
859.	1,800	REFLECTORIZED DRUM AT _____ PER DAY		
864.04	410	PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC) AT _____ PER SQUARE FOOT		
866.106	50	6 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) AT _____ PER FOOT		
866.112	510	12 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) AT _____ PER FOOT		
867.104	695	4 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC) AT _____ PER FOOT		
867.106	50	6 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC) AT _____ PER FOOT		

Project # 613163	Contract # 135786			
Location : LYNNFIELD				
Description : Rail Trail Construction, from Ford Avenue to the Peabody City Line				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
874.	11	STREET NAME SIGN AT _____ EACH		
874.2	5	TRAFFIC SIGN REMOVED AND RESET AT _____ EACH		
874.41	5	TRAFFIC SIGN REMOVED AND DISCARDED AT _____ EACH		
986.	90	MODIFIED ROCKFILL AT _____ PER TON		
Total Qty:	221,743.6			