KAL

COMMONWEALTH OF MASSACHUSETTS



CONTRACT DOCUMENTS AND SPECIAL PROVISIONS

PROPOSAL NO.	608940-133931
P.V. =	$3,226,000.00
PLANS	YES

FOR

Federal Aid Project No. HSI-0036(022)X

Intersection Improvements Boston Post Road (Route 20) at Wellesley Street

in the Town of

WESTON

In accordance with the STANDARD SPECIFICATIONS
for HIGHWAYS and BRIDGES dated 2025

This Proposal to be opened and read: **TUESDAY, APRIL 28, 2026 at 2:00 P.M.**

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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, APRIL 28, 2026 at 2:00 P.M. **
WESTON
Federal Aid Project No. HSI-0036(022)X
Intersection Improvements Boston Post Road (Route 20) at Wellesley Street
****Date Subject to Change**

PROJECT VALUE = $3,231,000.00

Bidders must be pre-qualified by the Department in the HIGHWAY - CONSTRUCTION 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 $640.00 per ton, Portland cement $425.13 per ton, diesel fuel $3.141 per gallon, and gasoline $2.270 per gallon, and Steel Base Price Index 362.6. 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, MARCH 28, 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.

<<<<<<<<<<>>>>>>>>>>

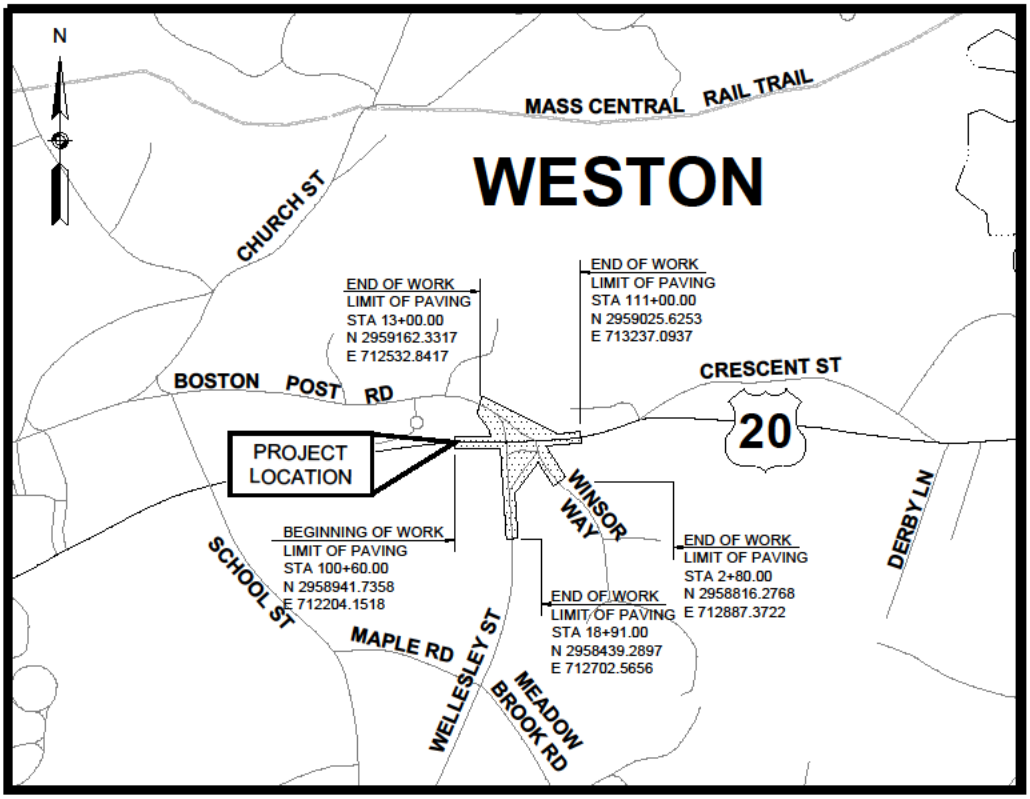
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DOCUMENT 00331

LOCUS MAP

WESTON
Federal Aid Project No. HSI-0036(022)X
Intersection Improvements Boston Post Road (Route 20) at Wellesley Street



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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

*** END OF DOCUMENT ***

DOCUMENT 00710
GENERAL CONTRACT PROVISIONS
Revised: 02-11-26

NOTICE OF AVAILABILITY

The STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES dated 2026, 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

SEPTEMBER 30, 2025

The 2025 *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 2.00: PROPOSAL REQUIREMENTS AND CONDITIONS

Subsection 2.09: Rejection of Proposals
Replace the first bullet in the third paragraph with the following:

- award of the contract would result in the Bidder exceeding the Aggregate Bonding Capacity or the Single Bonding Capacity established by its Surety Company, or the Bidder's Proposal exceeds its Single Contract Limit, or the Bidder was not prequalified in the specified class of work on or before the time of bid opening; or

SECTION 3.00: AWARD AND EXECUTION OF THE CONTRACT

Subsection 3.02: Award of Contract
Replace the third paragraph with the following:

The successful bidder will be notified by mail or otherwise that their bid has been accepted and that they have been awarded the Contract.

SECTION 7.00: LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

Subsection 7.01: Laws to be Observed
In paragraph 701.G Buy America Provisions change Federally-aid to Federal-aid.

Subsection 7.05: Insurance Requirements
Change the title of paragraph A to Workers' Compensation Insurance

Subsection 7.22: Labor, Lodging, Board, Maximum Hours of Employment, Weekly Payment, Keeping of Payroll Records.
Replace this subsection with the following;

Subsection 7.22: Labor, Lodging, Board; Maximum Hours of Employment; Minimum Wage Rates; Payment of Wages; Keeping of Payroll Records

Every employee in public work shall lodge, board and trade where and with whom he elects; and no person or their agents or employees under contract with the commonwealth, a county, city or town, or with a department, board, commission or officer acting therefor, for the doing of public work shall directly or indirectly require, as a condition of employment therein, that the employee shall lodge, board or trade at a particular place or with a particular person. This section shall be made a part of the contract for such employment. (M.G.L. c. 149, § 25).

Every contract, except for the purchase of material or supplies, involving the employment of laborers, workers, mechanics, foremen or inspectors, to which the commonwealth or any county or any town, subject to section thirty, is a party, shall contain a stipulation that no laborer, worker, mechanic, foreman or inspector working within the commonwealth, in the employ of the contractor, sub-contractor or other person doing or contracting to do the whole or a part of the work contemplated by the contract, shall be required or permitted to work more than eight hours in any one day or more than forty-eight hours in any one week, or more than six days in any one week, except in cases of emergency, or, in case any town subject to section thirty-one is a party to such a contract, more than eight hours in any one day, except as aforesaid; provided, that in contracts entered into by the department of highways [a predecessor agency to MassDOT] for the construction or reconstruction of highways there may be inserted in said stipulation a provision that said department, or any contractor or sub-contractor for said department, may employ laborers, workers, mechanics, foreman and inspectors for more than eight hours in any one day in such construction or reconstruction when, in the opinion of the commissioner [currently defined in M.G.L. c. 149, § 1 as the director of the Department of Labor Standards], public necessity so requires. Every such contract not containing the aforesaid stipulation shall be null and void. (M.G.L. c. 149, § 34).

Attention of Bidders is called to M.G.L. c. 149, § 26-27H (the Prevailing Wage Law), requiring that the rate per hour of the wages paid to mechanics and apprentices, teamsters, chauffeurs and laborers in the construction of public works shall not be less than the rate or rates of wages to be determined by the director of the department of labor standards, and M.G.L. c. 149, § 148 requiring the weekly or bi-weekly payment of employees.

The Contractor shall furnish certified copies of any or all payrolls for the Contract, showing the name, address, and occupational classification of each employee on said works, and the hours worked by, and the wages paid to each such employee. Such payroll shall also include the rates paid for rented trucks or rental equipment of any kind used on the work. This requirement shall also apply to the work of any Subcontractor, having a Subcontract for any of the work performed on the project. Such records shall be kept in such manner as the Director of Labor Standards shall prescribe, and shall be open to inspection by the Engineer or any authorized representative of the Department of Labor Standards at any reasonable time and as often as may be necessary.

SECTION 8.00: PROSECUTION AND PROGRESS

Subsection 8.01: Subletting or Assignment of Contract

In the first bullet of the third paragraph replace the title of Subsection 7.22 Labor, Lodging, Board; Maximum Hours of Employment; Minimum Wage Rates; Payment of Wages; Keeping of Payroll Records

SECTION 9.00: MEASUREMENT AND PAYMENT

Subsection 9.03: Payment for Extra Work

Replace 903.B, first paragraph, numbers (2) and (3) with the following.

(2) Plus 13 percent of direct labor, for the estimated costs of Federal Insurance Contribution Act (FICA) including Medicare; Federal Unemployment Tax Act (FUTA); State Unemployment Tax Act (SUTA), which includes Unemployment Insurance, the Workforce Training Fund Program,-Employer Medical Assistance Contribution, and COVID-19 Recovery Assessment; Earned Sick Time (EST) Law (940 CMR 33.00); and Paid Family and Medical Leave (PFML) Act (458 CMR 2.00); or, as an alternative to the above 13 percent, the Contractor may elect to use actual rates for FICA, FUTA, SUTA, EST and PFML provided the actual rates are supported with verifiable documentation and shall be subject to review by MassDOT Audit Operations.

(3) Plus the estimated cost of Workers' Compensation and Liability Insurance, Health, Welfare and Pension benefits, and such additional fringe benefits which the Contractor is required to pay as a result of Union Labor Agreements and/or is required by authorized governmental agencies;

In 903.B, second paragraph, number (3), replace the word "Workmen's" with "Workers'" .

DIVISION II

CONSTRUCTION DETAILS

SECTION 300: WATER SYSTEMS

SUBSECTION 301: WATER SYSTEMS

Subsection 301.60G: Laying Pipe
Revise the third paragraph to read as follows:

Pipe sections shall be laid with the bell on the upgrade end. Before laying the pipe, the outside of the spigot and the inside of the bell shall be wire brushed and wiped clean and dry.

Subsection 301.80: Method of Measurement
Delete the words cast iron in the first paragraph.

Replace the second paragraph with the following;

Fittings, consisting of bends, tees, caps, wyes, sleeves, reducers, increasers, blow-off fittings and other special fittings, apply only when new materials are necessary and which are not specifically provided for under other items in the Proposal. Fittings other than new will not be paid separately but only under the applicable pipe items. When new fittings are measured separately for payment, the length of pipe occupied by the fittings will not be measured for payment.

SECTION 700: INCIDENTAL WORK

SUBSECTION 715: RURAL MAIL BOXES REMOVED AND RESET

Subsection 715: Rural Mail Boxes Removed and Reset
Change the words mail box and mail boxes to the word mailbox or mailboxes where encountered in the title, and all subsections.

SECTION 800: TRAFFIC CONTROL DEVICES

SUBSECTION 850: TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE OPERATIONS

Subsection 850.29: Temporary Barrier and Temporary Barrier Removed and Reset
Delete this subsection.

Subsection 850.49: Temporary Barrier
Delete this subsection.

Subsection 850.69: Temporary Barrier and Temporary Barrier Removed and Reset
Delete this subsection.

Subsection 850.80: Method of Measurement
Delete the fifth paragraph from the end of this subsection.

Subsection 850.81: Basis of Payment
Delete the sixth and seventh paragraphs from the end of this subsection.

SUBSECTION 853: TEMPORARY BARRIER

Subsection 853.: Temporary Barrier
Add this new subsection:

DESCRIPTION

853.20: General

Work under this Subsection consists of furnishing, placing, adjusting, resetting, maintaining, and removing temporary barrier.

MATERIALS

853.40: General

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

Material	Section
Precast, Prestressed, and Prefabricated Concrete Products	M4.09.0
Temporary Barrier	M10.16.0
Limited Deflection Temporary Barrier	M10.16.1
Delineators for Temporary Barrier	M10.16.2

The Contractor shall supply a temporary barrier system that meets or exceeds the Test Level (TL) designated in the description of the bid item.

If the Contractor uses a proprietary temporary barrier system, it shall be listed on the QTCE.

Temporary barrier segments that appear to be damaged or in otherwise unsuitable condition may be rejected or ordered to be replaced by the Engineer at no additional cost.

853.41: Deflection

The deflection of a temporary barrier system is defined as the measured deflection, permanent and/or dynamic, during MASH Test Designation 2-11 (for TL-2) or Test Designation 3-11 (for TL-3).

The Contractor shall supply a temporary barrier system that is equal to or less than the maximum allowable deflection (permanent and/or dynamic) for each run of temporary barrier, as shown in the Plans or stated in the Special Provisions. If no distinction between permanent and temporary deflection is shown in the plans or Special Provisions, then dynamic deflection shall govern.

853.42: Precast Concrete Barriers

Precast Concrete Barriers used as temporary barriers shall be fabricated in accordance with M4.09.0: Precast, Prestressed, and Prefabricated Concrete Products. The Contractor shall submit a Certificate of Compliance (CoC) attesting to meeting this requirement.

853.43: Delineation

Delineators installed at 20-ft intervals throughout the entire barrier run shall be included. The delineators shall conform to M10.16.2: Delineators for Temporary Barrier. Delineators that may act as a washer on a bolted connection shall not be used unless specifically allowed by the barrier manufacturer. Delineators that are damaged, are no longer reflective, or go missing while temporary barrier is deployed shall be replaced in kind by the Contractor.

Delineators may be top or side-mounted to the barrier and oriented in a manner to maximize reflectivity to approaching traffic.

Temporary barrier placed on the right side of the travel way, or top-mounted and separating two or more lanes traveling in the same direction, shall use white delineators. Temporary barrier placed on the left side of the travel way shall use amber or yellow delineators; if separating two-way traffic and top-mounted, the delineator shall be double-sided.

853.44: Anchored Barrier

Temporary barrier systems that include an anchor system in order to meet performance requirements of the contract and/or meet MASH testing requirements may be accepted for use at the discretion of the Department.

Barrier that utilizes an anchor system shall use the same pattern, placement, and material of anchors that was used in MASH crash testing.

853.45: Shop Drawings

Within 30 days of the Notice to Proceed, the Contractor shall provide Shop Drawings showing the proposed temporary barrier system and confirming that it conforms to 853.40: General and will meet the allowable deflection requirements as described in 853.41: Deflection.

If anchors are proposed, the means, methods, pattern, placement, and materials for anchoring and subsequent pavement and/or deck repairs following removal of the temporary barrier system shall be included in the Shop Drawing submittal. If the use of an anchor system is rejected by the Department, the Contractor shall select an unanchored system that meets or exceeds the contract specified performance requirements, at no additional cost.

Shop Drawings for proprietary barrier systems shall include manufacturer's instructions for installation.

CONSTRUCTION METHODS

853.60: General

A Traffic Management Plan approved by the Department is required prior to the installation of the temporary barrier system.

The Contractor shall install temporary barrier systems in accordance with the Plans.

Barrier ends shall not be exposed to approaching traffic during installation. Crashworthy shielding or attenuation shall be provided at all times.

Proprietary temporary barrier systems shall be installed per the manufacturer's instructions.

The Contractor shall not place any breaks in the temporary barrier system that will result in sections that are shorter than the tested minimum length-of-need (LON) under MASH Test 2-11 (for TL-2) or 3-11 (for TL-3). Exceptions shall be allowed for gate systems or changeable length segments placed over expansion joints, if those barrier segment types have been determined to be crashworthy per MASH.

Temporary barrier shall not be placed on unpaved surfaces, unless otherwise shown in the Plans.

The Contractor shall not store materials, vehicles, or other equipment within the measured dynamic deflection envelope, as defined in 853.41: Deflection.

853.61: Temporary Barrier Removed and Reset

Temporary Barrier Removed and Reset consists of relocating a string of temporary barrier from one alignment to another to support the sequence and phasing of construction, as shown in the Plans.

Temporary Barrier Removed and Reset does not include moving all or a portion of the temporary barrier system to gain access to a work area, for the convenience of the Contractor, or to realign units that have moved due to construction activities or a traffic incident.

853.62: Quality Control Inspection

After temporary barrier installation is completed, the Contractor shall perform a Quality Control (QC) Inspection in the presence of the Engineer. QC Inspection activities shall include, but are not limited to the following reviews:

- Installation location per the approved Plans.
- Alignment and connection mechanism between adjacent barrier segments.
- Alignment and connection mechanism between barrier segment and attenuator, if present.
- Anchor system installation, if present.

For proprietary barrier systems, the QC Inspection shall also include any manufacturer-specific inspection details or criteria found in the installation instructions.

Work behind the barrier shall not commence until the QC Inspection has been accepted by the Engineer.

COMPENSATION

853.80: Method of Measurement

Temporary Barrier will be measured by the foot installed, in place.

Temporary Barrier Removed and Reset will be measured by the foot removed and reset.

853.81: Basis of Payment

Temporary Barrier will be paid for at the contract unit price per foot which shall provide full compensation for fabrication, storage, transport, furnishment, installation, delineation, alignment, maintenance, repair, and final removal of the temporary barrier.

Temporary Barrier Removed and Reset will be paid for at the contract unit price per foot which shall provide full compensation for removing, relocating, transporting, and installing new anchorage (if used). If more than one accepted temporary barrier system is approved for use in a single contract, the unit cost for Temporary Barrier Removed and Reset shall not differ among systems.

All costs associated with fabrication, installation, and maintenance of temporary barrier delineators shall be considered incidental to the cost of the item.

All costs associated with Shop Drawings and COCs shall be considered incidental to the item.

All costs associated with patching or repairing the road surface or bridge deck due to the installation and removal of temporary barrier and/or anchors for a temporary barrier system shall be considered incidental to the cost of the item.

853.82: Payment Items

Item number	Description	Unit
853.2	Temporary Barrier (TL-2)	Foot
853.21	Temporary Barrier Removed and Reset	Foot
853.23	Temporary Barrier (TL-3)	Foot
853.33	Temporary Barrier – Limited Deflection (TL-3)	Foot

SECTION 900: STRUCTURES

SUBSECTION 902: ULTRA HIGH PERFORMANCE CONCRETE

Subsection 902.32: Mockup

In Table 902.32-1 change the Link Slab width to 2 ft – 0 in. and change the Joint Header width to 0 ft – 6 in. .

Subsection 902.32: - 902.38

Renumber section 902.32 Surface Preparation to 902.33 Surface Preparation and renumber section 902.33 through 902.38 to 902.34 through 902.39.

DIVISION III

MATERIALS SPECIFICATIONS

SECTION M2: AGGREGATES AND RELATED MATERIALS

Subsection M2.01.0 Crushed Stone
Replace the fourth paragraph and the associated asterisk notes with the following;

The crushed stone shall have a maximum 45% wear as determined by the Los Angeles Abrasion Test (AASHTO T 96)

SECTION M5: PIPE, CULVERT SECTIONS AND CONDUIT

Subsection M5.01.0 Joint Materials for Pipe
Replace this subsection with the following;

- Jute or oakum furnished for use in pipe joints shall be of an accepted grade approved for common usage.
- Mortar shall conform to the requirements of M4.04.0: Cementitious Grout, Mortar and Concrete Products
- Standard couplers as approved by the manufacturer shall be used to join corrugated metal pipe
- Rubber ring or plastic gaskets for concrete pipe joints, or manholes section joints shall be of tough, flexible, chemical-resistant material, and of such size and shape as to ensure satisfactory pipe joints when incorporated in the work and shall conform to AWWA C153.
- Rubber gasket joints for ductile iron pipe shall be Styrene-Butadiene Rubber (SBR), Ethylene Propylene Diene Monomer (EPDM) or Nitrile and conform to AWWA C111

Subsection M5.05.03.B Gate Valves
Replace this subsection with the following;

Gate valves shall conform to the requirements of AWWA Standard C500 and/or to the type used by the municipality as specified in the Special Provisions.

SECTION M7: PAINTS, PROTECTIVE COATINGS AND PAVEMENT MARKINGS

Subsection M7.01.04 Fast Drying White and Yellow Waterborne Traffic Paint
Replace the subsection with the following;

Approved waterborne traffic paint shall be tested in accordance with AASHTO M 348 and be listed on the QCML The dry paint film shall be under the Toxicity Characteristic Leaching Procedure (TCLP) limits for all contaminants listed in 40 CFR 261.24. The markings shall be installed using reflective glass beads meeting the requirements of M7.01.07. For waterborne yellow paint use Organic Yellow No. 65 or No. 75 pigment.

SECTION M9: MISCELLANEOUS MATERIALS

Subsection M9.12.0 Reflectors for Barriers
Delete this subsection.

SECTION M10: TRAFFIC CONTROL DEVICES

Subsection M10.16.0: Temporary Barrier
Subsection M10.16.1: Limited Deflection Temporary Barrier
Subsection M10.16.2: Delineators for Temporary Barrier
Add these new subsections.

M10.16.0: Temporary Barrier

All Temporary Barrier shall be tested to MASH crash testing standards and the results of the following crash test designations must fall within the acceptable impact tolerances and evaluation criteria shown in Table 2-2A of MASH:

- Test Level 2: 2-10, 2-11
- Test Level 3: 3-10, 3-11

M10.16.1: Limited Deflection Temporary Barrier

To be classified as a Limited Deflection Temporary Barrier, the results of MASH Test Designation 3-11 must result in a measured dynamic deflection of 24 in. or less.

M10.16.2: Delineators for Temporary Barrier

Delineators for Temporary Barrier shall consist of a housing, retroreflective material, and an adhesive or mechanical fastener.

Housings for Delineators for Temporary Barrier shall be fabricated from a lightweight polymer material. Metal housings shall not be permitted.

Retroreflection shall be achieved using an acrylic reflector or retroreflective sheeting directly applied to the housing. If used, retroreflective sheeting shall be factory applied and conform to ASTM D4956 Type IV, Type V, or Type IX. A minimum of 8 $in.^2$ of reflective material shall be visible on any traffic-facing portion of the delineator.

Delineators shall be attached to temporary barriers using a manufacturer-approved adhesive or mechanical fastener.

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END OF SUPPLEMENTAL SPECIFICATIONS

DOCUMENT 00760

FHWA-1273 – Revised October 23, 2023

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Non-segregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
XI. Certification Regarding Use of Contract Funds for Lobbying
XII. 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. Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements 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 shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The 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, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

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. 23 CFR 633.102(d).

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 (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 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; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 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; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. 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. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurances Required:

a. The requirements of 49 CFR Part 26 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 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 are incorporated by reference. 49 CFR Part 21.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. 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 V, 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

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

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 IV. 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 FHWA-1273 in any subcontracts, 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.

V. 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.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) 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 IV 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.

VI. 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 Section VI 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 Section VI 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).

VII. 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).

VIII. 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."

IX. 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.

X. 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.

* * * * *

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.

* * * * *

XI. 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.

XII. 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 (23 CFR 633, Subpart B, Appendix B) 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 23 CFR 633.207(e) 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

March 25, 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	$0.56
2	ASTM A27 (AASHTO M103) Steel Castings, H-Pile Points & Pipe Pile Shoes (See Note below.)	$0.78
3	ASTM A668 / A668M (AASHTO M102) Steel Forgings	$0.78
4	ASTM A108 (AASHTO M169) Steel Forgings for Shear Studs	$0.80
5	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Plate	$0.84
6	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Shapes	$0.79
7	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Plate	$0.84
8	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Shapes	$0.79
9	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Plate	$0.87
10	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Shapes	$0.80
11	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W 345W Structural Steel Plate	$0.87
12	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W or 345W Structural Steel Shapes	$0.80
13	ASTM A709/A709M Grade HPS 50W / AASHTO M270M/M270 Grade HPS 50W or 345W Structural Steel Plate	$0.91
14	ASTM A709/A709M Grade HPS 70W / AASHTO M270M/M270 Grade HPS 70W or 485W Structural Steel Plate	$0.98
15	ASTM A514/A514M-05 Grade HPS 100W / AASHTO M270M/M270 Grade HPS 100W or 690W Structural Steel Plate	$1.50
16	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Plate	$0.87
17	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Shapes	$0.80
18	ASTM A276 Type 316 Stainless Steel	$4.51
19	ASTM A240 Type 316 Stainless Steel	$4.51
20	ASTM A148 Grade 80/50 Steel Castings (See Note below.)	$1.55
21	ASTM A53 Grade B Structural Steel Pipe	$0.98
22	ASTM A500 Grades A, B, 36 & 50 Structural Steel Pipe	$0.98
23	ASTM A252, Grades 240 (36 KSI) & 414 (60 KSI) Pipe Pile	$0.78
24	ASTM 252, Grade 2 Permanent Steel Casing	$0.78
25	ASTM A36 (AASHTO M183) for H-piles, steel supports and sign supports	$0.82
26	ASTM A328 / A328M, Grade 50 (AASHTO M202) Steel Sheetpiling	$1.48
27	ASTM A572 / A572M, Grade 50 Sheetpiling	$1.48
28	ASTM A36/36M, Grade 50	$0.84
29	ASTM A570, Grade 50	$0.82
30	ASTM A572 (AASHTO M223), Grade 50 H-Piles	$0.84
31	ASTM A1085 Grade A (50 KSI) Steel Hollow Structural Sections (HSS), heat-treated per ASTM A1085 Supplement S1	$0.98
32	AREA 140 LB Rail and Track Accessories	$0.51

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.

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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: 133931 **Project No.** 608940 **Federal Aid No.:** HSI-0036(022)X

Location: WESTON

Project Description: Intersection Improvements Boston Post Road (Route 20) at Wellesley Street

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:**	WESTON
Contract Number:	133931		
Description of Work:	WESTON - Federal Aid Project No. HSI-0036(022)X Intersection Improvements Boston Post Road (Route 20) at Wellesley Street		
Job Location:	Boston Post Road (Route 20) at Wellesley Street		

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	1/1/2026	$40.95	$16.17	$21.78	$0.00	$0.00	$78.90
	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	1/1/2026	$41.02	$16.17	$21.78	$0.00	$0.00	$78.97
	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	1/1/2026	$41.14	$16.17	$21.78	$0.00	$0.00	$79.09
	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"	12/1/2025	$41.22	$10.65	$9.75	$9.11	$0.00	$70.73
	6/1/2026	$42.66	$10.65	$9.75	$9.11	$0.00	$72.17
	12/1/2026	$44.10	$10.65	$9.75	$9.11	$0.00	$73.61
	6/1/2027	$45.55	$10.65	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$47.00	$10.65	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.50	$10.65	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$50.00	$10.65	$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)"	12/1/2025	$41.22	$10.65	$9.75	$9.21	$0.00	$70.83
	6/1/2026	$42.66	$10.65	$9.75	$9.21	$0.00	$72.27
	12/1/2026	$44.10	$10.65	$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"	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$9.75	$9.11	$0.00	$79.01
ASPHALT RAKER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2025	$40.72	$10.65	$9.75	$9.21	$0.00	$70.33
	6/1/2026	$42.16	$10.65	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.60	$10.65	$9.75	$9.21	$0.00	$73.21

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
ASPHALT/CONCRETE/CRUSHER PLANT-ON SITE	12/1/2025	$58.68	$16.55	$13.35	$3.25	$0.00	$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.98	$16.55	$13.35	$3.25	$0.00	$93.13
OPERATING ENGINEERS LOCAL 4	12/1/2026	$61.43	$16.55	$13.35	$3.25	$0.00	$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BACKHOE/FRONT-END LOADER	12/1/2025	$58.68	$16.55	$13.35	$3.25	$0.00	$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.98	$16.55	$13.35	$3.25	$0.00	$93.13
OPERATING ENGINEERS LOCAL 4	12/1/2026	$61.43	$16.55	$13.35	$3.25	$0.00	$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
BARCO-TYPE JUMPING TAMPER	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
LABORERS	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
LABORERS - ZONE 2	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER	12/1/2025	$41.22	$10.65	$9.75	$9.11	$0.00	$70.73
LABORERS	6/1/2026	$42.66	$10.65	$9.75	$9.11	$0.00	$72.17
LABORERS - ZONE 2	12/1/2026	$44.10	$10.65	$9.75	$9.11	$0.00	$73.61
	6/1/2027	$45.55	$10.65	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$47.00	$10.65	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.50	$10.65	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$50.00	$10.65	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY)	12/1/2025	$41.22	$10.65	$9.75	$9.21	$0.00	$70.83
LABORERS	6/1/2026	$42.66	$10.65	$9.75	$9.21	$0.00	$72.27
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$44.10	$10.65	$9.75	$9.21	$0.00	$73.71
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

Construction

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

Apprentice: BOILER MAKER

Effective Date: 1/1/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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) BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 (WALTHAM)	2/1/2026	$67.95	$12.84	$15.57	$8.02	$0.00	$104.38
	8/1/2026	$70.15	$12.84	$15.57	$8.02	$0.00	$106.58
	2/1/2027	$71.55	$12.84	$15.57	$8.02	$0.00	$107.98

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	12/1/2025	$58.02	$16.55	$13.35	$3.25	$0.00	$91.17
	6/1/2026	$59.30	$16.55	$13.35	$3.25	$0.00	$92.45
	12/1/2026	$60.74	$16.55	$13.35	$3.25	$0.00	$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
CAISSON & UNDERPINNING BOTTOM MAN LABORERS LABORERS - FOUNDATION AND MARINE	12/1/2025	$49.10	$10.65	$9.75	$9.80	$0.00	$79.30
	6/1/2026	$50.65	$10.65	$9.75	$9.80	$0.00	$80.85
	12/1/2026	$52.15	$10.65	$9.75	$9.80	$0.00	$82.35
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING LABORER LABORERS	12/1/2025	$47.95	$10.65	$9.75	$9.80	$0.00	$78.15
	6/1/2026	$49.50	$10.65	$9.75	$9.80	$0.00	$79.70

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS - FOUNDATION AND MARINE	12/1/2026	$51.00	$10.65	$9.75	$9.80	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING TOP MAN	12/1/2025	$48.28	$10.65	$9.75	$9.80	$0.00	$78.48
LABORERS	6/1/2026	$49.83	$10.65	$9.75	$9.80	$0.00	$80.03
LABORERS - FOUNDATION AND MARINE	12/1/2026	$51.33	$10.65	$9.75	$9.80	$0.00	$81.53
For apprentice rates see "Apprentice- LABORER"							
CARBIDE CORE DRILL OPERATOR	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
LABORERS	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
LABORERS - ZONE 2	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
CARPENTER	3/1/2026	$50.85	$11.08	$11.47	$8.50	$0.00	$81.90
CARPENTERS	9/1/2026	$52.10	$11.08	$11.47	$8.50	$0.00	$83.15
CARPENTERS -ZONE 2 (Eastern Massachusetts)	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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CARPENTER WOOD FRAME	10/1/2025	$27.37	$7.38	$4.47	$1.00	$0.00	$40.22
CARPENTERS	10/1/2026	$28.47	$7.38	$4.47	$1.00	$0.00	$41.32
CARPENTERS-ZONE 3 (Wood Frame)							
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
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	1/1/2026	$53.24	$13.35	$16.43	$7.78	$1.80	$92.60
PLASTERERS AND CEMENT MASONS LOCAL 534	7/1/2026	$54.49	$13.35	$16.43	$7.78	$1.80	$93.85
Plasterers and Cement Masons - Zone 1	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: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$26.62	$13.35	$16.43	$0.00	$0.00	$56.40
2	60.00	$31.94	$13.35	$16.43	$7.78	$1.80	$71.30
3	65.00	$34.61	$13.35	$16.43	$7.78	$1.80	$73.97
4	70.00	$37.27	$13.35	$16.43	$7.78	$1.80	$76.63

Construction

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

Apprentice: CEMENT MASONRY/PLASTERING

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
5	75.00	$39.93	$13.35	$16.43	$7.78	$1.80	$79.29
6	80.00	$42.59	$13.35	$16.43	$7.78	$1.80	$81.95
7	90.00	$47.92	$13.35	$16.43	$0.00	$0.00	$77.70

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 to Journeyworker Ratio: 1:5

CHAIN SAW OPERATOR LABORERS LABORERS - ZONE 2	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$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	12/1/2025	$59.88	$16.55	$13.35	$3.25	$0.00	$93.03
	6/1/2026	$61.21	$16.55	$13.35	$3.25	$0.00	$94.36
	12/1/2026	$62.69	$16.55	$13.35	$3.25	$0.00	$95.84
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
COMPRESSOR OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2025	$37.37	$16.55	$13.35	$3.25	$0.00	$70.52
	6/1/2026	$38.23	$16.55	$13.35	$3.25	$0.00	$71.38
	12/1/2026	$39.18	$16.55	$13.35	$3.25	$0.00	$72.33
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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: DELEADER (BRIDGE)							
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							
DEMO: ADZEMAN	12/1/2025	$48.00	$10.65	$9.75	$9.65	$0.00	$78.05
LABORERS	6/1/2026	$49.55	$10.65	$9.75	$9.65	$0.00	$79.60
LABORERS - ZONE 2	12/7/2026	$51.05	$10.65	$9.75	$9.65	$0.00	$81.10
	6/7/2027	$52.65	$10.65	$9.75	$9.65	$0.00	$82.70
	12/6/2027	$54.25	$10.65	$9.75	$9.65	$0.00	$84.30
	6/5/2028	$55.93	$10.65	$9.75	$9.65	$0.00	$85.98
	12/4/2028	$57.60	$10.65	$9.75	$9.65	$0.00	$87.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BACKHOE/LOADER/HAMMER OPERATOR	12/1/2025	$49.00	$10.65	$9.75	$9.65	$0.00	$79.05
LABORERS	6/1/2026	$50.55	$10.65	$9.75	$9.65	$0.00	$80.60
LABORERS - ZONE 2	12/7/2026	$52.05	$10.65	$9.75	$9.65	$0.00	$82.10
	6/7/2027	$53.65	$10.65	$9.75	$9.65	$0.00	$83.70
	12/6/2027	$55.25	$10.65	$9.75	$9.65	$0.00	$85.30
	6/5/2028	$56.93	$10.65	$9.75	$9.65	$0.00	$86.98
	12/4/2028	$58.60	$10.65	$9.75	$9.65	$0.00	$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BURNERS	12/1/2025	$48.75	$10.65	$9.75	$9.65	$0.00	$78.80
LABORERS	6/1/2026	$50.30	$10.65	$9.75	$9.65	$0.00	$80.35
LABORERS - ZONE 2	12/7/2026	$51.80	$10.65	$9.75	$9.65	$0.00	$81.85
	6/7/2027	$53.40	$10.65	$9.75	$9.65	$0.00	$83.45
	12/6/2027	$55.00	$10.65	$9.75	$9.65	$0.00	$85.05
	6/5/2028	$56.68	$10.65	$9.75	$9.65	$0.00	$86.73
	12/4/2028	$58.35	$10.65	$9.75	$9.65	$0.00	$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: CONCRETE CUTTER/SAWYER	12/1/2025	$49.00	$10.65	$9.75	$9.65	$0.00	$79.05
LABORERS	6/1/2026	$50.55	$10.65	$9.75	$9.65	$0.00	$80.60
LABORERS - ZONE 2	12/7/2026	$52.05	$10.65	$9.75	$9.65	$0.00	$82.10
	6/7/2027	$53.65	$10.65	$9.75	$9.65	$0.00	$83.70
	12/6/2027	$55.25	$10.65	$9.75	$9.65	$0.00	$85.30
	6/5/2028	$56.93	$10.65	$9.75	$9.65	$0.00	$86.98
	12/4/2028	$58.60	$10.65	$9.75	$9.65	$0.00	$88.65

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
For apprentice rates see "Apprentice- LABORER"							
DEMO: JACKHAMMER OPERATOR LABORERS LABORERS - ZONE 2	12/1/2025	$48.75	$10.65	$9.75	$9.65	$0.00	$78.80
	6/1/2026	$50.30	$10.65	$9.75	$9.65	$0.00	$80.35
	12/7/2026	$51.80	$10.65	$9.75	$9.65	$0.00	$81.85
	6/7/2027	$53.40	$10.65	$9.75	$9.65	$0.00	$83.45
	12/6/2027	$55.00	$10.65	$9.75	$9.65	$0.00	$85.05
	6/5/2028	$56.68	$10.65	$9.75	$9.65	$0.00	$86.73
	12/4/2028	$58.35	$10.65	$9.75	$9.65	$0.00	$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: WRECKING LABORER LABORERS LABORERS - ZONE 2	12/1/2025	$48.00	$10.65	$9.75	$9.65	$0.00	$78.05
	6/1/2026	$49.55	$10.65	$9.75	$9.65	$0.00	$79.60
	12/7/2026	$51.05	$10.65	$9.75	$9.65	$0.00	$81.10
	6/7/2027	$52.65	$10.65	$9.75	$9.65	$0.00	$82.70
	12/6/2027	$54.25	$10.65	$9.75	$9.65	$0.00	$84.30
	6/5/2028	$55.93	$10.65	$9.75	$9.65	$0.00	$85.98
	12/4/2028	$57.60	$10.65	$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	12/1/2025	$58.02	$16.55	$13.35	$3.25	$0.00	$91.17
	6/1/2026	$59.30	$16.55	$13.35	$3.25	$0.00	$92.45
	12/1/2026	$60.74	$16.55	$13.35	$3.25	$0.00	$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
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

Construction

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

ELEVATOR CONSTRUCTOR	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
ELEVATOR CONSTRUCTORS LOCAL 4							

Apprentice: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2026

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: 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
ELEVATOR CONSTRUCTORS LOCAL 4	1/1/2027	$56.39	$16.48	$11.16	$11.00	$0.00	$95.03
ELEVATOR CONSTRUCTORS LOCAL 4							
For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"							
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)	12/1/2025	$40.72	$10.65	$9.75	$9.21	$0.00	$70.33
LABORERS	6/1/2026	$42.16	$10.65	$9.75	$9.21	$0.00	$71.77
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$43.60	$10.65	$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	11/1/2025	$53.56	$16.05	$13.25	$3.25	$0.00	$86.11
OPERATING ENGINEERS LOCAL 4	5/1/2026	$55.00	$16.05	$13.25	$3.25	$0.00	$87.55
OPERATING ENGINEERS LOCAL 4	11/1/2026	$56.29	$16.05	$13.25	$3.25	$0.00	$88.84
	5/1/2027	$57.72	$16.05	$13.25	$3.25	$0.00	$90.27
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.PARTY CHIEF-BLDG,SITE,HVY/HWY	11/1/2025	$55.17	$16.05	$13.25	$3.25	$0.00	$87.72
OPERATING ENGINEERS LOCAL 4	5/1/2026	$56.62	$16.05	$13.25	$3.25	$0.00	$89.17
OPERATING ENGINEERS LOCAL 4	11/1/2026	$57.92	$16.05	$13.25	$3.25	$0.00	$90.47
	5/1/2027	$59.37	$16.05	$13.25	$3.25	$0.00	$91.92
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FIELD ENG.ROD PERSON-BLDG,SITE,HVY/HWY	11/1/2025	$26.03	$16.05	$13.25	$3.25	$0.00	$58.58
OPERATING ENGINEERS LOCAL 4	5/1/2026	$26.88	$16.05	$13.25	$3.25	$0.00	$59.43
OPERATING ENGINEERS LOCAL 4	11/1/2026	$27.64	$16.05	$13.25	$3.25	$0.00	$60.19
	5/1/2027	$28.49	$16.05	$13.25	$3.25	$0.00	$61.04

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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	9/1/2026	$68.78	$13.00	$14.69	$9.00	$0.00	$105.47
ELECTRICIANS LOCAL 103	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	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 see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"							
FIREMAN (ASST. ENGINEER)	12/1/2025	$47.09	$16.55	$13.35	$3.25	$0.00	$80.24
OPERATING ENGINEERS LOCAL 4	6/1/2026	$48.15	$16.55	$13.35	$3.25	$0.00	$81.30
OPERATING ENGINEERS LOCAL 4	12/1/2026	$49.33	$16.55	$13.35	$3.25	$0.00	$82.48
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
FLAGGER & SIGNALER (HEAVY & HIGHWAY)	12/1/2025	$28.09	$10.65	$9.75	$9.21	$0.00	$57.70
LABORERS	6/1/2026	$29.21	$10.65	$9.75	$9.21	$0.00	$58.82
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$29.21	$10.65	$9.75	$9.21	$0.00	$58.82
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	9/1/2026	$60.74	$10.33	$11.47	$8.80	$0.00	$91.34
FLOORCOVERERS LOCAL 2168 ZONE I	3/1/2027	$62.24	$10.33	$11.47	$8.80	$0.00	$92.84

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

Construction

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

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	12/1/2025	$58.68	$16.55	$13.35	$3.25	$0.00	$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.98	$16.55	$13.35	$3.25	$0.00	$93.13
OPERATING ENGINEERS LOCAL 4	12/1/2026	$61.43	$16.55	$13.35	$3.25	$0.00	$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
GENERATOR/LIGHTING PLANT/HEATERS	12/1/2025	$37.37	$16.55	$13.35	$3.25	$0.00	$70.52
OPERATING ENGINEERS LOCAL 4	6/1/2026	$38.23	$16.55	$13.35	$3.25	$0.00	$71.38
OPERATING ENGINEERS LOCAL 4	12/1/2026	$39.18	$16.55	$13.35	$3.25	$0.00	$72.33
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)							

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

HOISTING ENGINEER/CRANES/GRADALLS	12/1/2025	$58.68	$16.55	$13.35	$3.25	$0.00	$91.83

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.98	$16.55	$13.35	$3.25	$0.00	$93.13
OPERATING ENGINEERS LOCAL 4	12/1/2026	$61.43	$16.55	$13.35	$3.25	$0.00	$94.58

Apprentice: HOISTING ENGINEER/CRANES/GRADALLS

Effective Date: 12/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	$32.88	$0.00	$0.00	$0.00	$0.00	$32.88
2	60.00	$35.87	$16.05	$13.25	$3.25	$0.00	$68.42
3	65.00	$38.86	$16.05	$13.25	$3.25	$0.00	$71.41
4	70.00	$41.85	$16.05	$13.25	$3.25	$0.00	$74.40
5	75.00	$44.84	$16.05	$13.25	$3.25	$0.00	$77.39
6	80.00	$47.82	$16.05	$13.25	$3.25	$0.00	$80.37
7	85.00	$50.81	$16.05	$13.25	$3.25	$0.00	$83.36
8	90.00	$53.80	$16.05	$13.25	$3.25	$0.00	$86.35

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	$32.99	$0.00	$0.00	$0.00	$0.00	$32.99
2	60.00	$35.99	$16.55	$13.35	$3.25	$0.00	$69.14
3	65.00	$38.99	$16.55	$13.35	$3.25	$0.00	$72.14
4	70.00	$41.99	$16.55	$13.35	$3.25	$0.00	$75.14
5	75.00	$44.99	$16.55	$13.35	$3.25	$0.00	$78.14
6	80.00	$47.98	$16.55	$13.35	$3.25	$0.00	$81.13
7	85.00	$50.98	$16.55	$13.35	$3.25	$0.00	$84.13
8	90.00	$53.98	$16.55	$13.35	$3.25	$0.00	$87.13

Apprentice to Journeyworker Ratio: 1:6

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)	3/1/2026	$70.58	$13.95	$14.00	$9.55	$0.00	$108.08

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PIPEFITTERS LOCAL 537 PIPEFITTERS LOCAL 537							
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	12/1/2025	$41.22	$10.65	$9.75	$9.11	$0.00	$70.73
	6/1/2026	$42.66	$10.65	$9.75	$9.11	$0.00	$72.17
	12/1/2026	$44.10	$10.65	$9.75	$9.11	$0.00	$73.61
	6/1/2027	$45.55	$10.65	$9.75	$9.11	$0.00	$75.06
	12/1/2027	$47.00	$10.65	$9.75	$9.11	$0.00	$76.51
	6/1/2028	$48.50	$10.65	$9.75	$9.11	$0.00	$78.01
	12/1/2028	$50.00	$10.65	$9.75	$9.11	$0.00	$79.51
For apprentice rates see "Apprentice- LABORER"							
HYDRAULIC DRILLS (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2025	$41.22	$10.65	$9.75	$9.21	$0.00	$70.83
	6/1/2026	$42.66	$10.65	$9.75	$9.21	$0.00	$72.27
	12/1/2026	$44.10	$10.65	$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
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	9/16/2025	$57.87	$9.05	$12.75	$14.50	$0.00	$94.17

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
IRONWORKERS LOCAL 7 (BOSTON AREA)							

Apprentice: IRONWORKER/WELDER

Effective Date: 9/16/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$34.72	$9.05	$12.75	$4.50	$0.00	$61.02
2	75.00	$43.40	$9.05	$12.75	$4.50	$0.00	$69.70
3	85.00	$49.19	$9.05	$12.75	$4.50	$0.00	$75.49
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	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$9.75	$9.11	$0.00	$79.01

For apprentice rates see "Apprentice- LABORER"

LABORER LABORERS LABORERS - ZONE 2	12/1/2025	$40.47	$10.65	$9.75	$9.11	$0.00	$69.98
	6/1/2026	$41.91	$10.65	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.35	$10.65	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.80	$10.65	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.25	$10.65	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.75	$10.65	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.25	$10.65	$9.75	$9.11	$0.00	$78.76

Apprentice: LABORER

Effective Date: 12/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.03	$10.15	$9.50	$9.11	$0.00	$53.79
2	70.00	$29.20	$10.15	$9.50	$9.11	$0.00	$57.96
3	80.00	$33.38	$10.15	$9.50	$9.11	$0.00	$62.14
4	90.00	$37.55	$10.15	$9.50	$9.11	$0.00	$66.31

Apprentice: LABORER

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.15	$10.65	$9.75	$9.11	$0.00	$54.66

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
2	70.00	$29.34	$10.65	$9.75	$9.11	$0.00	$58.85
3	80.00	$33.53	$10.65	$9.75	$9.11	$0.00	$63.04
4	90.00	$37.72	$10.65	$9.75	$9.11	$0.00	$67.23

Apprentice to Journeyworker Ratio: 1:5

LABORER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2025	$40.47	$10.65	$9.75	$9.21	$0.00	$70.08
	6/1/2026	$41.91	$10.65	$9.75	$9.21	$0.00	$71.52
	12/1/2026	$43.35	$10.65	$9.75	$9.21	$0.00	$72.96

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 12/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.03	$10.15	$9.50	$9.21	$0.00	$53.89
2	70.00	$29.20	$10.15	$9.50	$9.21	$0.00	$58.06
3	80.00	$33.38	$10.15	$9.50	$9.21	$0.00	$62.24
4	90.00	$37.55	$10.15	$9.50	$9.21	$0.00	$66.41

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$25.15	$10.65	$9.75	$9.21	$0.00	$54.76
2	70.00	$29.34	$10.65	$9.75	$9.21	$0.00	$58.95
3	80.00	$33.53	$10.65	$9.75	$9.21	$0.00	$63.14
4	90.00	$37.72	$10.65	$9.75	$9.10	$0.00	$67.22

Apprentice to Journeyworker Ratio: 1:5

LABORER: CARPENTER TENDER LABORERS LABORERS - ZONE 2	12/1/2025	$40.47	$10.65	$9.75	$9.11	$0.00	$69.98
	6/1/2026	$41.91	$10.65	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.35	$10.65	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.80	$10.65	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.25	$10.65	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.75	$10.65	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.25	$10.65	$9.75	$9.11	$0.00	$78.76

For apprentice rates see "Apprentice- LABORER"

LABORER: CEMENT FINISHER TENDER LABORERS LABORERS - ZONE 2	12/1/2025	$40.47	$10.65	$9.75	$9.11	$0.00	$69.98
	6/1/2026	$41.91	$10.65	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.35	$10.65	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.80	$10.65	$9.75	$9.11	$0.00	$74.31

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2027	$46.25	$10.65	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.75	$10.65	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.25	$10.65	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS LABORERS - ZONE 2	12/1/2025	$40.56	$10.65	$9.75	$9.65	$0.00	$70.61
	6/1/2026	$42.00	$10.65	$9.75	$9.65	$0.00	$72.05
	12/7/2026	$43.44	$10.65	$9.75	$9.65	$0.00	$73.49
	6/7/2027	$44.89	$10.65	$9.75	$9.65	$0.00	$74.94
	12/6/2027	$46.34	$10.65	$9.75	$9.65	$0.00	$76.39
	6/5/2028	$47.84	$10.65	$9.75	$9.65	$0.00	$77.89
	12/4/2028	$49.34	$10.65	$9.75	$9.65	$0.00	$79.39
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER LABORERS LABORERS - ZONE 2	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$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)	12/1/2025	$40.72	$10.65	$9.75	$9.21	$0.00	$70.33
	6/1/2026	$42.16	$10.65	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.60	$10.65	$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	12/1/2025	$40.47	$10.65	$9.75	$9.11	$0.00	$69.98
	6/1/2026	$41.91	$10.65	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.35	$10.65	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.80	$10.65	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.25	$10.65	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.75	$10.65	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.25	$10.65	$9.75	$9.11	$0.00	$78.76
For apprentice rates see "Apprentice- LABORER"							
LABORER: TREE REMOVER LABORERS LABORERS - ZONE 2	12/1/2025	$40.47	$10.65	$9.75	$9.11	$0.00	$69.98
	6/1/2026	$41.91	$10.65	$9.75	$9.11	$0.00	$71.42
	12/1/2026	$43.35	$10.65	$9.75	$9.11	$0.00	$72.86
	6/1/2027	$44.80	$10.65	$9.75	$9.11	$0.00	$74.31
	12/1/2027	$46.25	$10.65	$9.75	$9.11	$0.00	$75.76
	6/1/2028	$47.75	$10.65	$9.75	$9.11	$0.00	$77.26
	12/1/2028	$49.25	$10.65	$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 incidental to construction . For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR LABORERS LABORERS - ZONE 2	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR (HEAVY & HIGHWAY)	12/1/2025	$40.72	$10.65	$9.75	$9.21	$0.00	$70.33
LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	6/1/2026	$42.16	$10.65	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.60	$10.65	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
MARBLE & TILE FINISHERS	2/1/2026	$52.08	$12.84	$15.57	$5.78	$0.00	$86.27
BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 - MARBLE & TILE	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	2/1/2026	$67.97	$12.84	$15.57	$7.99	$0.00	$104.37
BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 - MARBLE & TILE	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

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

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
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)	12/1/2025	$58.02	$16.55	$13.35	$3.25	$0.00	$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.30	$16.55	$13.35	$3.25	$0.00	$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.74	$16.55	$13.35	$3.25	$0.00	$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
MECHANICS MAINTENANCE	12/1/2025	$58.02	$16.55	$13.35	$3.25	$0.00	$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.30	$16.55	$13.35	$3.25	$0.00	$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.74	$16.55	$13.35	$3.25	$0.00	$93.89
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

Apprentice Notes

Step 1&2 Appr. indentured after 1/6/2020 receive no pension,

Apprentice to Journeyworker Ratio: 1:4

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
MORTAR MIXER LABORERS LABORERS - ZONE 2	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$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	12/1/2025	$25.08	$16.55	$13.35	$3.25	$0.00	$58.23
	6/1/2026	$25.67	$16.55	$13.35	$3.25	$0.00	$58.82
	12/1/2026	$26.34	$16.55	$13.35	$3.25	$0.00	$59.49
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OILER (TRUCK CRANES, GRADALLS) OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2025	$31.05	$16.55	$13.35	$3.25	$0.00	$64.20
	6/1/2026	$31.77	$16.55	$13.35	$3.25	$0.00	$64.92
	12/1/2026	$32.57	$16.55	$13.35	$3.25	$0.00	$65.72
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
OTHER POWER DRIVEN EQUIPMENT - CLASS II OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2025	$58.02	$16.55	$13.35	$3.25	$0.00	$91.17
	6/1/2026	$59.30	$16.55	$13.35	$3.25	$0.00	$92.45
	12/1/2026	$60.74	$16.55	$13.35	$3.25	$0.00	$93.89
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 PAINTERS LOCAL 35 - ZONE 2	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

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
3	60.00	$29.44	$10.35	$0.00	$7.56	$0.00	$47.35

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**					
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)	12/1/2025	$40.47	$10.65	$9.75	$9.21	$0.00	$70.08
	6/1/2026	$41.91	$10.65	$9.75	$9.21	$0.00	$71.52
	12/1/2026	$43.35	$10.65	$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	1/1/2026	$40.78	$16.17	$21.78	$0.00	$0.00	$78.73
	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	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
PIPELAYER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2025	$40.72	$10.65	$9.75	$9.21	$0.00	$70.33
	6/1/2026	$42.16	$10.65	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.60	$10.65	$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	$73.89	$14.32	$12.61	$8.00	$0.00	$108.82
	8/31/2026	$76.04	$14.32	$12.61	$8.00	$0.00	$110.97
	3/1/2027	$78.19	$14.32	$12.61	$8.00	$0.00	$113.12
	8/30/2027	$80.34	$14.32	$12.61	$8.00	$0.00	$115.27
	2/28/2028	$82.54	$14.32	$12.61	$8.00	$0.00	$117.47
	9/4/2028	$84.74	$14.32	$12.61	$8.00	$0.00	$119.67
	3/5/2029	$86.94	$14.32	$12.61	$8.00	$0.00	$121.87

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	9/3/2029	$89.14	$14.32	$12.61	$8.00	$0.00	$124.07
	3/4/2030	$91.09	$14.32	$12.61	$8.00	$0.00	$126.02

Apprentice: PLUMBERS & GASFITTERS

Effective Date: 3/2/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	35.00	$25.86	$14.32	$4.61	$2.80	$0.00	$47.59
2	40.00	$29.56	$14.32	$5.22	$3.20	$0.00	$52.30
3	55.00	$40.64	$14.32	$7.07	$4.40	$0.00	$66.43
4	65.00	$48.03	$14.32	$8.30	$5.20	$0.00	$75.85
5	75.00	$55.42	$14.32	$9.53	$6.00	$0.00	$85.27

Apprentice: PLUMBERS & GASFITTERS

Effective Date: 8/31/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	35.00	$26.61	$14.32	$4.61	$2.80	$0.00	$48.34
2	40.00	$30.42	$14.32	$5.22	$3.20	$0.00	$53.16
3	55.00	$41.82	$14.32	$7.07	$5.20	$0.00	$68.41
4	65.00	$49.43	$14.32	$8.30	$5.20	$0.00	$77.25
5	75.00	$57.03	$14.32	$9.53	$6.00	$0.00	$86.88

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	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$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)	12/1/2025	$40.72	$10.65	$9.75	$9.21	$0.00	$70.33
	6/1/2026	$42.16	$10.65	$9.75	$9.21	$0.00	$71.77
	12/1/2026	$43.60	$10.65	$9.75	$9.21	$0.00	$73.21

For apprentice rates see "Apprentice- LABORER (Heavy and Highway)

POWDERMAN & BLASTER LABORERS LABORERS - ZONE 2	12/1/2025	$41.47	$10.65	$9.75	$9.11	$0.00	$70.98
	6/1/2026	$42.91	$10.65	$9.75	$9.11	$0.00	$72.42
	12/1/2026	$44.35	$10.65	$9.75	$9.11	$0.00	$73.86
	6/1/2027	$45.80	$10.65	$9.75	$9.11	$0.00	$75.31
	12/1/2027	$47.25	$10.65	$9.75	$9.11	$0.00	$76.76

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/1/2028	$48.75	$10.65	$9.75	$9.11	$0.00	$78.26
	12/1/2028	$50.25	$10.65	$9.75	$9.11	$0.00	$79.76
For apprentice rates see "Apprentice- LABORER"							
POWDERMAN & BLASTER (HEAVY & HIGHWAY)	12/1/2025	$41.47	$10.65	$9.75	$9.21	$0.00	$71.08
LABORERS	6/1/2026	$42.91	$10.65	$9.75	$9.21	$0.00	$72.52
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$44.35	$10.65	$9.75	$9.21	$0.00	$73.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
POWER SHOVEL/DERRICK/TRENCHING MACHINE	12/1/2025	$58.68	$16.55	$13.35	$3.25	$0.00	$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.98	$16.55	$13.35	$3.25	$0.00	$93.13
OPERATING ENGINEERS LOCAL 4	12/1/2026	$61.43	$16.55	$13.35	$3.25	$0.00	$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (CONCRETE)	12/1/2025	$58.02	$16.55	$13.35	$3.25	$0.00	$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.30	$16.55	$13.35	$3.25	$0.00	$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.74	$16.55	$13.35	$3.25	$0.00	$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (DEWATERING, OTHER)	12/1/2025	$37.37	$16.55	$13.35	$3.25	$0.00	$70.52
OPERATING ENGINEERS LOCAL 4	6/1/2026	$38.23	$16.55	$13.35	$3.25	$0.00	$71.38
OPERATING ENGINEERS LOCAL 4	12/1/2026	$39.18	$16.55	$13.35	$3.25	$0.00	$72.33
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
READY MIX CONCRETE DRIVERS after 4/30/12	8/1/2022	$30.40	$11.91	$15.25	$0.00	$0.00	$57.56
(Drivers Hired After 4/30/2012)							
TEAMSTERS 25 (Suburban) - Aggregate							
TEAMSTERS 25 (Suburban) - Aggregate							
READY-MIX CONCRETE DRIVER	8/1/2022	$30.50	$11.91	$15.25	$0.00	$0.00	$57.66
TEAMSTERS 25 (Suburban) - Aggregate							
TEAMSTERS 25 (Suburban) - Aggregate							
RECLAIMERS	12/1/2025	$58.02	$16.55	$13.35	$3.25	$0.00	$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.30	$16.55	$13.35	$3.25	$0.00	$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.74	$16.55	$13.35	$3.25	$0.00	$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
RIDE-ON MOTORIZED BUGGY OPERATOR	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
LABORERS	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
LABORERS - ZONE 2	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
ROLLER/SPREADER/MULCHING MACHINE	12/1/2025	$58.02	$16.55	$13.35	$3.25	$0.00	$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.30	$16.55	$13.35	$3.25	$0.00	$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.74	$16.55	$13.35	$3.25	$0.00	$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg) ROOFERS LOCAL 33 ROOFERS LOCAL 33	2/1/2026	$53.53	$14.53	$12.67	$9.03	$0.00	$89.76

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
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	1/1/2026	$41.24	$16.17	$21.78	$0.00	$0.00	$79.19
	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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
SPECIALIZED EARTH MOVING EQUIP > 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	$41.53	$16.17	$21.78	$0.00	$0.00	$79.48
	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 SPRINKLER FITTERS LOCAL 550 - (Section A) Zone 1	1/1/2026	$72.05	$13.45	$7.45	$18.25	$0.00	$111.20

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 OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2025	$58.02	$16.55	$13.35	$3.25	$0.00	$91.17
	6/1/2026	$59.30	$16.55	$13.35	$3.25	$0.00	$92.45
	12/1/2026	$60.74	$16.55	$13.35	$3.25	$0.00	$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TAMPERS, SELF-PROPELLED OR TRACTOR DRAWN OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS LOCAL 4	12/1/2025	$58.02	$16.55	$13.35	$3.25	$0.00	$91.17
	6/1/2026	$59.30	$16.55	$13.35	$3.25	$0.00	$92.45
	12/1/2026	$60.74	$16.55	$13.35	$3.25	$0.00	$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TELECOMMUNICATION TECHNICIAN TELECOMMUNICATION TECHNICIAN ELECTRICIANS LOCAL 103 ELECTRICIANS LOCAL 103	3/1/2026	$53.49	$13.00	$14.23	$7.20	$0.00	$87.92
	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 and ratios see "Apprentice- ELECTRICIAN"							

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
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
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

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	12/1/2025	$51.95	$10.65	$9.75	$9.80	$0.00	$82.15
LABORERS	6/1/2026	$53.50	$10.65	$9.75	$9.80	$0.00	$83.70
LABORERS - FOUNDATION AND MARINE	12/1/2026	$55.00	$10.65	$9.75	$9.80	$0.00	$85.20
For apprentice rates see "Apprentice- LABORER"							
TEST BORING DRILLER HELPER	12/1/2025	$48.07	$10.65	$9.75	$9.80	$0.00	$78.27
LABORERS	6/1/2026	$49.62	$10.65	$9.75	$9.80	$0.00	$79.82
LABORERS - FOUNDATION AND MARINE	12/1/2026	$51.12	$10.65	$9.75	$9.80	$0.00	$81.32
For apprentice rates see "Apprentice- LABORER"							
TEST BORING LABORER	12/1/2025	$47.95	$10.65	$9.75	$9.80	$0.00	$78.15
LABORERS	6/1/2026	$49.50	$10.65	$9.75	$9.80	$0.00	$79.70
LABORERS - FOUNDATION AND MARINE	12/1/2026	$51.00	$10.65	$9.75	$9.80	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"							
TRACTORS/PORTABLE STEAM GENERATORS	12/1/2025	$58.02	$16.55	$13.35	$3.25	$0.00	$91.17
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.30	$16.55	$13.35	$3.25	$0.00	$92.45
OPERATING ENGINEERS LOCAL 4	12/1/2026	$60.74	$16.55	$13.35	$3.25	$0.00	$93.89
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TRAILERS FOR EARTH MOVING EQUIPMENT	1/1/2026	$41.82	$16.17	$21.78	$0.00	$0.00	$79.77
TEAMSTERS JOINT COUNCIL NO. 10	6/1/2026	$42.82	$16.17	$21.78	$0.00	$0.00	$80.77
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	12/1/2025	$60.18	$10.65	$9.75	$10.25	$0.00	$90.83
LABORERS	6/1/2026	$61.73	$10.65	$9.75	$10.25	$0.00	$92.38
LABORERS (COMPRESSED AIR)	12/1/2026	$63.23	$10.65	$9.75	$10.25	$0.00	$93.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)	12/1/2025	$62.18	$10.65	$9.75	$10.25	$0.00	$92.83
LABORERS	6/1/2026	$63.73	$10.65	$9.75	$10.25	$0.00	$94.38
LABORERS (COMPRESSED AIR)	12/1/2026	$65.23	$10.65	$9.75	$10.25	$0.00	$95.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR	12/1/2025	$52.25	$10.65	$9.75	$10.25	$0.00	$82.90

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS	6/1/2026	$53.80	$10.65	$9.75	$10.25	$0.00	$84.45
LABORERS (FREE AIR TUNNEL)	12/1/2026	$55.30	$10.65	$9.75	$10.25	$0.00	$85.95
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR (HAZ. WASTE)	12/1/2025	$54.25	$10.65	$9.75	$10.25	$0.00	$84.90
LABORERS	6/1/2026	$55.80	$10.65	$9.75	$10.25	$0.00	$86.45
LABORERS (FREE AIR TUNNEL)	12/1/2026	$57.30	$10.65	$9.75	$10.25	$0.00	$87.95
For apprentice rates see "Apprentice- LABORER"							
VAC-HAUL	1/1/2026	$41.24	$16.17	$21.78	$0.00	$0.00	$79.19
TEAMSTERS JOINT COUNCIL NO. 10	6/1/2026	$42.24	$16.17	$21.78	$0.00	$0.00	$80.19
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	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
WAGON DRILL OPERATOR	12/1/2025	$40.72	$10.65	$9.75	$9.11	$0.00	$70.23
LABORERS	6/1/2026	$42.16	$10.65	$9.75	$9.11	$0.00	$71.67
LABORERS - ZONE 2	12/1/2026	$43.60	$10.65	$9.75	$9.11	$0.00	$73.11
	6/1/2027	$45.05	$10.65	$9.75	$9.11	$0.00	$74.56
	12/1/2027	$46.50	$10.65	$9.75	$9.11	$0.00	$76.01
	6/1/2028	$48.00	$10.65	$9.75	$9.11	$0.00	$77.51
	12/1/2028	$49.50	$10.65	$9.75	$9.11	$0.00	$79.01
For apprentice rates see "Apprentice- LABORER"							
WAGON DRILL OPERATOR (HEAVY & HIGHWAY)	12/1/2025	$40.72	$10.65	$9.75	$9.21	$0.00	$70.33
LABORERS	6/1/2026	$42.16	$10.65	$9.75	$9.21	$0.00	$71.77
LABORERS - ZONE 2 (HEAVY & HIGHWAY)	12/1/2026	$43.60	$10.65	$9.75	$9.21	$0.00	$73.21
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
WASTE WATER PUMP OPERATOR	12/1/2025	$58.68	$16.55	$13.35	$3.25	$0.00	$91.83
OPERATING ENGINEERS LOCAL 4	6/1/2026	$59.98	$16.55	$13.35	$3.25	$0.00	$93.13
OPERATING ENGINEERS LOCAL 4	12/1/2026	$61.43	$16.55	$13.35	$3.25	$0.00	$94.58
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
WATER METER INSTALLER	3/2/2026	$73.89	$14.32	$12.61	$8.00	$0.00	$108.82
PLUMBERS & GASFITTERS LOCAL 12	8/31/2026	$76.04	$14.32	$12.61	$8.00	$0.00	$110.97
PLUMBERS & GASFITTERS LOCAL 12	3/1/2027	$78.19	$14.32	$12.61	$8.00	$0.00	$113.12
	8/30/2027	$80.34	$14.32	$12.61	$8.00	$0.00	$115.27
	2/2/2028	$82.54	$14.32	$12.61	$8.00	$0.00	$117.47
	9/4/2028	$84.74	$14.32	$12.61	$8.00	$0.00	$119.67
	3/5/2029	$86.94	$14.32	$12.61	$8.00	$0.00	$121.87
	9/3/2029	$89.14	$14.32	$12.61	$8.00	$0.00	$124.07
	3/4/2030	$91.09	$14.32	$12.61	$8.00	$0.00	$126.02
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"							

Outside Electrical

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CABLE TECHNICIAN (Power Zone)	8/31/2025	$36.55	$10.75	$1.10	$1.00	$0.00	$49.40
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/30/2026	$38.13	$11.00	$1.14	$1.00	$0.00	$51.27
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/29/2027	$39.65	$11.25	$1.19	$1.00	$0.00	$53.09
For apprentice rates see "Apprentice- LINEMAN"							
CABLEMAN (Underground Ducts & Cables)	8/31/2025	$51.78	$10.75	$1.55	$10.71	$0.00	$74.79
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/30/2026	$54.02	$11.00	$1.62	$11.14	$0.00	$77.78
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/29/2027	$56.17	$11.25	$1.69	$11.57	$0.00	$80.68
For apprentice rates see "Apprentice- LINEMAN"							
DRIVER / GROUNDMAN CDL	8/31/2025	$42.64	$10.75	$1.28	$10.45	$0.00	$65.12
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/30/2026	$44.49	$11.00	$1.33	$10.80	$0.00	$67.62
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/29/2027	$46.26	$11.25	$1.39	$11.15	$0.00	$70.05
For apprentice rates see "Apprentice- LINEMAN"							
DRIVER / GROUNDMAN -Inexperienced (<2000 Hrs)	8/31/2025	$33.51	$10.75	$1.01	$1.00	$0.00	$46.27
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/30/2026	$34.95	$11.00	$1.05	$1.00	$0.00	$48.00
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/29/2027	$36.64	$11.25	$1.09	$1.00	$0.00	$49.98
For apprentice rates see "Apprentice- LINEMAN"							
EQUIPMENT OPERATOR (Class A CDL)	8/31/2025	$51.78	$10.75	$1.55	$14.79	$0.00	$78.87
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/30/2026	$54.02	$11.00	$1.62	$15.22	$0.00	$81.86
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/29/2027	$56.17	$11.25	$1.69	$15.65	$0.00	$84.76
For apprentice rates see "Apprentice- LINEMAN"							
EQUIPMENT OPERATOR (Class B CDL)	8/31/2025	$45.69	$10.75	$1.37	$11.27	$0.00	$69.08
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/30/2026	$47.66	$11.00	$1.43	$11.65	$0.00	$71.74
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/29/2027	$49.56	$11.25	$1.49	$12.03	$0.00	$74.33
For apprentice rates see "Apprentice- LINEMAN"							
GROUNDMAN	8/31/2025	$33.51	$10.75	$1.01	$1.00	$0.00	$46.27
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/30/2026	$34.95	$11.00	$1.05	$1.00	$0.00	$48.00
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/29/2027	$36.34	$11.25	$1.09	$1.00	$0.00	$49.68
For apprentice rates see "Apprentice- LINEMAN"							
GROUNDMAN -Inexperienced (<2000 Hrs.)	8/31/2025	$27.41	$10.75	$0.82	$1.00	$0.00	$39.98
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/30/2026	$28.60	$11.00	$0.86	$1.00	$0.00	$41.46
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/29/2027	$29.74	$11.25	$0.89	$1.00	$0.00	$42.88
For apprentice rates see "Apprentice- LINEMAN"							
JOURNEYMAN LINEMAN	8/31/2025	$60.92	$10.75	$1.83	$18.00	$0.00	$91.50
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/30/2026	$63.55	$11.00	$1.91	$18.50	$0.00	$94.96
OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	8/29/2027	$66.08	$11.25	$1.98	$19.00	$0.00	$98.31

Apprentice: JOURNEYMAN LINEMAN

Effective Date: 8/31/2025

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

Outside Electrical

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

Apprentice: JOURNEYMAN LINEMAN

Effective Date: 8/31/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
2	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
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
7	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Apprentice: JOURNEYMAN LINEMAN

Effective Date: 8/30/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
2	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
3	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
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
7	0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00

Apprentice to Journeyworker Ratio: 1:2

TELEDATA CABLE SPLICER OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	2/4/2019	$30.73	$4.70	$0.92	$2.25	$0.00	$38.60
TELEDATA LINEMAN/EQUIPMENT OPERATOR OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	2/4/2019	$28.93	$4.70	$0.89	$2.25	$0.00	$36.77
TELEDATA WIREMAN/INSTALLER/TECHNICIAN OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104 OUTSIDE ELECTRICAL WORKERS - EAST LOCAL 104	2/4/2019	$28.93	$4.70	$0.89	$2.25	$0.00	$36.77

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.

DOCUMENT 00870

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

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"General Decision Number: MA20260021 01/02/2026

Superseded General Decision Number: MA20250021

State: Massachusetts

Construction Type: Highway

County: Middlesex County in Massachusetts.

HIGHWAY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	01/02/2026

ELEC0103-007 09/01/2025

	Rates	Fringes
ELECTRICIAN	$ 66.17	37.08

ENGI0004-026 06/01/2025

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
Group 1	$ 57.83	33.70
Group 2	$ 57.18	33.70

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

POWER EQUIPMENT OPERATORS CLASSIFICATIONS
Group 1: Backhoe/Excavator/Trackhoe; Bobcat/Skid Steer/Skid Loader; Broom/Sweeper; Gradall; Loader; Paver (Asphalt, Aggregate, and Concrete)
Group 2: Bulldozer; Grader/Blade; Milling Machine; Roller

IRON0007-031 09/16/2025

	Rates	Fringes
IRONWORKER (ORNAMENTAL, REINFORCING, AND STRUCTURAL)	$ 57.87	37.67

LABO0039-002 06/01/2018

	Rates	Fringes
LABORER		
Asphalt, Includes Raker, Shoveler, Spreader and Distributor	$ 33.50	22.92
Landscape	$ 33.25	22.92

PAIN0035-023 07/01/2024

	Rates	Fringes
PAINTER (Steel)	$ 56.76	36.00

SUMA2014-011 01/11/2017

	Rates	Fringes
CARPENTER, Includes Form Work	$ 47.93	19.46
CEMENT MASON/CONCRETE FINISHER	$ 56.70	21.08
LABORER: Common or General	$ 36.58	19.40
LABORER: Concrete Saw (Hand Held/Walk Behind)	$ 41.78	18.37
LABORER: Guardrail Installation	$ 37.70	15.37
OPERATOR: Crane	$ 57.61	0.00
OPERATOR: Forklift	$ 64.67	0.00
OPERATOR: Mechanic	$ 48.14	17.02
OPERATOR: Piledriver	$ 44.46	16.94
OPERATOR: Post Driver (Guardrail/Fences)	$ 41.49	23.07
PAINTER: Spray (Linestriping)	$ 40.87	13.86
PILEDRIVERMAN	$ 45.65	23.33
TRAFFIC CONTROL: Flagger	$ 23.00	20.44

TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper	$ 44.49	12.41
TRUCK DRIVER: Concrete Truck	$ 33.69	15.79
TRUCK DRIVER: Dump Truck	$ 38.92	9.73
TRUCK DRIVER: Flatbed Truck	$ 48.53	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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 $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025. 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

WESTON
Federal Aid Project No. HSI-0036(022)X

Intersection Improvements Boston Post Road (Route 20) at Wellesley Street

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 *Construction Standard Details* in effect as of January 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 proposed project consists of the installation of a new traffic signal system at intersection of Route 20 at Boston Post Road and Wellesley Street in Weston, MA. The work includes geometric revisions to the intersection to reduce driver confusion; installation of buffered bicycle lanes; sidewalk reconstruction; new crosswalks; pavement fine mill / overlay; drainage modifications; and pavement markings/signage.

The proposed project consists of two corridors: Route 20 and Boston Post Road / Wellesley Street. The Route 20 project limits start approximately 500 feet west and ends approximately 550 feet east of the intersection with Boston Post Road and Wellesley Street. For Boston Post Road and Wellesley Street project limits start approximately 300 feet north on Boston Post Road and ends approximately 350 feet south on Wellesley Street of the intersection with Route 20. The proposed project also includes full depth reconstruction for approximately 250 feet of private way called "Winsor Way" located east of Wellesley Street.

Additional work includes unclassified excavation, full depth hot mix asphalt pavement, hot mix asphalt sidewalks, hot mix asphalt driveways, granite curb, highway guard, balanced stone wall, fence, landscaping and other incidental work.

SUBSECTION 7.05 INSURANCE REQUIREMENTS

The insurance requirements set forth in this subsection are in addition to the requirements of the Standard Specifications.

7.05.B: Public Liability Insurance 1. and 7.05.B: Public Liability Insurance 2.

The Massachusetts Department of Transportation and applicable railroads shall be named as additional insureds.

7.05.B: Public Liability Insurance 4.

Asbestos Liability Insurance shall be obtained for this project. The Contractor and the Massachusetts Department of Transportation shall be named as additional insureds.

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.

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 8.02 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.

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.

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.

By December 31, 2025, 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.

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.

SUBSECTION 8.14 (Continued)

- 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.

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.

SUBSECTION 8.14 (Continued)

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.

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)

SUBSECTION 8.14 (Continued)

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.

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.

SOIL MANAGEMENT

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.

WORK ACCESS – DISTRICT 6

These procedures shall reestablish the District's guidelines regarding the submission and administration of Access Work Requests and meetings within the District. All parties requesting access to the District 6 Right of Way (including MHS), shall adhere to the following procedures (whether an in-house or out-house request.) All out-house or third-party requests shall be submitted under an active Contract; Permit, or other approved document allowing or requiring the need to request access. Access Work Requests will be approved on a weekly basis.

The Contractor is required to complete an "Access Work Request" form and submit the completed form via email to District6AWRequest@dot.state.ma.us by noontime Wednesday of the week preceding the work (unless otherwise noted). Forms which are incorrectly filled out, submitted beyond this time or outside this email address will not be accepted.

Access Work Requests shall be initialed by the respective DOT representative where applicable. The "Representative" shall refer to the person who is responsible for overseeing the respective operation(s) requestion access. (i.e. Resident Engineer, Bridge/Tunnel Inspector, etc.) This person should also be responsible to ensure requests are submitted in line with any access constraints in the Contract, Permit, etc.

Each Thursday at 9 am, the District will host an in-person AWR meeting (no virtual option) at the District 6 office (185 Kneeland St.) with parties requesting access (roadway or other) for the following week. Attendance is recommended. The weekly Access Work meeting will provide the opportunity to review requests, establish priorities, discuss and sort out potential conflicts, etc. as well as highlight potential long-term Access needs. After the weekly meeting, the District will meet internally to review requests, confirm priorities and finalize a schedule for the following week. MassDOT notifications (approvals and denials) and a final schedule, will be delivered via email by noon on Friday.

Cancellations shall be submitted to the email; District6AWRequest@dot.state.ma.us at least 2 hours prior to the end of the most recent day shift (i.e., 7am- 3:30pm). Failure to notify the District within the specified time may result in back-charges for any costs incurred. Excessive cancellations or no-shows will be addressed at the District's discretion.

The District will make every effort to provide as much advanced notice as possible for any necessary cancellations or restrictions due to scheduled or emergency events (i.e. weather, special events, etc.).

Weekly Schedule revisions will be handled on a case-by-case basis and not guaranteed. Any revisions to the established schedule will be at the District's discretion.

WORK ACCESS – DISTRICT 6 – CASTING PROTOCOLS

Contractor shall not access or perform work on any MassDOT casting without written authorization through the Access Work Program.

1. MassDOT castings to be accessed shall be inspected by the requester prior to AWR request. Contractor shall note any deficiencies and or issues on the AWR request.

2. A note shall be made in the Daily Diary noting structure#, station, or other identifying marker (along w/photo). The time casting was opened and time it was secured shall be noted as well as the work performed.

3. Type of manhole being opened (electric, drainage, etc.) – if electric, MassDOT Electrical Engineer shall be notified prior to access and all electrical circuits shall be locked out per Lock Out Tag Out (LOTO) procedures.

4. All castings shall be secure, free of movement and have 100% of bolts installed prior to opening to traffic. All bolts shall be coated with a MassDOT approved anti-seize prior to reinstallation. MHs that exhibit movement shall be welded.

5. In order to address bolts that cannot be re-secured, the contractor should have at all times either a:
    a. Welder capable of welding covers back (electric welding only in tunnel) (Ref Approved Welding Detail)
    b. Means to drill and tap new bolt of same length and dimension of existing

6. MassDOT personnel shall inspect and sign off on casting prior to contractor leaving location (along w/photo).

7. All MassDOT roadway castings shall comply with "Engineering Directive E-16-003 for Manholes and Catch Basins approved on May 18, 2016." Castings encountered that do not comply shall be reported in writing the District Construction Engineer or Maintenance Engineer, as appropriate - provide photos.

WORK SCHEDULE

Work hours shall be 7:00 am to 3:00 pm Monday to Friday unless otherwise approved by MassDOT and the Town of Weston. Work impacting the travel way will not be allowed during peak traffic periods. Peak periods are defined as Monday thru Friday, 6:00 am to 10:00 am and 3:00 pm to 7:00 pm. Night work (Sunday thru Thursday, 9:00 pm to 5:00 am) may be required by MassDOT for certain work activities such as pavement milling and paving operations to avoid major traffic impacts during the day.

No work shall be done on this Contract on Saturdays, Sundays or holidays or on the day before or the day after a long weekend which involves a holiday without prior approval by the Engineer.

RESTRICTED MATERIALS

All new construction materials shall be asbestos-free including any roofing felt, adhesives, waterproofing materials, grout, or sealer that may be used in project construction.

All yellow temporary and permanent pavement markings, including all pavement marking tape, placed as part of this project shall be lead-free.

PROVISIONS FOR TRAVEL AND PROSECUTION OF THE WORK
(Supplementing Subsection 8.03)

Before starting any work under this Contract, the Contractor shall prepare, and submit to the Engineer for approval, a plan (based on the Contract traffic management plans) that indicates the traffic routing proposed by the Contractor during the various stages and time periods of the work and the temporary barricades, signs, drums and other traffic control devices to be employed during each stage and time period of the work to maintain traffic and access to abutting properties.

Particular care shall be taken to establish and maintain methods and procedures that will not create unnecessary or unusual hazards to public safety. Traffic control devices required only during working hour operations shall be removed at the end of each working day.

Signs having messages that are irrelevant to normal traffic conditions shall be removed or properly covered at the end of each work period. Signs shall be kept clean at all times and legends shall be distinctive and unmarred.

PLANS
(Supplementing Subsection 5.02)

The Contractor shall furnish Mylar "AS BUILT" plans of the completed project to the Engineer. These "AS BUILT" plans shall be furnished prior to the date of final acceptance. Full compensation for these plans shall be included in the prices bid for the various Contract items of work and no additional compensation will be allowed therefore.

The Engineer will make the original drawings available to the Contractor for use in preparing the as-built drawings. However, the Contractor may request a CADD version of the contract drawings as an alternative method for preparing the “AS BUILT” plans. In either case, final “AS BUILT” plans shall contain all information shown on the contract drawings and shall clearly indicate areas where changes were made during construction.

The “AS BUILT” plans shall be titled “AS BUILT” and stamped and dated by a Professional Engineer registered in the Commonwealth of Massachusetts. The Professional Engineer’s stamp is required to certify any changes made to the contract drawings and shall not dictate responsibility for the original design drawings.

PLANS (Continued)

The "AS BUILT" plans will provide a record of constructed improvements for future reference, therefore partial plan sets will not be accepted. The Contractor may elect to use a combination of reproducible duplicates of the design drawings and revised CAD drawings to provide a complete set of "AS BUILT" plans.

Shop Drawings:

Within 30 days following notice to proceed of the Contract, the Contractor shall submit shop drawings for signal supports, a list of equipment, and manufacturer's equipment specifications to the Engineer in accordance with the relevant provisions of Section 815.20.

No work shall be commenced by the Contractor until approval of the shop drawings and manufacturer's data has been received in writing from the Engineer. Approval of these drawings will be general in character and shall not relieve the Contractor from the responsibility of, or the necessity of, furnishing materials and workmanship conforming to the plans and specifications.

The Contractor shall deliver to the Engineer a certificate of compliance with the manufacturer for all materials purchased from the manufacturer.

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.

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.

COOPERATION OF THE CONTRACTOR
(Supplementing Subsections 5.05 and 5.06)

Agents of various public service agencies, municipal and State Departments, and private site contractors may be entering on the work site to remove existing utilities, to construct or place new facilities or to make alterations to existing facilities.

The Contractor shall perform the work in cooperation with the various agencies in a manner which causes the least interference with the operations of the aforementioned agencies and shall have no claim for delay which may be due, or result, from said work of these agents.

PUBLIC SAFETY AND CONVENIENCE

(Supplementing Subsection 7.09)
The Contractor shall provide necessary access for fire apparatus and other emergency vehicles through the work zones to abutting properties at all times.

Sweeping and cleaning of surfaces beyond the limits of the project required to clean up material caused by spillage or vehicular tracking during the various phases of the work shall be considered as incidental to the work being performed under the Contract and there will be no additional compensation.

NOTICE TO OWNERS OF UTILITIES
(Supplementing Subsection 7.13)

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.

Before commencing work on service connections, the Contractor shall be responsible for contacting the Electric Company servicing the area to obtain construction requirements, standards, and to give adequate notice of commencement of work. The Contractor's attention is further directed to the requirements of Work in the Immediate Vicinity of Certain Underground Structures and Poles herein included in these Special Provisions.

The following are the names of owners and representatives of the principal utilities affected, but completeness of this list is not guaranteed by the Department:

NOTICE TO OWNERS OF UTILITIES (Continued)

TOWN OF WESTON

Fire Department 394 Boston Post Road Weston, MA 02493	Chief Justin Woodside Phone: 781-786-6101 Email: woodside.j@westonma.gov
Police Department 180 Boston Post Road By-pass Weston, MA 02493	Chief Denis J. Linehan Phone: 781-786-6200 linehan.d@police.westonma.gov
Engineering Department 190 Boston Post Road By-pass Weston, MA 02493	Jason Lavoie, P.E. Town Engineer Phone: 781-786-5115 Email: lavoie.j@westonma.gov
Department of Public Works 190 Boston Post Road By-pass Weston, MA 02493	Tom Cullen, P.E Director of Operations Phone: 781-786-5100 Email: cullen.t@westonma.gov
Water Department 190 Boston Post Road By-pass Weston, MA 02493	David Fava Water Division, Superintendent Phone: 781-786-5175 Email: fava.d@westonma.gov
ELECTRIC Eversource Electric "A" 1165 Massachusetts Avenue Dorchester, MA 02125	Ned Sadowski Phone: 413-537-6594 Email: ned.sadowski@eversource.com
TELEPHONE Verizon 385 Myles Standish Blvd. Taunton, MA 02780	Karen Mealey Phone: 774-409-3160 Email: karen.m.mealey@verizon.com
GAS National Grid Gas 40 Sylvan Road Waltham, MA 02451	Melissa Owens Phone: 781-907-2845 Email: melissa.owens@nationalgrid.com
Enbridge 8 Wilson Way Westwood, MA 02090	Kathy M. Aruda Phone: 508-938-7728 Email: kathleen.aruda@enbridge.com
Tennessee Gas Pipeline Company 8 Anngina Drive Enfield, CT 06082	David Wood Phone: 860-763-6005 Email: KMEncroachmentsNorth@kindermorgan.com

NOTICE TO OWNERS OF UTILITIES (Continued)

CABLE

Comcast Cable Corporation
PO Box 6505, 5 Omni Way
Chelmsford, MA 01824

Wendy Brown
Phone: (978) 848-5163
Email: wendy_brown@comcast.com

Crown Castle
80 Central Street
Boxborough, MA 01719

Mark Bonanno
Phone: (508) 616-7818
Email: mark.bonanno@crowncastle.com

MCI-Verizon Business
P.O. Box 600
Charlton, MA 01507

Stephen Parretti
Phone: (508) 248-1305
Email: stephen.parretti@verizon.com

Eversource Fiber
247 Station Drive, Mail Stop: SUM SE 320
Westwood, MA 02090

Bechir Khoury
Phone: (781) 441-3864
Email: bechir.khoury@eversource.com

AT&T / Teleport Communications America
c/o Siena Engineering Group
50 Mall Road - Suite 203
Burlington, MA 01803

Erica Hudson
Phone: (781) 221-8400 ext. 7041
Email: erica.hudson@sienaengineeringgroup.com

WATER

MWRA
2 Griffin Way
Chelsea, MA 02150

Ralph Francesconi
Phone: (617) 461-3573
Email: ralph.francesconi@mwra.com

RAILROAD

MBTA Archive & Digital Asset Preservation
10 Park Plaza
Boston, MA 02116

Sylvia Welsh
Email: archives@mbta.com

OTHER

Raytheon Technologies
870 Winter Street
Waltham, MA 02451

Doug Flynn
Email: flynn@rtx.com

Lumen
1025 Eldorado Blvd.
Broomfield, CO 80021

Renoy Thomas
Phone: (516) 712-3041
Email: relocations@lumen.com

Verizon Wireless Small Cell
20 Alexander Drive
Wallingford, CT 06492

Liz Glidden
Email: elizabeth.glidden@verizonwireless.com

NATIONAL GRID EMERGENCY TELEPHONE NUMBERS

GAS:
Emergency: 1-800-233-5325
New Service: 1- 877-696-4743
Customer Support: 1-800-732-3400

EVERSOURCE EMERGENCY TELEPHONE NUMBERS

ELECTRIC:
Outage/ Emergency: 800-592-2000 or 844-726-7562
New Service: 1-888-633-3797 (1-888-need pwr)
Customer Support: 1-800-340-9822

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 337-1496.

ORDER OF CONDITIONS

The Contractor is advised that the Order of Conditions (OCC), #337-1496 issued by the Town of Weston Conservation Commission on 12/31/2024 is part of this contract. A copy of this order is included in Document A00861.

The Contractor shall be responsible for meeting all the orders for conditions attached. No separate payment will be made for complying with the orders of conditions, except as noted in the special provisions, but all costs in connection therewith shall be included in the unit prices bid for the various contract items.

ENVIRONMENTAL PERMITTING

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 6 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 6 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.

PROTECTION OF UTILITIES AND PROPERTY
(Supplementing Subsection 7.13)

The Contractor, in constructing or installing facilities alongside or near sewers, drains, water or gas pipes, electric or telephone conduits, poles, sidewalks, walls, vaults or other structures shall sustain them securely in place. The Contractor shall coordinate with the officers and agents of the various utility companies and municipal departments to assure that the services of these structures are maintained. The Contractor shall also be responsible for the repair or replacement, at no additional cost to the Owner (Department), of any damage to such structures caused by construction operations. The Contractor is responsible to leave them in the same condition as they existed prior to commencement of the work. In case of damage to utilities, the Contractor shall promptly notify the utility owner and shall, if requested by the Engineer, furnish labor and equipment to work temporarily under the utility owner's direction. Pipes or other structures damaged by the operation of the Contractor may be repaired by the Department or by the utility owner which suffers the loss. The cost of such repairs shall be borne by the Contractor, without compensation therefor.

If during construction there is an existing utility and/ or structure found to be in conflict with the proposed work under this Contract, the Contractor shall protect and maintain the services to the utilities and structures. The Engineer will, as soon as possible identify the utilities to be relocated or other such activities deemed suitable for resolution.

If live service connections are to be interrupted by excavations of any kind, the Contractor shall not break the service until new services are provided. Abandoned services shall be plugged off or otherwise made secure.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing all the work involved in protecting or repairing property as specified in this Section, shall be considered included in the prices paid for the various Contract items of work and no additional compensation will be allowed therefor.

WORK IN THE IMMEDIATE VICINITY OF CERTAIN UNDERGROUND STRUCTURES AND UTILITY POLES

For overhead connections, the Electric Company servicing the area will make the connection from the top of the riser on the utility pole to the power source. The Contractor shall supply all labor, materials and equipment to install the service connection, complete in place and in accordance with the Electric Company procedures, from the controller to and including the riser with enough wire coiled above the riser to permit the Electric Company servicing the area to make the final connection.

For underground connections, the Electric Company servicing the area will perform the actual wiring of the service connections from its power source to the sweep at the local controllers, but all steel sweeps, ducts, entrance holes into manholes, patching and all other necessary labor, materials and equipment required to install the electric service, complete in place, shall be furnished by the Contractor.

The Contractor shall pay the Electric Company servicing the area for their services rendered for the connection of overhead and underground service connections.
If a pole needs to be held by the Utility in order to sustain them securely in place during placement of drainage structures and/or pipe, the Contractor will be solely responsible for all costs charged by the Utility owner for this service. All costs in connection shall be included in the unit prices bid for the various drainage items.

Before starting work at existing manholes, the Contractor shall test for gas and blow out the manholes.

TEMPORARY ACCESS TO AREA MERCHANTS AND BUSINESSES
(Supplementing Subsections 8.02 and 8.06)

The work is in a predominantly residential section of the City and access to all properties must be maintained at all times.

The Contractor shall provide safe and ready means of ingress and egress to all stores and shops, public and private and professional offices and any other businesses or residences in the project area, both day and night, for the duration of the project.

SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS
(Supplementing Subsection 850.21 AND 850.61)

Safety controls for construction operations shall be done in accordance with the relevant provisions of Subsection 850 of the Standard Specifications, the Manual on Uniform Traffic Control Devices, the Traffic Management Plan and the following:

SAFETY CONTROLS FOR CONSTRUCTION OPERATIONS (Continued)

The providing of safety controls for construction operations shall be considered incidental to this contract and the costs for safety controls shall be included in the unit bid price for those contract items requiring such controls.

Positioning, adjusting and re-positioning of all devices such as traffic cones, high level warning devices, etc., not otherwise classified and paid for under other items in this contract, is considered incidental and no separate payment will be made.

All construction signing, temporary traffic control devices, and roadside elements shall conform shall conform with the latest version of the Manual on Uniform Traffic Control Devices (MUTCD), with Massachusetts state amendments, to MUTCD; the latest revision of the American Association of State Highway and Transportation Officials (AASHTO), Roadside Design Guide; AASHTO Policy on Geometric Design of Highways and Streets; and National Cooperative Highway Research Program (NCHRP) Report 350 or the AASHTO Manual for Assessing Safety Hardware (MASH).

The Contractor shall replace any crosswalk that have been removed or obscured at the end of each work shift.

WORK DONE BY OTHERS

Relocation and/or resetting to new grades of private utilities, including utility poles, made necessary by the construction of this project, will be accomplished by the respective utility companies, as noted on the plans.

DRAINAGE

The Contractor shall maintain the drainage system in the Contract area to provide continual drainage of the travel ways and construction areas.

All drainage castings in new pavement areas shall be installed at base or intermediate course grade, as directed by the Engineer, and reset to proposed finish surface grade prior to placement of the pavement surface course.

All proposed pipes and structures being placed where existing pipe, or an existing structure is located, the cost of removing and disposing of the existing pipes and structures will be incidental to the cost of the proposed pipes and structures.

New manholes to be constructed over existing pipes shall include the connecting of the pipe to the structure and the necessary cutting and removal of the existing pipe within the structures. The existing pipe shall be neatly cut to provide a smooth uniform face flush with the inside wall surface of the structure and totally removed or neatly cut longitudinally and partially removed to retain the lower half of the existing pipe barrel to form the required (manhole) shaped invert. This work shall be considered incidental to the cost of the structure.

DRAINAGE (Continued)

All pipes and structures installed as part of this Contract shall be left in a clean and operable condition at the completion of the work.

No separate payment will be made for the maintenance of the existing drainage system or for plugging, cutting or capping of pipes, but all costs in connection therewith shall be included in the unit prices bid for the various Contract items.

DRAINAGE STRUCTURES

Where new pipe is shown on the drawings to be connected into an existing drainage structure to remain, the existing structure shall be first cleaned to remove all mud, debris and other material. The existing structure wall shall be carefully and neatly cut to provide the minimum size opening required for the insertion of the new pipe. The proposed pipe end shall be set or cut off flush with the inside face of the existing structure wall and the remaining space around the pipe completely filled with cement grout for the full thickness of the structure wall.

Existing shaped inverts shall be reconstructed as necessary to provide a smooth and uniform flow channel from the new pipe through the existing structure.

No separate payment will be made for the cost of connecting new pipes into existing structures, cleaning and necessary alterations of existing structures, but all costs in connection therewith shall be included in the unit prices bid for the various pipe items.

SAWCUTS

Existing pavements to remain shall be sawcut at all openings for utility work, for new or reset curb and at all joints with proposed full-depth hot mix asphalt pavement, as shown on the plans and as directed by the Engineer. Sawcuts made in existing pavement in areas of trenching for new conduit, in areas of new or reset curb, or trench limits for drainage/water work, will be included in the unit price under the respective items. Sawcutting will be paid separately when made in areas of full depth box widening under item 482.5 Sawcutting Asphalt Pavement for Box Widening.

NOTIFICATION OF FUNDING SOURCES FOR WORK TO BE PAID BY OTHERS

This contract has an agreement with the Town of Weston, 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.

MAINTENANCE OF TRAFFIC SIGNALS

It shall be the responsibility of the Contractor to provide all labor, equipment and material required for the total maintenance and repair of all proposed traffic signal control equipment, including damage by automobile accidents until final completion and acceptance of the project, unless otherwise specified under Subsection 7.17 "Traffic Accommodation: of the Standard Specifications as amended, in which case Subsection 7.17 will govern. These provisions will apply to the signalized locations included as part of this construction Contract from the date of written notice given to the Engineer that the Contractor will work on or adjacent to an existing signal until the date when the Department accepts the complete project. This written notice must be given before the Contractor may proceed with any work on a specified traffic signal location. For the purpose of these Special Provisions, the phrase "Traffic Signal Control Equipment" is intended to include controllers and cabinet assemblies used for traffic control.

The cost of the maintenance of signals shall be deemed to be included in the various traffic signal Contract items and no additional payments will be made.

Upon notification of an issue by MassDOT or their representitive requiring a response by the Contractor, the Contractor shall respond to the notification within 2 hours. Should the Contractor fail to take prompt action within the required response time, MassDOT shall make emergency repairs or cause the same to be made, with the stipulation that the costs for such repairs shall be charged against the Contractor and deducted from moneys due him.

FINE TUNING, ADJUSTMENT, AND TESTING PERIOD

After the Contractor has finished installing the controller and all other associated signal equipment and after the Contractor has set the signal equipment to operate as specified in the Contract documents, the fine tuning, adjusting, and testing period shall begin. The Contractor shall advise the Engineer, in writing, of the date of the beginning of the fine tuning and testing period. This period shall not start until the work at the intersection is complete. During this period, the Contractor, under the direction of the Engineer, shall make necessary adjustments and tests to insure safe and efficient operation of the equipment. This period shall last for 30 days, and the Contract completion date has taken this testing period into consideration. No request for final acceptance will be considered until successful completion of the testing period.

The Contractor shall notify the Engineer in writing of the starting date of the fine-tuning period prior to the starting date.

FINAL INSPECTION AND ACCEPTANCE

Upon successful completion of the 30-day testing period wherein the traffic signals have operated for 30 days without failure, the Contractor shall notify MassDOT. The Engineer will make a final inspection of the installation in the presence of MassDOT and the Contractor. An inspection check will be made to ensure that all equipment, materials, installations, and operations are in accordance with the construction contract, plans and specifications. Items to be checked will include, but not be limited to, traffic signal systems and flashing warning beacon operation, cabinet equipment, documents (wiring diagrams, as-built plans, instruction manuals, parts list, warranties, grounding resistivity test report, etc.), signs, and pavement markings, and street hardware (posts, bases, housings, brackets, etc.).

The Engineer will notify the Contractor in writing of any items in which the inspection reveals that the work is incomplete, defective, or does not otherwise meet the project specifications. The Contractor shall perform the corrective actions necessary to achieve final acceptance by MassDOT. These corrective actions shall be done by and at the expense of the Contractor and within 15 days of the date of the inspection report, unless otherwise approved in writing by MassDOT.

GUARANTEE AFTER FINAL ACCEPTANCE

The Contractor shall diagnose (troubleshoot) the system and replace any part of the traffic signal system found to be defective in workmanship, material, or manner of functioning within six months from date of final acceptance of all the installations under this Contract. This requirement does not affect the one-year warranty period on equipment specified in Subsection 815.20 of the Standard Specifications.

Upon the date of acceptance of the project by MassDOT, the Contractor shall turn over all guarantees and warranties to MassDOT.

QUALIFIED ELECTRICIANS

Within 10 days after Notice to Proceed, the Contractor shall submit a list of the Journeyman Electricians (Massachusetts License) who will perform the electrical work in this contract.

Also, the Contractor shall submit copies of each Journeyman Electrician's current Massachusetts License.

PROPERTY BOUNDS

The Contractor shall exercise due care when working around all property bounds which are to remain. Should any damage to a bound result from the actions of the Contractor, the bound shall be replaced and/or realigned by the Contractor as directed by the Engineer at no cost to the Owner.

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. This project has been consulted with the USFWS through the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and Federal Transit Administration (FTA) Programmatic Biological Opinion/Conference Opinion for Transportation Projects in the Range of the Indiana bat, northern long-eared bat, and tricolored bat, dated December 13, 2024. and generated a May Affect, Not Likely to Adversely Affect (NLAA) determination (see Document A00844 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 AMM

- 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.

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 3.3 Million 18-kip (80-kn) ESALs.

The PGAB Grade selected for this Contract is PG 64-28.

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 City of project, or at minimum, within county, of construction operations.

SECTION 722
CONSTRUCTION SCHEDULING
DESCRIPTION

722.20 General

The Contractor's approach to prosecution of the Work shall be disclosed to the Department by submission of a Critical Path Method (CPM) schedule and a cost/resource loaded Construction Schedule as defined by the schedule type set forth below. These requirements are in addition to any requirements imposed in other sections.

This section establishes the requirement for scheduling submissions. There are four schedule types identified as types A, B, C and D.

All schedules shall be prepared and submitted in accordance with this specification and the instructions contained in the Construction Schedule Toolkit located on the MassDOT-Highway Division website at https://www.mass.gov/info-details/massdot-highway-contractors-schedule-toolkit.

Type A –

- Schedule Planning Session
- Baseline CPM Schedule
- Monthly Update CPM Schedule
- Short-term Construction Schedule
- Contract Schedule Update Meeting
- Cost-loaded & Resource Loaded CPM
- Resources Graphic Reporting
- Cash Flow Projections from the CPM
- Cash Flow Charts
- Monthly Projected Spending Report (PSR)
- Contractor-furnished CPM software and computer

Type B –

- Schedule Planning Session
- Baseline CPM Schedule
- Monthly Update CPM Schedule
- Short-term Construction Schedule
- Contract Schedule Update Meeting
- Cost-loaded & Resource Loaded CPM
- Monthly Projected Spending Report (PSR)
- Contractor-furnished CPM software and computer

Type C –

- Schedule Planning Session
- Baseline CPM Schedule
- Monthly Update CPM Schedule
- Short-term Construction Schedule
- Contract Schedule Update Meeting
- Monthly Projected Spending Report (PSR)
- Contractor-furnished CPM software and computer

SECTION 722 (Continued)

Type D -

- Bar chart schedule updated monthly or at the request of the Engineer
- Short-term Construction Schedule
- Monthly Projected Spending Report (PSR)

EQUIPMENT, PERSONNEL

722.40 General

A. **Software Requirements**

The Contractor shall use Primavera P6 computer scheduling software.

In addition to the requirements of Section 740 – Engineer's Field Office and Equipment, the Contractor shall provide to the Department one (1) copy of the scheduling software, one (1) software license and one (1) computer capable of running the scheduling software for the duration of the Contract. This computer and software shall be installed in the Engineer's Field Office. The computer and software shall be maintained and serviced at no additional cost to the Department.

B. Scheduler Requirements

The Scheduler shall be approved by the Engineer.

For Type A, B and C Schedules the name of the Contractor's Project Scheduler together with his/her qualifications shall be submitted to the Department for approval by the Engineer within seven (7) Calendar Days after NTP. The Project Scheduler shall have a minimum of five (5) years of project CPM scheduling experience, three (3) years of which shall be on projects of similar scope and value as the project for which the Project Scheduler is being proposed. References shall be provided from past projects that can attest to the capabilities of the Project Scheduler.

SCHEDULING METHODS

722.60 General

A. **Schedule Planning Session**

The Contractor shall conduct a schedule planning session prior to submission of the Baseline Schedule. This session will be attended by the Department and its consultants. During this session, the Contractor shall present its planned approach to the project including, but not limited to:

1. the Work to be performed by the Contractor and its subcontractors;
2. the planned construction sequence and phasing; planned crew sizes;
3. summary of equipment types, sizes, and numbers to be used for each work activity;
4. all early work related to third party utilities;
5. identification of the most critical submittals and projected submission timelines;
6. estimated durations of major work activities;
7. the anticipated Critical Path of the project and a summary of the activities on that Critical Path;
8. a summary of the most difficult schedule challenges the Contractor is anticipating and how it plans to manage and control those challenges;

SECTION 722 (Continued)

9. a summary of the anticipated quarterly cash flow over the life of the project.

This will be an interactive session and the Contractor shall answer all questions that the Department and its consultants may have. The Contractor shall provide a written summary of the information presented and discussed during the session to the Engineer. The Contractor's Baseline Schedule and accompanying Schedule Narrative shall incorporate the information discussed at this Schedule Planning Session.

B. **Schedule Reviews by the Department**

1. Baseline Schedule Reviews
   The Engineer will respond to the Baseline Schedule Submission within thirty (30) Calendar Days of receipt providing comments, questions and/or disposition that either accepts the schedule or requires revision and resubmittal. Rejected Baseline Schedules shall be resubmitted within fifteen (15) Calendar Days after receipt of the Engineer's comments.
2. Contract Progress Schedule / Monthly Update Reviews / Recovery Schedules
   The Engineer will respond to each submittal within twenty-one (21) Calendar Days. Rejected schedules shall be resubmitted by the Contractor within five (5) Calendar Days after receipt of the Engineer's comments.

The Engineer's review comments shall not be construed as direction to change the Contractor's means and methods. The review and acceptance of the CPM schedule does not relieve the Contractor of the responsibility for accomplishing the work within the contract required completion dates. Omissions and errors in the accepted CPM schedule shall not excuse performance less than that required by the Contract.

722.61 Schedule Content and Preparation Requirements

All schedules shall be prepared and submitted in accordance with the instructions contained in the Construction Schedule Toolkit located on the MassDOT-Highway Division website at:
https://www.mass.gov/info-details/massdot-highway-contractors-schedule-toolkit
and the following:

A. **LOGIC**

The schedules shall divide the Work into activities with appropriate logic ties to show:

1. conformance with the requirements of this Section and Division I, Subsection 8.02 - Schedule of Operations
2. the Contractor's overall approach to the planning, scheduling, and execution of the Work
3. conformance with any additional sequences of Work required by the Contract Documents, including, but not limited to, Subsection 8.03 - Prosecution of Work and Subsection 8.06 – Limitations of Operations.

SECTION 722 (Continued)

B. **ACTIVITIES**

The schedule shall clearly define the progression of the Work from the Notice to Proceed (NTP) to Contractor Field Completion (CFC) by using separate activities, or including attributes within appropriate activities, to address each of the following:

1. Notice to Proceed
2. Work Breakdown Structure
3. The Critical Path is clearly defined and organized.
4. Float shall be clearly identified.
5. Detailed activities to satisfy permit requirements.
6. Subcontractor approvals at fifteen (15) Calendar Days from submittal to response
7. The preparation and submission of shop drawings, procedures, and other required submittals, with a planned duration that is to be demonstrated to the Engineer as reasonable.
8. The review and return of shop drawings, procedures, and other required submittals, approved or with comments, the duration of which shall be thirty (30) Calendar Days, unless otherwise specified or as approved by the Engineer.
9. Procurement of fabricated materials and equipment with long lead times, including time for review and approval of submittals required before procuring and fabricating.
10. Each component of the Work defined by specific activities.
11. Right-of-Way (ROW) takings that have been identified in the Contract.
12. Early Utility Relocation (by others) that has been identified in the Contract.
13. Interfaces with adjacent work, utility companies, other public agencies, sensitive abutters, and/or any other third-party work affecting the Contract.
14. Utility work to be performed in accordance with the Project Utility Coordination (PUC) Form as provided in Section 8.14 - Utilities Coordination, Documentation and Monitoring Responsibilities
15. Access Restraints – restrictions on access to areas of the Work that are defined by the Department in the bid package, in Subsection 8.06 – Limitations of Operations or elsewhere in the Contract
16. Limitations of Work – time of year restrictions and any other limitations identified in the contract
17. Traffic work zone set-up and removal, night work and phasing
18. Material Certifications
19. Milestones listed in Subsection 8.03 - Prosecution of Work or elsewhere in the Contract Documents
20. For Type A and B Contracts only: All items to be paid for, including all Unit Price and Lump Sum pay items, shall be identified by activity. This shall include all non-construction activities such as engineering work; purchase of permanent materials and equipment, purchase of structural steel stock, equipment procurement, equipment delivery to the site or storage location and the representative amount of overhead/indirect costs that was included in the Contractor's Bid Prices.

SECTION 722 (Continued)

21. Contractor's request for validation of FBU (ready to open to traffic)
22. Full Beneficial Use (FBU) Contract Milestone per the following requirements: The majority of contract Work has been completed and the asset(s) has been opened for full multi-modal transportation use, except for limited contract work items that do not materially impair or hinder the intended public use of the transportation facility. All anticipated lane takings have been completed, except for minor, short term work items and as defined in Subsection 8.03 - Prosecution of Work
23. The Department's confirmation of completed work to allow for FBU.
24. Contractor's request for validation of Substantial Completion
25. Department generated punch list of twenty-one (21) Calendar Days
26. Substantial Completion Contract Milestone as defined in the standard specifications.
27. Punch list Completion Period of at least thirty (30) Calendar Days per the requirements of Subsections 5.11 - Final Acceptance, 7.15 - Claims Against Contractors for Payment of Labor, Materials and Other Purposes
28. Contractor confirmation that all punchlist work and documentation has been completed.
29. Physical Completion of the Work Contract Milestone per the requirements of Subsections 5.11 - Final Acceptance and 8.03 - Prosecution of Work
30. Documentation Completion per the requirements of Subsections 5.11 - Final Acceptance and 8.03 - Prosecution of Work
31. Contractor Field Completion Contract Milestone (which can also be considered the completion date) per the following requirements: All physical contract Work is complete including punchlist. The Contractor has fully de-mobilized from field operations and as defined in Subsection 5.11

C. **EARLY AND LATE DATES**

Early Dates shall be based on proceeding with the Work or a designated part of the Work exactly on the date when the corresponding Contract Time commences. Late Dates shall be based on completing the Work or a designated part of the Work exactly on the corresponding Contract Time, even if the Contractor anticipates early completion.

D. **DURATIONS**

Activity durations shall be in Work Days. Planned Original Durations shall be established with consideration of resources and production rates that correspond to the Contractor's Bid Price. Within all of the Department-required schedules, the Contractor shall plan the Work using durations for all physical construction activities of no less than one (1) Work Day and no greater than fourteen (14) Work Days, unless approved by the Engineer as part of the Baseline Schedule Review.

SECTION 722 (Continued)

Should there be an activity with a duration that is determined by the Engineer to be unreasonable, the Contractor will be asked to provide a basis of the duration using bid documents, historic production rates for similar work, or other form of validation that is acceptable to the Engineer. Should the Contractor and the Engineer be unable to agree on reasonable activity durations, the Engineer will, at a minimum, note the disagreement in the Baseline Schedule Review along with a duration the Engineer considers reasonable and the basis for that duration. A schedule that contains a substantial number of activities with durations that are deemed unreasonable by the Engineer will not be accepted.

E. **MATERIALS ON HAND**

The Contractor shall identify in the Baseline Schedule all items of permanent materials (Materials On Hand) for which the Contractor intends to request payment prior to the incorporation of such items into the Work.

F. **ACTIVITY DESCRIPTIONS**

The Contractor shall use activity descriptions in all schedules that clearly describe the work to be performed using a combination of words, structure numbers, station numbers, bid item numbers, work breakdown structure (WBS) and/or elevations in a concise and compact label.

G. **ACTIVITY IDENTIFICATION NUMBERS**

The Contractor shall use the activity identification numbering system specified in the MassDOT Highway Division Contractor Construction Schedule Toolkit.

H. **ACTIVITY CODES**

The Contractor shall use the activity codes specified in the MassDOT Highway Division Contractor Construction Schedule Toolkit.

I. **CALENDARS**

Different calendars may be created and assigned to all activities or to individual activities. Calendars define the available hours of work in each Calendar Day, holidays and general or project-specific non-Work Days such as Fish Migration Periods, time-of-year (TOY) restrictions and/or area roadway restrictions. All calendars shall extend two years beyond the current project completion date.

Project Special Provisions identify specific calendar restrictions some examples of special calendars include, but are not limited to:

- Winter Shutdown Period, specific work is required by separate special provision to be performed during the winter. See Special Provision 8.03 (if applicable)
- Peak traffic hours on heavily traveled roadways. This shall be from 6:30 am to 9:30 am and from 3:30 pm to 7:00 pm, unless specified differently elsewhere in the Contract.
- Special requirements by sensitive abutters, railroads, utilities and/or other state agencies as defined in the Contract.
- Planting seasons for trees, shrubs and grasses and wetlands mitigation work.

SECTION 722 (Continued)

- Cape Cod and the Islands Summer Roadway Work Restrictions: A general restriction against highway and bridge construction is enforced between Memorial Day and Labor Day, unless otherwise directed by the Engineer. Cape Ann Summer Roadway Work Restrictions: While there are no general restrictions for Cape Ann as there are for Cape Cod and the Islands, project-specific restrictions may be enforced.
- Turtle and/or Fish Migration Periods and/or other in-water work restrictions: Refer to the Project Special Provisions for specific restrictions.
- Working over Waterways Restricted Periods.
- Night-time paving and striping operations, traffic, and temperature restrictions.
- Utility Restrictions shall be as specified within the Contract.

J. **FLOAT**

For the calculation of float in the CPM schedule, the setting for *Retained Logic* is required for all schedule submissions, starting with the Baseline Schedule Submission. Should the Contractor have a reason to propose that an alternative calculation setting such as *Progress Override* be used, the Contractor shall obtain the Engineer's approval prior to modifying to this setting.

K. **COST AND RESOURCE LOADING (Types A and B only)**

For all Type A and B Schedules, the Contractor shall provide a cost and resource-loaded schedule with an accurate allocation of the costs and resources necessary to complete the Work. The costs and resources shall be assigned to all schedule activities in order to enable the Contractor to efficiently execute the Contract requirements and the Engineer to validate the original plan, monitor progress, provide cash flow projections, and analyze delays.

1. Each schedule activity shall have an assigned cost that accurately represents the value of the Work. Each schedule activity shall have its resources assigned to it by craft and the anticipated hours to accomplish the work. Each schedule activity's equipment resources shall be assigned to it by equipment type and hours operated. Front-loading or other unbalancing of the cost distribution will not be permitted.
2. The sum of the cost of all schedule activities shall be equal to the Contractor's Bid Price.
3. Indicating the labor hours per individual, per day, by craft and equipment hours/day will be acceptable.
4. The Engineer reserves the right to use the cost-loading as a means to resolve changes, disputes, time entitlement evaluations, increases or decreases in the scope of Work, unit price renegotiations and/or claims.
5. For all Type A and B Schedules, all subnets, fragnets, Proposal Schedules, and Recovery Schedules shall be cost and resource- loaded to help to quickly validate and monitor the duration of the Work to be performed.
6. For Type A Schedules, cost-loading of the schedule will also be used for cash flow projection purposes.
7. The cost-loading of each activity shall indicate the portion of the cost for that activity that is applicable to a specific bid item (cost account.) The total cost for each cost account must equal the bid item price.

SECTION 722 (Continued)

L. **NOT TO BE USED IN THE CONTRACTOR'S CPM SCHEDULE**

1. Milestones or constraint dates not specified in the Contract.
2. Scheduled work not required for the accomplishment of a Contract Milestone
3. Use of activity durations, logic ties and/or sequences deemed unreasonable by the Engineer.
4. Delayed starts of follow-on trades.
5. Float suppression techniques.
6. Leads such as leads, lags, SS, SF, & FF relationships without the expressed permission of the Department.

722.62 Submittal Requirements

All schedules shall be prepared and submitted in accordance with the requirements listed below.

Each monthly Contract Progress Schedule submittal shall be uniquely identified.

Each Submission shall, at a minimum, include the following:

a. Narrative
b. Schedule submittals shall be signed by the Scheduler
c. Schedule Printout - All Activities
d. Schedule Printout - Critical Path Layout
e. Schedule Printout - Remaining Work
f. Schedule Printout - Top 3 Float Path
g. Work Breakdown Structure (WBS) Summary
h. Project Spending Report (PSR) in Portable Document Format (.PDF)
i. Project Spending Report (PSR) in Microsoft Excel spreadsheet (.XLS)
j. Oracle Primavera P6 Schedule File (.XER)

All digital file submittals will be labeled with the following information.

- Contract Number
- Project Number
- Project locations (i.e., town(s))
- Brief description
- Submittal description (i.e., UP07)
- Data Date (MM-DD-YY)
- File Description (i.e., Critical Path)

Example: C110464 (P606309) - Orange Route 2 over 202 – UP23 (07-15-22) - Critical Path

A. **Narratives**

A written narrative shall be submitted with every schedule submittal. The narrative shall:

1. itemize and describe the flow of work for all activities on the Critical Path in a format that includes any changes made to the schedule since the previous Contract Progress Schedule / Monthly Update or the Baseline Schedule, whichever is most recent.
2. provide a description of any specification requirements that are not being followed. Identify those that are improvements and those that are not considered to be meeting the requirements.

SECTION 722 (Continued)

3. provide all references to any Notice of Delay that has been issued, within the time period of the Contract Progress Schedule Update, by letter to the Engineer. Note that any Notice of Delay that is not issued by letter will not be recognized by the Engineer. See Subsection 722.64.A – Notice of Delay.
4. provide a description of each third-party utility's planned vs. actual progress and note any that are trending late or are late per the durations and commitments as provided in the PUC Form; provide a description of the five (5) most important responses needed from the Department and the need date for the responses in order to maintain the current Schedule of Record.
5. provide a description of all critical issues that are not within the control of the Contractor or the Department (third party) and any impact they had or may have on the Critical Path.
6. provide a description of any possible considerations to improve the probability of completing the project early or on time.
7. compare Early and Late Dates for activities on the Critical Path and describe reasons for changes in the top three (3) most critical paths.
8. describe the Contractor's plan, approach, methodologies, and resources to be employed for completing the various operations and elements of the Work for the top three (3) most critical paths. For update schedules, describe and propose changes to those plans and verify that a Proposal Schedule is not required.
9. describe, in general, the need for shifts that are not 5 days/week, 8 hours/day, the holidays that are inserted into each calendar and a tabulation of each calendar that has been used in the schedule.
10. describe any out-of-sequence logic and provide an explanation of why each out-of-sequence activity does not require a correction, if one has not been provided, and an adequate demonstration that these changes represent the basis of how these activities will be built, including considerations for resources, dependencies, and previously approved production rates.
11. identify any possible duration increases resulting from actual or anticipated unit price item quantity overruns as compared to the baseline duration, with a corresponding suggestion to mitigate any possible delays to the Critical Path. If the delay is anticipated to impact the Critical Path, refer to Subsections 4.06 – Increased or Decreased Contract Quantities and 8.10 – Determination and Extension of Contract Time for Completion and submit a letter to the Engineer notifying of a potential delay.
12. include a schedule log consisting of the name of the schedule, the data date and the date submitted.
13. include and describe any notifications, communications and coordination meetings with third-parties such as utility companies that occurred from the last update including personnel names, job titles and contact information, date of meeting(s)/correspondence(s), topics discussed, and reasons the third party provided for deviations from the PUC form.

SECTION 722 (Continued)

B. **CPM Bar Charts**

One (1) timescaled bar chart containing all activities shall be prepared and submitted using a scale that yields readable plots and that meets the requirements of Subsection 722.61 – Schedule Content and Preparation Requirements Activities shall be linked by logic ties and shown on their Early Dates. Critical Paths shall be highlighted, and Total Float shall be shown for all activities.

A second timescaled bar chart shall also be prepared containing only the Critical Path or, if the Critical Path is not the longest path, the Longest Path using a scale that yields readable plots and that meets the requirements of Subsection 722.61 – Schedule Content and Preparation Requirements. Activities shall be linked by logic ties and shown on their Early Dates. Total Float shall be shown for all activities.

C. Detailed Activity Schedule Comparisons

A Detailed Activity Schedule Comparison (DASC) is a simple reporting tool in the format of a graphical report that will provide Resident Engineers with immediate, timely and up-to-date information. The DASC consists of an updated bar chart that overlays the current time period's bar chart onto the previous time period's bar chart for an easily read comparison of progress during the present and previous reporting periods.

D. Activity Cost Report and Monthly Cash Flow Projections (Type A only)

With each Contractor Quantity Estimate (CQE), the Contractor shall submit an Activity Cost Report and Cash Flow Projection that includes all activities grouped by Contract Bid Item.

The Activity Cost Report shall be generated from the Schedule of Record and shall be the basis of the Monthly Cash Flow Projection. Within each contract Bid Item, activities shall be sequenced by ascending activity identification number and shall show:

1. activity ID and description,
2. forecast start and finish dates for each activity and,
3. when submitted as a revised schedule, actual start, and finish dates for each completed activity.
4. any variance to the estimated contract quantity shall be shown.

E. Resource Graphs (Type A only)

Monthly and cumulative resource graphs for the remaining Contract period using the Early Dates and Late Dates in the Contract Progress Schedule shall be included as part of each schedule submittal.

SECTION 722 (Continued)

F. Projected Spending Reports

A Projected Spending Report (PSR) shall be prepared and submitted monthly. The PSR shall indicate the monthly spending (cash flow) projection for each month from NTP to Contractor Field Completion (CFC). Each month's actual spending shall be calculated using all CQEs paid during that month. The Projected Spending Report (PSR) shall be depicted in a tabular format and provided in both an .XLS and .PDF.

722.63. Progress Schedule Requirements

A. Baseline Schedule

The Baseline Schedule shall be due thirty (30) Calendar Days after Notice to Proceed (NTP). The Baseline Schedule shall only reflect the Work awarded to the Contractor and shall not include any additional work involving Extra Work Orders or any other type of alleged delay. The Baseline Schedule shall be prepared and submitted in accordance with Subsections 722.61 - Schedule Content and Preparation Requirements and 722.62 - Submittal Requirements. Once the Baseline Schedule has been accepted by the Engineer, with or without comments, it shall represent the as-planned schedule for the Work and become the Contract Progress Schedule of Record until such time as the schedule is updated or revised under Subsections 722.63.C - Contract Progress Schedules / Monthly Updates, 722.64.C - Recovery Schedules and 722.64.D - Proposal Schedules.

The Cost and Resource-Loading information (Types A and B only) shall be provided by the Contractor within forty-five (45) Calendar Days after NTP.

The Engineer's review comments on the Baseline Schedule and the Contractor's responses to them will be maintained for the duration of the Contract and will be used by the Engineer to monitor the Contractor's work progress by comparing it to the Contract Progress Schedule / Monthly Update.

B. Interim Progress-Only Schedule Submissions

The first monthly update of the Contract Progress Schedule/Monthly Update is due within seventy (70) Calendar Days after Notice to Proceed (NTP.) The Baseline Schedule review period ends at sixty (60) Calendar Days after NTP, see Subsection 722.60.B - Schedule Reviews by the Department. If the Baseline Schedule has not been accepted within sixty (60) Calendar Days after NTP, an Interim Progress-Only Schedule shall be due within seventy (70) Calendar Days after NTP. The purpose of the Interim Progress-Only Schedule is to document the actual progress of all activities, including non-construction activities, from NTP until the Baseline Schedule is accepted.

SECTION 722 (Continued)

C. Contract Progress Schedules / Monthly Updates

The first Contract Progress Schedule shall be submitted by the Contractor no later than seventy (70) Calendar Days after NTP. The data date for this first Progress Schedule shall be two months (approximately sixty (60) Calendar Days) after NTP. Subsequent Progress Schedules shall be submitted monthly.

Each Contract Progress Schedule shall reflect progress up to the data date. Updated progress shall be limited to asbuilt sequencing and asbuilt dates for completed and inprogress activities. Asbuilt data shall include actual start dates, remaining Work Days and actual finish dates for each activity, but shall not change any activity descriptions, the Original Durations, or the Original Resources (as planned at the time of bid), without the acceptance of the Engineer. If any activities have been completed out-of-sequence, the Contractor shall propose new logic ties for affected in-progress and future activities that accurately reflect the previously approved sequencing. Alternatively, the Contractor may submit to the Engineer for approval an explanation of why an out-of-sequence activity does not require a correction and an adequate demonstration that the changes accurately represent how the activities will be built, including considerations for resources, dependencies, and previously approved production rates. Once approved by the Engineer, the Contractor may incorporate the changes in the next Contract Progress Schedule/Monthly Update with the affected activities clearly identified and explained in the Schedule Narrative.

No revisions to logic ties, sequence, description, or duration of future activities; or planned resource costs shall be made without prior approval by the Engineer.

Any proposed logic changes for in-progress or future activities shall be submitted to the Engineer for approval before being incorporated into a Contract Progress Schedule. The logic changes must be submitted using a Proposal Schedule or a schedule fragnet submission. Once approved by the Engineer, the Contractor may incorporate the logic in the next Contract Progress Schedule/Monthly Update with the affected activities clearly identified and explained in the Schedule Narrative.

For any proposed changes to the original sequence, description or duration of future activities, the Contractor shall submit to the Engineer for approval an explanation of how the proposed description or duration change reflects how the activity will be progressed, including considerations for resources and previously approved production rates. Any description or duration change that does not accurately reflect how the activity will be progressed will not be approved by the Engineer. Once approved by the Engineer, the Contractor may incorporate the changes in the next Contract Progress Schedule/Monthly Update with the affected activities clearly identified and explained in the Schedule Narrative.

Contract Progress Schedules that extend performance beyond the Contract Time or beyond any Contract Milestone shall not be approved by the Engineer. The Contractor shall submit a Recovery Schedule, or a Time Entitlement Analysis, if any Contract Progress Schedule/Monthly Update indicates a failure to meet the Contract Dates.

SECTION 722 (Continued)

D. Short-Term Construction Schedule

The Contractor shall provide a Short-Term Construction Schedule that details daily work activities, including any multiple shift work that the Contractor intends to conduct, in a spreadsheet format. The daily activities shall directly correspond to the Contract Progress Schedule activities, with a matching reference to the activity identification number in the Contract Progress Schedule and may be at a greater level of detail. The Short-Term Construction Schedule shall be submitted every two weeks. It shall display all work for a thirty-five (35) Calendar Day period consisting of completed work for the two (2) week period prior and all planned work for the following three (3) week period. The initial submission shall be provided no later than thirty (30) Calendar Days after NTP or as required by the Engineer.

The Contractor shall be prepared to discuss the Short-Term Construction Schedule, in detail, with the Engineer in order to coordinate field inspection staff requirements, the schedule of work affecting abutters and any corresponding work with affected utilities. Short-Term Construction Schedules shall be prepared and submitted in accordance with Subsections 722.61 - Schedule Content and Preparation Requirements and 722.62 - Submittal Requirements.

722.64 Impacted Schedule Requirements

A. Notice of Delay

The Contractor shall notify the Engineer in writing, with copies to the District and State Construction Engineers, within fifteen (15) of the start of any delays to the Critical Path that are caused by actions or inactions that were not within the control of the Contractor. Delay notifications that are not provided in a letter to the Engineer, such as a delay notification in the schedule narrative, will not be recognized as contractual notice in the determination of any Time Extension related to the impacts to the work associated with this specific alleged delay. Should such a delay continue for more than one (1) week, the Contractor shall note it in the Schedule Narrative until the delay is no longer impacting the Critical Path for the completion of the Contract Milestones. The Engineer will evaluate the alleged delay and its impact and will respond to the Contractor within ten (10) Calendar Days after receipt of a notice of delay.

B. Time Entitlement Analysis

A Time Entitlement Analysis (TEA) shall consist of a descriptive narrative, prepared in accordance with Subsection 722.62.A - Narratives, and an as-built CPM schedule, which may be in the form of a schedule fragnet that has been developed from the project's Contract Progress Schedule of Record, and illustrates the impact of a delay to the Critical Path, Contract Milestones and/or Contract Completion Date as required in Subsection 8.10 - Determination and Extension of Contract Time for Completion. TEAs shall also be used to determine the schedule impact of proposed Extra Work Orders (EWO) as also required in Subsection 8.10.

TEAs shall be prepared and submitted in accordance with the requirements of Subsections 722.61 - Schedule Content and Preparation Requirements and 722.62 - Submittal Requirements and shall be based on the Contract Progress Schedule of Record applicable at the start of the delay or impact from an EWO. A TEA fragnet must start with a specific new activity describing the work contained in either a Notice of Delay previously submitted to the Department per Subsection 722.64.A - Notice of Delay or an EWO.

SECTION 722 (Continued)

TEAs shall be submitted:

1. as part of any Extra Work Order that may impact Contract Time,
2. with a request for a Time Extension,
3. within fifteen (15) Calendar Days after a request for a TEA by the Engineer for any other reason.

A TEA shall be submitted to the Engineer before any Time Extension is granted to the Contractor. Time Extensions will not be granted unless the TEA accurately reflects an evaluation of all past delays and the actual events that occurred that impacted the Critical Path. The TEA must also demonstrate a plan for the efficient completion of all of the remaining work through an optimized CPM Schedule. The analysis shall include all delays, including Contractor-caused delays, and shall be subdivided into timeframes and causes of delays.

TEAs shall incorporate any proposed activities, logic ties, resource considerations, and activity costs required to demonstrate the schedule impacts most efficiently in addition to detailing all impacts to existing activities, logic ties, the Critical Path, Contract Milestones, and the Contract Completion Date. In addition, TEAs shall accurately reflect any changes made to activities, logic ties, restraints, and activity costs, necessitated by an Extra Work Order or other schedule impact, for the completion of the remaining work. The Contractor shall provide TEAs that demonstrate that all delays have been mitigated to the fullest extent possible without requiring an Equitable Adjustment to the original bid basis.

All TEAs shall clearly indicate any overtime hours, additional shifts and the resources that are proposed to be incorporated in the schedule. The Engineer shall have final discretion over the use of overtime hours and additional shifts. The Engineer shall have the right to require that overtime hours and/or additional shifts be used to minimize the duration of Time Extensions if it is determined to be in the best interest of the Department to do so.

When accepted, the changes included in a TEA shall be incorporated into the next Contract Progress Schedule per the requirements of Subsection 722.63.C - Contract Progress Schedules / Monthly Updates. During the review of any TEA, all Contract Progress Schedules shall continue to be submitted as required.

The Engineer may request that the Contractor prepare a Proposal Schedule or a Recovery Schedule to further mitigate any delays that are shown in the accepted TEA or Contract Progress Schedule.

C. Recovery Schedules

The Contractor shall promptly report to the Engineer all schedule delays during the prosecution of the Work. Contract Progress Schedules that predict performance extended beyond the Contract Time or beyond any Contract Milestone shall not be approved as the schedule of record. This requirement is critical to the Department's ability to make informed decisions regarding Contract Time and costs.

The Contractor shall submit a Recovery Schedule within fifteen (15) Calendar Days of a Contract Progress Schedule submission that shows failure to meet the Contract Dates unless a recovery schedule is waived by the Department. Waiving the recovery schedule does not relieve the contractor of the responsibility for the delay. The Department may revoke the waiver of a Recovery Schedule, at which time a Recovery Schedule shall be submitted within fifteen (15) Calendar Days of the Contractor being notified.

Changes represented in accepted Recovery Schedules shall be incorporated into the next Contract Progress Schedule.

SECTION 722 (Continued)

D. Proposal Schedules

A Proposal Schedule is an alternative schedule used to evaluate proposed changes to the Contract scope or significant alternatives to previously approved approaches to complete the Work, which may include changes to activity durations, logic, and sequence. For Types A and B Schedules, the Proposal Schedule shall be cost and resource loaded.

A Proposal Schedule may be requested by the Department at any time or may be offered by the Contractor. The Engineer may request that the Contractor prepare a Proposal Schedule to further mitigate any delays that are shown in an accepted TEA or Contract Progress Schedule.

The Contractor shall submit the Proposal Schedule within thirty (30) Calendar Days of a request from the Department.

The Proposal Schedule shall not be considered a Schedule of Record until the logic, durations, narrative, and basis of the Proposal Schedule have been accepted by the Engineer. If the Proposal Schedule took the form of a fragnet, it must be incorporated into the Contract Progress Schedule of Record showing the current progress of all other activities and the impacts/results of the changes made by the Proposal Schedule before the Proposal Schedule is accepted by the Department.

Proposal Schedules shall clearly indicate any proposed acceleration including overtime hours, additional shifts, and the resources that are proposed to be incorporated in the schedule. The Engineer shall have final discretion over the use of overtime hours and additional shifts. Proposal Schedules that contain a cost element shall be submitted with a separate Cost Proposal.

Changes represented in the accepted Proposal Schedules shall be incorporated into the next Contract Progress Schedule. During the review of any Proposal Schedule, all Contract Progress Schedules shall continue to be required every month.

E. Disputes

All schedules shall be submitted, reviewed, dispositioned, and accepted in the timely manner specified herein so as to provide the greatest possible benefit to the execution of this Contract.

The Contractor may dispute a decision by the Engineer by filing a claim notice within seven (7) days after the Contractor's request for additional time has been denied or if the Contractor does not accept the number of days granted in a time extension. The Contractor's claim notice shall include a revised time entitlement analysis that sufficiently explains the basis of the time-related claim. Failure to submit the required time entitlement analysis with the claim notice shall result in denial of the Contractor's claim. A determination on the Contractor’s claim shall be in accordance with Subsection 7.16 Claims of Contractor for Compensation. Pending resolution of any dispute, the last schedule accepted by the Engineer will remain the Contract Schedule of Record.

SECTION 722 (Continued)

722.65 Schedule Type D Requirements

This section is to detail the requirements for Type D Schedules and is separate from the requirements listed above. These schedules are intended for a project in which a more formal schedule would not be practical.

Schedules for Type D projects shall be submitted for each work assignment. The Schedule Type D shall be submitted electronically in .XLS and .PDF format and meet the following requirements.

The schedule requirements for work assignments that are anticipated to last three weeks or less shall conform to the requirements for Short-term Construction Schedules below.

Work assignments that are anticipated to last longer than three weeks shall submit a bar chart baseline and provided update schedules upon request of the engineer as required under Bar Chart Schedule below in addition to meeting the Short-term Construction schedule requirements.

A. **Bar Chart Schedule**

A Bar Chart that shall include the following:

- Work Assignment start date.
- Activities to identify.
  - Major work operations broken down to be no longer than 14 days.
  - Procurement of fabricated materials and equipment with long lead times, including time for review and approval of submittals required before procuring and fabricating.
  - The preparation and submission of shop drawings, procedures, and other required submittals, with a planned duration that is to be demonstrated to the Engineer as reasonable.
  - The review and return of shop drawings, procedures, and other required submittals, approved or with comments, the duration of which shall be shown as thirty (30) Calendar Days,
  - Detailed activities to satisfy permit requirements.
  - Subcontractor approvals at fifteen (15) Calendar Days from submittal to response
  - Project Close out activities including a 21-calendar day creation of a punchlist activity and 30 calendar day minimum completion of punchlist activity.
- Interfaces with adjacent work, utility companies, other public agencies, sensitive abutters, and/or any other third-party work affecting the Contract.
- Access Restraints – restrictions on access to areas of the Work
- Traffic work zone set-up and removal, night work and phasing
- Contract Milestones including Full beneficial Use, Substantial Completion and Contractor Field Completion

The Bar Char Schedule shall be provided at the beginning of the project and updated with each work order created for the project.

SECTION 722 (Continued)

B. **Short-Term Construction Schedule**

The Contractor shall provide a Short-Term Construction Schedule that details daily work activities, including any multiple shift work that the Contractor intends to conduct, in a spreadsheet format. The daily activities shall directly correspond to the Contract Progress Schedule activities, with a matching reference to the activity identification number in the Contract Progress Schedule and may be at a greater level of detail. See schedule toolkit for suggested format.

The Short-Term Construction Schedule shall be submitted every two weeks. It shall display all work for a thirty-five (35) Calendar Day period consisting of completed work on the assignment for the two week period prior and all planned work for the following three week period. The initial submission shall be provided no later than thirty (30) Calendar Days after NTP or as required by the Engineer.

The Contractor shall be prepared to discuss the Short-Term Construction Schedule, in detail, with the Engineer in order to coordinate field inspection staff requirements, the schedule of work affecting abutters and any corresponding work with affected utilities.

C. **Project Spending Report (PSR)**

A Projected Spending Report (PSR) shall be prepared and submitted monthly. The PSR shall be for all active work assignments, broken down by work assignment. The PSR shall indicate the monthly spending (cash flow) projection for each month from NTP to Contractor Field Completion (CFC). Each month's actual spending shall be calculated using all CQEs paid during that month. The Projected Spending Report (PSR) shall be depicted in a tabular format and provided in both an .XLS and .PDF

SECTION 722 (Continued)

COMPENSATION

722.80 Method of Measurement

Schedule of Operations (Type A, B and C)

The project bid documents specify the fixed-price amounts to be paid to the Contractor for the Project Schedule requirements contained herein. Each bidder shall include this fixed price bid item amounts in their bid. Failure to do so may be grounds for the rejection of the bid.

This fixed price amount is for payment purposes only and is separate from what the Department considers to be the Contractor's General Condition costs. If the Contractor deems it necessary to include additional costs to provide all of the requirements of this section, these additional costs shall be included in the Contractor's overall bid price.

All required schedule-related work, including, but not limited to computers, computer software, the planning and coordination with utilities, training, schedule preparation and schedule submittals will be paid for under the fixed price amount.

Twenty percent (20%) of this pay item will be paid upon the Engineer's acceptance of the Contractor's Baseline Schedule, prepared and submitted in accordance with Subsection 722.63.A.

The remaining eighty percent (80%) of this pay item will be paid in equal monthly installments distributed across the Contract Duration from Notice to Proceed (NTP) to Contractor Field Completion (CFC), less the 2 months required for the submittal and review of the Baseline Schedule in accordance with the following formula:

$$\text{Monthly Payment} = \frac{\text{Remaining Fixed Price amount (80\% of the Item Cost.)}}{\text{Contract Duration in whole months} - 2 \text{ months}}$$

The Schedule of Operations pay item will be adjusted to pay for only the actual quantity of schedules that have been submitted in accordance with this section.

Should there be a Time Extension granted to the Contractor, the Engineer may provide an Equitable Adjustment for additional Contract Progress Schedule Updates at intervals directed by the Engineer. The monthly payment will be the basis for this Equitable Adjustment.

Schedule of Operations (Type D)

For projects assigned with Type D schedule requirements, all scheduling work shall be considered incidental to the project with no separate payment under this section.

SECTION 722 (Continued)

722.81 Basis of Payment

The timely and accurate submission of the Baseline Schedule is critical to the Contract and the Department's ability to make informed decisions. Only payments under Item 740 - Engineer's Field Office and Item 748 – Mobilization will be made until the Baseline Schedule is accepted by the Engineer.

All required schedule-related work, including, but not limited to computers, computer software, the planning and coordination with utilities, training, schedule preparation and schedule submittals (including monthly progress schedules, short-term schedules, project spending reports, TEAs, recovery schedules or impacted schedules) shall be included in this work.

No payment for any other pay item will be processed beyond seventy-five (75) Calendar Days from Notice to Proceed (NTP) until the Baseline Schedule is accepted by the Engineer. Until the Engineer's acceptance of the Baseline Schedule, the combined total of all payments made to the Contractor will be limited to an amount no greater than the total price for Item 748 - Mobilization or 3% of the contract price, whichever is less.

All Contract Progress Schedule Updates submitted later than ten (10) Calendar Days after the CQE (Contract Quantity Estimate) completion date, or greater than forty (40) Calendar Days from the Data Date of the previous submission, will be deemed to be no longer useful and will not qualify for payment. The late submission of Impacted schedules, including TEAs, recovery schedules and proposal schedules will result in the forfeiture of the monthly payment for the month in which they were due and subsequent months until the submission is made. Late submission of missed submittals will not result in recovery of the previously forfeited portion of the Schedule of Operations Fixed Price Payment Item.

Failure to submit schedules as and when required may result in the forfeiture of that portion of the Schedule of Operations Fixed Price Payment and/or the withholding of the full or partial CQE payments by the Engineer.

Failure to submit schedules that are acceptable to the Engineer may result in the forfeiture of that portion of the Schedule of Operations Fixed Price Payment and/or the withholding of the full or partial CQE payments by the Engineer.

The Schedule of Operations pay item will be adjusted to pay for only the actual quantity of schedules that have been submitted in accordance with this section.

The Contractor's failure or refusal to comply with the requirements of this Section shall be reasonable evidence that the Contractor is not prosecuting the Work with due diligence and may result in the Engineer withholding of full or partial payments of all work performed.

722.82 Payment Items

722.1	SCHEDULE OF OPERATIONS (TYPE A) - FIXED PRICE $_____	LUMP SUM
722.2	SCHEDULE OF OPERATIONS (TYPE B) - FIXED PRICE $_____	LUMP SUM
722.3	SCHEDULE OF OPERATIONS (TYPE C) - FIXED PRICE $_____	LUMP SUM

ITEM 102.511 TREE PROTECTION – ARMORING AND PRUNING EACH

The work under this item shall conform to the relevant provisions of Sections 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.

ITEM 102.511 (Continued)

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.

- 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 102.521 TREE AND PLANT PROTECTION FENCE FOOT

The work under this Item shall conform to the relevant provisions of Sections 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 Section 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 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 180.03 (Continued)

Laboratory testing will be reimbursed upon receipt of paid invoices for testing approved by the Engineer.

This item is for LSP work for compliance with the MCP and Department Policies. LSP hours and any laboratory testing related to off-site disposal of excess soil and sediment is incidental to Items 181.11-181.14 (including, but not limited to, disposal characterization, disposal package preparation, landfill acceptance, shipment paperwork preparation, field screening, and tracking).

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 costs 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 182.1 INSPECTION AND TESTING FOR ASBESTOS LUMP SUM

The work shall include the inspecting and testing of all materials suspected of containing asbestos. When any demolition is required to enable the inspection and testing of the suspected material it will be considered incidental to this Item and the Contractor must perform all asbestos handling and testing in accordance with the regulations stated below.

Dust suppression in the form of light water sprays, foams, dust suppressants and calcium chloride will be implemented as required to control dusting during any disturbance of asbestos suspected material. Alternatively, intrusive activities may be reduced or curtailed under high wind or heavy rain conditions, which in the opinion of the Health and Safety Plan (HASP) may pose a safety hazard to the workers.

The Contractor shall employ the services of a Massachusetts licensed "Asbestos Inspector" to inspect the material to determine whether or not "ITEM 182.2 REMOVAL OF ASBESTOS" is required. Should the asbestos inspector determine laboratory testing is required, a state certified laboratory shall be used to perform all necessary tests.

REGULATIONS

U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA) including but not limited to:

29 CFR 1910 Section 1001 and 29 CFR 1926 Section 58 Occupational exposure to Asbestos, Tremolite, Anthophyllite and Actinolite, Final Rule
29 CFR 1910 Section 134 Respiration Protection
29 CFR 1926 Construction Industry
29 CFR 1910 Section 2 Access to Employee Exposure and Medical Records
29 CFR 1910 Section 1200 Hazard Communication
29 CFR 1910 Section 145 Specifications for Accident Prevention Signs and Tags

U.S. Environmental Protection Agency, (EPA) including but not limited to:

40 CFR 762, CPTS 62044, FRL 2843-9, Federal Register Vol. 50 no.134, July 12, 1985 p.28530 - 28540 Asbestos Abatement Projects Rule
40 CFR 61 Subpart A Regulation for Asbestos
40 CFR 61 Subpart M (Revised Subpart B) National Emission Standard for Asbestos

ITEM 182.1 (Continued)

U.S. Department of Transportation 49 CFR 172 and 173

Massachusetts Department of Labor Standards Regulations, (DLS) including but not limited to:

454 CMR 28.00 Removal, Containment and Encapsulation of Asbestos

Massachusetts Department of Environmental Protection (DEP) including but not limited to (supplementing subsection 7.01):

310 CMR 7.00, Section 7.09 Odor and Dust, Section 7.10 Noise, Section 7.15 Air Pollution Control Regulations
310 CMR 18.00 and 19.00 Solid Waste Regulations

Massachusetts Division of Industrial Safety 45 CMR 10.00

Local Requirements including but not limited to those of Health Departments, Fire Departments and Inspection Services Departments

Wherever there is a conflict or overlap of the above references, the most stringent provision shall apply.

BASIS OF PAYMENT

Item 182.1 will be paid for at the Contract unit price per Lump Sum, which price shall include all labor, materials, tools, equipment, and all incidental costs required to complete the work as described and as required by the Engineer.

No separate payment will be made for the protection of general public, private property, the proper inspecting and testing of the material, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 182.2 REMOVAL OF ASBESTOS FOOT

The work shall include the removal and satisfactory disposal of existing asbestos. The Contractor's attention is directed to the fact that existing asbestos shall be inspected and tested prior to removal, to determine if special removal and disposal is required. The Contractor shall follow all the rules and regulations stated in "ITEM 182.1 INSPECTION AND TESTING FOR ASBESTOS". If asbestos is present, the Contractor shall follow all the rules and regulations stated in the section "REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIALS", under this item. The Contractor should notify and coordinate his/her efforts with the proper utility accordingly.

REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIALS

This section specifies the requirements for the handling and removal of asbestos containing material. The Contractor must perform all asbestos handling and removal work in accordance with these specifications and the following additional requirements.

U.S. Department of Labor, Occupational Safety and Health Administration, (OSHA) including but not limited to:

29 CFR 1910 Section 1001 and 29 CFR 1926 Section 58
Occupational exposure to Asbestos, Tremolite, Anthophyllite and Actinolite, Final Rule
29 CFR 1910 Section 134 Respiration Protection
29 CFR 1926 Construction Industry
29 CFR 1910 Section 2 Access to Employee Exposure and Medical Records
29 CFR 1910 Section 1200 Hazard Communication
29 CFR 1910 Section 145 Specifications for Accident Prevention Signs and Tags

U.S. Environmental Protection Agency, (EPA) including but not limited to:

40 CFR 762, CPTS 62044, FRL 2843-9, Federal Register Vol. 50 no.134, July 12, 1985 p.28530 - 28540 Asbestos Abatement Projects Rule
40 CFR 61 Subpart A Regulation for Asbestos
40 CFR 61 Subpart M (Revised Subpart B) National Emission Standard for Asbestos

ITEM 182.2 (Continued)

U.S. Department of Transportation 49 CFR 172 and 173

Massachusetts Department of Labor Standards, (DLS) including but not limited to:

454 CMR 28.00 Removal, Containment and Encapsulation of Asbestos

Massachusetts Department of Environmental Protection (DEP) including but not limited to (supplementing subsection 7.01):

310 CMR 7.00, Section 7.09 Odor and Dust, Section 7.10 Noise, Section 7.15 Air Pollution Control Regulations
310 CMR 18.00 and 19.00 Solid Waste Regulations

Massachusetts Division of Industrial Safety 45 CMR 10.00

Local Requirements including but not limited to those of Health Departments, Fire Departments and Inspection Services Departments

Wherever there is a conflict or overlap of the above references, the most stringent provision shall apply.

All asbestos material shall be removed and properly disposed of by a contractor or subcontractor with a current Massachusetts Abatement Contractors License issued by the Department of Labor Standards. Work shall be supervised by a competent person as required by OSHA in 29 CFR 1926 to ensure regulatory compliance. This person must have completed a course at an EPA Training Center or equivalent course in asbestos abatement procedures, have had a minimum of four years on-the-job training and meet any addit
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onal requirements set forth in 29 CFR 1926 for a Competent Person. This person must also be certified by the Commonwealth as an Asbestos Supervisor and Asbestos Project Designer as required by 454 CMR 28.00.

Asbestos removal work shall be coordinated with all other work under the contract and shall be completed prior to performing any activities which could disturb the asbestos material or produce airborne asbestos fibers.

Dust suppression in the form of light water sprays, foams, dust suppressants and calcium chloride will be implemented as required to control dusting during trenching and excavation. Alternatively, intrusive activities may be reduced or curtailed under high wind or heavy rain conditions, which in the opinion of the Health and Safety Plan (HASP) may pose a safety hazard to the workers.

ITEM 182.2 (Continued)

NOTIFICATION AND PERMITS

The Contractor shall prepare a formal pre-notification form at least ten (10) days prior to the start of asbestos removal work. This form must be submitted to the appropriate Regional Office of the Massachusetts Department of Environmental Protection and to the U.S. Environmental Protection Agency Region I Air and Hazardous Material Division. A copy of the submitted forms must be provided to the Engineer and kept at the work site.

Prior to starting any work, the Contractor shall also obtain any required asbestos removal permit(s) from the city/town. A copy of the permit(s) must be provided to the Engineer and posted at the work site.

The Contractor shall also obtain and pay all other applicable asbestos waste transportation and disposal permits, licenses and fees.

STANDARD OPERATING PROCEDURES

The standard operating procedure shall ensure the following:

1. Proper site security including posting of warning signs and restricting access to prevent unauthorized entry into the work spaces.

2. Proper protective clothing and respiratory protection prior to entering the work spaces.

3. Safe work practices including provisions for communications; exclusion of eating, drinking, smoking, or use of procedures or equipment that would in any way reduce the effectiveness of respiratory protection or other engineering controls.

4. Proper exit practices from the work space though the showering and decontamination facilities.

5. Removing asbestos containing material in ways that minimize release of fibers.

6. Packing, labeling, loading, transporting and disposing of contaminated material in a way that minimizes or prevents exposure and contamination.

7. Emergency evacuation of personnel, for medical or safety (fire and smoke) so that exposure will be minimized.

8. Safety from accidents in the work space, especially from electrical shocks, slippery surfaces and entanglements in loose hoses and equipment.

9. Provisions for effective supervision and OSHA - specified personnel air monitoring for exposure during work.

ITEM 182.2 (Continued)

REQUIRED SUBMITTALS

The Contractor shall submit to the Engineer the following listed items at least ten (10) calendar days prior to the start of asbestos work. No asbestos removal work activities shall commence until these items are reviewed by the Engineer, unless otherwise waived. Submittals shall be clearly labeled and in sufficient detail to enable the Engineer to form an opinion as to its conformity to the specifications.

1. Name, experience and DLS certification of proposed Supervisors and Foreman responsible for asbestos work.

2. Summary of workforce by disciplines and a notarized statement documenting that all proposed workers, by name, have received all required medical exams and have been properly trained and certified for asbestos removal work, respirator use and appropriate Massachusetts DLS, EPA and OSHA standards.

3. Notarized statement that workers are physically fit and able to wear and use the type of respiratory protection proposed for the project. Notarized certification signed by an officer of the abatement contracting firm that exposure measurements, medical surveillance and worker training records are being kept in conformance with 29 CFR 1926.

4. Written plan of action and standard operating procedures (HASP) to include: location and layout of decontamination areas; sequencing of asbestos work; detailed schedule of work activities by date and interface with other project activities which affect work performance; methods used to assure safety and security; worker protection and exposure monitoring; contingency and emergency evacuation procedures; detailed description of methods to be employed to control pollution; waste handling procedures.

5. Written respiratory protection program specifying level of protection intended for each operation required by the project and details of daily inspection and maintenance elements.

6. Copies of the U.S. EPA, State and local asbestos removal pre-notification forms. If applicable, lists and copies of all permits, licenses, or manifests which will be applied for and used.

7. Name, location and applicable approval certificates for primary and secondary landfill for disposal of asbestos-containing or asbestos contaminated waste. Name, address and licenses number(s) of hauler permitted to transport waste. (Submit copies of completed manifests upon disposal).

The Contractor must provide copies of daily inspection and record logs upon request of the Engineer, at any time during project. This information will include but is not limited to work area entry data, respirator inspections and maintenance, HEPA-exhaust inspections and maintenance and other work applicable activities or reports of accidents or unusual events.

ITEM 182.2 (Continued)

METHOD OF MEASUREMENT

ITEM 182.2 will be measured for payment by the FOOT for the complete removal and disposal of the asbestos containing material.

BASIS OF PAYMENT

Item 182.2 will be paid for at the Contract unit price per FOOT, which price shall include all labor, materials, tools, equipment, and all incidental costs required to complete the work specified above and as required by the Engineer.

No separate payment will be made for the protection of general public, private property, the proper inspecting and testing of the material, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 655.3 WOOD FENCE FOOT

The work under this item shall conform to the relevant provisions of Subsections 120 and 644 of the Standard Specifications and the following:

The work shall consist of the installation of new wood fence as shown on the Plans and as required by the Engineer.

Wood posts and rail shall be Eastern Spruce, 1450 grade or better, or other approved species. Wood shall be paintable pressure treated lumber in accordance with the requirements of the Standard Specifications of the American Wood Preservers Association (AWPA) and shall be marked to indicate the wood grade and preservative standard.

Pressure-treated rails shall be 1 ¼" x 6". Fence posts shall be set at not more than 8'-0" intervals and set in ground not less than 3'-0" deep from proposed ground level. The height of the wood fence shall be 6' from ground level.

Where solid rock or boulder is encountered without an overburden of soil, posts shall be set a minimum depth of 18 inches into the solid rock. The posts shall be cut before installation to lengths, which will give the required length of post above ground. After the post is set and plumbed, the hole shall be filled with grout consisting of one part Portland cement and one-part clean, well-graded sand. The grout shall be thoroughly worked into the hole so as to leave no voids. The Concrete base shall be 3500 psi, 1.5 in., 470 cement concrete masonry.

When loose rock or small boulders are encountered, the post shall be set to the full depth as shown on the detail sheet (3'-0") after removing rock and small boulders.

METHOD OF MEASUREMENT

Item 655.3, Wood Fence, will be measured for payment by the FOOT of fence installed.

BASIS OF PAYMENT

Item 655.3 will be paid at the Contract unit price per FOOT, which price shall include all labor, materials, equipment, drilling into rock, excavation, disposal of the existing foundations, supplying and placing of gravel backfill, compaction, the restoration or replacement in kind of disturbed surfaces, and all incidental costs required to complete the work.

Also included under this item is all the hardware, galvanized steel screws, etc., necessary to attach the 1 ¼" x 6" rail to the 4" x 4" fence post.

Cement Concrete Masonry for post foundations shall be considered incidental and included in the payment for this item.

ITEM 670.1 FENCE REMOVED AND DISCARDED FOOT

The work under this item shall conform to the relevant provisions of Subsections 120 and 665 of the Standard Specifications and the following:

The work shall consist of removing and discarding of existing wood fence as shown on the Plans and as required by the Engineer.

In addition, the work shall include the removal of fence posts, foundations and all appurtenances, the hole backfilled with gravel and compacted, and the existing surfaces restored or replaced in kind.

METHOD OF MEASUREMENT

Item 670.1, Fence Removed and Discarded, will be measured for payment by the FOOT of fence removed and discarded.

The fence will be measured in original position along the top edge of the fence element from center to center of end posts.

BASIS OF PAYMENT

Item 670.1 will be paid at the Contract unit price per FOOT, which price shall include all labor, materials, equipment, excavation, disposal of the existing foundations, supplying and placing of gravel backfill, compaction, the restoration or replacement in kind of disturbed surfaces, and all incidental costs required to complete the work.

ITEM 685. STONE MASONRY WALL IN CEMENT MORTAR CUBIC YARD

The work to be performed under this item shall conform to the relevant provisions of Subsections 685 and 690 of the Standard Specifications and as shown on the plans.

The Contractor shall construct recessed mortar joints on the roadway / sidewalk side of the wall. Joints shall be recessed to a depth of one and a half (1.5) inches.

METHOD OF MEASUREMENT

Item 685., Stone Masonry Wall in Cement Mortar, will be measured for payment by the CUBIC YARD, in place, measured complete in place along the top centerline of the finished wall and accepted.

BASIS OF PAYMENT

Item 685 will be paid at the Contract unit price per CUBIC YARD of finished wall, which price shall include all labor, materials, equipment, stacking, disposal of excess stone, and incidental costs necessary to complete the work.

ITEM 691. BALANCE STONE WALL REMOVED AND REBUILT FOOT

The work to be performed under this item shall conform to the relevant provisions of Subsections 685 and 690 of the Standard Specifications and the following:

The work shall consist of carefully dismantling, stockpiling stone, and rebuilding selected fieldstone balance stone walls in new locations within the project area. Balance stone walls to be removed and rebuilt as identified on the plans. Locations of new walls shall comply with all ROW and clear recovery requirements.

To allow mason greatest selection of local fieldstone in rebuilding balance wall, no stones from balance stone walls shall be discarded from project area until all rebuilt balance walls on project are complete.

The work shall include the total volume of adjusted wall, disassembly of existing wall, and reconstructing wall in new location complete as shown on the plans and as directed by the Engineer.

The work shall include but not be limited to digging and trenching, removal of vegetation, labor, tools, equipment and all incidentals required to complete the work as stated herein, shown on the contract plans, and as directed by the Engineer. The work shall be done in accordance with these specifications, and in close conformity with the lines and grades shown on the plans or established by the Engineer.

MATERIALS

Stone from existing project area balance walls shown to be removed shall be used. Ideally stone from segments of wall shall simply be relocated. No stone from walls not to be removed shall be used.

Most stones are dry laid but vary in size. Some stones may be boulders embedded in the ground.

Any supplemental stones that are required shall be field stones which match the size, color, and texture of the existing stones as closely as is feasible.

Stones from existing walls should not require cleaning. Natural staining or patches of lichen growth is acceptable.

No mortar shall be used anywhere or for any reason in reconstructing dry laid balance walls.

ITEM 691. (Continued)

SUBMITTALS

The stonework shall be done by masons who are experienced in construction of dry laid stone walls. At least one of the masons shall have 10 years or more experience constructing mortarless, dry-laid balance stone walls. Resume and projects showing experience shall be submitted to Engineer and MassDOT Landscape Section for approval.

CONSTRUCTION METHODS

Prior to the disassembly of the existing wall, photographs of the existing conditions of the wall shall be taken to serve as a guide for its reconstruction.

The Contractor shall take care not to damage the existing stones during the disassembly and reconstruction of the wall.

The Contractor shall provide a secure location for stockpiling stone prior to reconstruction, so that stones will not be damaged, lost or stolen.

The rebuilt walls shall maintain a linear appearance and irregular character of local early agricultural farmer walls to as great a degree as possible.

To prepare the base, remove vegetation and excavate a trench up to 12 inches deep as needed to achieve stable, unfrozen soil. Place the bottom row of stones in the trench. Stones from select, existing dismantled walls, shall be used to rebuild the new walls.

The open spaces about the base of the wall shall be filled with the materials excavated from the trench. Surplus excavation shall be used as directed in location or disposed.

The stones shall be laid in a two-over-one, one-over-two pattern so as to break joints and all vertical spaces shall be packed full with spalls or chinking stones. No spalls or chinking shall be allowed in the beds and at least 25% of the stones in the face shall be headers evenly distributed throughout the wall.

Additional available stone may be used to increase height of wall if needed. The walls shall not exceed four feet in height.

METHOD OF MEASUREMENT

Item 691, Balance Stone Wall Removed and Rebuilt, will be measured for payment by the FOOT. Balance Stone Wall Removed and Rebuilt will be measured in place and shall be the length of the balance stone walls rebuilt.

ITEM 691. (Continued)

BASIS OF PAYMENT

Item 691. will be paid at the Contract unit price per FOOT, complete and to the satisfaction of the Engineer.

The price for this work shall include full compensation for, including, but not limited to, all labor, equipment, worker protection, environmental compliance, vegetation removal, materials, tools, material testing, transportation/hauling and any incidentals required to complete the work to the satisfaction of the Engineer in accordance will all requirements of the contract.

Excavation at the new location will be paid for at the contract unit price per cubic yard under the item for Item 141, Class A Trench Excavation, or Item 144, Class B Rock Excavation.

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 Section 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

Work under this item shall conform to the relevant provisions of Subsection 670 of the Standard Specifications and the following:

The work under this item shall consist of placing a geotextile fabric in the construction of the 2:1 slope along Route 20 as shown on the plans.

The fabric shall conform to requirements of AASHTO M 288 for stabilization. Installation will be in conformance with the manufacturer's specifications.

The Engineer shall inspect and approve the reconstructed end of the stone balance wall and incidental work after completion.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 698.3 will be measured by the SQUARE YARD of stabilized slope.

Item 698.3 will be paid for at the Contract unit price per SQUARE YARD, which price shall include all labor, materials, equipment, and incidental costs required to complete the work.

ITEM 704. STONE DUST WALKS TON

The work shall include the furnishing and placing of stone dust upon a gravel base as shown on the drawings and as directed by the Engineer.

Stone dust shall be crushed stone or gravel fines conforming to the following gradation:

- 100% passing #4 sieve
- 90% passing #50 sieve
- 65% passing #200 sieve

Color shall be dark grey. Submit stone dust sample for approval by Engineer.

Place, grade and compact the gravel base. Place, grade and compact the stone dust to produce the minimum required thickness with a firm, uniform surface at the lines and grades shown on the plans and as directed by the Engineer.

METHOD OF MEASUREMENT

Item 704, Stone Dust Walks, will be measured for payment by the TON, complete in place.

BASIS OF PAYMENT

Item 704, Stone Dust Walks, will be paid at the Contract unit price bid per TON, which price shall include all labor, material, equipment including aluminum edging and spikes, and incidental costs required to complete the work.

Gravel borrow will be paid for separately under Item 151.

Fine grading and compacting will be paid for separately under Item 170.

ITEM 740. ENGINEERS 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 Systems 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.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

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 756. NPDES STORMWATER 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 Contractor to facilitate and/or address the Contractor's schedule, methods and prosecution of the work shall be considered incidental to this item.

ITEM 756. (Continued)

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.

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.

ITEM 767.121 (Continued)

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 minimu
m 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 e
scaping 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.

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.

ITEM 767.121 (Continued)

Sedimentation Fence

Materials and Installation shall be per Section 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 Section 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.

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.

ITEM 767.121 (Continued)

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.

772.341	**CEDAR - WESTERN RED 10 - 12 FEET**	**EACH**
783.467	**TUPELO 2-2.5 INCH CALIPER**	**EACH**
785.734	**INKBERRY - COMPACT 2-3 FEET / #3**	**EACH**
787.094	**RHODO - ROSEBAY 2-3 FEET**	**EACH**
790.637	**DOGWOOD - ARCTIC FIRE RED TWIG 2-3 FEET**	**EACH**
796.125	**ROSY RETURNS DAYLILY #1 POT**	**EACH**
796.145	**LITTLE SUZY BLACK - EYED SUSAN #1 POT**	**EACH**
796.236	**SWITCH GRASS - SHENENDOAH #2 POT**	**EACH**

The work under these items shall conform to the relevant provisions of Subsection 771 of the Standard Specifications, as shown on the drawings, and as required by the Engineer.

Plant substitutions and inspections shall be as directed by the Engineer in coordination with MassDOT Landscape Architect and the Town of Weston. Prior to delivery of plant materials to the site, planting areas shall be staked out by the Contractor for acceptance by the Engineer in coordination with the Town of Weston. The Town of Weston shall be notified of staking and planting dates no less than 5 working days prior to proposed work.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Items 772.341, 783.467, 785.734, 787.094, 790.637, 796.125, 796.145, and 796.236 will be measured and paid in accordance with the requirements of Subsections 771.80 and 771.81 of the Standard Specifications.

ITEM 804.3 3 INCH ELECTRICAL CONDUIT TYPE NM - PLASTIC -(UL) FOOT

The work under this item shall conform to the relevant portions of Subsection 801 of the Standard Specifications and the following:

The work shall include the furnishing and installation of 3-inch non-metallic conduit for traffic signal systems in accordance with the plans and as required by the Engineer.

The length of conduit estimated under this Item is not guaranteed by the Engineer; it may be increased or decreased by the Engineer depending upon actual conditions encountered as provided for in Section 4.06 of the Standard Specifications.

Where new conduits are installed in existing grass areas outside the limits of grading, the work shall include the placement of a minimum of 6 inches of loam and seed to restore the disturbed areas to their original condition. No separate payment will be made for this work, but all costs in connection therewith shall be included in the unit price bid.

Where new conduits are installed in existing sidewalk or paved median areas to remain, the work shall include replacement of the gravel base material and the surface pavement to match preconstruction conditions. No separate payment will be made for this work, but all costs in connection therewith shall be included in the unit price bid.

Where new conduits are installed in existing roadway areas, the work shall include replacement of the gravel base material and the hot mix asphalt required to match preconstruction conditions. No separate payment will be made for the gravel borrow base material, but all costs in connection therewith shall be included in the unit price bid.

MATERIALS

Rigid Plastic Conduit

For the traffic signal system, the conduit material shall be Schedule 80 polyvinyl chloride (PVC) plastic conduit. Cement concrete shall be placed 3 inches around the conduit when the conduit crosses a roadway as shown on the construction details.

Couplings And Fittings

Conduit couplings shall be constructed of polyvinyl chloride rigid plastic formed to fit the outside diameter of the conduit, to be used in conjunction with heavy-bodied solvent cement.

ASTM Specification D2564 Solvent Cements for PVC Plastic Pipe and Fittings

ITEM 804.3 (Continued)

Conduit Duct Bell Ends shall be polyvinyl chloride rigid plastic approved by Underwriter's Laboratories, Inc. for use on thread less rigid plastic conduit, to be used in conjunction with a heavy bodied solvent cement.

Construction Methods

The PVC conduit shall be installed in a trench as described in Subsection 801.60 of the Standard Specifications. Refer to trench details for backfill requirements and warning tape requirements above the PVC conduits.

A ¾-inch polypropylene pull rope shall be installed in all conduits.

Metallic warning tape shall be placed above the duct bank as shown on the Construction Details.

Conduits entering concrete pull boxes/handholes or manholes shall be terminated 2 inches inside the wall of the pull box/handholes or manholes and shall have attached a bell end of the required size, using the solvent cement as called for in the specifications.

All conduit installed in pull boxes/handholes, or manholes shall be installed in knockouts provided in the pull boxes/handholes or manholes. After the conduit has been installed in the pull boxes/handholes or manholes, the open space between the pull boxes/handholes or manhole and the conduit will be sealed with Class B Cement Concrete Masonry. Any conduit installed in such a manner as to block complete access to any other conduit shall be removed and reset.

When more than one conduit is to be installed in one trench, the width of the trench shall be increased by the sum of the outside diameters of the conduits plus 4 inches for each individual conduit.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 804.3 will be measured and paid in accordance with the requirements of Subsections 801.80 and 801.81 of the Standard Specifications.

Controlled Density Fill-Excavatable shall be incidental to this item.

Hot mix asphalt trench patching will be paid for under Item 451. - HMA for Patching.

ITEM 811.28 ELECTRIC HANDHOLE POLYMER CONCRETE EACH

The work under this Item shall conform to the relevant provisions of Subsection 801 of the Standard Specifications and the following:

The work under this section shall require that the Contractor provide all labor, materials, equipment, tools, supplies and transportation involved in the installation of approved polymer-concrete electrical handhole with cover at location as specified on the plans:

DESCRIPTION

General
The work shall include, but not be limited to, the excavation, removal and disposal of existing soil, installation of electric polymer concrete handhole with cover and with suitable backfill.

Submittals
List of materials and equipment requiring shop drawings shall include:

1. Polymer Concrete Electrical Handhole with Cover Type B (24”W x 36”L x 24”D)

Perform work and provide (furnish and install) material and equipment as shown on Drawings and as specified, or indicated, in this Section of the specifications. Completely coordinate work of this Section with work of other trades and provide a complete and fully functional installation. Drawings and specifications form complimentary requirements; provide work specified and not shown, and work shown and not specified as though explicitly required by both. Although work is not specifically shown or specified, provide supplementary or miscellaneous items, appurtenances, devices and materials obviously necessary for a sound, secure and complete installation.

Remove all debris caused by Contractors’ work.

Interpretation of Drawings

Drawings are diagrammatic and indicate general arrangement of systems and work included in Contract. Drawings are not intended to specify or show every offset, fitting or component; however, Contract Documents require components and materials whether or not indicated or specified as necessary to make installation complete and operational. Any work installed contrary to, or without review by, the Engineer shall be subject to change as directed by the Engineer, and no extra compensation will be allowed for making these changes.

MATERIALS

General
Materials and products furnished shall be designed for the intended use, shall meet all requirements of the latest edition of the National Electric Code (NEC), and all local codes.

Materials shall be manufactured in accordance with the standards indicated in this Section, and typical industry standards and codes for the products specified.

ITEM 811.28 (Continued)

The materials used shall be new, unused, and of the best quality for the intended use. All equipment shall have the manufacturer's name, address, model or type designation, serial number and all applicable ratings clearly marked thereon in a location which can be readily observed after installation. The required information should be marked on durable nameplates that are permanently fastened to the equipment.

Electrical equipment shall at all times during construction be adequately protected against mechanical injury or damage by water. Electrical equipment shall not be stored outside exposed to the elements. If any equipment or apparatus is damaged, such damage shall be repaired at no additional cost, or replaced at no additional cost as directed by the Engineer.

Electric Handholes

Electric Handholes are to be strong, polymer concrete and provided in the dimensions as shown on the Contract Drawings. Electric Handholes shall be Ultraviolet (UV) resistant, along with being unaffected by moisture, freezing temperatures, soil, and sub-soil chemicals. Minimum handhole size is 24" W x 30"L x 24"D, interior dimensions. Manufacturer from heavy-duty, fire-retardant polymer concrete reinforced composites, with UV stabilizers and vertical ribs for structural stiffness.

Handholes shall be provided with bolted, gasketed cover, containing two (2) stainless steel (penta-head) captive bolts and self-centering corrosion resistant nuts. Cover to have two (2) 5/8" x 4" lifting slots, with an "Street Lighting" logo. Handholes and Covers shall be design for street-rated, heavy-duty applications, meeting the requirements of ANSI/SCTE 77 Tier 15 loading, with a minimum design load of 15,000 lbs for both the handhole box and cover. Handholes to be installed flush with final grade.

Handholes shall meet the requirements of the latest edition of the National Electric Code with regards to structural integrity, installation methods, grounding of the cover and metallic parts, etc

METHOD OF MEASUREMENT

Item 811.28 will be measured for payment by the EACH.

BASIS OF PAYMENT

Item 811.28 will be paid at the Contract unit price per EACH, which price shall constitute full compensation for all equipment, labor, materials, set up and incidental costs necessary to install new polymer concrete electric handholes with covers and all as described in the previous sections herein or as shown on the plans.

The Contract unit price will include excavation, installation, backfill, compaction and finishing, along with all necessary components, including (but not limited to) handhole, cover, frame, hardware.

ITEM 811.31 PULL BOX 12 x 12 INCHES – SD2.031 EACH

The work under this Item shall conform to the relevant provisions of Subsection 801 of the Standard Specifications and the following:

The work shall include the furnishing and installation of pull boxes, frames, and covers for the traffic signal system in accordance with the plans, MassDOT standards, and as directed by the Engineer.

Pull boxes associated with traffic signals shall have "TRAFFIC" embossed on the cover per MassDOT standards.

METHOD OF MEASUREMENT

Item 811.31 will be measured for payment by the EACH.

BASIS OF PAYMENT

Item 811.31 will be paid at the Contract unit price by the EACH, which price shall include all labor, materials, equipment, and incidental costs required to complete the work. No separate payment will be made for excavation, back filling, gravel borrow, or grounding but all costs in connection therewith shall be included in the contract unit price bid.

ITEM 815.1 TRAFFIC CONTROL SIGNAL LOCATION NO. 1 LUMP SUM

The work under this item shall conform to the relevant provisions of Section 800 of the Standard Specifications, the 2009 Manual on Uniform Traffic Control Devices (MUTCD), and the following:

The work shall include the furnishing and installation of part or all of the following items: ATC traffic signal controller and cabinet assembly with foundation and concrete pad(s); standard mast arm assemblies with anchor bolts and foundations; signal posts with foundations; signal heads; backplates; single-point video detection; directional high gain antenna; field monitoring unit; emergency vehicle preemption; GPS Time Reference Synchronization Unit; pedestrian signals with countdown timers; accessible pedestrian signal (APS) push buttons; all cable and wiring; ground rods; equipment grounding and bonding; service connection; and all other equipment, materials and incidental costs necessary to provide complete, fully operational traffic control signal system as specific herein and as shown on the plans. The location is:

- Route 20 at Wellesley Street/ Boston Post Road

A list of major traffic signal items required at this location is included on the plans.

Shop Drawings

Within 30 days after the date of Notice to Proceed, the Contractor shall submit shop drawings for signal supports, a list of equipment, and manufacturer's equipment specifications to the Engineer in accordance with the relevant provisions of Section 815.20.

No work shall be commenced by the Contractor until approval of the shop drawings and manufacturer's data has been received in writing from the Engineer. Approval of these drawings will be general in character and shall not relieve the Contractor from the responsibility of, or the necessity of, furnishing materials and workmanship conforming to the plans and specifications.

The Contractor shall deliver to the Engineer a certificate of compliance with the manufacturer for all materials purchased from the manufacturer.

Signal Turn-On

Prior to initial turn-on of the new signal, equipment, signal displays, and vehicle detection as shown on the plans and called for in these special provisions, shall be installed and operable. Applicable signs and pavement makings shall also be in place when the signals are put into operation. Refer to the **FINE TUNING, ADJUSTMENT, AND TESTING PERIOD** and **FINAL INSPECTION AND ACCEPTANCE** sections in the upfront portion of this document for additional information.

Service Connection

Service connection shown on the plans is approximate only. The Contractor shall determine exact location from the servicing utility, arrange to complete the service connection, and be responsible for all charges incidental thereto. The respective utility is responsible for making the connection from the respective riser to the overhead wires.

ITEM 815.1 (Continued)

Testing of Grounding System

The Contractor shall perform testing of the equipment grounding system in the presence of the Design Engineer in accordance with MassDOT Standard Specifications.

Flashing Operation

Changes from automatic flashing to stop-and-go operation and from stop-and-go to automatic flashing operation shall occur as set forth in the MUTCD.

Bench Testing

Prior to installation in the street, the Contractor shall perform bench testing of the proposed completed controller/cabinet assembly in the presence of MassDOT and the Design Engineer at the Contractor's facility prior to installation in the field. Refer to Appendix "A" for the ATC/ATCC test plans to be executed by the Contractor in the presence of the Engineer. Any issues identified during the testing will be successfully mitigated by the Contractor prior to installation.

The Vendor/Manufacturer shall provide this testing facility within New England. In order for the Vendor/Manufacturer's facility to be acceptable for testing, it must be clean, air conditioned/heated, have signal displays and other equipment needed for simultaneous testing of the controller/cabinet assembly supplied as part of this project.

The Vendor/Manufacturer shall set up the controller to operate test displays on all field signal circuits used for the signal sequence shown on the plans. The Vendor/Manufacturer shall make available to the Engineer complete and accurate copies of the as-built wiring diagrams for the cabinet assembly prior to inspection. In addition, a hard copy of all programming data resident in each of the devices at the time of inspection shall be furnished to the Design Engineer. The services of a test engineer shall be made available by the Contractor during the entire test process at no additional cost.

GPS Time Reference Synchronization Unit

The Contractor shall supply and install a GPS Time Reference Synchronization Unit (Future Use) in the controller cabinet. This device will be used specifically for keeping the local controller time clocks accurate for use in time-based coordination.

The GPS Time Reference Unit shall consist of a one-piece component with an embedded receiver and antenna. The GPS unit shall be mounted to the top of the traffic signal control cabinet with all mounting holes sealed with weatherproof caulking.

The GPS unit shall be connected to the controller. The GPS units shall be initially programmed with current time zone, time of day to reset clock, and which day(s) to reset the clock. The GPS time reference unit shall initially be programmed to output the time once a day on every day of the week. The controller shall be initially programmed to reset the time clock once per day.

ITEM 815.1 (Continued)

The installation of GPS unit shall include all necessary wiring, additional Bus Interface Units (BIUs), and programming to ensure a fully operating system.

The cabinet documentation (box prints) shall show all wiring between the GPS time reference unit and the control cabinet. This documentation shall include all programming in the local controller.

Single-point Video Detection System

The Contractor shall furnish and install single-point video detection and monitoring system (SPVDMS) as specific herein and shown on the plans.

The SPVDMS shall detect vehicles on a roadway by processing images sent from an IP 360-degree camera to an interface unit with detector outputs that can be received by the traffic signal controller. The SPVDMS shall consist of but not limited to the following items: IP 360-degree camera with fisheye lens, video processor unit, surge suppression, and cables.

No additional hardware, software items and/or subscription fees/costs shall be needed/allowed to satisfy the requirements as defined in these specifications for the life of the project, and shall meet the following requirements:

1. The SPVDMS shall include all licenses for traffic data collection, data reporting, and unlimited web-based video streaming.
2. The SPVDMS shall stream the detection video camera via the FMU manufacturer's web interface. The use of an external VPN connection shall not be required or allowed.
3. The SPVDMS shall collect all turning movement counts in perpetuity, 24 hours a day 7 days a week, and provide volume occupancy reports as needed.
4. The SPVDMS shall not require the use of a data plan to collect and store traffic data.
5. THE SPVDMS shall not use a web-based configuration software.
6. The SPVDMS shall be equipped with a variable video stream bit rate, to allow streaming video via the FMU.

The SPVDMS shall allow for the configuration of all settings within the SPVDMS without the need for an outside internet connection.

The SPVDMS shall be supplied with a software client program that will be used to configure all settings. The use of a web-based software shall not be allowed.

The SPVDMS shall include a user configurable object masking system to improve detection, by removing unwanted areas of interest.

ITEM 815.1 (Continued)

Components of the SPVDMS shall all be the same make and model. As a minimum, the SPVDMS system shall be supplied and installed with the following functionality:

- Shall have the capability of remotely displaying live video streams all IP video detection units installed at the intersections. The setup of detection zones shall be available via remote access. The system shall log which user made any changes to the detection zone configurations.
- Shall acquire and record phase, channel, detector, pedestrian detector, pre-emption, alarm and overlap statuses at a frequency of no less than 10 times per second including whether a phase is next or has a call for service on it.
- Video detection shall consist of an IP based camera assembly and a digital video detection system. Analog cameras with separate video encoders shall not be allowed.
- Every vehicular approach at every project intersection shall be included in the vehicle detection system, as shown in the Plans.
- Shall be supplied with the ability to automatically collect and process data based on the classification of vehicles.
- Shall provide 24/7 turning movement count reports at no additional cost for the life of the project.
- Shall support local configuration of detection zones and system settings via manufacturer software.
- Shall allow for configuration at the roadside, by a laptop computer connected via ethernet to the Video Processing Unit and Software.
- Shall support the configuration of entries, exits, and turning movements for additional traffic analytics.
- All configuration files shall be stored locally at the traffic control cabinet.
- Installer shall follow all manufacturer written instructions/recommendations and requirements related to the install. Installer shall also submit a list of personnel that will be involved in the installation and provide certification that the technician has received factory approved/authorized training.
- Shall support a minimum of 100 unique video detection zones.
- Shall support real-time detection of vehicles, cyclists, and pedestrians in configurable detection zones per camera.
- Shall support identification of unacceptable video feed, including interrupted video signal.
- Shall support directional detection zones to reduce false detections from objects traveling in other directions.
- Shall support the tracking of vehicles and pedestrians for video analytics applications.

ITEM 815.1 (Continued)

Construction Methods - The SPVDMS shall be installed in accordance with the manufacturer's recommendations. Size and locations of the video detection zones shall be positioned/repositioned in the field to provide accurate vehicle detection on each approach as directed by the Engineer/ MassDOT. The SPVDMS shall be programmed by the Contractor to ensure that detection zones are established to cover the approach width and that the detection system is functioning to the satisfaction of MassDOT. Once the new camera(s) is in place and active, the Contractor shall verify that accurate, stable detection is occurring by observing vehicle presence/movement along with the video image on each approach.

The Contractor shall supply and install extension brackets to support proposed the vehicle detection system camera(s).

The extension bracket length and attachment heights shall be verified by the Contractor based on existing grade at the site. The Contractor shall be responsible for selecting the proper length of bracket and achieving the proper orientation of the extension brackets and may be required to field adjust the location of the extension brackets in the presence of the Engineer/ MassDOT to properly align vehicle detection sensors and for strategic placement of any blind spot created by the extension bracket.

The SPVDMS cable shall be supplied and installed per the manufacturer's recommendations.

The Contractor shall be responsible for furnishing all training, labor, materials, cables, connectors, tools, equipment, shipping, and incidental items necessary to complete the installation and make the SPVDMS fully operational.

The Contractor shall install the SPVDMS system software on computers/systems as required by the Engineer to allow visual confirmation of the detection zones as shown on the plans. All equipment shall be installed and wired in a neat and orderly manner in conformance with the manufacturer's instructions. The detector assembly(s) shall be affixed to the support structure in accordance with the manufacturer's instructions to provide the optimal field of detection.

Installation - The manufacturer of the SPVDMS, or their representative, shall design sensor layout, placement, and lens size, and supervise the installation and testing of the equipment. The Contractor may be required to adjust and readjust the location of existing and proposed vehicle detection zones in the presence of the Engineer, at no additional cost, to properly set the detection areas. A factory certified representative from the supplier shall be on-site for a minimum of one day.

Installation will be considered complete when the Contractor shows the system successfully and consistently places a request to the controller to call and extend the appropriate phase based on a vehicle detected in the detection zone.

The manufacturer shall provide 3 complete sets of maintenance manuals for the installed equipment. These manuals shall have complete set-up, maintenance and troubleshooting procedures presented in an organized format.

ITEM 815.1 (Continued)

Warranty, Maintenance and Support - The traffic cameras shall be warranted by its supplier for a minimum of ten (10) years.

The SPVDMS shall be warranted by its supplier for a minimum of two (2) years.

During the warranty period, the supplier shall provide technical support by telephone during normal business hours and request for support by telephone shall be answered by factory certified personnel within one (1) hour.

During the warranty period, certified personnel from the supplier shall be on site within seventy-two (72) hours if required.

Vehicle Detection Communications Cable

The vehicle detection communications cable shall be supplied and installed per the manufacturer's recommendations.

Vehicle Detection Management System Software Integration

The Contractor shall connect the video detection system to MassDOT existing Vehicle Detection Management System Software. The Contractor shall coordinate with MassDOT and or the Engineer for remote access to the existing Vehicle Detection Management System Software.

Video Detector Unit Assemblies

The video detector assemblies shall conform to ATCC 5301 v02 and NEMA TS2 Type 1. All vehicle detection and preemption cards shall be mounted either in the cabinet's detector rack, single, stand-alone detector rack; or installed on the cabinet shelf and shall communicate with the ATC controller providing vehicle detector data. Installing detector cards directly into the traffic controller chassis is not allowed.

4G LTE Directional High Gain Antennas

The Contractor shall furnish and install a 4G LTE Directional High Gain Cellular Antenna (DHGCA) which shall be used for communication between the FMU and MCOMMS for all access to the traffic signal equipment, as shown in the Plans.

All active components shall be UL listed and the network installation shall conform to the NEC/ EIA/TIA, and any other applicable standards and codes.

ITEM 815.1 (Continued)

Antenna Requirements

- The Contractor shall provide and install an external high gain directional antenna at all locations as shown on the plans.
- The antenna shall have a gain of at least 15 dB.
- The external antenna shall be on a protected mount, weatherproof and of the type that is specifically designed for outdoor applications. It shall include a weatherproof covering that protects the antenna elements from snow and ice buildup.
- The antenna shall be mounted to the traffic signal pole or strain pole.
- The mounting method and hardware shall be as recommended and approved by the antenna manufacturer.
- The mounting method and hardware shall be as recommended and approved by the antenna manufacturer.

The Contractor shall position the antennas in a manner that yields the maximum achievable signal strength at each location.

The Contractor shall rotate the antenna through a full 360 degrees of rotation while monitoring the received signal strength. The antenna shall be permanently secured at the rotational position that yields the maximum signal strength.

The lead-in cable between the external antenna and the cabinet shall be an ultra-low-loss coaxial cable as specified by the antenna manufacturer. The antenna cable shall be suitable for installation in an outdoor conduit environment. The cable loss shall not exceed 4 dB per one hundred (100) feet of length. The Contractor shall use two (2) antenna cables between the DHGCA and the FMU. The Contractor shall provide and install a coaxial surge protector in the antenna lead-in cables.

The surge protector shall be properly grounded as recommended by its manufacturer. The surge protector shall be ground to a ground bus bar in the traffic control cabinet. Grounding to the 19" rack rails shall not be allowed.

Any adapters needed to interconnect the FMU, surge protector, and antenna shall be supplied by the Contractor.

Advanced Transportation Controller (ATC)

The controller shall be shelf-mounted, solid state, menu driven, keyboard unit conforming to the ATC 5201 v06.25 Advanced Transportation Controller (ATC) Standard. The controller shall be supplied with all necessary interfaces needed to support Advanced Transportation Controller Cabinet (ATCC) / Serial Interface Unit (SIU) communications. The controller shall be supplied with an internal real-time clock/calendar capable of daily, weekly, and yearly events time programming. The controller shall be designed and supplied to provide the number of phases and sequencing as shown on the plans without any auxiliary equipment. The controller shall be supplied as follows:

ITEM 815.1 (Continued)

- Contain ATC API operational software conforming to ATC 5401 Standard v02.
- Be configured to operate in an ATCC 5301 v02 cabinet platform.
- Be supplied with the appropriate version of the Linux operating system, Board Support Package (BSP) and internal processing levels necessary to support connected vehicle (CV) as well as local and system operations.
- Shall include all licenses to support CV applications (SPaT), SPM, and Transit Signal Priority (TSP). These licenses shall be included with the controller.
- Shall include all licenses to allow for use of graphical user interface as well as standard display.
- Shall be fully compliant with NTCIP 1201, 1202, and 1211 standards.
- Shall support a minimum of 8 vehicle/pedestrian phases and 8 overlaps.
- Include a minimum of 3 High Speed USB 2.0 ports.
- Include a minimum of 3 10/100BaseT, RJ45 Ethernet connector ports.
- Shall be supplied with 2 SDLC ports, at a minimum.
- The SDLC ports shall be fully functional and operate simultaneously with all other ports.
- The SDLC ports shall support the following baud rates:
  - SDLC Port
    - Asynchronous Rates (bps) 1200 / 2400 / 4800 / 9600 / 19.2k / 38.4k / 57.6k / 115.2k / 230.4k
  - SDLC (Port SIU)
    - Synchronous Rates (bps) 153.6k / 614.4k
- All data communication connectors shall be supplied and installed with an outer boot molded cover designed specifically for the connector to ensure physical protection for the connector wire terminations. There shall be no exposed wires visible between the connector and the cable insulated jacket.
- Shall contain real-time context sensitive HELP screens.
- Shall include a time-of-day, day-of-week, week-of-year scheduler.
- Shall include dedicated phase detection inputs, pedestrian detection inputs, and system detection inputs.
- Shall be supplied with the ability to provide 12 unique preemption/priority inputs.
- Shall contain the ability to alter the controller unit's internal database using a built-in front panel keyboard, using a computer connected to the controller unit with a USB cable or an Ethernet cable, and remotely using a central management system application. In addition, a remote access system shall be provided using SSH and/or HTTPS.

ITEM 815.1 (Continued)

- Shall include an internal database which stores all configurable parameters, including but not limited to phase timings, phase sequencing, overlaps, coordination parameters, preemption and priority parameters, time base parameters, communications parameters, detection parameters, flashing operation parameters, and security parameters.
- Shall include detector failure algorithms that initiates user defined actions when user defined criteria are met.
- Shall be supplied with the ability to generate user defined alarms and alerts.
- Shall be supplied with programming documentation fully defining the coding (compiler and C libraries) used to create the ATC controller applications residing in the unit.
- Shall be supplied with the source code used to produce and support the Linux kernel environment (Board Support Package).
- Shall be supplied with a manufactures Software Development tool Kit (SDK) for supplied firmware version to allow for future system modifications/expansions.
- -40ºC to 74ºC operating temperature range
- -40ºC to 85ºC storage temperature range
- 10% to 95% relative humidity (non-condensing)
- 89 VAC to 135 VAC, 60 Hz
- No additional hardware, software items and/or subscription fees/costs shall be needed/allowed to satisfy the requirements as defined in these specifications
- Meet the functional requirements of the NEMA TS-2, 2016 Standard, including all amendments.
- Shall have connectors for all external input/output functions that are rigidly defined by the ATC, NTCIP and applicable national standards required to be supplied as part of the specification.
- Based on application, connectors for external input/output functions shall be identical in quantity, size, type, configuration, and pinout for all manufacturer's units used in the project.
- Shall be supplied with all necessary hardware and software elements needed to fully support Connected Autonomous Vehicle (CAV) operations utilizing dual mode DSRC/5G communications.
- Shall be supplied with all necessary ATC hardware, software elements and instruction procedures needed to facilitate the extraction and processing of the SPM data.
- Support Flashing Yellow Arrow (FYA) and Flashing Red Arrow (FRA) operation with the ability to provide a minimum of 6 flashing pairs.

ITEM 815.1 (Continued)

- Contain the ability to alter the controller unit's internal database using a built-in front panel keyboard, using a computer connected to the controller unit with a USB cable or an Ethernet cable, and remotely using the central management system application.
- Be supplied and installed with the ability to collect, store, and report various measures of effectiveness (MOE's).
- Shall collect and process all 255 high resolution enumerations as defined in the report entitled "Indiana Traffic Signal Hi Resolution Data Enumerations", dated 2019. This data will be processed in the controller and available via download from the controller USB Ethernet port or, if available, via system communications. At a minimum, the controller shall be set up to provide the following performance reports:
    - Approach delay
    - Preemption events
    - Transit Priority Events
    - Split Monitor
    - Approach Volumes
    - Arrivals on Red
    - Arrivals on Green
    - Phase Termination
    - Pedestrian Delay
- Shall be able to backup and restore ATC programing data to a USB memory device connected to the front of the controller. No additional software shall be required to perform this function.
- Shall be able to upgrade the ATC firmware via USB memory device connected to the front of the controller. No additional software shall be required to perform this function.
- The Contractor at time of submission shall submit from the manufacturer the latest ATC firmware release notes as part of the shop drawing submission.
- The ATC unit shall be supplied with the same latest firmware. The use of older firmware shall not be allowed unless directed by the Engineer.
- The controller supplied and installed as part of this project shall be provided with Transit Signal Priority (TSP) operation without the need for additional software, hardware, data key device or any recurring licensing fees. The TSP algorithm shall be fully programmable to extend a phase or reduce a vehicle phase depending on user defined settings. This function shall be available for operation during both coordinated and free operation, and shall include the following:

ITEM 815.1 (Continued)

- TSP shall support a minimum of six priority routines.
- The TSP program shall be capable of extending the priority phase green time and truncating the non-priority phase(s) green when a priority call is received by the ATC unit.
- TSP operation shall not cause the ATC unit to skip any phases that have active vehicle/pedestrian demand.
- Rail and emergency vehicle preemption (EVP) shall override TSP operation.
- The TSP program shall have the ability to delay and/or extend priority calls.
- The TSP program shall have the ability to support user defined time periods between servicing valid priority calls.
- All TSP events shall be logged (time/date stamped) in the ATC unit.
- The TSP algorithm shall allow for non-TSP phases to be conditionally truncated based on the absence of a concurrent pedestrian service of the non-TSP phase.
- It shall be possible to user define in the traffic controller a minimum time between responses to priority calls.

TSP Coordinated Operation **(Future Use) –** Under coordinated operation, the controller shall modify existing signal operation to accommodate a priority call. This may include modification to per phase termination points established under normal coordinated control. During a priority event, per phase coordination modes shall remain in effect. Priority and non-priority phase duration shall be user programmable per coordination pattern.

TSP Non-Coordinated (Free operation) **(Future Use)** – Upon receipt of a valid priority call, the controller shall either extend the priority phase or reduce the non-priority(s). These settings for the adjusted green times shall be user defined, on a per phase basis, and adjustable on a time-of-day basis.

ATC Cabinet Enclosure

The cabinet shall be a NEMA "P" size (44" W x 26" D x 67" H). The cabinet size and functional requirements shall conform to the NEMA TS2 -2016 Standard, Section 7. The cabinet shall conform to requirements defined in the Advanced Transportation Controller Cabinet (ATCC) 5301 v02 Standard. The cabinet size and functional requirements shall conform to the NEMA TS2 -2016 Standard, Section 7. The cabinet shall have a natural brushed aluminum finish.

ITEM 815.1 (Continued)

The traffic signal control equipment shall be enclosed within a dust and moisture-proof aluminum housing with an auxiliary door in door feature. The door hinge pins shall be made of stainless steel. All cabinets shall be configured to eliminate arc flash. All electrical equipment shall be dead front, no open terminals, busbars, breakers, or exposed terminal strips. All cabinet switches and circuit breakers shall be permanently labeled as to function. The cabinet shall be designed, constructed, and installed with all necessary provisions to comply with the latest NFPA 70E requirements. All electrically live parts over 50 volts shall be covered with Lexan or a suitable physical barrier to eliminate the possibility of arc flash.

The lock for the police door switch compartments shall unlock with a skeleton style (#1) key. The lock for the main door(s) of the cabinet shall unlock with a Corbin #2 key. Two sets of two keys (main door/police door) shall be furnished with the cabinet.

The cabinet shall be supplied with a permanent label mounted on the upper portion of the inside front main door which shall contain the name of the cabinet manufacturer, controller manufacturer, model/part number and year/month of assembly.

The cabinet shall be supplied with a GFCI duplex outlet, as well as a multi-outlet strip. All AC+ line cords shall contain a white flexible label with black permanently lettering affixed to the plug end of the cord depicting the device/ assembly that it is connected to, i.e., ATC, FMU, video detection etc.

The cabinet shall be provided with two removable lifting eyes for placing the cabinet on its foundation. Each eye opening shall have a minimum diameter of 0.75 inches. Each lifting eye shall be able to support a weight limit of 1,000 pounds.

The quantity, size and location of the equipment shall correspond to the contract drawings for the ATC Cabinet. All equipment shall be installed with the correct number of mounting screws/mounting support devices. All internal cabinet wiring shall be routed such that there is no conflict for access to cabinet devices or interference with door mechanisms. The AC- buss used for terminating field signal cable shall be installed in a readily accessible location on the interior side wall in the rear of the cabinet in close proximity to the field output terminals (phoenix connectors). The neutral conductor for all signal cable shall be properly terminal on the AC- buss within the cabinet; direct connection of the signal cable's neutral conductor to the cabinet's electrical ground buss is not allowed.

The cabinet shall be equipped with an internal cable management system. The cable management system shall be comprised of nonconductive channels designed to facilitate wire and cable routing within an electrical enclosure.

All AC line cords used to power used to power various in cabinet devices shall be permanently labelled as to which device it is connected to. This label shall be white in color with black lettering and installed in close proximity to the plug end of the line cord.

All shelving used on the Power and Auxiliary side of the cabinet shall be designed to with sufficient strength to fully support a 375 lb weight, the weight of two 12V lead acid batteries, per shelf, without sag or flex in the middle section of the shelf.

ITEM 815.1 (Continued)

Cabinet Configuration – The cabinet shall be supplied with two side-by-side, 19" rack cages which shall extend from the bottom to the top of the cabinets.

The cabinet front left side shall provide for user interface to the in-cabinet equipment including the front panel of the controller, the cabinet status displays and detection system control interfaces. The cabinet rear shall provide access for termination of field cables and shall only be accessed for installation and for cabinet troubleshooting. The left-side rack of the cabinet relative to facing the cabinet from the front, to be referred to as the "Control" side, shall house the control devices such as the Controller, Cabinet Monitor

Unit (CMU) and Auxiliary Display Unit (ADU), switch packs and the power distribution panel. As such, this rack shall be referred to as the "Control" side of the cabinet. The right-side rack of the cabinet relative to facing the cabinet from the front, to be referred to as the "Power and Auxiliary" side, shall house the spare card cage assembly, battery back-up devices (if required), communications elements and future ancillary devices.

Cabinet Doors – The NEMA P cabinet shall be supplied with four main doors: two on the front face and two on the back face. Each door shall open independently with an independent center post latching for each of the four doors. The front control doors shall be defined as the "primary" doors; the remaining three (3) main doors shall be defined as "secondary" doors.

The cabinet main doors shall be provided with a stop to limit door opening to both 90° and 180° ±10°. The door stop bars shall be a captive type mechanism that serves to keep the bars in contact with the cabinet at both stop bar ends and provided with a catch that can be operated when the doors reach these 2 positions and shall hold the doors open securely until released. The cabinets shall be supplied with a three-point draw roller latching system consisting of the following latching points:

a. Center of the cabinet (lock)
b. Top of the cabinet – controlled by door handle
c. Bottom of the cabinet – controlled by door handle

The latching points on the top and bottom of the cabinet doors shall remain in the locked position until the door locks are disengaged. The locking mechanisms shall be equipped with nylon rollers to secure the top and bottom of the doors. The door locking mechanism shall be constructed such that it closes freely without obstruction with any internal cabinet device, shelf, rack system or internal metal support element.

The cabinet shall be supplied with a ¾" diameter shank, stainless steel latching handle for each door. The latching handle shall have a provision for padlocking the door in a closed position. The cabinet shall have a pliable seal composed of caulking compound or mastic installed between the cabinet base and the concrete foundation and in between the riser base and the cabinet to prevent dust and dirt from entering the cabinets.

ITEM 815.1 (Continued)

Extension Bases – The cabinet shall be supplied with a 6" high riser aluminum base that elevates the cabinet above the cabinet foundation. The color and finish of the base shall match the color and finish of the main cabinet is supports.

Internal Cabinet Lighting – The cabinet shall be supplied with white LED light panels which shall automatically illuminate via a door open switch whenever any one of the four main cabinet doors are opened.

The LED panels shall produce a minimum of 1,000 lumens on the Control side of the cabinet and 1,000 lumens on the Power/Auxiliary side of the cabinet and be protected by a clear shatterproof shield. The cabinet shall contain four light panels: two at the top of each rack assembly and two at the underside of the bottom shelf of each rack assembly. There shall be two switches on each of the four main doors. LED light panel mounting brackets shall be installed such that they do not interfere with the unused rack mounting holes which could potentially conflict with the installation of future rack mounted devices. The second door switch shall be used to monitor when the door has been opened. The front control side door monitoring switch shall be connected to one of the door status inputs of the controller. The door monitoring switches for the remaining doors shall be connected to the second door status input to the controller. The door status inputs shall log a report event that one of the doors was opened.

Cabinet Fans – The cabinet shall be provided with thermostatically controlled ventilating fans and throwaway glass fiber air filters. The electric fans shall have ball or roller bearings and shall have a capacity of 100 ft^3 per minute. The fans shall be rated for continuous duty with a minimum service life of 3 years. The fan blades shall be supplied with a safety screen to prevent accident contact with the blades. The ventilating system shall be designed to prevent the entrance of rain, snow, dust, and insects. The fans and vents shall be arranged in such a manner that the air intake is at the cabinet bottoms and the exhaust is at the cabinet tops. The air intake shall be rain tight and covered with a removable glass fiber air filter. The removable air filter shall be firmly held in place with aluminum louvered backing plate such that cracks, and openings are eliminated to ensure that all air is filtered. The cabinets shall contain two fans. The thermostat panel shall be mounted to the top, rear of the cabinet's 19" equipment rack and oriented to be clearly visible allowing user adjustable temperature settings from a minimum of 70°F to 140°F and capable of activating the fans within plus or minus five degrees of the set temperature; the thermostat shall be initially set to 100°F. Any exposed terminals shall be covered to protect a technician's hand.

There shall be two intake vents provided with the cabinet, one in each front door.

Cabinet Switches/Manual Control – The cabinet shall be supplied with a single police door panel located in the middle area of the front door on the Power and Auxiliary side. The switches shall be mounted in the police panel and labelled as to function. The three switches shall be supplied as follows:

a. Signal On/Off
b. Signal/Flash
c. Manual/Auto with cord

ITEM 815.1 (Continued)

The manual control cord shall be a coiled type, sealed weatherproof covered hand switch extending to six feet when fully stretched. The cord shall be fastened to the cabinet via a compression type connector to provide strain relief for the cord's electrical connections. The police door panel shall be of sufficient size so as to store the manual control cord when panel door is closed. The police signal control button (interval advance) shall not be functional unless the manual / auto switch is in the manual position thus preventing a user to advance the signal displays without an active "manual control enable" controller input being active.

The cabinet shall be supplied with a technician's panel switches integrated into the lower output file rack assembly. This panel shall be supplied with the following switches:

a. Flash/Auto (Allows the controller to cycle while flashing)
b. Signals On/Off (Allows the controller to cycle with signal displays being dark)
c. Stop Time Normal/On (Provides the ability to manually activate a controller stop time input)

Cabinet Power - The main cabinet circuit breaker shall be rated at 30 amps. Circuit breakers shall be approved and listed by the UL. All circuit breakers shall be quick-make, quick-break on either automatic or manual operation. Contacts shall be silver alloy enclosed in an arc quenching chamber. Overload tripping of breakers shall not be influenced by an ambient temperature range of from 0 to +158°F. The electrical current rating shall be stenciled on the support panel adjacent to each fuse and circuit breaker installed within the cabinet.

Pull-Out Drawers – The cabinet shall contain a pull-out drawer, 19" wide with sufficient strength to hold a laptop computer. The cabinet detail included in the contract drawings show the location of the pull-out drawer.

Spare Lateral Rack (SLR) – The cabinet shall be supplied with a Spare Lateral Rack (SLR) (empty cage) assembly. This rack assembly shall not be wired to any cabinet device, but rather used to store spare rack mounted cabinet devices such as switch packs, Serial Interface Units (SIUs), CMUs and phase selectors. This spare rack assembly shall be located at the top of the Power and Auxiliary rack. The rear of the assembly shall contain unterminated edge connectors which shall serve to hold the spare plug-in devices in place during storage.

ITEM 815.1 (Continued)

Electric Meter Trim - The cabinet shall be supplied and installed with an electric service meter socket trim and electrical service disconnect switch mounted on the exterior of the cabinet. The meter and disconnect switch shall be installed centered on the side of the cabinet without doors such that it is not less than 48 inches nor more than 60 inches above final grade. The Contractor shall coordinate with the local electric utility company to determine the appropriate type of electric service meter socket trim and electrical conductors to be used. The line side cable shall be routed external to the cabinet from the ground to a 50 amp disconnect switch, then continuing to the bottom of the electric service meter socket trim, all through rigid steel conduit furnished and installed by the Contractor. The load side cable shall be routed through the cabinet and terminated on the line side of the main cabinet circuit breaker. The cable shall be routed through the interior of the cabinet such that it does not block or enter into available rack space preventing that space from being used either by equipment supplied as part of the project, or future equipment that would be installed in the rack system. The cable shall be routed between the edge of the rack system and the cabinet side wall, along the bottom of the cabinet and below the bottom opening of the doors. Care shall be taken by the Contractor when installing the electric service meter socket trim and electrical service disconnect switch so that there is no damage inflicted on installed devices or the rack system during the installation. All metal shavings produced during the drilling of the access hole for the electric service shall be removed from the cabinet interior by the Contractor. The Contractor shall install appropriate bushings to all cabinet penetrations. All wiring shall comply with all applicable local electrical codes as well as the National Electric Code.

Back of Door Documentation – The cabinet shall be supplied with a laminated door stickers. These stickers shall be permanently affixed to the inside front control side of the cabinet door. At a minimum, the sticker shall contain the following information:

a. Vehicle/ Pedestrian detection information including all detector channel assignments, phases assigned, approaches and cabinet termination points.

b. Per approach preemption information including channel, approach/direction and termination points.

c. Field termination chart showing per approach/per phase numbering of all signal circuits.

d. Signal phasing and signal plan with intersection geometry and signal head designations.

e. Any logic statements and text describing signal operation created by the internal logic programming.

f. Time of day and coordination program resident in the controller.

The back of the main front door shall contain a resealable, heavy-duty opaque plastic envelope with two grommets that provide mounting to two integrated hooks installed on the back side of the front cabinet door. The heavy-duty plastic envelope will be used to store cabinet wiring diagrams and operations manuals that cannot be accommodated in the pull-out draw storage tray.

ITEM 815.1 (Continued)

Input and Output Channels – The cabinet shall be supplied with 32 output channels and 48 input channels. The input channel rack assemblies shall consist of two (2) 24 channel units.

Output Channel Assignments – The cabinet shall be configured to provide the following output channel assignments:

Channel	Outputs (32 Channel)
Channels 1 – 8	Phases 1 -8
Channels 9 – 12	Flashing Yellow Arrow
Channels 13- 16	Pedestrians
Channels 17 – 20	Overlaps
Channels 21 +	As needed
Channel 32	Confirmation strobe if required

Detector Test Switch Panels – The cabinet shall be supplied with a detector test switch panel. There shall be a total of 48 switches to allow for the manual placement of detector calls into the controller. Each switch shall be clearly labelled as to input channel. Each switch position shall correspond to the same controller input; switch one is for controller input channel one, switch two is for controller input channel 2, etc. The detector switch panel shall be comprised of switches that are wired directly to the corresponding input channels on the rack assemblies. Each switch shall be supplied with a red LED indicator to be illuminated whenever a channel input is active via the three-position detector switch. The use of an SIU internal to the detector test switch panel to provide this capability is not allowed. The switches shall be three position type and function as follows:

a. Up Position = Provides a constant call
b. Center Position = Normal operation (Phase receives call from detectors)
c. Down Position = Provides a momentary call

Standard ATC Cabinet Devices - A Cabinet Monitor Unit (CMU) and Auxiliary Display Unit (ADU) shall be supplied and installed in the cabinet. The CMU and ADU shall conform to requirements defined in the Advanced Transportation Controller Cabinet (ATCC) 5301 v02 standard. The CMU/ADU units supplied and installed as part of this project shall support 32 channels. All configuration programming shall be resident in a non-volatile Datakey device~~.~~ The Contractor shall program the Datakey with data entries appropriate for the intersection. The CMU shall be programmed to activate load current monitoring on all active vehicle and pedestrian circuits. The CMU shall be programmed using the set-up wizard supplied with the CMU. The Contractor shall supply documentation stating that the set-up wizard was used for the CMU programming. Any deviations made by the Contractor to the CMU programming data generated by the set-up wizard shall be documented with reason(s) why the deviations were required; these deviations shall be documented and included with the cabinet. All programing resident on the Datakey shall be included in the hardcopy.

ITEM 815.1 (Continued)

A cabinet power supply shall be supplied and installed in the cabinet. The cabinet power supply shall comply with ATCC 5301 v02.

The Contractor shall reconfigure the default username and passwords on all communications / control equipment within the ATC Controller and Cabinet. This includes but is not limited to the ATC traffic controller, ATC ancillary equipment, video detection equipment, Ethernet switches, and routers. The new username and passwords shall be created in coordination with the agency IT staff and or as directed by the engineer; no manufacture default level passwords shall be allowed.

All SDLC cables used to interconnect devices within the cabinet shall be supplied with factory installed protective wire covers to protect the connector side of the cables. The use of Contractor supplied/installed cable protector covers shall not be allowed.

The Contractor shall utilize network communications encryption settings on all forms of wired Ethernet data paths. No "in the clear" communications shall be allowed. At a minimum all wired Ethernet connections shall meet 802.1AE standards. The Contractor shall supply and configure a Cyber Intrusion and Prevention Device (CIPD) in each ATC cabinet. The CIPD shall prevent any unauthorized access / connections to the traffic control system. Upon detection of unauthorized attempts, the CIPD shall notify the agency via SMS message and or email and log the event. The CIPD shall be installed prior to any remote access device.

The Contractor shall coordinate with the agencies Information Technology and Operational Technology (IT/OT) staff and or the Engineer for finale configuration of the CIPD. No direct access to the traffic system shall be allowed without the installation of a CIPD and or Router/Firewall.

Surge Suppression

Electrical filtering/surge protection shall be supplied and installed in each cabinet in accordance with ATCC 5301 v02 requirements and the manufacturer's recommendations. At a minimum, surge suppression shall be provided for incoming electric utility power conductors, all signal control circuits, vehicle detection, pedestrian detection, communications, and preemption system terminations. The use of a single fuse for surge suppression shall not be allowed.

The cabinet shall be electrically bonded and grounded to comply with Section 643, the National Electrical Code (NEC) and the National Electrical Safety Code (NESC), latest versions of each document.

Each in-cabinet current interrupting device (controller unit, flasher, and all other devices) shall be equipped with a suitable radio interference suppressor installed at the input power point. Interference suppressors shall be designed to minimize interference in both broadcast and aircraft frequencies. Suppressors shall be designed for 125 percent of the total connected load and shall meet standards of the UL and the EIA.

ITEM 815.1 (Continued)

Spare Traffic Signal Equipment

The Contractor shall furnish and provide the following spare equipment in the of the proposed ATC cabinet:

- A full complement of switch packs. The switch packs shall comply with ATCC 5301 v02.
- A full complement of Serial Interface Units (SIU). The SIUs shall comply with ATCC 5301 v02, plus 2 additional SIU.
- A full complement of flashers. The flashers shall comply with ATCC 5301 v02.
- A full complement of flash transfer relays. The flash transfer relays shall comply with ATCC 5301 v02.
- Thirty-two (32) additional Phoenix connectors.
- One (1) additional CMU USB datakey programmer tool with software.
- A second separate GFI protected duplex outlet mounted on the side wall of the cabinets for servicing other devices. The main cabinet circuit breaker shall be rated at 30 amps.
- Two (2) spare service power panel assemblies.

All spare equipment required to be supplied with the cabinet shall be stored in the SLR and any additional spare equipment shall be placed on the Power and Auxiliary side shelves. No spare equipment shall be placed on the interior cabinet foundation.

Field Monitoring Unit (FMU)

In the cabinet the Contractor shall furnish and install a Field Monitoring Unit (FMU) and software, as well as all needed accessories required for a full and complete installation, including but not limited to power adapters, Ethernet cables, and interface cables, as described herein.

The FMU shall be manufactured by Applied Information (AI), Model AI-500-085-02 FMU with 4G Video and 4-Port Ethernet Switch, or approved equal. If another product is proposed, Contractor shall submit a test unit to the agency for evaluation along with conducting a live demonstration of the FMU functionality and shall submit test plans demonstrating the proposed device meets or exceeds all items in this specification prior to acceptance by MassDOT. The Contractor shall request from MassDOT and or the Engineer the IP addresses for each device connected to the FMU. All devices with Ethernet ports within the controller cabinet shall be connected to the FMU.

The FMU shall be integrated into MassDOT existing MassDOT Critical Operations Multi-jurisdictional Modular System (MCOMMS) cloud-based management system.

The FMU shall be configured to connect to MassDOT existing traffic signal network as directed by the Engineer.

ITEM 815.1 (Continued)

This work shall consist of furnishing, installing, configuring, and testing an FMU that meets the following requirements:

A. The FMU shall operate independent of the brand/type of intersection controller, video or thermal detection system and battery backup system (if applicable) deployed in the traffic cabinet.

B. The FMU shall function correctly between -34 degrees C and +74 degrees C.

C. The FMU shall have at least five (5) other FMU installations within the New England area.

D. The FMU shall be provided with appropriately rated connectors that allows the FMU to be exchanged by unplugging connectors, without tools.

E. The Contractor shall develop a test plan that fully demonstrates that all requirements as defined in these specifications have been met. The test plan shall define in detail each test, and the expected result of each test. The test plan shall be submitted as part of the shop drawings and shall be subject to revisions based on review and comment by the agency and the design consultant. Where applicable, the Contractor shall provide manufacturer certificates of compliances to verify that the unit supplied meets a specific requirement.

F. The FMU shall monitor and log all Controller and cabinet faults and/or alarms.

G. The FMU shall be wired directly to the cabinet.

H. The FMU shall have an internal cellular modem running at 4G LTE.

- The Cellular modem shall be designed to be replaced / upgraded to 5G service when available.

I. The FMU shall incorporate an integrated GPS and cell modem.

J. The configuration of the FMU shall be accomplished by accessing the internal web server with a browser. It shall be possible to configure the FMU without any special software.

K. The FMU shall be powered via a standard 120 VAC input power.

L. The FMU shall allow for the routing of the controller configuration packets to and from the controller by Ethernet for any type of controller utilized by the agency. In this way, it shall be possible to configure the controller and utilize the controller specific software to interrogate the controller, and the FMU shall provide the redundant communications pipeline (where applicable) which allows this to be accomplished.

M. The FMU shall be connected via a RJ-45 Ethernet cable to the Ethernet Switch (if applicable).

ITEM 815.1 (Continued)

N. The FMU shall be configured to allow for the remote display and control of the connected traffic signal controller via the FMU manufacturer cloud hosted web-based software. This feature shall not require the end user to create a separate VPN connection to the FMU.

O. The FMU shall be configured to provide access to view the detection system, including the video image of each approach, via the FMU web-based software. This feature shall not require the end user to create a separate VPN connection to the FMU.

- The remote streaming of the video detection camera shall be done via the FMU manufacturer's website. The streaming shall be able to stream at 10 frames per section or greater.

P. The FMU shall perform a load test of the connected Battery Backup System (BBS) batteries on a scheduled or on demand basis (if applicable).

Q. The FMU shall, within the size limitations above, include a battery and battery charging/monitoring circuit to allow the FMU to function correctly even when all power to the intersection has failed. The battery shall continue to power the FMU for a minimum of 5 hours after all power has failed to the intersection.

R. The FMU shall incorporate an integrated GPS which will allow the FMU to geo-locate itself on the FMU management software map, without configuration.

S. The FMU shall be connected to the traffic signal controller to provide for GPS time sync pulse for the traffic signal internal clock.

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

U. In the event that the cell service is interrupted or is not available, the FMU shall store any events that occur in its internal memory and forward these events automatically to the FMU management software when the cell service is restored. In this way, a complete record of events at the device can be maintained even if cell service is interrupted for a period of time. The system shall store 5,000 events.

V. The FMU shall utilize HTTP and HTTPS protocols, and XML data structures, for communication with the FMU management software. In this way the data shall be scalable for future expansion and competition. The use of custom proprietary protocols is not permitted.

W. The FMU shall include Ethernet communications via an Ethernet Port with RJ45 connector.

X. The FMU shall include an integrated four port Ethernet switch.

Y. The FMU shall be supplied and installed to include weatherproof antennas to support operations.

ITEM 815.1 (Continued)

Z. The FMU shall be supplied, installed, and configured by the Contractor with map display management software that has the following features:

- The FMU shall include a scrollable, zoomable map display, with the intersections and other monitored devices shown as representative icons on the map. The map shall include the ability to see the intersections using Google Streetview or similar.
- The alarm status of the intersection shall be clearly indicated on the icon on the map so that the user can see at a glance which intersections are in an alarm condition.
- The map display shall also include a list of intersections, with the number and priority of alarms indicated on the list. Intersections in high priority alarm shall be moved to the top of the list, followed by medium priority, low priority and then finally by intersections not in an alarm state.
- The icons shall dynamically change to be able to clearly indicate if an intersection is offline.
- Clicking on the icon on the map shall expose a display window with the current parameters of the intersection shown.
- The default map display position and zoom shall be configurable by user so that the user's view will default to show the intersections that the user is responsible for managing.
- The map view shall have the ability to show Google traffic overlays on the map.

AA. The FMU shall be supplied, installed, and configured by the Contractor with intersection detail display management software that has the following features:

- It shall be possible to drill down, either from the map icon or from the list, to a device level detail for the intersection. The cabinet shall be fully wired to support the following parameters that shall be monitored and displayed:
    - The alarm status, with priority indicated, and a text description of the alarm (if an alarm is present for this device).
    - The time since the last communication with the device.

ITEM 815.1 (Continued)

- The following parameters (real time values, minimum for the day values, maximum for the day values, and average for the day values).
  - The AC mains voltage (value)
  - The battery back-up voltage (value)
  - The cabinet temperature (value)
  - The cabinet humidity (value)
  - The presence of AC power (OK or Fail)
  - The flashing status of the intersection (OK or Flashing)
  - Stop Time status (OK or Stop Time Active)
  - The cabinet door status (Open or Closed)
  - The intersection fan status (Fan on or Fan off)

- It shall be possible to view graphs of each of the value parameters in graphical form over the most recent two-week period. This includes real time graphs of:
  - The AC mains voltage
  - The battery back-up voltage
  - The cabinet temperature
  - The cabinet humidity

BB. The FMU shall be supplied, installed, and configured by the Contractor with a diagnostics and log display management software that meets or exceeds the following:

- From the device level detail within the FMU management software, it shall be possible to drill down to get the raw data; the error logs; and the communications logs to allow a technician to fault-find problems.
- It shall be able to filter the logs by Device; by Device Type and/or by Group as well as between dates.
- It shall be able to print these selected logs to a local printer or a PDF file.
- It shall be able to export these logs to Excel on the local computer for further analysis.

ITEM 815.1 (Continued)

CC. The FMU shall be supplied, installed, and configured by the Contractor with an alarm management software that meets or exceeds the following:

- The FMU management software shall have a comprehensive alarm generation capability.
- It shall be able to configure alarms to be generated on any parameter that indicates a value that is out of tolerance, including analog values, digital values, and enumerated values.
- Alarms shall be configurable to be of Low, High or Critical Priority.
- The alarm priority shall be displayed throughout the FMU management software, on all displays using color codes such as red-critical; yellow–high; and amber-low to indicate the priority of the alarm.
- The current active alarms shall be accessible for viewing via an expandable window, to observe which alarms are active and when the alarm occurred. The highest priority alarms shall rise to the top of the list.

DD. The FMU shall be supplied, installed, and configured by the Contractor with alerts management software that meets or exceeds the following:

- The FMU management software shall have a comprehensive alerting function to enable the response personnel to be notified when an abnormal situation has occurred.
- It shall be able to configure alerts to one or more personnel for each alarm. This will cause, as selected, an SMS and/or an email to be sent to the person when an alarm occurs.
- The alert notification system shall be configurable by the system user to optionally send via email and/or via SMS message when an alarm clears.
- The SMS and email alerts shall be issued within 30 seconds of the occurrence of an event which results in an alert being issued.

EE. The FMU shall be supplied, installed, and configured by the Contractor with connectivity and server management software that meets or exceeds the following:

- The Contractor shall supply the FMU with unlimited data for Connectivity and Service, as part of the purchase price. The Connectivity and Service agreement shall include at a minimum:
  - Cellular Connectivity
  - No cellular overage charges
  - Video Streaming via the manufacturer's web-based interface
  - Extended warranty on the hardware for the period of the Connectivity and Service Agreement

ITEM 815.1 (Continued)

- Over-the-air software updates
- Over-the-air security updates
- Remote Front Panel of the connected traffic signal controller
- SPaT message broadcast to mobile device application
- Future Connected Vehicles Service

FF. The FMU shall be configured for SPaT data.

GG. The FMU shall be supplied with the unlimited video/data streaming service.

HH. The FMU shall be configured with Traffic Signal Controller remote front panel access.

II. The FMU shall be configured to supply streaming video from the detection system.

JJ. At the time of the shop drawing submittal, Contractor shall supply a detailed list of available FMU functions for the agency consideration.

Cabinet Documentation (Hard copy. Flash Drive)

The Contractor shall supply a full set of cabinet wiring diagrams. The wiring diagrams shall depict all of the as-built cabinet wiring routing and terminations. Each in-cabinet device (switches, relays, connectors, surge protection devices, etc.) shall be labeled on the wiring diagram as to the function the device serves.

Three copies of the database programming for all in cabinet devices shall be provided with the cabinet. The database programming sheets shall reflect as-built programming resident in each unit at the time of acceptance. A printout of the databases contained in the controller, CMU, Preemption, Video Detection, or any other equipment shall be provided to the Engineer. The databases shall be provided in both hard copy printouts and on a “thumb drive.”

Operating and maintenance manuals for all in cabinet devices shall be provided in both electronic format as well as hard copy.

Emergency Preemption

The emergency vehicle preemption system shall be installed in the same cabinet as the controller.

The emergency vehicle preemption system shall meet Town of Weston standards. **Note: As part of the shop drawing submission the Contractor shall provide written approval of the preemption system from the Town.**

The emergency vehicle preemption control system shall consist of a data-encoded phase selector to be installed within the traffic control cabinets in the detector racks. These units will serve to validate, identify, classify, and record the signal from the optical detectors located on support structures at the intersection.

ITEM 815.1 (Continued)

Upon receiving a valid signal from the detector, the phase selector shall generate a preempt call to the controller initiating a preemption operation as shown on the plans.

The optical detectors shall be single input, single output units used to control one approach. All traffic signal installations shall be supplied with a minimum of two optical detectors unless otherwise noted in the major items list.

The phase selectors shall be a rack-mounted plug-in two and/or four channel, dual priority device, as noted on the plans. The phase selectors shall plug into an empty slot in the detector rack. Programming the phase selectors shall be via a PC-based computer utilizing unit specific software. One copy of software on CDs shall be supplied and licensed to the applicable MassDOT. A hard copy of final programming data shall be left in the control cabinet. A complete set of interface cables for phase selectors to laptop connection shall be supplied in the cabinet.

The Contractor shall install confirmation strobe(s) as shown on the plans. The confirmation strobe shall serve to validate to the driver of the emergency vehicle that the traffic signal has recognized the preemption call and will initiate the proper preemption sequence. The confirmation strobe shall be a white lens.

The Contractor shall be responsible for the proper programming of the phase selector, orientation of the optical detectors, and all other work necessary to provide a complete and operating emergency vehicle preemption systems. The Contractor may be required to field adjust the location of the optical detectors in the presence of the Engineer to properly detect preemption calls from approaching vehicles. Upon final inspection and testing, any discrepancies or failures to properly preempt the traffic signals will necessitate a complete replacement on any non-compatible equipment.

Signal Housing Brackets

All signal housing brackets must be installed to manufacturer's specifications and must be properly torqued. The brackets shall utilize galvanized cables, hardware, and all miscellaneous materials necessary to fix mount the signal heads to the mast arms. Banded clamps and stainless-steel clamps shall not be used. Any bracket that does not meet MassDOT approval will not be accepted. No separate payment will be made to correct the bracket.

Signal Heads

Signal heads mounted on mast arms shall be rigidly attached to the mast arms. All signal heads mounted overhead on mast arms shall be installed, with the bottom of the signals at the same height. All traffic signal lenses shall be 12 inches in diameter. All signal heads shall be equipped with ball and/or arrow light emitting diode (LED) modules. Five (5) inches non-louvered backplates and tunnel visors shall be provided on all signal heads.

ITEM 815.1 (Continued)

All backplates shall include 3-inch wide, yellow reflective micro-prismatic retroreflective sheeting conforming to ASTM D4956 Type VIII of better on the outside edge of the backplates.

Traffic Signal LED Modules

All signal and pedestrian displays shall be equipped with LED signal modules. All red, amber, green, and pedestrian signal housings with the exception of optically programmed and fiber optic housings and shall conform to the following where applicable:

- ITE's Vehicle Traffic Control Signal Heads – Light Emitting Diode (LED) Arrow Traffic Signal Supplement, Dated July 1, 2007
- ITE's Vehicle Traffic Control Signal Heads – Light Emitting Diode (LED) Circular Signal Supplement, Dated June 27, 2005.
- ITE's Pedestrian and Countdown Signal Modules Compliant to PTCSI - Part 2 Light Emitting Diode (LED), Dated, February 2011
- On the MassDOT Traffic Signal Approved Equipment List

For an LED module to installed on this project, the LED module shall have approval from the MassDOT Traffic Control Products Approved Equipment Committee and be included on the Traffic Control Products List prior to the date of this proposal. To prevent the LED module warranty from being voided, the connecting leads on the module shall not be cut. The original LED module leads shall be connected to the signal head terminal block as continuous wire without splices.

The LED signal module will be replaced or repaired by the manufacturer if it exhibits one of the following:

- A failure due to workmanship or material defects within the first 60 months of field operation.
- A greater than 40 percent light output degradation or a fall below the minimum intensity levels (as defined by the latest ITE performance specifications) within the first 36 months of field operation

Pedestrian Heads with Countdown Timers

All pedestrian heads shall be 16-inch, single units, with countdown timers. Pedestrian head indications shall be illuminated L.E.D. type displaying graphical symbols of a walking person and/or upraised hand. The countdown module shall display the number of seconds remaining throughout the pedestrian "WALK" interval, continue counting down through the flashing "DON'T WALK" interval, and blank out during the steady "DON'T WALK" interval. The countdown module shall be automatically set by the intersection controller based upon the "WALK" and "DON'T WALK" signal intervals only. The countdown module shall continuously monitor the intersection controller for any changes to the pedestrian phase timing, and reprogram itself automatically. All LED indications on the pedestrian signal shall have an automatic dimming circuit for night illumination to reduce long-term degradation to the LEDs.

ITEM 815.1 (Continued)

Accessible Pedestrian Signal Pushbuttons

The Accessible Pedestrian Signal (APS) pushbuttons shall provide information in non-visual formats (such as audible tones, speech messages, and/or vibrating surfaces). The APS pushbuttons shall be compliant with the 2009 MUTCD. At a minimum the APS pushbuttons shall be provide with the following features:

- Pushbutton locator tone
- A visible and audible indicator that the button press has occurred
- A vibro-tactile arrow
- A speech walk message for the "WALKING PERSON" indication

The APS pushbuttons shall provide visually disabled pedestrians with a locator tone that will allow them to find the pushbutton to activate the walk signal. Once the pushbutton call has been placed, the signal will provide both an audible and tactile response during the related "WALK" portion of the cycle. A sunlight visible LED latches "ON" to confirm the button has been pushed. The audible response shall be a speech message, indicating the name of the street crossing, and when the phase is started.

Housing and Pushbutton Unit – Shall meet the following minimum requirements:

- Constructed of cast aluminum with a powder coated finish.
- Highly vandal resistant and pressure activated with essentially no moving parts.
- Pushbutton must be able to withstand an impact from a baseball bat or hammer.
- Operating temperature range -34 degrees Celsius to 65 degrees Celsius.
- Operating voltage range 12 to 36 VDC.
- Button cap must be made of solid 316 stainless steel.
- Pushbutton must activate with 5 lbs of force or less.
- Unit must have an LED display to give indication that of pushbutton being pushed.
- Pushbutton must fully operate immediately after being completely immersed in water for 5 minutes (electrical terminals isolated from water).
- Pushbutton must not allow ice to form such that it would impede function of pushbutton or pushbutton cap.
- All switch electronics must be sealed within the housing.
- All sounds shall emanate from the back of the of the APS pushbutton unit via a weatherproof speaker that is protected by a vandal resistant screen.

Tactile Arrows and Locator Tones – Shall meet the following minimum requirements:

- APS pushbuttons shall incorporate a locator tone at the pushbutton the locator tone, measured at 3 feet from the APS pushbutton, shall be 2dB minimum and 5dB maximum above ambient noise level in standard operation and shall be responsive to ambient noise level changes. Tones shall consist of multiple frequencies with a dominant component of 880Hz. The duration of the locator tone shall be 0.15s and shall repeat at intervals of 0.15s.

ITEM 815.1 (Continued)

- APS pushbuttons shall be a minimum of 2 inches across in diameter and shall contract visually with their housing and mounting.
- APS pushbuttons shall include a vibro-tactile arrow aligned parallel to the crosswalk direction. The arrow shall be raised 0.03 inches minimum and shall be 1.5 inches minimum in length. The arrow head shall be open at 45 degrees to the shaft and shall be 33 percent of the length of the shaft. Stroke width shall be 10 percent minimum and 15 percent maximum of arrow length. The arrow shall contrast with the background.
- The arrow shall vibrate during the "WALK" portion of the cycle.

Speech Walk Message – The speech walk message shall be audible from the beginning of the associated crosswalk. The speech walk message and associate APS pushbuttons shall be as follows:

PEDESTRIAN PUSHBUTONS	SPEECH WALK MESSAGE
ALL	Walk sign is on to cross street

Mounting Requirements - A maximum mounting height of 42 inches above the finish sidewalk grade shall be used for APS pedestrian pushbuttons. Minimum mounting height shall be 27 inches.

The Contractor is hereby notified that they are ultimately responsible for constructing all pedestrian push button elements (clear ground space, forward and side arm reaches) in strict compliance with the current AAB rules, regulations and standards.

All construction elements in this project associated with pedestrian push buttons are controlled by 521CMR – Rules and Regulations of the Architectural Access Board.

The Contractor shall establish clear ground space at all pedestrian push button locations, and shall set arm reach lengths according to the AAB rules (or to the details shown on the plans).

The project has been designed to conform to all AAB rules, and the Engineer is not aware of any required variances for the work presented on the design plans. The Contractor shall notify the Engineer of any project element related to the pedestrian push buttons that will not comply with 521 CMR prior to constructing said pedestrian push button elements.

Installation - The APS pushbuttons shall be installed by Contractor and as recommended by the manufacturer and documented in installation materials provided by the manufacturer. The Contractor shall be responsible for the proper programming of the APS pushbuttons, orientation of the pushbuttons, and all other work necessary to provide a complete and operational APS pushbutton system. The Contractor may be required to adjust volume levels as directed by the Engineer. When the setup is complete and the APS pushbuttons are ready for operation, the values of all parameters that were set during the process shall be delivered to the Engineer in printed and computer-readable form.

ITEM 815.1 (Continued)

Warranty - Each APS pushbutton shall be warranted free from defects in material and workmanship for a period of at least 2 years from the date of installation by the Contractor and acceptance from the owner.

During the warranty period, technical support shall be available from the supplier to owner via telephone within 4 hours of the time a call is made by a user, and this support shall be available from factory-certified personnel without charge.

Posts and Bases

Signal posts and bases shall be aluminum shafts with transformer bases.

Signal base foundations shall not obstruct a sidewalk or crosswalk so that passage by physically challenged persons is impaired.

Mast Arms, Poles, and Foundations

The mast arm poles shall be fabricated and constructed in conformance with the MassDOT December 2015 *Overhead Signal Structure & Foundation Standard Drawings* for 110 mph wind speeds and as stated below.

All mast arm poles shall be Type 2 galvanized steel monolevers with shoe bases.

Acceptance of Type 2 mast arm poles will be contingent upon review and approval of shop drawings submitted by the Contractor. Longhand design calculations shall be submitted by the Contractor with the shop drawings for all Type 2 mast arm poles.

The Contractor shall provide a set of calculations, stamped by a Structural Engineer registered in the Commonwealth of Massachusetts, along with plans and specifications for review by the Engineer.

All mast arm pole foundations shall be cored pier foundations and constructed in conformance with MassDOT Standard Drawings and priced per Table 2 provided below.

TABLE 2

Boring Log No.	ARM LENGTH	STA.	OFFSET	SOIL TYPE	FOUND. DIA.	FOUND. DEPTH	VERT. BARS	TIE BARS
B1	40’	104+86.0	43.0’ LT	Wet Sand (Loose)	3’-6“	17’-0”	18-#8	5-#9
B2	30’	105+83.0	45.5’ LT	Dry Sand (Dense)	3’-6“	10’-0”	18-#8	5#12
B3	40’	105+84.0	42.0’ RT	Dry Sand (Dense)	3’-6“	10’-0”	18-#8	5#9
B4	35’	105+04.0	46.0’ RT	Dry Sand (Loose)	3’ 6”	13’-6”	18-#8	5-#9

ITEM 815.1 (Continued)

If ledge or unsuitable soil is encountered (i.e. on which does not apply to the design tables shown in MassDOT's standard drawings), an alternative design shall be provided by the Design Engineer. If utilities or other underground obstructions are encountered, the Contractor shall backfill the area to its original condition until an alternate design has been provided by the Design Engineer and approved by MassDOT.

No separate payment will be made for work considered incidental to the excavation, including but not limited to, mast arm foundations, dewatering, etc. but all costs in connection therewith shall be included in the lump sum bid price.

Foundations shall not obstruct a sidewalk or crosswalk so that passage by physically challenged persons is not impaired.

Mast Arm Sign Support Assembly

Sign brackets for mast arms shall be used in all locations where a sign is to be mounted to the mast arms. Mast arm sign brackets shall consist of a mast arm clamp assembly cast from 356-T6 aluminum alloy or equivalent, vertical support tube extruded from 6063 aluminum or equivalent, stainless-steel bands, clamp hardware, and all miscellaneous materials necessary to fix mount the signs to the mast arms.

Signs shall be bolted through the sign face.

Vertical support tubes shall be of sufficient length to allow mounting of the signs to within 3 inches of the top and bottom of the signs.

Any sign bracket that does not meet MassDOT approval will not be accepted. No separate payment will be made to correct the sign bracket.

Software

All ATC controller, cabinet monitor unit, vehicle detection, and license software shall be supplied with the latest available revision. Any software upgrades released by the manufacturer shall be supplied at no charge to the Owner for a period of five years after acceptance of the traffic signal installations.

Data Base Programming

Each programmable local hardware component (i.e., controller, cabinet monitor unit, vehicle detection, preemption unit, communications devices) shall be initially programmed by the Contractor based on information contained on the plans. Electronic copies and three sets of hard copy programming per device shall be supplied by the Contractor.

ITEM 815.1 (Continued)

Manuals and Keys

The Contractor shall supply two (2) copies of operating and maintenance manuals (i.e., controller, malfunction management unit, preemption unit) and two (2) sets of cabinet keys to MassDOT.

Ownership and Maintenance

Upon acceptance of the traffic signal system by MassDOT, the Contractor shall turn over all guarantees and warranties to MassDOT. In turn, MassDOT shall assume ownership and maintenance of the signal system.

Equipment Finish and Color

All proposed traffic signal equipment including but not limited to signal posts, bases, signal heads, visors (outside), doors, mast arms, pushbutton saddles, service meter socket box, optical preemption detectors, hardware, and rigid mounting brackets for signals and signs shall be colored **BLACK** and subject to the approval of the Town. The Contractor shall submit to the Engineer, and the Town for approval, paint chips and sample finishes on steel and aluminum of the intended color prior to any work being done under this heading.

Signal heads, doors, visors, mounting brackets, and hardware supplied direct from the manufacturer in the color stipulated above may be acceptable provided it meets or exceeds the finish process for the material indicated below.

Steel Equipment

Galvanizing

All bolts, screws, nuts, rods and washers shall be galvanized in accordance with AASHTO M232 and the Standard Specifications. The hardened machine screws may be electroplate galvanized. Stainless steel studs, bolts, screws, nuts, straps and washers shall not be galvanized. Galvanized hardware need not be painted; however, the ends of bolts, nuts, and washers shall be painted in the field according to section "Touch-up and Repairs." Immediately prior to galvanizing, the steel shall be immersed in a bath of zinc ammonium chloride. The dry kettle galvanizing process shall be used.

All steel components, other than above, shall be galvanized after fabrication in accordance with AASHTO M111. The galvanizing bath shall contain nickel (0.05% to 0.09% by weight).

Galvanized members requiring shop assembly shall be welded and drilled prior to galvanizing.

Coating Over Galvanized Steel

Prior to painting, the applicator shall ensure that all components are smooth and without sharp protrusions that would present and injury hazard to pedestrians. Also, the fabricator shall ensure that all welds shall be cleaned thoroughly in accordance with good practice and according to AWD D1.5 and ASTM A123-89a and shall have a suitable surface to accept the galvanizing.

ITEM 815.1 (Continued)

In preparation for the two coat painting system, the surface shall be blast cleaned in accordance with the requirements of SSPC SP7 "Brush-Off Blast Cleaning" or other method producing equivalent results and uniform profile, to achieve a 1.0 to 1.5 mils anchor profile as indicated be a Keane Tator profile comparator or similar device. The creation of the anchor profile shall be performed prior to the formation of "white rust" on the galvanized surface.

Following blast cleaning, the zinc coating thickness shall be measured to verify that the coating thickness is in accordance with AASHTO M111.

A two-coat painting system shall be applied by the Galvanizer in his own facility within twelve hours of galvanizing the steel components.

The prime coat material shall be a polyamide epoxy applied to minimum dry film thickness of 2.0 to 4.0 mils (0.002-0.004 in.) and force cured as given below for the finish coat.

The finish coat material shall be a two component, catalyzed aliphatic urethane applied by airless spray to a minimum dry film thickness of 4.0 mils.

The color shall be **BLACK** as noted above. The fabricator shall submit to the Engineer for approval, paint chips of the intended color prior to any work being done under this heading.

All finish coat material shall be applied under conditions within the following tolerances:

Air Temperature	50°F min.,	90°F max.
Surface Temperature	50°F min.,	100°F max.

Surface temperature must be at least 5°F above the dew point.

The finish coat shall be cured in a booth capable of maintaining 150°F for 2-4 hours.

Touch-up and Repairs
Should any damage occur to the galvanized coating during shipping or handling at the job site, the Contractor shall repair and touch-up any damaged areas to the satisfaction of the Engineer and the following:

Touch-up of galvanizing before the finish coat is applied shall be accomplished by applying galvanizing repair paint. The dry film thickness of the applied repair paint shall not be less than 4.0 mils.

Applications shall be in accordance with the manufacturer's instruction.

ITEM 815.1 (Continued)

Field touch-up procedures shall conform to the recommendations of the Galvanizer. Touch-up of the finish coat shall be by applying a coating of a two-part urethane, as supplied by the Galvanizer, to achieve a dry film thickness of at least 4.0 mils. Prior to the application of the paint, remove all damaged coatings down to a solidly adhered coating and apply galvanizing repair paint as primer.

Allow the primer to dry for at least 4 hours prior to top coating.

The Contractor shall also use the touch-up paint material and procedures to paint the galvanized hardware used in field erection that has not been finish coated previously.

Aluminum Equipment

All aluminum equipment called for shall have a powder coat finish **BLACK,** as noted above, in color. The coating shall be a polyester-TGIC (triglycidyl isocyanurat) resin system conforming to the following:

Quality	Test	Limits
Abrasion	Taber abraser CS-10, 1000 gram load, 1000 cycle, ASTM D4060	100 mg. Maximum weight loss
Adhesion	ASTM D .59 Initial 1000 hours	 5A 5A
Gloss	ASTM D 523 60° - 600 hours 60° - 1000 hours	 82% retention 90% retention (washed)
Hardness	ASTM D 3363	2H – No Gouge
Impact	ASTM D 2794 Direct	Pass 80 inch-lb.
Salt Spray Resistance	ASTM B 177 ASTM D 1654 1000 hours unscribed 400 hours scribed	 Table 2-10 Table 1-10
Weather Resistant	ASTM G 23, 1000 hours, 18 min. waterspray, 102 min. light	No film failure
Color	Black	
Identify	Infrared fingerprint	Match
Flexibility	180° bend; ½" dia, mandrel within 10 seconds	No breaks, flaking or cracks. Tested with a Q-panel with 2 mils or less of coating
Humidity	ASTM D 2247, 1000 hours	No blister or film failure
Thickness		4 mils +/- 1 mils
Mar Resistance		Good

A Certificate of Compliance of the powder coating system is required for the Engineer's approval.

ITEM 815.1 (Continued)

BASIS OF PAYMENT

Item 815.1 will be paid at the Contract LUMP SUM price, which price shall include all labor, material, equipment and incidental costs required to complete the work.

No separate payment will be made for work considered incidental to the excavation, including but not limited to, mast arm foundations, dewatering, etc., but all costs in connection therewith shall be included in the lump sum price bid for Item 815.1.

No separate payment will be made for adjusting or readjusting of proposed vehicle detection zones, but all costs in connection therewith shall be included in the lump sum price bid for Item 815.1.

Conduit will be paid for separately under Item 804.3, 3-Inch Electrical Conduit Type NM Plastic (UL).

Pull Boxes will be paid for separately under Item 811.31, Pull Box 12 x 12 Inch – SD2.031.

ITEM 823.70 HIGHWAY LIGHT POLE AND LUMINAIRE REMOVED AND RESET EACH

The work under this Item shall conform to the relevant provisions of Subsections 801 and 820 and the following:

The work shall include the removal and resetting of the existing lighting fixtures, light poles, and existing street lighting as shown on the plans.

Contractor shall use extreme caution and care when dismantling, removing, and resetting existing lighting fixtures, light poles, and existing street lighting. Any light pole, light fixture, light foundation, street lighting or related equipment damaged due to carelessness or lack of protection by the Contractor shall be replaced at no additional cost to the Town.

The wiring in the pole shall be disconnected and the pole removed. The existing wiring shall be pulled out of the conduit and the conduit shall be disconnected at the base of the pole.

All electrical work shall be performed by a Commonwealth of Massachusetts licensed electrician and said work shall meet all state and local electrical codes.

At the existing light pole location, the Contractor shall remove the existing light foundation, backfill with gravel borrow or suitable material, construct a heavy duty pull box, splice the existing conduit and extend new conduit to proposed light pole location as noted on the plans.

METHOD OF MEASUREMENT

Item 823.70 will be measured for payment by the EACH fixture, pole, pole foundation (one unit) and/or luminaire successfully removed, transported, and re-set without damage.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 823.70 will be paid at the Contract unit price per EACH, which price shall include all labor, material, tools and equipment, dismantling, excavation, wiring removal, conduit disconnection, backfill, transportation, re-setting and all incidental costs required to complete the work without damage.

Removal of existing light pole foundation, new light pole foundation and installation of it shall be included in the unit price under Item 823.70.

Proposed conduit, pull boxes, wiring and all other work associated with Item 823.70 shall be included in the unit price.

ITEM 823.701 HIGHWAY LUMINAIRE AND BRACKET REMOVED AND RESET EACH

The work to be done under this item shall conform to the relevant provisions of the Standard Specifications Subsection 820 and the following:

The work shall include the removal existing cobra head arm and luminaires affixed to utility poles which are relocated as part of the project and resetting said arm and luminaire on the relocated pole. The Contractor shall perform the work in a sequence which prevents any outage of lighting. The Contractor shall be qualified to work in Eversource electrical space. Inspection shall be by the Town of Weston where deemed appropriate.

The work shall include all labor, tools, material, and equipment to remove arm and luminaire, stack or otherwise safely store all lighting components, and reattach arm and luminaire at the proposed location.

The work under this item shall include coordination with utility company regarding disconnection and reconnection of electrical power, including fees charged by the Utility company. The Contractor shall be qualified to work in Eversource electrical space. The Contractor shall apply for a work request to Eversource a minimum of 90 days prior to the schedule date for the work of this item. Delays to the Eversource connect/disconnect and work under this item will delay the work by the next utility relocation wire on the pole and will not be a cause for utility delay claim.

Any lighting component damaged by the work of this section and which in the opinion of the Engineer is unsuitable for reuse shall be replaced by the Contractor without additional compensation.

Lighting units damaged through no fault of the Contractor shall be stacked at the Town of Weston Department of Public Works facility on Boston Post Road in Weston and a new unit shall be provided by Town of Weston for replacement at no additional cost under this item.

METHOD OF MEASUREMENT

Item 823.701 will be measured for payment by the EACH.

BASIS OF PAYMENT

Item 823.701 will be paid at the Contract unit price by the EACH cobra head arm and luminaire removed and reset and made operational to the satisfaction of the Engineer.

ITEM 831.11 ROADSIDE GUIDE (MA-D1-XX) - - ALUMINUM PANEL (TYPE A) SQUARE FOOT

Work under this item shall conform to the relevant provisions of Subsection 828 of the Standard Specifications and the following:

The work under this item shall consist of fabricating and installing new 0.250 inch Type A (sheet) aluminum guide signs as indicated on the plans or as directed by the Engineer. Signs shall be installed on new support posts.

METHOD OF MEASUREMENT

Item 831.11 will be measured for payment by the SQUARE FOOT.

BASIS OF PAYMENT

Item 831.11 will be paid at the Contract unit price per SQUARE FOOT, which price shall include all labor, material, equipment, and incidental costs required to complete the work.

New sign supports will be paid for separately under Item 841.11, Support For Guide Sign (5 Inch Tubular Post) Steel.

ITEM 841.11 SUPPORT FOR GUIDE SIGN - (5 INCH TUBULAR POST) STEEL 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 shall consist of fabricating and installing 5 inch tubular steel posts in 4000 psi concrete foundations for proposed flat sheet aluminum guide sign panels that are installed as shown on the plans or as directed by the Engineer. These signs are as followings:

1. MA-D1-6a & MA-D1-5a
2. MA-D1-6b & MA-D1-5b
3. MA-D1-5c
4. MA-D1-5d
5. MA-D1-5e
6. MA-D1-5f

The Contractor shall provide all excavations, backfilling, compaction, foundations, materials, labor, equipment tools, appurtenances, and incidentals necessary to satisfactorily complete these items of work, complete, in place and accepted.

The sizes and quantities of the supports, and the applicable signs are shown on the plans.

In advance of the sign support installations, the Contractor shall mark, on site, the sign support locations with any changes required by field conditions such as utilities. The sign support layouts shall be inspected and approved by the Engineer before they are installed.

METHOD OF MEASUREMENT

Item 841.11 will be measured for payment by the EACH.

BASIS OF PAYMENT

Item 841.11 will be paid at the Contract unit price per EACH, which price shall include all labor, material, equipment and incidental costs required to complete the work.

New sign panels will be paid for separately under Item 831.11 Roadside Guide (MA-D1-XX) – Aluminum Panel (Type A).

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 "Am ericans 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 & 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 853.8 TEMPORARY ILLUMINATION FOR WORK ZONE DAY

The work under this item shall conform to the relevant provisions of Subsection 850 of the Standard Specifications and the following:

The use of temporary portable light towers shall be limited to balloon diffuser systems.

These portable light towers shall be used throughout the project area for temporary work zone lighting. The use of unshielded high wattage flood lights shall not be permitted.

The portable balloon light tower shall be used, relocated, and adjusted to meet the criteria in Subsection 850 of the Standard Specifications.

A detailed lighting plan with photometrics detailing the lighting levels to be provided. Said plan shall include types, locations and mounting heights and directionality of all lighting provided and utilized (any existing). Plan shall be designed by a registered professional engineer registered in Massachusetts and submitted to the Engineer for approval prior to any operations within the right of way.

METHOD OF MEASUREMENT

Item 853.8 will be measured for payment by the DAY.

BASIS OF PAYMENT

Item 853.8 will be paid at the Contract unit price per DAY, which price shall include all labor, materials, equipment, tools, and all incidentals required for the design and installation of work zone lighting equipment. This shall include, but not limited to, lighting plan preparation, wiring connections, equipment relocations and include all material and labor incidental to meet a complete and functional and operational system. The price of this item shall include any possible fabrication, modification and installation of luminaires or diffusers.

The per day price shall be full compensation for all “Temporary Illumination of Work Zone” regardless of the number of concurrent work areas, amount of equipment concurrently in use, or the durations of or changes of the work shifts per day.

Installation and modifying the existing setup shall be incidental to Item 853.8.

ITEM 854.6 TEMPORARY PORTABLE RUMBLE STRIPS DAY

Work under this item consists of furnishing, deploying, maintaining in proper operating conditions, and removing temporary portable rumble strips (TPRS) for temporary lane closures of 24 hours or less.

MATERIALS

The TPRS shall be 10’ to 11’ wide, measured perpendicular to the path of travel, 12” to 16” long, measured parallel to the path of travel, and 0.5” to 0.75” tall. All edges shall be beveled. The surfaces shall be grooved to limit potential hydroplaning.

The TPRS shall lay flat on the road surface without the use of nails, anchors, or adhesives, and shall be flexible so as to conform to the surface profile.

The TPRS shall be able to withstand vehicle weights of up to 80,000 lbs. and operate in temperatures between 0° to 120° F.

The manufacturer shall certify the TPRS to be safe for use on roads with speed limits of at least 70 mph.

TPRS that appear damaged or functioning in an unsafe manner may be order removed by the Engineer and replaced at no additional cost.

CONSTRUCTION METHODS

The TPRS shall be installed per the plans or at the discretion of the Engineer.

The Contractor shall conform to the manufacturer’s specifications for installation and the following:

A. The road surface shall be cleared of all gravel, sand, and debris.
B. If RoadQuake 2™ model is used, the modular pieces shall be assembled into 11-foot strips per the manufacturer’s instructions in advance of deployment. The interconnected segments shall form a smooth and flat, continuous section.
C. A Truck-Mounted Attenuator, conforming to Section 850, shall be used as shadow vehicle protection during the deployment and removal of TPRS on any roadway with speeds of 45 mph or greater.
D. TPRS shall be deployed in conjunction with all other temporary traffic control devices. MA-W28-1 (Rumble Strips Ahead) sign(s) shall be installed per the Temporary Traffic Control Plan.

ITEM 854.6 (Continued)

E. TPRS deployment:
   1. TPRS shall be placed perpendicular to the direction of travel, centered in the lane.
   2. Three (3) individual strips are required for a single array.
   3. Refer to the Temporary Traffic Control Plan for the location of the array respective to the lane closure.
   4. The spacing of the individual strips within the array shall conform to the following table:

Speed Limit	**Distance Between Rumble Strips (measured center-to-center)**
>55 mph	20 feet
40 mph to 55 mph	15 feet
<40 mph	10 feet

   5. The TPRS shall be placed without the use of nails, adhesives, or other methods of affixing them to the road surface.

F. All TPRS shall be maintained in proper condition, alignment, spacing, and location throughout the duration of the lane closure, at no additional cost.

G. The TPRS shall be removed prior to the removal of the traffic control devices used to close the travel lane.

H. TPRS shall not be used during snow events.

METHOD OF MEASUREMENT

An array of three (3) temporary portable rumble strips is considered one (1) unit and will be measured by the day. Each period of up to 24 hours during which this unit is in use will be measured as one day regardless of the number of times the array is deployed, repositioned, or removed.

BASIS OF PAYMENT

Temporary Portable Rumble Strips will be paid for at the Contract unit price per day, which shall include full compensation for furnishing, deploying, repositioning, and removing the array of three (3) individual strips as directed by the Engineer.

ITEM 859.1 REFLECTORIZED DRUMS WITH SEQUENTIAL DAY FLASHING WARNING LIGHTS

The work under this Item shall conform the relevant provisions of Subsection 850 of the Standard Specifications and the following:

Work under this item consists of furnishing, installing, maintaining in proper operating conditions, and removing reflectorized drums, and any necessary ballast, equipped with sequential flashing warning lights.

MATERIALS

Reflectorized drums shall be listed on the MassDOT Qualified Traffic Control Equipment List. Reflective sheeting on drums shall meet or exceed ASTM D4956 Type VIII. All drums shall be maintained in a satisfactory manner including the removal of oils, dirt, and debris that may cause reduced retroreflectivity.

The Contractor shall use one of the following sequential flashing warning light systems unless otherwise approved by the Engineer:

1. Empco-Lite LWCSD.
2. pi-Lit® Sequential Barricade-Style Lamp; or
3. Unipart Dorman SynchroGUIDE.

Sequential flashing warning lights shall be secured to reflectorized drums per the light manufacturer's specifications.

CONSTRUCTION METHODS

The first ten (10) drums in any merging or shifting taper as designated in the Temporary Traffic Control Plan shall be equipped with sequential flashing warning lights. These lights shall be operating, at a minimum, between dusk and dawn when the taper is deployed.

The successive flashing of the sequential warning lights shall occur from the upstream end of the merging or shifting taper to the downstream end of the taper in order to identify the desired vehicle path. Each warning light in the sequence shall be flashed at a rate of not less than 55, nor more than 75 times per minute.

Warning lights shall be powered off when drums are not deployed in a taper.

METHOD OF MEASUREMENT

A group of ten (10) reflectorized drums with sequential flashing warning lights is considered one (1) unit and will be measured by the day. Each period of up to 24 hours during which this unit is in use will be measured as one day regardless of the number of times that the drums are positioned, repositioned, removed, or returned to service.

ITEM 859.1 (Continued)

BASIS OF PAYMENT

Reflectorized Drums with Sequential Flashing Warning Lights will be paid for at the contract unit price per day, which shall include full compensation for furnishing, positioning, repositioning, and removing the group of ten (10) drums as directed by the Engineer.

ITEM 864.031	**PAVEMENT LEGEND REFL. WHITE THERMOPLASTIC (PREFORMED) – BICYCLE RIDER**	**EACH**
ITEM 864.032	**PAVEMENT LEGEND REFL. WHITE THERMOPLASTIC (PREFORMED) – BICYCLE STRAIGHT ARROW**	**EACH**
ITEM 864.034	**PAVEMENT LEGEND REFL. WHITE THERMOPLASTIC (PREFORMED) – BICYCLE AT STOP LINE**	**EACH**
ITEM 864.116	**PAVEMENT LEGEND REFL. WHITE THERMOPLASTIC (PREFORMED) – BIKE BOX LEFT ARROW**	**EACH**
ITEM 864.117	**PAVEMENT LEGEND REFL. WHITE THERMOPLASTIC (PREFORMED) – BIKE BOX BICYCLE RIDER**	**EACH**
ITEM 864.118	**PAVEMENT LEGEND REFL. WHITE THERMOPLASTIC (PREFORMED) – LANE REDUCTION ARROW**	**EACH**

The work under these items shall conform to the 2009 Manual of Uniform Traffic Control Devices (MUTCD) and the following:

The work shall consist of preparing pavement surfaces, along with furnishing and installing retroreflective preformed thermoplastic legends and symbols associated with bicycle pavement markings at locations shown on the plans or as directed by the Engineer, and in accordance with this special provision.

The Contractor shall provide all labor and material (i.e. propane fueled torch with pressure regulator and hose, tape measure, utility knife, putty knife, hammer, chisel, chalk sticks and snap lines, sealer, adequate supply of propane) and all other equipment, materials and incidental costs necessary to complete the installation of the preformed thermoplastic markings.

Shop Drawings

Within 30 days following execution of the Contract, the Contractor shall submit shop drawings for the performed thermoplastic material, and the manufacturer's materials specifications to the Engineer in accordance with the relevant provisions of MassDOT Standards Section 815.20.

No work shall be commenced by the Contractor until approval of the shop drawings and manufacturer's data has been received in writing from the Engineer. Approval of these drawings will be general in character and shall not relieve the Contractor from the responsibility of, or the necessity of, furnishing materials and workmanship conforming to the plans and specifications.

The Contractor shall deliver to the Engineer a certificate of compliance with the manufacturer for all materials purchased from the manufacturer.

ITEMS 864.031, 864.032, 864.034, 864.116, 864.117, & 864.118 (Continued)

Materials

All preformed markings shall be selected from the following suppliers or approved equivalent:

- PreMARK Bike Marking, with ViziGrip, as manufactured by Ennis Flint Trading, Inc., 115 Todd Court, Thomasville, NC 27360.
- Ozark Materials, LLC 591 Glendale Avenue, Greenville, AL 36037
- RAE Products & Chemical Corp. 11638 South Mayfield Avenue, Alsip, IL 60803

The preformed bike markings shall have a minimum thickness of 90 mils.

The surface of the markings shall upon application provide a minimum skid resistance value of 45 BPN when tested according to ASTM:E 303.

The legends and symbols, along with the manufacturer's item numbers, are as follows:

Item	Legends & Symbols	Manufacturer's Item No.		
		PreMark	**RAE Paint**	**Ozark**
864.031 864.032	Bike Lane Rider Bike Lane Straight Arrow	PM602006(L) 89330268HS	3573 3525	OZ-BP1013-090 OZ-BP1025-090
864.116 864.117	Bike Box - Left Turn Arrow - Bike Rider	PM6092756(L) 89230525(L)HS	3522 3574	OZ-BP1015-090 OZ-AR1026-90
864.034	Bike at Stop Line	89230577(L)HS	4061	OZ-BP1006-090
864.118	Lane Reduction Arrow	8330155NB	3537	OZ-AR1019-090

Application

In advance of the preformed marking installations, the Contractor shall mark, on site, the preformed markings with any changes required by field conditions such as manholes. The marking layouts shall be inspected and approved by the Engineer before the markings are installed.

The Contractor shall provide certification, to the Engineer, from the manufacturer documenting the Contractor's qualifications to install the preformed markings in a manner acceptable to the manufacturer and documented in installation materials provided by the manufacturer.

Prior to installation the pavement shall dry and free of dirt, debris, deicing agents, chemicals, and significant oily substances.

ITEMS 864.031, 864.032, 864.034, 864.116, 864.117, & 864.118 (Continued)

The Contractor shall be responsible for controlling and minimizing airborne dust and similar debris generated by surface preparation and cleanup to prevent a hazard to motor vehicle operation, pedestrians, or nuisance to adjacent property.

Observations

The preformed markings shall be subject to a 180 day observation period under normal traffic conditions. The observation period shall begin with the satisfactory completion and acceptance of the work by the Engineer and MassDOT.

The preformed markings shall show no signs of failure such as: blistering, excessive cracking, chipping, discoloration, poor adhesion to the pavement, loss of reflectivity or vehicle damage. MassDOT reserves the right to check the color and retro reflectivity any time prior to the end of the observation period.

The Contractor, at no additional cost to MassDOT, shall replace any preformed markings that do not perform satisfactorily under the 180-day observation period.

Warranty

The Manufacturer shall warrant the preformed markings against material defects for a period of one year from the date of the acceptance letter of the project by MassDOT.

METHOD OF MEASUREMENT

Items 864.031, 864.032, 864.034, 864.116, 864.117, and 864.118 will be measured for payment by the EACH.

BASIS OF PAYMENT

Items 864.031, 864.032, 864.034, 864.116, 864.117, and 864.118 will be paid at the respective Contract unit prices by the EACH, which prices shall include all labor, material, equipment, and all incidental costs required to complete the work.

ITEM 864.41 GREEN FRICTION SURFACE FOR BIKE LANES SQUARE FOOT

Work under this item consists of furnishing and installing Colorized Pavement Markings at the locations shown on the plans or as directed by the Engineer. All work shall conform to Subsection 860 and the following.

Materials

Colorized Pavement Markings are composed of Epoxy, Methyl Methacrylate (MMA).

The initial daytime chromaticity coordinates for green colorized pavement shall fall within the area created by the following coordinates:

Initial Daytime Chromaticity Coordinates (Corner Points) for Green Colorized Pavement Markings				
	1	2	3	4
x	0.230	0.266	0.367	0.444
y	0.754	0.460	0.480	0.583

The surface of the Colorized Pavement Markings shall provide a minimum skid resistance value of 55 British Pendulum Number (BPN) when tested in accordance with ASTM E303.

The Contractor shall provide a Certificate of Compliance verifying the product supplied meets the specified daytime chromaticity requirements and friction requirements prior to installation.

Construction Methods

The Contractor shall supply Shop Drawings to the Engineer for approval a minimum of 30 days in advance of installation. Shop Drawings shall include the product manufacturer's instructions, material safety data sheets (MSDS) for all components including any primers and sealers, and all tools, equipment, and procedures to be used for the installation. No work shall commence until the Shop Drawings have been approved.

It shall be the responsibility of the Contractor to prepare the surface prior to the installation of any Colorized Pavement Markings. Any joints or cracks in the pavement shall be pre-treated per the manufacturer's recommendation. The surface shall be clean and dry prior to installation of the system. If additional surface preparation is recommended by the manufacturer, such as the installation of a primer or preheating, it shall be completed per the manufacturer's specifications. All surface preparation shall be considered incidental to the cost of the item.

Any existing pavement markings that conflict with the Colorized Pavement Markings shall be removed by the Contractor in advance of installation; installation of colorized pavement over pavement markings shall not be allowed. All existing pavement markings that are to remain, castings, curbs, and rumble strips within the vicinity of the colorized pavement application shall be covered and protected by the Contractor. Existing pavement markings damaged by the Colorized Pavement Markings installation shall be removed and replaced by the Contractor at no additional cost.

ITEM 864.41 (Continued)

The Contractor shall follow all installation instructions from the manufacturer, including allowable ranges of temperature and humidity for installation, unless otherwise approved by the Engineer.
Upon completion of installation, a sealer shall be applied if recommended by the manufacturer. The sealer shall be installed per the manufacturer's specification. The application of a sealer shall be considered incidental to the cost of the item.
The Contractor shall maintain protection of the Colorized Pavement Markings installation from vehicle and foot traffic throughout the minimum cure time recommended by the manufacturer.

METHOD OF MEASUREMENT

Item 864.41 will be measured for payment by the SQUARE FOOT.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 864.41 will be paid at the Contract unit price per SQUARE FOOT, which price shall include all labor, material, tools, equipment testing, and all incidental costs required to complete the work.

ITEM 874.2 TRAFFIC SIGNS REMOVED AND RESET EACH

The work under these items shall conform to the relevant provisions of Subsection 828 of the Standard Specifications and the following:

The Contractor shall carefully remove and reset at new locations all existing signs, attachment hardware and sign support posts not included under other sign items as shown on the drawings and as directed by the Engineer.

Signs, attachment hardware and sign support posts shall be satisfactorily stored and protected until reset in the proposed work.

Signs, attachment hardware and sign support posts lost, damaged or otherwise made unsuitable for reuse while being removed, transported, stored or reset shall be replaced with new materials at no additional cost to the Owner. New attachment hardware shall be furnished and installed as necessary to replace any missing or unusable existing hardware.

Included under Item 874.2 are Warning-Regulatory and Route Marker signs, and miscellaneous directional signs and decorative street name signs.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 874.2 will be measured for payment per EACH, complete in place.

Item 874.2 will be paid for at the Contract unit price per EACH, which price shall include all labor, material, equipment, and incidental costs required to complete the work.

ITEM 874.41 TRAFFIC SIGN REMOVED AND DISCARDED EACH

The work to be done under this Item shall consist of the dismantling, removing, and disposal of all existing regulatory and warning signs and their supports as noted on the plans and/or as directed by the Engineer.

Also included is the excavation of the existing foundations. If, in the opinion of the Engineer, the existing foundation will not interfere with new construction, it may be removed to a depth of 12 inches below the existing ground, the hole backfilled with gravel and compacted, and the existing surfaces restored or replaced in kind. The existing sign panels and supports, under this Item, not needed on the project, shall be discarded at the Contractor's expense.

The existing signs shall not be removed until the new signs and structures replacing them are ready for traffic unless otherwise directed by the Engineer.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 874.41 will be measured for payment per EACH sign removed and discarded.

Item 874.41 will be paid for at the Contract unit price per EACH, which price shall include all labor, material, equipment and incidental costs required to complete the work.

DOCUMENT A00802

DETAIL SHEETS

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THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
TEN PARK PLAZA - BOSTON, MA

—PRELIMINARY ESTIMATE OF QUANTITIES — DETAIL SHEET—

CITY	WESTON	YEAR:	2026
STA.:	100+60 TO 111+00 CONSTRUCTION BASELINE 18+91 TO 24+14 CONSTR.BASELINE 13+00 TO 15+72 CONSTR. BASELINE	ROAD:	BOSTON POST ROAD (ROUTE 20) WELLESLEY STREET BOSTON POST ROAD
		CLASS:	URBAN PRINCIPAL ARTERIAL
Type of Project:	SIGNAL AND INTERSECTION IMPROVEMENTS PROJECT	DATE:	JANUARY 7, 2026

Unclassified Excavation	2,100	Cu. Yards	Subbase Full Depth Pvm't	700	Cu. Yards
Class "A" Trench Excav	-	Cu. Yards	Gravel for Cem Conc Sidewalks	8	Cu. Yards
Class "B" Trench Excav	40	Cu. Yards	Gravel for Hot Mix Walk	207	Cu. Yards
Channel Excav	-	Cu. Yards	Gravel for Driveways	11	Cu. Yards
Ordinary Borrow	280	Cu. Yards	Gravel for Pedestrian Curb Ramps	38	Cu. Yards
Special Borrow	-	Cu. Yards	Gravel for Stone Dust Walk	11	Cu. Yards
			Embankment +15%	-	Cu. Yards

PROPOSED FULL DEPTH PAVEMENT (GREATER THAN 4.0 FEET WIDE) **AREA = 1,839 SY**

SURFACE: 1.75" SUPERPAVE SURFACE COURSE 12.5 - P (SSC-12.5-P) OVER
2.25" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER

BASE: 4.5" SUPERPAVE BASE COURSE 37.5 (SBC-37.5) MATERIAL PLACED IN ONE COURSE OVER

SUBBASE: 4" DENSE GRADED CRUSHED STONE OVER
8" GRAVEL BORROW, TYPE b

PROPOSED FULL DEPTH PAVEMENT (LESS THAN 4.0 FEET WIDE) **AREA = 294 SY**

SURFACE: 1.75" SUPERPAVE SURFACE COURSE 12.5 – P (SSC-12.5-P) OVER
2.25" SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0) OVER

BASE: 6" HIGH EARLY STRENGTH CEMENT CONCRETE FOR BASE COURSE OVER

SUBBASE: 8" GRAVEL BORROW, TYPE b

Plan No.'s	14-16	Estimated by	A. Loncarevic
Profile No.'s	17-20	Reviewed by	G. Melaugh
Calculation Book No.'s	608940	Submitted by	T. McIntosh

PROPOSED PAVEMENT FINE MILLING AND OVERLAY – ROUTE 20 **AREA = 4,357 SY**

SURFACE: 1.75” SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P)
2.25” MIN SUPERPAVE INTERMEDIAT COURSE 19.0 (SIC-19.0)

MICROMILL: VARIES: 1.75” MIN TO 4” MAX

**PROPOSED PAVEMENT MILLING AND OVERLAY –
BOSTON POST ROAD AND WELLESLEY STREET AND WINSOR WAY** **AREA = 2,338 SY**

SURFACE: 1.75” SUPERPAVE SURFACE COURSE 12.5 POLYMER (SSC-12.5-P)

MICROMILL: 1.75”

**PROPOSED CEMENT CONCRETE PEDESTRIAN
CURB RAMP / SIDEWALK** **AREA = 210 SY**

SURFACE: 4” CEMENT CONCRETE (AIR ENTRAINED 4000 PSI, 3/4", 610)

FOUNDATION: 8” GRAVEL BORROW, TYPE b

PROPOSED HOT MIX ASPHALT DRIVEWAY **AREA = 48 SY**

SURFACE: 1.5” SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5)
2.5” SUPERPAVE SURFACE COURSE 12.5 (SSC-12.5)

FOUNDATION: 8” GRAVEL BORROW, TYPE b

PROPOSED HOT MIX ASPHALT WALK **AREA = 932 SY**

SURFACE: 1.25” SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5)
1.75” SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5)

FOUNDATION: 8” GRAVEL BORROW, TYPE b

PROPOSED STONE DUST WALK **AREA = 48 SY**

SURFACE: 4” STONE DUST SURFACE (2-2” COURSES)

FOUNDATION: 8” GRAVEL BORROW, TYPE b

ITEM 102.511 **TREE PROTECTION – ARMORING AND PRUNING**

Boston Post Road
Sta. 13+52, 27.4' LT Sta. 13+63, 28.0' LT Sta. 13+65, 28.1' LT
Sta. 13+66, 27.1' LT Sta. 13+75, 28.0' LT Sta. 13+82, 29.8' LT
Sta. 13+89, 32.9' LT

Winsor Way
Sta. 0+34, 26.1' RT Sta. 0+64, 17.6' RT

And as directed.

ITEM 102.522 **TREE AND PLANT PROTECTION FENCE - CHAIN LINK**

At various locations where existing trees or other areas of quality. Vegetation is to remain, as directed by the Engineer and the MassDOT landscape architect, prior to any construction activities and at the locations below:

Winsor Way
Sta. 1+39 to Sta. 2+82, RT

And as directed.

ITEM 103. **TREE REMOVED – DIAMETER UNDER 24 INCHES**

Route 20
Sta. 107+68, 34.0' RT

Winsor Way
Sta. 1+56, 16.4' RT Sta. 2+12, 13.3' RT Sta. 2+20, 9.8' RT
Sta. 2+21, 12.7' RT Sta. 2+31, 11.7' RT Sta. 2+35, 12.7' RT

Wellesley Street
Sta. 19+26, 17.2' RT Sta. 23+45, 31.5' RT

And as directed.

ITEM 104. **TREE REMOVED – DIAMETER 24 INCHES AND OVER**

Winsor Way
Sta. 2+16, 7.4' RT

And as directed.

ITEM 105. **STUMP REMOVED**

Winsor Way
Sta. 1+70, 11.8' RT

And as directed.

ITEM 121. **CLASS A ROCK EXCAVATION**
For removal of existing retaining walls and ledge outcrop.

Existing retaining walls

Winsor Way
Sta. 1+29 to Sta. 1+64 RT

Wellesley Street
Sta. 19+82 to Sta. 20+95 RT

Route 20
Sta. 107+00 to Sta. 108+64 RT

Existing ledge outcrop

Wellesley Street
Sta. 19+48 to Sta. 19+58 RT

ITEM 146. **DRAINAGE STRUCTURE REMOVED**

At locations detailed below, and as directed.

Wellesley Street
Sta. 23+69, 27.3' RT Sta. 23+83, 34.8' RT

Boston Post Road
Sta. 14+40, 20.2' LT Sta. 15+322, 19.7' LT

Winsor Way
Sta. 1+48, 36.4' LT

ITEM 220.3 **DRAINAGE STRUCTURE CHANGE IN TYPE**

At locations detailed below, and as directed.

Route 20
Sta. 103+92, 21.9' RT Sta. 107+34, 21.3' RT

Winsor Way
Sta. 1+72, 18.6' LT

ITEM 220.5 **DRAINAGE STRUCTURE REMODELED**

At locations detailed below, and as directed. To be used for existing drainage that need to be adjusted over 6" to final grade.

Boston Post Road
Sta. 14+33, 25.2' RT Sta. 14+13, 34.9' RT

ITEM 358. **GATE BOX ADJUSTED**

Route 20

Station	Offset	
106+60	31.5	LT
106+62	23.4	RT
106+90	22.3	RT

Winsor Way

Station	Offset	
1+36	21.7	LT
1+67	48.1	LT

ITEM 506. GRANITE CURB TYPE VB – STRAIGHT

Route 20
Sta 100+66 to Sta 104+74 RT — Sta 100+83 to Sta 104+73 LT
Sta 106+03 to Sta 109+29 RT — Sta 109+29 to Sta 109+96 LT

Boston Post Road
Sta 13+19 to Sta 14+91 RT — Sta 13+17 to Sta 14+61 LT
Sta 14+92 to Sta 15+13 LT

Wellesley Street
Sta 18+92 to Sta 19+50 LT — Sta 18+99 to Sta 21+83 RT
Sta 19+84 to Sta 20+46 LT — Sta 22+83 to Sta 23+51 RT

Winsor Way
Sta 0+59 to Sta 0+89 RT — Sta 0+81 to Sta 0+89 LT

ITEM 506.1 GRANITE CURB TYPE VB – CURVED

Route 20
Sta 106+05 to Sta 106+07

Boston Post Road
Sta 14+91 to Sta 15+02 RT — Sta 15+13 to Sta 15+22 LT
Sta 15+25 to Sta 15+29 RT — Sta 15+39 to Sta 15+42 LT

Wellesley Street
Sta 21+72 to Sta 22+25 RT — Sta 22+78 to Sta 22+83 RT
Sta 23+46 to Sta 23+51 LT — Sta 23+74 to Sta 23+82 LT
Sta 23+76 to Sta 23+80 RT

Winsor Way
Sta 0+24 to Sta 0+31 RT — Sta 0+55 to Sta 0+59 RT

ITEM 620.12 GUARDRAIL, TL-2 (SINGLE FACED)

Route 20
Sta. 101+68.1 RT to Sta. 104+55.6 RT

ITEM 627.1 TRAILING ANCHORAGE

Route 20
Sta. 104+55.6 RT to Sta. 104+65.0 RT

ITEM 627.82 GUARDRAIL TANGENT END TREATMENT, TL-2

Route 20
Sta. 101+34.3 RT to Sta. 101+68.1 RT

ITEM 655.1 **WOOD FENCE**

Wellesley Street
Sta. 19+82 RT to Sta. 20+97 RT

ITEM 670.1 **FENCE REMOVED AND DISCARDED**

To be used at the location below and as directed for existing fencing that is determined to be unacceptable for reuse.

Wellesley Street
Sta. 19+82 RT to Sta. 20+97 RT

Winsor Way
Sta. 1+22 RT to Sta. 1+63 RT

ITEM 685. **STONE MASONRY WALL IN CEMENT MORTAR**

Wellesley Street
Sta. 19+82 RT to Sta. 20+95 RT

ITEM 691. **BALANCED STONE WALL REMOVED AND RESET**

Wellesley Street
Sta. 18+91 RT to Sta. 19+82 RT

Winsor Way
Sta. 1+42 RT to Sta. 1+98 RT

ITEM 811.31 **PULL BOX 12x 12 INCHES - SD2.031**

For traffic signal & light pole, Route 20 at Wellesley St / Boston Post Rd

Route 20

Sta 104+97, 37' LT	Sta 105+06, 37’ RT	Sta 105+09, 56’ LT
Sta 105+20, 54’ RT	Sta 105+63, 58’ LT	Sta 105+71, 54’ RT
Sta 105+82, 39’ LT	Sta 105+82, 38’ RT	Sta 105+93, 36‘ LT
Sta 106+10, 32’ RT	Sta 106+10, 30’ LT	

ITEM 823.70 **HIGHWAY LIGHT POLE AND LUMINAIRE REMOVED AND RESET**

For relocating Town owned light poles

Route 20
Sta 104+94. 35’ LT

Wellesley Street
Sta 23+47, 21‘ RT

ITEM 823.701 **HIGHWAY LUMINAIRE AND BRACKET REMOVED AND RESET**

For removing and resting existing cobra head light located on existing utility poles that will be removed and reset

Route 20
Sta 105+87.7, 27.4' LT – ULT #21-47
Sta 106+16.8, 61.8' RT – ULT #13-1
Sta 108+49.3, 20.3' RT – ULT #21-45

ITEM 831.11. **ROADSIDE GUIDE SIGN (MA-D1-XX)- ALUM. PANEL (TYPE A)**

Route 20
MA-D1-5c Sta 101+52, 23.0' RT
MA-D1-5e Sta 104+72, 40.0' RT
MA-D1-5f Sta 106+48, 35.0' LT
MA-D1-5d Sta 109+97, 24.0' LT

Boston Post Road
MA-D1-6a Sta 14+94, 37.0' RT
MA-D1-5a Sta 14+94, 37.0' RT

Wellesley Street
MA-D1-6b Sta 23+42, 37.0' RT
MA-D1-5b Sta 23+45, 37.0' RT

ITEM 864.031 **PAVEMENT LEGENDS REFLECTORIZED WHITE THERMOPLASTIC (PREFORMED) - BIKE LANE RIDER**

Route 20

Sta 100+86, 16.0' RT	Sta 100+97, 17.0' LT	Sta 103+53, 27.0' RT
Sta 103+63, 26.0' LT	Sta 106+00, 27.0' RT	Sta 106+53, 21.0' RT
Sta 108+64, 25.0' RT	Sta 110+85, 18.0' RT	Sta 110+96, 18.0' RT

ITEM 864.032 **PAVEMENT LEGENDS REFLECTORIZED WHITE THERMOPLASTIC (PREFORMED) - BIKE LANE ARROW**

Route 20

Sta 100+87, 17.0' RT	Sta 100+16, 16.0' RT	Sta 103+52, 26.0' RT
Sta 103+64, 27.0' LT	Sta 106+11, 27.0' RT	Sta 108+53, 25.0' LT
Sta 108+62, 20.0' RT	Sta 110+85, 18.0' LT	Sta 109+96, 17.0' RT

ITEM 864.034 **PAVEMENT LEGENDS REFLECTORIZED WHITE THERMOPLASTIC (PREFORMED) - BIKE DETECTION SYMBOL**

Route 20

Sta 104+70, 26.0' RT	Sta 106+02, 25.0' LT	Sta 106+03, 5.0' LT

Boston Post Road

Sta 15+10, 16.0' LT	Sta 15+13, 13.0' LT

Wellesley Street

Sta 23+55, 6.0' RT	Sta 23+55, 17.0' RT

ITEM 864.04 PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC)

Route 20
Sta 103+80, 5.0‘ RT
Sta 103+80, 14.0’ RT
Sta 104+44, 5.0’ RT
Sta 104+44, 14.0’ RT
Sta 106+27, 7.0‘ LT
Sta 106+69, 5.0‘ LT
Sta 107+16, 6.0‘ LT
Sta 107+57, 5.0‘ LT

Boston Post Road
Sta 14+64, 7.0‘ RT
Sta 15+04, 7.0’ RT

Wellesley Street
Sta 22+90, 16.0‘ RT
Sta 23+31, 16.0’ RT

ITEM 864.116 PAVEMENT LEGENDS REFLECTORIZED WHITE THERMOPLASTIC (PREFORMED) - BIKE BOX LEFT ARROW

Route 20
Sta 105+22, 32.0‘ LT
Sta 105+52, 35.0’ RT

ITEM 864.117 PAVEMENT LEGENDS REFLECTORIZED WHITE THERMOPLASTIC (PREFORMED) - BIKE BOX BICYCLE RIDER

Route 20
Sta 105+24, 35.0‘ LT
Sta 105+50, 37.0’ RT

ITEM 864.118 PAVEMENT LEGENDS REFLECTORIZED WHITE THERMOPLASTIC (PREFORMED) - LANE REDUCTION ARROW

Route 20
Sta 106+49, 17.0‘ RT
Sta 107+30, 16.0’ RT

ITEM 864.41 GREEN FRICTION SURFACE FOR BIKE LANES

Route 20
Sta 104+90, 26.0‘ LT to Sta 105+81, 26.0’ LT
Sta 104+91, 26.0’ RT to Sta 105+84, 27.0’ RT
Sta 105+48, 35.0’ RT to Sta 105+55, 35.0‘ RT
Sta 105+19, 33.0‘ LT to Sta 105+35, 16.0‘ LT

ITEM 874. STREET NAME SIGNS

Route 20
MA-D3-1 Sta 105+77, 45.0’ LT
MA-D3-2 Sta 105+11, 43.0’ RT
MA-D3-3 Sta 104+86, 28.0’ LT
MA-D3-4 Sta 105+84, 35.0’ RT

Wellesely Street
MA-D3-5 Sta 21+75, 18.0’ RT

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DOCUMENT A00808

PROJECT UTILITY COORDINATION FORM

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Project Utilities Coordination (PUC) Form

CONTACTS AND GENERAL UTILITY INFORMATION

10/23/2025
Revision Date:

City/Town:	Project File #:	PUC Completed by:	Utility Pole Set:	
Weston	608940	PCM	Eversource	
Route/Street:	**Resident Engineer:**	**Mass DOT PM:**	**Scheduled Ad Date:**	**Total Poles Relocated:**
Rte 20 & Boston Post Rd	*TBD*	Alolade Campbell	3/28/2026	5 Relocated. 1 Removed

10/23/2025 PRINTED

Consultant:	Contact:	Office #	Cell #	Email
VHB	Timothy McIntosh	617-607-2719		tmcintosh@vhb.com

Utility Company	Contact	Office #	Cell #	Email	Scope, Budget, Duration Submitted		Reimbursement			Potential for District Initiated Early Relocation *		Utilities On Bridge/Structure		Utilities Underground (UG) /Aerial (OH)	
					Yes	No	Agreement	Non-Reimb'le	Notes	YES	NO	YES	NO	UG	OH
Eversource Electric	Ned Sadowski Jason Kaminsky Michael Wightman Chris Carey	413-537-6594 305-308-7256 913-456-6387 339-987-7807		ned.sadowski@eversource.com jason.kaminsky@eversource.com michael.wightman@eversource.com christopher.carey@eversource.com	x		x		EVS to remove UP 21/48, relocate five (5) UP & cooresponding guy anchors. EVS has OHW transfers. EVS to extend UG conduit from existing UP 21/45 to relocated UP 21/45 and install riser on relocated UP 21/45.		x		x	x	x
Crown Castle	Mark Bonanno Mark Vegnani	508-616-7818 508-208-9117		mark.bonanno@crowncastle.com mark.vegnani@crowncastle.com	x		x		Crown Castle has OHW transfers.		x		x		x
Cobreaheads	Town owned see DPW Contacts								Contractor to relocate three (3) Town owned cobraheads.						
MCI - Verizon Business	Stephen Parretti	508-248-1305	508-892-3381	stephen.parretti@verizon.com	x		x		MCI-Verizon Business has recently purchased facilities formerly owned by Raytheon within this projects limits and will be responsible for necessary relocations. MCI-VZ Business to transfer OHW's. MCI-VZ Business is located underground within Verizon owned conduit system. Verizon responsible for relocating riser and conduit from UP 21/48 to UP 21/47 for MCI-VZ Business use. MCI VZ Business to relocate, pull & splice cable within relocated Verizon owned riser and conduit. Note MCI - Verizon Business and Verizon are separate organizations.		x		x	x	x
Raytheon Technologies	Doug Flynn Kevin Michaud Jesse Duane	781-603-5812 - 832-580-9624		flynn@rtx.com kmichaud@masselec.com jduane@masselec.com					MCI-Verizon Business has recently purchased all facilities previously owned by Raytheon within this projects limits.						
Comcast	Wendy Brown Louis Cormier Brian Cleary	978-848-5163 508-647-1435 508-498-1244		wendy_brown@comcast.com louis_cormier@cable.comcast.com briancleary@rwbryant.com	x		x		Comcast has OHW transfers. Comcast responsible for relocating cable into contractor installed conduit and riser on relocated UP 21/46.		x		x	x	x
Verizon	Paul Diamantopolous Stacey Manseau	978-323-0282 978-339-5812		paul.e.diamantopoulos@verizon.com smanseau@pike.com	x		x		Verizon has OHW transfers. VZ has conduit, riser, and HH relocation work.		x		x	x	x
National Grid Gas	Melissa Owens Tim Matook Deepa Gangadhar	781-907-2845 781-577-8358 781-249-4505		melissa.owens@nationalgrid.com timothy.matook@nationalgrid.com deepa.gangadhar@nationalgrid.com					National Grid Gas has casting adjustments				x	x	
For Information Only															
AT&T	Erica Hudson James Araujo	781-221-8400 x7041 781-221-8400 x7042		erica.hudson@sienaengineeringgroup.com james.araujo@sienaengineeringgroup.com					AT&T has leased fiber within Crown Castle owned Cable. Crown Castle responsible for AT&T relocations: 8-12-2020						
Weston DPW - Engineering Division	Jason Lavoie	781-786-5115		lavoie.j@westonma.gov											
Weston DPW - Water Division	David Fava	781-786-5175		Fava.d@westonma.gov											
Weston Fire Dept.	Justin Woodside	781-786-6101		woodside.j@westonma.gov					Weston Fire confirmed they removed all OHW within the limits of this project						
No Facilities or No Conflicts															
Lumen	Renoy Thomas	516-712-3041		relocations@lumen.com					No Facilities: 7-27-2020						
Enbridge	Kathy M. Aruda	508-938-7728		kathleen.aruda@enbridge.com					No Facilities: 7-29-2020						
MWRA Water	Ralph Francesconi	617-461-3573		ralph.francesconi@mwra.com					No Facilities: 8-21-2020						
Eversource Fiber	Bechir Khoury	781-441-3864		bechir.khoury@eversource.com					No Facilities: 11-12-2021						
Tennessee Gas	David Wood	860-763-6005		davidwood@kindermorgan.com					No Facilities: 7-27-2020						
MBTA Archives & Digital Asset Preservation	Sylvia Walsh	-		archives@mbta.com					No Facilties: PCM						
Verizon Wireless Small Cell	Elizabeth Glidden	-		elizabeth.glidden@verizonwireless.com					No Facilties: PCM						

Utility Relocation Notes for MassDOT Contractor

Unless otherwise noted by Contract, the MassDOT Contractor is to provide the District Construction Office with 7 Calendar Days advance notification in order to validate the current progress and provide the required 30 Days advance notice-to-proceed for the first Utility - and each subsequent Utility. These advance notifications are to be identified in the Contractor's Schedules (Pre-Con preparation, Baseline, Subnets, and Updated/Monthly Schedules) as specified in Subsection 8.02 (for DBB Contracts) and/or Section 9 (of DB Contracts). Note: The durations included below do not include these lead-times. See Additional 'Important Basis notes for Contractor' - on last PUC Form page.

Additional notes:

Suggested Sequence of Relocation (Based on Consultant proposed construction staging)

The sequence as detailed on the following pages is based on the consultants proposed staging plan. This information was compiled through meetings that included all of the utilities listed below along with the designer and the the Town of Weston. The information provided is the best available information prior to project advertisement.

PUC FORM - CONTINUED

Is 'enabling' (prep) work, by the Contractor, necessary prior to the start of the first series of utility relocations:	Yes	No
	X	

Has any of the Utility work been identified to work concurrently	Yes	No
	X	

10/23/2025
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Project File #:	608940
City/Town:	Weston
Route/Street:	Rte 20 & Boston Post Rd

massDOT Massachusetts Department of Transportation Highway Division

RESPONSIBLE PARTY		DESCRIPTION - Utility Relocation Phases, Tasks and Activities	Estimated Duration (Work Days) by Utilities (Lead time not included)	Concurrent / Exclusive Utility Work Contractor note: In planning and executing the work, the Access Restraints listed in the Special Provisions, takes precedence over the checklist in these 4 columns.				Access Restraint & Limitations of Operations Notes Should an AR be considered for the Contractor ?	
				Exclusive Utility on site	Concurrent Utilities	Contractor Off-Site	Contractor Concurrent		
C = Contractor	U = Utility Co.			Utility working with no other Utilities in vicinity	Utility working with other Utilities on site	No Contractor physical construction operations on-site (while Utility is	Contractor and Utility are working on-site - but NOT in the same vicinity	Potential Access Restraint (Yes/No)	Reason/Note (optional)
Stage: 1		Enabling' work by the Contractor - Install needed environmental controls (silt stacks, etc.). Digsafe paint and utility pole markout with proposed curb marked out, and pre-walk with all utilites, designer of record, DURE and RE. Trim and remove trees as required for utilities, OHW, poles and guys. Pole relocations should begin at the start of the project and prior to roadway reconstruction. Coordinate with private utility companies for relocation or adjustment of private utilities.							
		UTILITY OPERATIONS - Utility Pole Relocations							
Task: 1		***Eversource Electric***							
	U	Install five (5) poles (UPs #13/1A, #13/1, #21/47, #21/46, #21/45)	5		X		X	No	
C		Contractor to install necessary temporary traffic protection barriers & reflectorized drums for relocated UP #21/46	-	-	-	-	-	No	
	U	Install guy/anchor(s) in three locations except for UP #21/47	3		X		X	No	
	U	Frame at five (5) locations	4		X		X	No	
	U	Transfer / re-run primary conductors	5		X		X	No	
		Sub-Total	**17**						
Task: 2		***Crown Castle***							
	U	Transfer overhead cables in power space +/- 6 poles	2		X		X	No	
		Sub-Total	**2**						
Task: 3		***Eversource Electric***							
	U	Transfer / install secondary conductor	5		X		X	No	
	U	Transfer / install all remaining equipment	7		X		X	No	
C		Contractor to relocate cobra head streetlights	-	-	-	-	-	No	
		Sub-Total	**12**						
Task: 4		***Verizon***							
	U	VZ contractor to install HH and relocate conduit risers.	5		X		X	No	
	U	Note: VZ contractor to install HH for relocated UP 21-46, coordinate with MCI-Verizon Business to relocate conduit and riser from UP 21-48 to relocated UP 21-47, install riser on relocated UP 21-45 to intercept riser on existing UP 21-45.	-		X		X	No	
		Sub-Total	**5**						
Task: 5		***MCI-Verizon Business***							
	U	Engineering and permitting for RTE 20 (15 day duration)	-		X		X	No	MCI-Verizon Business has reimbursable work that will extend outside of this projects limits. MCI-Verizon Business to coordinate traffic setups with RE and Contractor.
	U	Pull new UG 288f cable and slack loop through existing conduit (Coordinate with Verizon on relocated riser to UP #21/47)	8		X		X	No	
	U	Install new 288f cable and slack loops from UP 21/48 to UP 21/42	7		X		X	No	
	U	Splice new fiber to splice points	3		X		X	No	
	U	Remove existing fiber	2		X		X	No	
		Sub-Total	**20**						
Task: 6		***Comcast***							
C		Contractor to intercept existing Comcast conduit, install Comcast specified HH, extend 4" conduit and install riser on relocated UP 21/46	-	-	-	-	-	No	
	U	Install strand	2		X		X	No	
	U	Lash coaxial cables	4		X		X	No	
	U	Splicing of active and passive equipment on poles	1		X		X	No	
	U	Cutting over relocated plant	1		X		X	No	
	U	Swinging of fiber plant	5		X		X	No	
	U	Wrecking out of old aerial plant	5		X		X	No	
		Sub-Total	**18**						

	RESPONSIBLE PARTY		DESCRIPTION - Utility Relocation Phases, Tasks and Activities	Estimated Duration (Work Days) by Utilities (Lead time not included)	Concurrent / Exclusive Utility Work Contractor note: In planning and executing the work, the Access Restraints listed in the Special Provisions, takes precedence over the checklist in these 4 columns.				Access Restraint & Limitations of Operations Notes Should an AR be considered for the Contractor ?	
	C = Contractor	U = Utility Co.			Exclusive Utility on site Utility working with no other Utilities in vicinity	Concurrent Utilities Utility working with other Utilities on site	Contractor Off-Site No Contractor physical construction operations on-site (while Utility is	Contractor Concurrent Contractor and Utility are working on-site - but NOT in the same vicinity	Potential Access Restraint (Yes/No)	Reason/Note (optional)
Task: 7			***Verizon***							
	C		Contractor to install 4" conduit from VZ set HH to relocated UP 41/46 and install riser on relocated UP 21/46	-	-	-	-	-	No	
		U	Verizon line to place strand and guying	11		X		X	No	
		U	Verizon line to place cables	6		X		X	No	
		U	Verizon splice to cut over cables	11		X		X	No	
		U	Verizon line to transfer and remove cables and guying	4		X		X	No	
			Sub-Total	**32**						
Task: 8			***Eversource Electric***							
		U	Remove old poles (6 poles)	5		X		X	No	
		U	Disconnect old primary UG connections	1		X		X	No	
			Sub-Total	**6**						
Stage: 3 Phase: A			Enabling' work by the Contractor - Existing slip lane along Boston Post Rd to be closed to traffic.							
			UTILITY OPERATIONS - Place GUY anchor							
Task: 9			***Eversource Electric***							
		U	Install guy/anchor(s) in one location (relocated UP #21/47)	1		X		X	No	
				1						
Stage: 5			Enabling' work by the Contractor - Notify Utilities prior to final paving							
			UTILITY OPERATIONS - Adjust Utility Structures for Final Paving							
Task: 10										
		U	National Grid Gas			X		X	No	
		U	Verizon			X		X	No	
		U	Eversource Electric			X		X	No	
			Sub-Total	**0**						

IMPORTANT BASIS NOTES - FOR CONTRACTOR

1	Unless otherwise specified in the MassDOT Construction Contract, or unless specifically noted within this PUC Form, these durations (herein) are based upon the Contractor providing *unimpeded access* to the Utility company to perform Utility relocations (see Note 5 - Access).
2	"Concurrent Utilities" operations noted herein, are to signify those Utility Company operations that can be worked concurrently (e.g. Utility A and Utility B work on-site together) - MassDOT and the Contractor are to prepare NTPs to Utilities accordingly.
3	"Potential Access Restraints" noted within this PUC Form are for planning purposes. See MassDOT Contract for Contractual Access Restraints (refer to Subsections 8.02, 8.03, and/or 8.06 for Design Bid Build Contracts and Volume II Section 9 for Design Build Contracts).
4	Utility non-work periods - For planning purposes, the durations above contain some non work days (contingency) for New England conditions (precipitation, high temperatures, low temperatures, snow, ice). Gas line work however, typically has a seasonal restriction and can NOT be installed from 15-November to 15-April. Municipally Owned Electric and Gas Utilities are also restricted from proceeding from 15-November to 15-April. The Contractor shall (and the CTD plan) reflect this calendar restriction within the schedule (unless otherwise note).
5	Access - Unless otherwise noted in the Contract, and in addition to the 'enabling' notes above, the Contractor must provide safe and unimpeded access (for trucks, lifts, cranes, etc.) to the Utilities, to allow for the proposed relocation(s) - including but not limited to snow removal, clearing and grubbing, guard rail removal, barrier removal, tree removal, and grading. Any costs associated with these tasks are deemed to be incidental to the project.
6	For all MassDOT construction contracts issued after January 2014, the new Utility Coordination/documentation specification is required. This is Section 8.14 in Design-Bid-Build Contracts (see Design-Build index reference for applicable section #).
7	Prior to starting any and all enabling work for Utilities, the Contractor is to plan in advance with submittals and approved durations.
8	* Potential District Initiated Early Utility Relocation - if noted herein, the District reserves the right to initiate early utility relocation in advance of the Contract NTP. In submitting a bid price and in the development/basis of the Baseline Schedule, the Contractor shall not plan the Work with the potential benefit of any form of 'early utility relocation.' As a requirement of the Baseline submission, unless otherwise noted in this Specification, the earliest that the first Utility company is to receive the 30 days advance notification to mobilize to the site, will be 7 calendar days after the pre-construction meeting and never sooner than 7 days after the Contract NTP.
9	

Proposal No. 608940-133931

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DOCUMENT A00811

WATERING LOG
for
MassDOT Plantings

Watering Log for MassDOT Plantings

Project Description:

Contract No:

Project No:

Plant Locations/s: (Attach planting plan/s as necessary)

Notes:

	Separate logs shall be kept to track areas or plants with different watering schedules. Trees shall receive a minimum of 10 gallons with each watering and shrubs a minimum of 5 gallons. Provide note that if watering is not performed as scheduled due to rain. Record date of rainfall and amount.												
Date Watered													
Landscape Contractor Initial													
Prime Contractor Initial													
Date Watered													
Landscape Contractor Initial													
Prime Contractor Initial													

Each week, following watering, Log shall be submitted to the MassDOT Engineer.

6/15/2018

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: WESTON Project File Number: 608940

Contract Number: 133931

Project Description: Intersection Improvements Boston Post Road (Route 20) at Wellesley Street

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 A00844

U.S. FISH AND WILDLIFE SERVICE

NLAA CONCURRENCE VERIFICATION 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 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: 06/17/2025 17:39:24 UTC
Project code: 2025-0110495
Project Name: 608940 WESTON- INTERSECTION IMPROVEMENTS BOSTON POST ROAD (ROUTE 20) AT WELLESLEY STREET

Subject: Not Likely to Adversely Affect Concurrence verification letter for the '608940 WESTON- INTERSECTION IMPROVEMENTS BOSTON POST ROAD (ROUTE 20) AT WELLESLEY STREET' project under the December 13, 2024, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat, Northern Long-eared Bat, and Tricolored Bat.

To whom it may concern:

This letter records the determination of effects to federally listed (or proposed) bat species anticipated to result from the 608940 WESTON- INTERSECTION IMPROVEMENTS BOSTON POST ROAD (ROUTE 20) AT WELLESLEY STREET (the Project). This determination is based upon information you entered into the assisted determination key (Dkey) associated with the above referenced Programmatic Biological Opinion/Conference Opinion (PBO/PCO) in the U.S. Fish and Wildlife Service's (Service) Information for Planning and Consultation (IPaC) system on the date listed above to verify that the Project may rely on the concurrence provided in the PBO/PCO to satisfy requirements under section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (16 USC 1536), as amended.

Ensuring Accurate Determinations When Using IPaC:

The Service developed the IPaC system and this Dkey in accordance with the ESA and based on the PBO/PCO. 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 the 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 determinations to remain valid. Carefully review this letter, your ESA requirements are <u>NOT</u> yet complete.

Determinations:

Based on the information you provided (Project Description shown below), you have determined that the Project is within the scope and adheres to the criteria of the PBO/PCO, including the adoption of applicable avoidance and minimization measures. Based on your IPaC submission and the PBO/PCO, the Project is consistent with the following effect determinations:

Species	Listing Status	Determination
Northern Long-eared Bat (*Myotis septentrionalis*)	Endangered	NLAA
Tricolored Bat (*Perimyotis subflavus*)	Proposed Endangered	NLAA

The 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 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 no effect or not likely to adversely affect (NLAA) determination from the key to confirm that the determination is still accurate.

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Project does not meet the criteria for a NLAA determination under the PBO/PCO. **If the Service does <u>not</u> notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Project under the terms of the NLAA concurrence provided in the PBO/PCO**. This verification period allows Service Field Offices to apply local knowledge to implementation of the PBO, as we may identify a small subset of actions having impacts that were unanticipated. In such instances, Service Field Offices may request additional information that is necessary to verify inclusion of the proposed action under the PBO/PCO.

If the Project is modified, or new information reveals that it may affect the Indiana bat, northern long-eared bat, or tricolored bat in a manner or to an extent not considered in the PBO/PCO, further review to conclude the requirements of ESA section 7(a)(2) may be required.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities:

If your initial bridge, culvert, or structure assessment failed to detect Indiana bat, northern long-eared bat, or tricolored bat use or occupancy, yet bats are later detected prior to, or during construction, promptly notify the local Service Field Office within 2 working days of the discovery. In addition, please document whether incidental take occurred, and if so, the type (i.e. kill or harm) and amount (i.e. number of individuals) and submit documentation to the local Service Field Office within 5 working days from the completion of the bridge, culvert, or structure construction (use Appendix E - Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form in the User's Guide). In these instances, potential incidental take of Indiana bats, northern long-eared bats, or tricolored bats may be exempted provided that the take is reported to

the Service. In these instances, potential incidental take of Indiana bats, northern long-eared bats, or tricolored bats may be exempted provided that the take is reported to the Service.

If the Project may affect any other federally listed or proposed species and/or designated critical habitat, additional consultation between the lead Federal action agency and this Service Field Office is required for those species/designated critical habitat. If the Project has the potential to take bald or golden eagles, additional coordination with the Service under the Bald and Golden Eagle Protection Act may also be required. In either of these circumstances, please advise the lead Federal action agency to contact this Service Field Office

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Proposed Threatened

PROJECT DESCRIPTION

The following project name and description was collected in IPaC as part of the endangered species review process.

NAME

608940 WESTON- INTERSECTION IMPROVEMENTS BOSTON POST ROAD (ROUTE 20) AT WELLESLEY STREET

DESCRIPTION

608940 WESTON- INTERSECTION IMPROVEMENTS BOSTON POST ROAD (ROUTE 20) AT WELLESLEY STREET

The proposed project consists of the installation of a new traffic signal system at intersection of Route 20 at Boston Post Road and Wellesley Street in Weston, MA. The work includes geometric revisions to the intersection to reduce driver confusion; installation of buffered bicycle lanes; sidewalk reconstruction; new crosswalks; pavement mill / overlay; drainage modifications; and pavement markings/signage. The proposed project consists of two corridors: Route 20 and Boston Post Road / Wellesley Street. The Route 20 project limits start approximately 500 feet west and ends approximately 550 feet east of the intersection with Boston Post Road and Wellesley Street. For Boston Post Road and Wellesley Street project limits start approximately 300 feet north on Boston Post Road and ends approximately 350 feet south on Wellesley Street of the intersection with Route 20. The proposed project also includes full depth reconstruction for approximately 250 feet of private way called “Winsor Way” located east of Wellesley Street. Additional work includes unclassified excavation, full depth hot mix asphalt pavement, hot mix asphalt sidewalks, hot mix asphalt driveways, granite curb, highway guard, balanced stone wall, fence, landscaping and other incidental work.

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/@42.36715075,-71.29058918545162,14z



DETERMINATION KEY RESULT

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the Indiana bat, northern long-eared bat or tricolored bat, therefore, consultation with the U.S. Fish and Wildlife Service pursuant to Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended 16 U.S.C. 1531 et seq.) is required. However, also based on your answers provided, this project may rely on the concurrence provided in the Programmatic Biological Opinion/Conference Opinion for Transportation Projects in the Range of the Indiana bat, northern long-eared bat, and tricolored bat, dated December 13, 2024.

QUALIFICATION INTERVIEW

1. Which Federal Agency is the lead federal agency the action?

   A) Federal Highway Administration (FHWA)

2. Does the Action Area intersect the species list area of the Northern long-eared bat?

   Automatically answered
   Yes

3. Does the Action Area intersect the species list area of the tricolored Bat (TCB)?

   Automatically answered
   Yes

4. Does your project's activities include raising the road profile above the tree canopy in documented habitat for the Indiana bat, NLEB, or TCB?

   Note: For the definition of documented habitat, refer to Appendix A: https://www.fws.gov/media/users-guide-range-wide-programmatic-consultation-indiana-bat-and-northern-long-eared-bat

   No

5. Is your project located within a karst area?

   No

6. Will the project include bridge, culvert, or structure removal, replacement, and/or alteration activities?

   Note: For definitions of bridge, culvert, and structure, refer to Appendix A: https://www.fws.gov/media/users-guide-range-wide-programmatic-consultation-indiana-bat-and-northern-long-eared-bat.

   No

7. Do your project’s activities involve tree removal/trimming, temporary lighting, new/additional permanent lighting, ground disturbance, percussives that involves noise/vibration above existing background levels, vibrations, or slash pile burning?

   Yes

8. Is there suitable summer habitat for the Indiana bat, NLEB, or TCB within the project action area?

   Note: See the Service's summer survey guidance for current definitions of suitable habitat [https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html].

   Yes

9. Have P/A surveys for the Indiana bat, NLEB, or TCB been conducted within the suitable summer habitat located within your project action area? This refers to mist-netting or acoustic surveys, not bridge assessments.

   Note: See the Service's survey guidance https://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html

   No

10. Will the project involve the removal or trimming of trees within suitable habitat for the Indiana bat, NLEB, or TCB?

    Yes

11. Will any tree removal or trimming occur during the bat pup season?

    Note: For more information about bat pup seasons please visit https://www.fws.gov/sites/default/files/documents/2024-10/2024_usfws_rangewide_ibat-nleb_survey_guidelines.pdf

    No

12. Will the removal or trimming of trees occur **within documented habitat** for the Indiana bat, NLEB, or TCB?

    Note: For the definition of documented habitat, refer to Appendix A: https://www.fws.gov/media/users-guide-range-wide-programmatic-consultation-indiana-bat-and-northern-long-eared-bat

    No

13. Will all tree removal or trimming occur within 100 feet of the road or rail surface?

    Yes

14. Does your project include activities involving the temporary or permanent exclusion of Indiana bats, NLEBs, or TCBs from a bridge/culvert or structure?

    Note: exclusion is conducted to deny bats' entry or reentry into a bridge/culvert or structure. To be effective and to avoid harming bats, it should be done according to established standards.

    No

15. Does your project involve the use of temporary lighting within Indiana bat, NLEB, or TCB suitable habitat?

    Note: For the definition of lighting, refer to Appendix A: https://www.fws.gov/media/users-guide-range-wide-programmatic-consultation-indiana-bat-and-northern-long-eared-bat

    Yes

16. Will the use of temporary lighting be conducted during the Indiana bat, NLEB, or TCB active season?

    Yes

17. Will temporary lighting be directed away from Indiana bat, NLEB, or TCB suitable habitat)?

    Yes

18. Will the project substantially increase baseline light conditions via the use of permanent lighting (replacement or new/additional) in suitable habitat.

    No

19. Will your project include percussive activities?

    Note: Refer to Stressor #2 Noise/Vibration on page 109 of the PBO/PCO.

    No

20. Will the project involve the removal or trimming of more than 20 acres of Indiana bat, NLEB, or TCB suitable habitat per 5-mile section of road/rail?

    No

21. Will the removal or trimming of trees occur within 0.5 miles of a known Indiana bat, NLEB, or TCB hibernaculum?

    No

22. Will the removal or trimming of these trees occur during the active season?

    No

23. Will the removal or trimming of trees occur **beyond 100 feet** of the existing road/rail surfaces?

    No

24. Does the Action Area intersect the species list area of the tricolored Bat (TCB)?

    Automatically answered
    Yes

25. Does the Action Area intersect the species list area of the northern long-eared bat (NLEB)?

    Automatically answered
    Yes

PROJECT QUESTIONNAIRE

1. Have you made a No Effect determinations for all other species included on the FWS IPaC generated species list?

   Yes

2. Have you made a May Affect determination for any other species on the FWS IPaC generated list?

   No

3. How many acres of trees are proposed for removal/trimming **outside of documented habitat** for the Indiana bat, NLEB, or TCB within 100 feet of the existing road/rail surfaces during the inactive season (NLAA)?

   Note: If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

   1.5

4. How many acres of trees are proposed for removal/trimming **outside of documented habitat** for the Indiana bat, NLEB, or TCB within 100 feet of the existing road/rail surfaces during the active season **(outside the pup season and not between Dec 15th-Feb 15th in Zone 1 of the NLEB and TCB YR active areas)** (LAA)?

   Note: If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

   0

5. How many acres of trees are proposed for removal/trimming **outside of documented habitat** for the Indiana bat, NLEB, or TCB within 100 feet of the existing road/rail surfaces during the pup season **(trees must be <9 in DBH, and not between Dec 15th-Feb 15th in Zone 1 of the NLEB and TCB YR active areas)** (LAA)?

   Note: If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

   0

6. How many acres of trees are proposed for removal/trimming **either outside or within documented habitat** for the Indiana bat, NLEB, or TCB between 100-300 feet of the existing road/rail surface during the inactive season (LAA)? Note: If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

   0

7. How many acres of trees are proposed for removal/trimming **either outside or within documented habitat** for the Indiana bat, NLEB, or TCB between 100-300 feet of the existing road/rail surfaces during the active season **(outside the pup season, and not between Dec 15-Feb 15 in Zone 1 of the NLEB and TCB YR active areas)** (LAA)?

   Note: If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

   0

8. How many acres of trees are proposed for removal/trimming **either outside or within documented habitat** for the Indiana bat, NLEB, or TCB beyond 300 feet of the existing road/rail surfaces during the inactive season (LAA)?

   Note: If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

   0

9. How many acres of trees are proposed for removal/trimming **either outside or within documented habitat** for the Indiana bat, NLEB, or TCB beyond 300 feet of the existing road/rail surfaces during the active season **(outside the pup season, and not between Dec 15th-Feb 15th in Zone 1 of the NLEB and TCB YR active areas)** (LAA)?

   Note: If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

0

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

This determination key result includes the commitment to implement the following Avoidance and Minimization Measures (AMMs):

GAMM1

Ensure all operators, employees, and contractors working in areas of Indiana bat, NLEB, or TCB suitable habitat are aware of all Transportation Agency environmental commitments, including all applicable AMMs.

LAMM1

Direct temporary lighting away from suitable habitat during the active season

TRTAMM1

Modify all phases/aspects of the project (e.g., temporary work areas, alignments) to the extent practicable to avoid tree removal/trimming in excess of what is required to implement the project safely.

TRTAMM2

Ensure tree removal/trimming 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 removal/trimming to ensure contractors stay within clearing limits

TRTAMM3

Ensure tree removal/trimming is limited to the inactive season, occurs within 100 ft of the road/ rail surface, and is outside of documented habitat for the Indiana bat, NLEB, and TCB

DETERMINATION KEY DESCRIPTION: FHWA, FRA, FTA PROGRAMMATIC CONSULTATION FOR TRANSPORTATION PROJECTS AFFECTING IBAT, NLEB, OR TCB

This key was last updated in IPaC on May 30, 2025. Keys are subject to periodic revision.

This decision key is intended for projects/activities funded or authorized by the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), and/or Federal Transit Administration (FTA), which may require consultation with the U.S. Fish and Wildlife Service (Service) under Section 7 of the Endangered Species Act (ESA) and may affect the federally listed endangered Indiana bat (*Myotis sodalis*), northern long-eared bat (*Myotis septentrionalis*), and/or federally proposed endangered tricolored bat (*Perimyotis subflavus*).

This decision key should only be used to verify project applicability with the Service's Programmatic Biological Opinion/Conference Opinion for Transportation Projects in the Range of the Indiana bat, northern long-eared bat, and tricolored bat, dated December 13, 2024. The programmatic consultation limited transportation activities that may affect the covered bat species and addresses situations that are both likely and not likely to adversely affect the covered bat species. This decision key will assist in identifying the effect of a specific project/activity and the applicability of the programmatic consultation. The programmatic consultation is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic consultation, or that may affect ESA-listed species other than the Indiana bat, northern long-eared bat, or tricolored bat, or their designated critical habitat, may require additional ESA Section 7 consultation.

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

DOCUMENT A00846

LANDSCAPE MAINTENANCE AGREEMENT

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TOWN OF
WESTON

TOWN MANAGER LEON A. GAUMOND, JR.

TOWN HALL, 11 Town House Road
Post Office Box 378
WESTON, MA 02493-0002

(781) 786-5020 FAX (781) 786-5029 @TownWeston on Twitter

December 5, 2024

John McInerney, P.E.
District Highway Director
MassDOT District 6
185 Kneeland Street, 10th Floor
Boston, MA 02111

Re: Project File No. 608940
Route 20 at Wellesley Street and Boston Post Road
Weston, MA

Dear John:

As requested by MassDOT (Landscape Section) this letter serves as a commitment for maintenance of the landscape elements as designed and installed within the specific project area noted below upon completion of construction and plant warranty period. The specific project area is located between the edge of Route 20, Wellesley Street and Winsor Way (relocated as part of the above reference project). Refer to the attached plan.

The scope of the landscape elements proposed within this area includes the following.

- One (1) deciduous tree.
- Various shrubs, perennials and grasses as shown on the plan.

The Town of Weston 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,

Leon Gaumond, Jr., Town Manager
Town of Weston

Cc: Alolade Cambell, MassDOT Project Manger
Stephanie Smoot, RLA, MassDOT Landscape Section

www.weston.org

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DOCUMENT A00860

MASSACHUSETTS

DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF INTENT

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Notice of Intent

Route 20 Intersection Improvements at Boston Post Road and Wellesley Street (MassDOT Project #608940)

Weston, MA

PREPARED FOR

Town of Weston
11 Town House Road
Weston, MA 02493

PREPARED BY

101 Walnut Street
PO Box 9151
Watertown, MA 02471
617.924.1770

October 2024

www.vhb.com

October 30, 2024

Ref: 14360.00

Weston Conservation Commission
Town Hall, 11 Town House Road
Weston, MA 02493

Re: Route 20 Intersection Improvement at Boston Post Road and Wellesley Street
Notice of Intent

Dear Commissioners,

On behalf of the Applicant, Town of Weston, Vanasse Hangen Brustlin, Inc. is submitting the enclosed Notice of Intent (NOI) to reconfigure and improve the intersection (the 'Project') of Route 20 at Boston Post Road and Wellesley Street in Weston MA (the 'Project Site') to increase transportation safety and improve intersection operation and accessibility. The Project consists of the construction of a new traffic signal system, reconfiguration of the intersection, particularly at Winsor Way, new pedestrian crosswalks, and buffered bicycle lanes. A full scope of work is included in the NOI narrative. This NOI is being filed pursuant to the Massachusetts Wetlands Protection Act (WPA), the Town of Weston Wetlands Protection Bylaw (the Bylaw), and the Weston Conservation Commission 25-Foot No-Disturb Zone Policy.

The jurisdictional areas subject to the WPA, the Bylaw and the No-Disturb Zone Policy on or near the Project Site include Bank, Bordering Vegetated Wetlands (BVW), Land Under Waterbodies and Waterways (LUWW), Bordering Land Subject to Flooding (BLSF), and Riverfront Area (RA), as well as the 100-foot buffer zone to Bank and BVW and the 100-foot Vernal Pool Habitat buffer. The Project will result in temporary and permanent impacts to RA, temporary and permanent alterations to the 100-foot buffer zone, and temporary impacts to the 25-foot NDZ. No work is proposed within Bank, BVW, LUWW, or BLSF or within a potential or certified vernal pool.

As an improvement project to correct a substandard intersection, the Applicant is requesting that the Project be approved as a Limited Project under 310 CMR 10.53(3)(f), for the "maintenance and improvement of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving inadequate drainage systems."

In compliance with the WPA and Weston NOI filing policy, notification to abutters within 100 feet of the Project Site will be made by certified, return-receipt mail once the date and time for the hearing are confirmed by Weston Conservation Commission. A copy of the certified list of abutters is enclosed as part of the NOI.

No checks have included with this submission, as the Applicant is exempt from filing fees under the WPA.

Engineers | Scientists | Planners | Designers

101 Walnut Street
PO Box 9151
Watertown, Massachusetts 02471
P 617.924.1770
F 617.924.2286

Please advertise this matter for a public hearing at the Commission's next scheduled meeting. If you have any questions concerning this submittal or need any additional information, please contact me at 617-607-6310 or tdonovan@vhb.com.

Regards,

Taylor Donovan

Taylor Donovan
Environmental Scientist

Attachment: Notice of Intent – Route 20 Intersection Improvement at Boston Post Road and Wellesley Street

CC: DEP Northeast Regional Office
Massachusetts Department of Transportation, Highway Division

Table of Contents

Notice of Intent Forms

- WPA Form 3
- Fee Transmittal Form
- Request for Work in 25-foot NDZ Form

Notice of Intent Figures

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- Figure 2 – Aerial Map
- Figure 3 – NHESP Map
- Figure 4 – FEMA Map

Attachment A - Notice of Intent Narrative

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Site Description....2
Wetland Resource Areas....4
Work Description....7
Mitigation Measures....9
Regulatory Compliance....12
Summary....17

Attachment B – Photographic Log

Attachment C – Wetland Delineation Form

Attachment D – Abutter Information

Attachment E – Stormwater Memorandum

Attachment F – Project Plans

Notice of Intent Forms

- WPA Form 3
- Fee Transmittal Form
- Request for Work in 25-foot NDZ Form

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 #:
eDEP Transaction #:1608249
City/Town:WESTON

A.General Information

1. Project Location:

a. Street Address	ROUTE 20 INTERSECTION		
b. City/Town	WESTON	c. Zip Code	02493
d. Latitude	42.36736N	e. Longitude	71.29072W
f. Map/Plat #	N/A	g.Parcel/Lot #	N/A

2. Applicant:

☐ Individual ☑ Organization

a. First Name	THOMAS	b.Last Name	CULLEN, P.E.		
c. Organization	TOWN OF WESTON DEPARTMENT OF PUBLIC WORKS				
d. Mailing Address	11 TOWN HOUSE ROAD				
e. City/Town	WESTON	f. State	MA	g. Zip Code	02493
h. Phone Number		i. Fax		j. Email	cullen.t@westonma.gov

3.Property Owner:

☐ more than one owner

a. First Name		b. Last Name			
c. Organization	MASSDOT - HIGHWAY DIVISION				
d. Mailing Address	10 PARK PLAZA				
e. City/Town	BOSTON	f.State	MA	g. Zip Code	02116
h. Phone Number	781-786-5100	i. Fax		j.Email	

4.Representative:

a. First Name	TAYLOR	b. Last Name	DONOVAN		
c. Organization	VHB				
d. Mailing Address	101 WALNUT STREET, PO BOX 9151				
e. City/Town	WATERTOWN	f. State	MA	g. Zip Code	02472
h.Phone Number	617-607-6310	i.Fax		j.Email	tdonovan@vhb.com

5.Total WPA Fee Paid (Automatically inserted from NOI Wetland Fee Transmittal Form):

a.Total Fee Paid	0.00	b.State Fee Paid	0.00	c.City/Town Fee Paid	0.00

6.General Project Description:

THE APPLICANT PROPOSES TO RECONFIGURE AND IMPROVE THE INTERSECTION OF ROUTE 20 AT BOSTON POST ROAD AND WELLESLEY STREET IN WESTON MA (THE ?PROJECT SITE?) TO INCREASE TRANSPORTATION SAFETY AND IMPROVE INTERSECTION OPERATION AND ACCESSIBILITY.

7a.Project Type:

1. ☐ Single Family Home	2. ☐ Residential Subdivision
3. ☐ Limited Project Driveway Crossing	4. ☐ Commercial/Industrial
5. ☐ Dock/Pier	6. ☐ Utilities
7. ☐ Coastal Engineering Structure	8. ☐ Agriculture (eg., cranberries, forestry)
9. ☑ Transportation	10. ☐ Other

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

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7b.Is any portion of the proposed activity eligible to be treated as a 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:

2. Limited Project: 310 CMR 10.53(3)(F), FOR THE ?MAINTENANCE AND IMPROVEMENT OF EXISTING PUBLIC ROADWAYS, BUT LIMITED TO WIDENING LESS THAN A SINGLE LANE, ADDING SHOULDERS, CORRECTING SUBSTANDARD INTERSECTIONS, AND IMPROVING INADEQUATE DRAINAGE SYSTEMS.?

8.Property recorded at the Registry of Deeds for:

a.County:	b.Certificate:	c.Book:	d.Page:
	N/A		

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1.Buffer Zone & Resource Area Impacts (temporary & permanent):

☐ This is a Buffer Zone only project - 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)

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	2. square feet
	3. cubic yards dredged	
d.☐ Bordering Land Subject to Flooding	1. square feet	2. square feet
	3. cubic feet of flood storage lost	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

1. Name of Waterway (if any)

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: 9484 square feet

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 #:
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City/Town:WESTON

4. Proposed Alteration of the Riverfront Area:

2677 a. total square feet	1288 b. square feet within 100 ft.	1389 c. square feet between 100 ft. and 200 ft.

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)

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 Beaches	Indicate size under Coastal Beaches and/or Coatstal Dunes, below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab, crea.
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

☐ Restoration/Replacement

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 entered the additional amount here.

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 #:
eDEP Transaction #:1608249
City/Town:WESTON

a. square feet of BVW

b. square feet of Salt Marsh

5.Projects Involves Stream Crossings

☐ Project Involves Streams Crossings

If the project involves Stream Crossings, please enter the number of new stream crossings/number of replacement stream crossings.

a. number of new stream crossings

b. number of replacement stream crossings

C. Other Applicable Standards and Requirements

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 of Endangered Species program (NHESP)?

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

b. Date of map:FROM MAP VIEWER

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18)....

c. Submit Supplemental Information for Endangered Species Review * (Check boxes as they apply)

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

3.☐ Project plans for entire project site, including wetland resource areas and areas outside of wetland 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

c.☐ MESA filing fee (fee information available at: http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/mass-endangered-species-act-mesa/mesa-fee-schedule.html)
Make check payable to "Natural Heritage & Endangered Species Fund" 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

d. 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, http://www.mass.gov/eea/agencies/dfg/dfw/laws-regulations/cmr/321-cmr-1000-massachusetts-endangered-species-act.html#10.14; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR

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:
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City/Town:WESTON

10.37 and 10.59.)

2. ☐ Separate MESA review ongoing.
   a. NHESP Tracking Number
   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.

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review...

2. For coastal projects only, is any portion of the proposed project located below the mean high waterline or in a fish run?
   a. ☑ Not applicable - project is in inland resource area only
   b. ☐ Yes ☐ No

   If yes, include proof of mailing or hand delivery of NOI to either:

South Shore - Cohasset to Rhode Island, and the Cape & Islands:	North Shore - Hull to New Hampshire:
Division of Marine Fisheries - Southeast Marine Fisheries Station Attn: Environmental Reviewer 836 S. Rodney French Blvd New Bedford, MA 02744	Division of Marine Fisheries - North Shore Office Attn: Environmental Reviewer 30 Emerson Avenue Gloucester, MA 01930

   If yes, it 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.

3. 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 DEP Website for ACEC locations). **Note:** electronic filers click on Website.

   b. ACEC Name

4. 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

5. 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

6. 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

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b. ☐ No, Explain why the project is exempt:

1. ☐ Single Family Home

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

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 by regular mail delivery.

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.
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. ☑

a. Plan Title:	b. Plan Prepared By:	c. Plan Signed/Stamped By:	c. Revised Final Date:	e. Scale:
INTERSECTION IMPROVEMENTS ROUTE 20 AT BOSTON POST ROAD & WELLESLEY STREET	ALEX LONCAREVIC	TIMOTHY MCINTOSH	10/24/2024	1" = 20'

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. ☑

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Provided by MassDEP:
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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:

N/A
2. Municipal Check Number

3. Check date

N/A
4. State Check Number

5. Check date

6. Payer name on check: First Name

7. Payer name on check: Last Name

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.

1. Signature of Applicant

10/23/24
2. Date

3. Signature of Property Owner(if different)

4. Date

Taylor Donovan
5. Signature of Representative (if any)

10/29/24
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 Section C, Items 1-3, 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
WPA Form 3 - Notice of Wetland FeeTransmittal Form
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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eDEP Transaction #:1608249
City/Town:WESTON

A. Applicant Information

1. Applicant:

a. First Name	THOMAS	b.Last Name	CULLEN, P.E.		
c. Organization	TOWN OF WESTON DEPARTMENT OF PUBLIC WORKS				
d. Mailing Address	11 TOWN HOUSE ROAD				
e. City/Town	WESTON	f. State	MA	g. Zip Code	02493
h. Phone Number		i. Fax		j. Email	cullen.t@westonma.gov

2.Property Owner:(if different)

a. First Name		b. Last Name			
c. Organization	MASSDOT - HIGHWAY DIVISION				
d. Mailing Address	10 PARK PLAZA				
e. City/Town	BOSTON	f.State	MA	g. Zip Code	02116
h. Phone Number	7817865100	i. Fax		j.Email	

3. Project Location:

a. Street Address	ROUTE 20 INTERSECTION	b. City/Town	WESTON

Are you exempted from Fee? ☐ (YOU HAVE SELECTED 'YES')

Note: Fee will be exempted if you are one of the following:

- City/Town/County/District
- Municipal Housing Authority
- Indian Tribe Housing Authority
- MBTA

State agencies are only exempt if the fee is less than $100

B. Fees

Activity Type	Activity Number	Activity Fee	RF Multiplier	Sub Total

City/Town share of filling fee	State share of filing fee	Total Project Fee
$0.00	$0.00	$0.00

Weston Conservation Commission
Permission request for work in 25-foot No-Disturb Zone

Landowners must obtain prior permission from the Commission before work of any kind (*e.g.*, tree or brush removal or trimming, vegetation removal or cutting, lawn expansion, soil grading, and construction) is conducted in the 25-foot No-Disturb Zone (NDZ) .

Owner Name: Massachusetts Department of Transportation, Highway Division
Owner Address: 10 Park Plaza
Owner Email Address: _____ Owner Phone #: _____

Proposed work in the NDZ: Minor roadway widening and sidewalk reconstruction

Total amount of NDZ on the property (square feet): 330.60
Portion of NDZ which is previously disturbed: 215.97
Portion of NDZ which is currently natural: 114.63

Amount of new land (s.f.) in NDZ which is proposed to be altered by this project: 58

Check which provision in Section II in WCC Policy this project applies to:

[X] A. the work is proposed in an area of the NDZ that was altered prior to the adoption of Weston's 25-foot NDZ policy in 1998, or was legally permitted to be altered; or

[X] B. no reasonable conditions or alternatives exist that would allow the proposed activity to proceed in compliance with the Wetlands Protection Act (WPA) and this policy, and permitting the work will further an overriding public interest or prevent an unconstitutional taking of private property without just compensation; or

[ ] C. The proposed work is limited to the alteration of vegetation that minimizes soil disturbance and in the Commission's judgment will not harm the interests and values protected under the WPA.

The Commission will only allow work within the 25-foot NDZ if the Commission finds that the applicant has made every effort to avoid and minimize alteration within the NDZ. Please describe below (or provide an attachment which describes) what alternatives you have considered and why work in the NDZ is necessary.

Please refer to NOI narrative for details.

Notice of Intent Figures

- Figure 1 – USGS Map
- Figure 2 – Aerial Map
- Figure 3 – NHESP Map
- Figure 4 – FEMA Map

Figure 1: USGS Site Location
Route 20 Intersection Improvement
Weston MA



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Sources: VHB, MassGIS

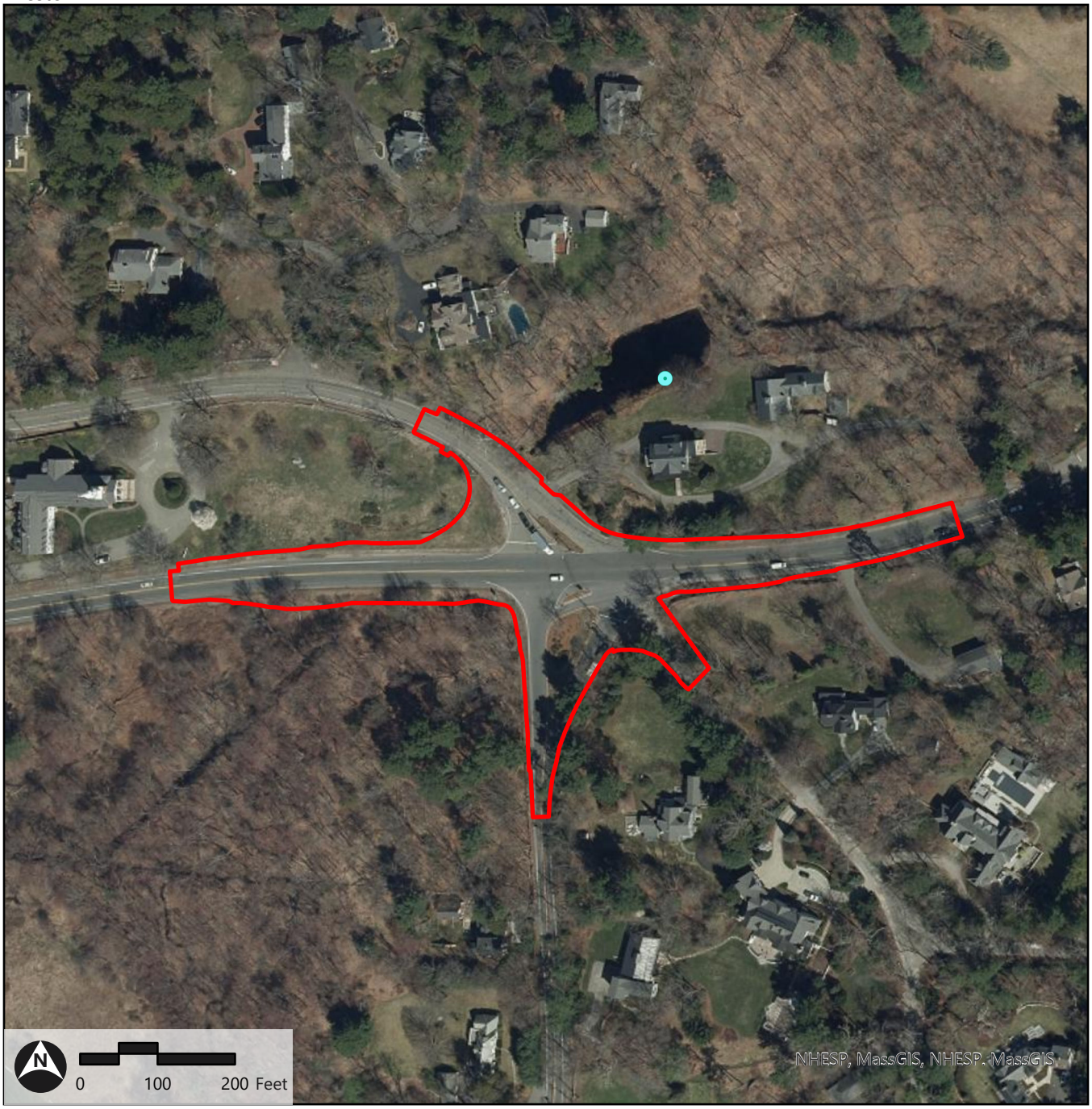
Figure 2: Aerial Overview
Route 20 Intersection Improvement
Weston MA



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Sources: VHB, MassGIS

Figure 3: NHESP
Route 20 Intersection Improvement
Weston MA



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Project Alignment

NHESP Potential Vernal Pools

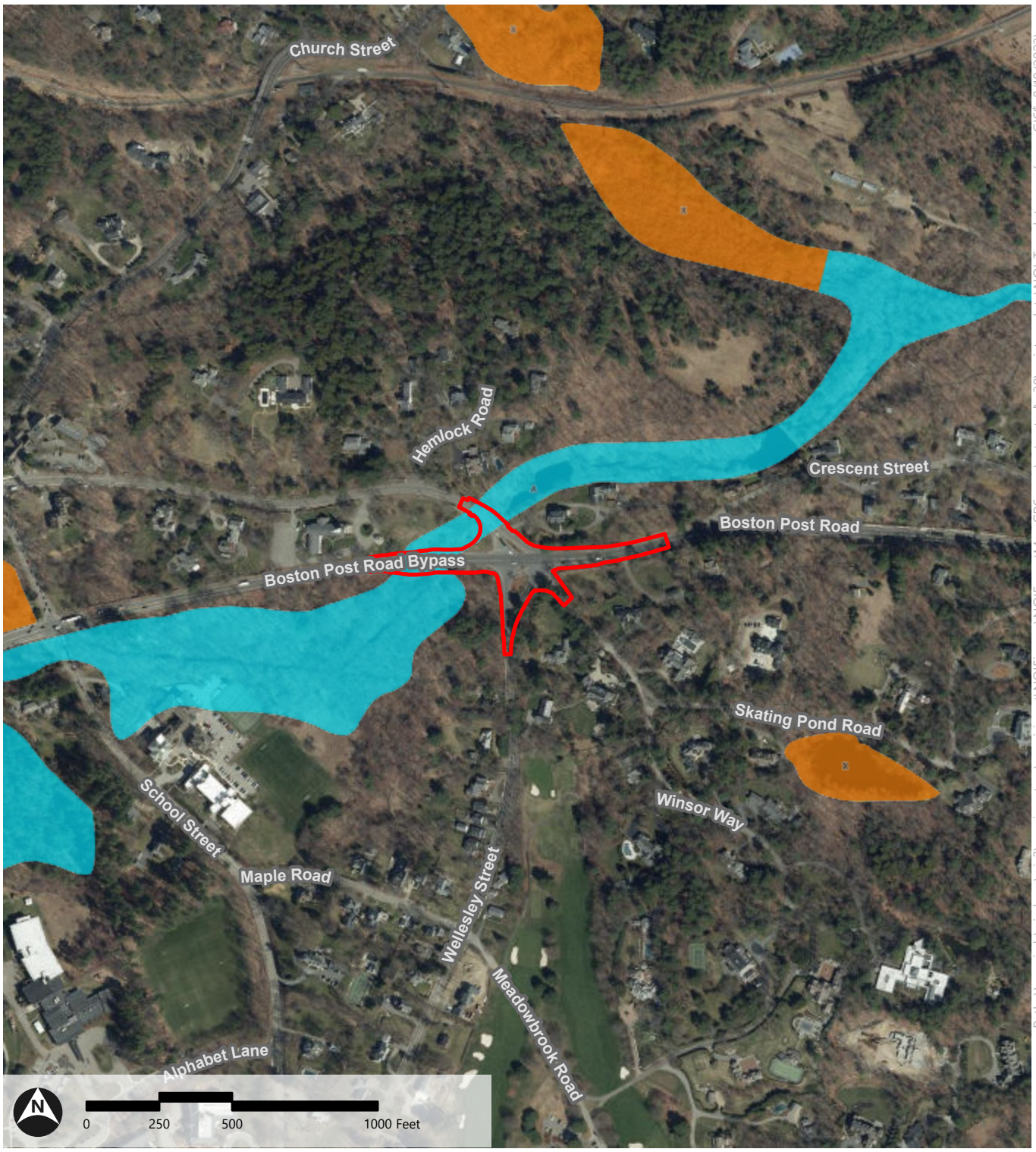
NHESP Certified Vernal Pools

NHESP Priority Habitats of Rare Species

NHESP Estimated Habitats of Rare Wildlife

Source: NHESP, MassGIS

Figure 4: FEMA Floodplain
Route 20 Intersection Improvement
Weston MA



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Sources: VHB, MassGIS

Attachment A
Notice of Intent Narrative

- Introduction
- Site Description
- Work Description
- Mitigation Measures
- Regulatory Compliance
- Summary

Attachment A - Notice of Intent Narrative

This Notice of Intent (NOI) is filed pursuant to the Massachusetts Wetlands Protection Act (WPA) (MGL Chapter 131, Section 40) and its implementing regulations (310 CMR 10.00), the Town of Weston Wetlands Protection Bylaw[1] (the Bylaw) (Article XVI), and the Weston Conservation Commission's 25-Foot No-Disturb Zone Policy[2] (WCC NDZ Policy). This narrative describes wetland resource areas associated with the Project Site, the proposed work, impacts to wetland resource areas, mitigation measures, and how the Project meets the performance standards of the WPA and the WCC NDZ Policy. Refer to the accompanying Project plans included as Attachment F (bound separately) for a layout and details of the Project components.

Introduction

Town of Weston (the 'Applicant') proposes to reconfigure and improve the five-way unsignalized intersection (the 'Project') of Route 20 at Boston Post Road and Wellesley Street in Weston, MA (the 'Project Site') to increase transportation safety and improve intersection operation and accessibility. The non-traditional intersection geometry currently leads to drivers' confusion and as a result, poses significant safety concerns. There is also limited accommodation for bicyclists and pedestrians within the Project Site. The Project proposes the installation of a new traffic signal system, geometric improvements to the intersection (particularly at Winsor Way), new pedestrian crosswalks, and buffered bicycle lanes. Ancillary improvements to support this work include minor box widening of the existing roadway, full depth pavement reconstruction, pavement milling and overlay, drainage modifications, sidewalk reconstruction, selective clearing and thinning, isolated clearing and grubbing, loaming and seeding, and landscaping after the completion of work.

Portions of land on or near the Project Site contain resource areas subject to the jurisdiction of the WPA including Bank, Bordering Vegetated Wetlands (BVW), Land Under Waterbodies and Waterways (LUWW), Bordering Land Subject to Flooding (BLSF), and Riverfront Area (RA). All resource areas are associated with an unnamed perennial stream. The WPA establishes a 100-foot buffer zone to Bank and BVW. Additionally, the Town of Weston upholds a 25-foot No-Disturb Zone (NDZ) which extends from the limits of all resource areas, and a 100-foot Vernal Pool habitat area which extends from

[1] Town of Weston, Article XVI. 2024. Wetlands Protection Bylaw.

[2] Weston Conservation Commission, 1998. 25-Foot No-Disturb Zone Policy.

the boundary of certified and potential vernal pools. The Project will result in temporary and permanent impacts to RA, temporary and permanent alterations to the 100-foot buffer zone, and temporary impacts to the 25-foot NDZ. No work is proposed within Bank, BVW, LUWW, or BLSF.

The Applicant is requesting that the Project be approved as a Limited Project under 310 CMR 10.53(3)(f), for the "maintenance and improvement of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving inadequate drainage systems". As such, the Project will adhere to the conditions for a limited project as stated under 310 CMR 10.53. As required under CMR 10.53(3), the below narrative serves to demonstrate that the impacts of the intersection improvements have been avoided where possible, and when not possible have been minimized and that mitigation measures have been provided to contribute to the protection of the interests identified in M.G.L. c.131, §40. An alternatives analysis is included in the sections below.

Wetland resource areas will be protected from impacts during construction through an erosion and sedimentation control program. This program will be implemented to minimize temporary impacts to wetland resource areas prior to and during the construction phase of the Project. Runoff generated from the Project will be collected and treated in accordance with design guidelines[3] developed by the Department of Environmental Protection (DEP) and standards contained in the WPA Regulations. Refer to the accompanying Stormwater Memorandum included as Attachment E for details of the Project's compliance with the DEP Stormwater Standards.

Site Description

The Project Site is located at the intersection of Boston Post Road Bypass (Route 20), Wellesley Street, Boston Post Road, and Winsor Way in Weston, MA (See Figure 1 USGS Map and Figure 2 Aerial Map). Route 20, Boston Post Road, and Wellesley Street each consist of one travel lane in each direction within the Project Site. The intersection of Route 20 with Wellesley Street, Boston Post Road, and Winsor Way is an unsignalized intersection with STOP control on Boston Post Road southbound, Wellesley Street northbound, and Winsor Way. Currently, there are no marked crosswalks at the intersections and no formal existing bicycle lanes within the Project Site, although full shoulders are provided along Route 20. In addition, the sidewalks along the north side of Boston Post Road to the north and east of the intersection are in poor condition and in need of repair.

An unnamed perennial stream located south of Route 20 and west of Wellesley Street flows northeast towards Route 20 and is then culverted beneath Route 20 as well as Winsor Way. The stream, as well as surface flows from Route 20, are then conveyed through a drainage pipe which is controlled by a pump system within the pump station located directly east of Boston Post Road (north of the intersection). The pump system continuously directs a small amount of flow out of the pump station and into a narrow,

[3] DEP, 2008. Massachusetts Stormwater Handbook.

armored stream channel which outlets to Cooks Pond. A BVW associated with the stream is present southwest of the intersection of Route 20 and Wellesley Street.

Route 20 is classified as a principal arterial under Massachusetts Department of Transportation (MassDOT) jurisdiction and is part of the National Highway System. The roadway generally runs east-west, and crosses I-95 approximately one mile east of the Project location. Boston Post Road is classified as a minor arterial under local jurisdiction, Wellesley Street is classified as a collector under local jurisdiction, and Winsor Way is classified as a local roadway under local jurisdiction. At the Project Site, Boston Post Road separates from Route 20 and continues northwest toward downtown Weston. Route 20 continues west and bypasses the downtown area, re-joining Boston Post Road approximately 1.25 miles west of the Project Site intersection. Neighboring properties found in the area are primarily residential.

According to the most recently available data provided by the Massachusetts Natural Heritage and Endangered Species Program[4] (NHESP), no portion of the Project Site is located within Priority Habitat of Rare Species or Estimated Habitat of Rare Wildlife. Cook's Pond, which is located adjacent to the Project Site and receives flow from the perennial stream, is mapped as a Potential Vernal Pool. There are no Certified Vernal Pools on the Project Site (Figure 3).

The Project Site does not lie within any Area of Critical Environmental Concern[5] (ACEC). According to the most recent information provided by MassDEP, the Project Site is located within an area designated as the Stony Brook Reservoir Outstanding Resource Water[6]. The Project Site is not located within a Zone I, Zone II, or Interim Wellhead Protection Area[7].

The most recently issued Flood Insurance Rate Maps[8] (FIRM) for the area produced by the Federal Emergency Management Agency (FEMA) indicate that portions of the Project Site, at Route 20 and Boston Post Road, are within mapped Zone A floodplain (Figure 4). However, based on coordination with the Weston Conservation Commission, the elevation of the 100-year floodplain (regulated as BLSF) on and near the Project Site is 169.2 ft NAVD88, which is below the present ground elevation of the Project Site. Therefore, the Project Site is located above the 100-year floodplain.

The Natural Resources Conservation Service[9] (NRCS) soil survey has mapped the Project Site as poorly-drained Ridgebury fine sandy loam along the floodplain boundary, and as well-drained Narragansett silt loam throughout the remainder of the Project Site.

Wetland resource areas and their buffer zones on or near the Project Site are described below.

[4] NHESP, 2021. *Massachusetts Natural Heritage Atlas, 15th Edition*.

[5] Massachusetts Executive Office of Energy and Environmental Affairs, 2009.

[6] MassDEP, 2010. Designated Outstanding Resource Waters of Massachusetts

[7] MassDEP, 2012. Approved Wellhead Protection Areas.

[8] Federal Emergency Management Agency, National Flood Hazard Layer, Digital Flood Insurance Rate Map (DFIRM).

[9] Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey.

Wetland Resource Areas

Wetland resource areas adjacent to the Project Site were delineated in August 2023 by environmental scientists with Vanasse Hangen Brustlin, Inc. in accordance with methods developed by the DEP[10] and the U.S. Army Corps of Engineers[11]. The following sections of this narrative describe the wetlands and identify resource areas that are regulated under the WPA Regulations (310 CMR 10.00) as well as the WCC NDZ Policy. The resource areas and their buffer zones are depicted on the attached Project Plans (Attachment F).

The resource areas identified on or near the Project Site subject to state regulations under the WPA include Bank, Bordering Vegetated Wetlands (BVW), Land Under Waterbodies and Waterways (LUWW), Bordering Land Subject to Flooding (BLSF), and Riverfront Area (RA). The resource areas are defined under the WPA (310 CMR 10.00) as follows:

- **Bank**: As defined at 310 CMR 10.54 (2), *"a Bank is the portion of the land surface which normally abuts and confines a water body … The upper boundary of Bank is the first observable break in slope or the mean annual flood level, whichever is lower."*
- **BVW**: As defined by 310 CMR 10.55 (2)(a), BVWs "*are freshwater wetlands which border on creeks, rivers, streams, ponds and lakes*." They "*are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants*." The boundary of BVW is determined by 50 percent or more wetland indicator plants and evidence of hydrology.
- **LUWW:** As defined at 310 CMR 10.56 (2), LUWW is "*land beneath any creek, river, stream, pond or lake. Said land may be composed of organic muck or peat, fine sediments, rocks or bedrock … The boundary of LUWW is the mean annual low water level*."
- **BLSF**: As defined at 310 CMR 10.57(2)(a), BLSF is *"an area with low, flat topography adjacent to and inundated by flood waters rising from creeks, rivers, streams, ponds or lakes. It extends from the banks of these waterways and water bodies; where a bordering vegetated wetland occurs, it extends from said wetland … The boundary of BLSF is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm."*
- **RA:** As defined by 310 CMR 10.58 (2)(a)(3), Riverfront Area is *"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"*

In addition, the Weston Conservation Commission upholds a 25-foot No-Disturb Zone Policy, which states that no work may be performed within 25 feet of any resource area

[10] DEP, 1995. Delineating Bordering Vegetated Wetlands Under the Massachusetts Wetlands Protection Act.

[11] USACE, 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region, Version 2.0.

subject to protection under the Massachusetts Wetlands Protection Act, G.L. c. 131, § 40, without prior permission from the Conservation Commission.

Wetlands and their buffer zones on/adjacent to the property are described in more detail in the table below and the following sections of this attachment.

Table 1 Delineated Wetland Resource Areas

Wetland	Flag Numbers	Type	Resource Areas
Stream 1	BF1-100 to BF1-115	Perennial stream channel flowing southwest to northeast, conveyed through a culvert beneath the Project Site	Bank, LUWW, BLSF, and RA
Cook's Pond	BF1-200 to BF1-207	Open water pond located north of the Project Site which receives flow from Stream 1	Bank, BLSF, and LUWW
Wetland 1	WF1-300 to WF1-305	Area of vegetated wetland associated with Stream 1 to the west	BVW, BLSF
Wetland 2	WF1-400 to WF1-410	Area of vegetated wetland associated with Stream 1 to the east	BVW, BLSF

Source: VHB, 2023

Stream 1

Stream 1 is an unnamed perennial stream which flows from the area south of Boston Post Road Bypass and west of Wellesley Street through a 4-ft by 4-ft box culvert under the intersection, through a controlled pump system, and then empties into Cooks Pond located north of Boston Post Road. Southwest of the intersection, the stream is approximately 4-8 feet wide, with highly tannic water and a mucky substrate.

The pump system is housed in a pump station located directly east of Boston Post Road (north of the intersection) and continuously directs a small amount of flow out of the pump station and into a narrow, armored stream channel which outlets to Cooks Pond to the northeast. Palustrine forested (PFO) wetland borders both Banks of the unnamed perennial stream southwest of the intersection. Because the culvert under the intersection is greater than 200 feet in length, the RA "*stops at a perpendicular line at the upstream end of the culvert*" (310 CMR 10.58(2)(a)3.c.)

Adjacent upland areas are primarily vegetated with sugar maple (*Acer saccharum*), red maple (*Acer rubrum*), glossy buckthorn (*Frangula alnus*), Virginia creeper (*Parthenocissus quinquefolia*), multiflora rose (*Rosa multiflora*), and Asiatic bittersweet (*Celastrus orbiculatus*).

Stream 1 supports Bank, LUWW, BLSF, RA, and the associated 100-foot buffer zone to Bank under the WPA. Stream 1 also supports the 25-foot NDZ to Bank, LUWW, and RA (coincident for all three resources) established by the WCC NDZ Policy.

Cooks Pond

At the downstream end of the culvert, the water is pumped into a short granite-walled channel that empties into the open water pond northeast of the Project Site. The northern bank of the pond is bounded by manmade granite walls and the southern bank is a steep vegetated slope descending from a maintained lawn. The pond was relatively dry with the muddy substrate exposed at the time of the delineation. The limits of Bank delineated in the field are coincident with the mean annual high-water line. According to the latest data from MassGIS, Cooks Pond also supports a potential vernal pool.

The pond supports Bank, BLSF, and the 100-foot buffer zone under the WPA, as well as the local 25-foot NDZ and 100-foot Vernal Pool habitat buffer under the Bylaw.

Wetland 1

Wetland 1 is the small PFO wetland complex which abuts the west Bank of Stream 1, southwest of the Project Site. Typical wetland vegetation includes red maple, spicebush (*Lindera benzoin*), American elm (*Ulmus americana*), glossy buckthorn, and poison ivy (*Toxicodendron radicans*). Adjacent upland areas are primarily vegetated with black cherry (*Prunus serotina*), glossy buckthorn, Virginia creeper, multiflora rose, and Morrow's honeysuckle (*Lonicera morrowii*). Refer to the accompanying wetland delineation data forms (Attachment C) for additional information.

Wetland 1 supports BVW, BLSF, and the 100-foot buffer zone under the WPA, as well as the local 25-foot NDZ.

Wetland 2

Wetland 2 is a palustrine forested (PFO) wetland complex which abuts the east Bank of Stream 1, southwest of the Project Site. Dominant vegetation includes Virginia creeper, eastern hay-scented fern (*Dennstaedtia punctilobula*), American elm, red maple, and glossy buckthorn. Adjacent upland areas are primarily vegetated with black cherry, multiflora rose, rough-stemmed goldenrod (*Solidago rugosa*), and European privet (*Ligustrum vulgare*). Refer to the accompanying wetland delineation data forms (Attachment C) for additional information.

Wetland 2 supports BVW, BLSF, and the 100-foot buffer zone under the WPA, as well as the local 25-foot NDZ

Bordering Land Subject to Flooding

As mentioned above, the confirmed elevation of BLSF in the vicinity of the Project Site is lower than the actual elevation of the Project Site. Therefore, there is no BLSF within the limits of the Project Site.

Riverfront Area

Most of the RA within the limits of the Project Site is previously disturbed as it lies within the Route 20 state highway layout. Portions of the RA which are not paved roadway consist either of maintained lawn or herbaceous roadside vegetation.

Buffer Zone

The WPA regulations (310 CMR 10.02(2)(b)) establish a 100-foot buffer zone from the limits of Bank and BVW as described above. The conditions of the 100-foot buffer zone within the Project Site are generally the same as the RA described above.

Work Description

The Applicant is proposing signalization and geometric improvements at the intersection of Route 20, Boston Post Road, and Wellesley Street to increase transportation safety and improve intersection operation and accessibility. The proposed intersection improvements generally include reconfiguration of the intersection, installation of a traffic signal system, and creation of new pedestrian crossings and buffered bicycle lanes. Additionally, a proposed landscaped area which will be vegetated with native plants and shrubs will replace an area of existing pavement located to the southeast of the reconfigured intersection.

All work will occur within previously disturbed areas. The following geometric improvements are proposed:

- Provide two lanes on Route 20 eastbound (one dedicated through lane and one shared through/right-turn lane),
- Provide two lanes on Route 20 westbound (one dedicated left-turn lane and one shared through/right-turn lane),
- Provide two lanes on Boston Post Road southbound (one dedicated left-turn lane and one shared through/right-turn lane),
- Provide two lanes on Wellesley Street northbound (one shared through/left-turn lane and one dedicated right-turn lane),
- Remove the existing right-turn slip lane from Route 20 westbound to Boston Post Road northbound, and
- Adjust geometry to shift access from Windsor Way south from Route 20 to just have access via Wellesley Street
- Install a new traffic signal system and add new pedestrian crossings on all four approaches to the intersection.

Ancillary work to support these improvements includes pavement saw cutting, box widening, full depth reconstruction, and milling and overlay, sidewalk reconstruction, minor grading and drainage modifications, and restoration of landscape elements, as well as pavement markings, signage, and other incidental work as required. Erosion

controls will be installed prior to the start of work and will be removed once the site has stabilized.

Sidewalks will be approximately 6 feet wide and constructed with Americans with Disabilities Act (ADA) compliant pedestrian curb ramps around the intersection. Buffered 5-foot bike lanes will be provided on both sides of Route 20.

There are no permanent easements on the Project Site, however, there are seven temporary construction easements required for areas of minor grading to abutting lawns, driveways, and walkways, and to restore impacts to the adjacent properties.

It is anticipated that the Project will be completed in following construction sequence:

- **Stage 1** - Test pits excavation, drainage system modifications, conduit and foundation installation;
- **Stage 2** - East side of Wellesley Street repaving, new Winsor way construction, drainage system modifications, and conduit installation;
- **Stage 3 -** Full depth pavement/box-widening on Route 20, drainage system modifications, conduit installation, and sidewalk construction;
- **Stage 4 -** Remaining full-depth pavement and sidewalk construction at Boston Post Road and Wellesley Street, drainage system modifications, and conduit installation;
- **Stage 5** - Complete remaining construction work, landscaping and restoration, traffic signal systems, and install pavement markings and signs.

Work in Riverfront Area

Proposed work in RA includes installing erosion controls, saw cutting the existing roadway, clearing and grubbing, minor box widening of roadway, full depth pavement reclamation, drainage system installation, pavement milling and overlay, minor grading, sidewalk construction, installing curbing and guardrail, and loaming and seeding after the completion of work. Disturbed areas not proposed for landscaping will be restored to pre-construction conditions after the completion of work. Overall, this work will result in 4,944 sf of exempt work in RA for pavement reclamation, 2,392 sf of temporary impact, and 285 sf of permanent impact for a total impact of approximately 2,677 sf in RA. Permanent impacts include conversion of previously disturbed, vegetated roadside areas to impervious pavement associated with creation of the dedicated bike lanes.

The proposed work will result in approximately 1,288 sf of impact within the 100-foot Riverfront Area, and 1,389 sf of impact within the 200-ft Riverfront Area. Table 2 breaks down the anticipated impact areas by location and duration.

Table 2 Work in Riverfront Area

Riparian Zone	WPA-Exempt Work (sf)	Temporary Impact (sf)	Permanent Impact (sf)	Total Impact (sf)
Inner RA/ 0 – 100 feet	363	1,106	182	1,288
Outer RA/ 100 – 200 feet	4,581	1,286	103	1,389
Total RA	4,944	2,392	285	**2,677**

Work in Buffer Zone

Work proposed in the buffer zone includes installing erosion controls, saw cutting the existing roadway, clearing and grubbing, minor box widening of roadway, full depth pavement, drainage system installation, pavement milling and overlay, minor grading, sidewalk construction, installing curbing and guardrail, and loaming and seeding after the completion of work. This work will result in both temporary and permanent alterations to buffer zone.

Work in 25′ No Disturb Zone

Work proposed in the 25′ NDZ to Cook's Pond includes a minor amount of roadway widening and sidewalk and ramp reconstruction. Approximately 58.0 sf of an existing grass median will be converted to paved sidewalk as part of the proposed reconstruction, but an adjacent area of existing sidewalk will be converted to a pervious, vegetated strip, so there will be no net loss of pervious surface in the NDZ. Disturbed areas will be generally restored to pre-construction conditions after the completion of work.

Mitigation Measures

A suite of mitigation measures is proposed to prevent short-term and long-term impacts to wetland resource areas. Mitigation measures proposed for this project include an erosion and sedimentation control program, which will include structural and non-structural practices.

Erosion and Sediment Control

An erosion and sedimentation control program will be implemented to minimize temporary impacts to wetland resource areas prior to and during the construction phase of the Project. The program incorporates Best Management Practices (BMPs) specified in

guidelines developed by the DEP[12] and the U.S. Environmental Protection Agency[13] (EPA).

Proper implementation of the erosion and sedimentation control program will:

- minimize exposed soil areas through sequencing and temporary stabilization;
- place structures to manage stormwater runoff and erosion; and
- establish a permanent vegetative cover or other forms of stabilization as soon as practicable.

The following sections describe the controls that will be used and practices that will be followed during construction. These practices comply with criteria contained in the NPDES General Permit for Discharges from Large and Small Construction Activities issued by the EPA.

Non-Structural Practices

Non-structural practices to be used during construction include temporary stabilization, temporary seeding, permanent seeding, dust control, and pavement sweeping. These practices will be initiated as soon as practicable in appropriate areas at the site.

Temporary Stabilization

Any areas of exposed soil or stockpiles that will remain inactive for more than 14 days will be covered with a layer of straw mulch applied at a rate of 90 pounds per 1,000 square feet. The mulch will be anchored with a tacking coat (non-tar) applied by a hydroseeder. Steeper slopes (greater than 10 percent) will be covered with a bonded fiber matrix according to the recommendations provided by the manufacturer.

Temporary Seeding

If conditions allow, a temporary vegetative cover will be established on areas of exposed soils (including stockpiles) that remain unstabilized for a period of more than 14 days. The seeded surfaces will be covered with a layer of straw mulch or bonded fiber matrix as described above. The seed mix shall include a blend of rapid germinating grasses that are indigenous to eastern Massachusetts.

Permanent Seeding

Upon completion of final grading, any areas not covered by pavement, other forms of stabilization, or other methods of landscaping will be seeded with a natural seed mix appropriate to the Project Site. The mix will be applied at the manufacturer's suggested rate and will be covered with mulch or bonded fiber matrix as described above.

[12] DEP, 1997. *Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials*.

[13] EPA, 2007. *Interim Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites*. Office of Water. Report EPA 833-R-060-04.

Dust Control

The erosion and sediment control program includes provisions to minimize the generation of dust during dry and windy conditions. When necessary, larger areas of exposed soil will be wetted to prevent wind borne transport of fine-grained sediment. Enough water shall be applied to wet the upper 0.5 inches of soil. The water will be applied as a fine spray to prevent erosion. A water truck will be kept on the property (or at a nearby location) to facilitate this practice.

Pavement Sweeping

The roadway shall be swept as needed during construction. The sweeping program will remove sediment and other contaminants directly from paved surfaces before their release into stormwater runoff. Pavement sweeping has been demonstrated to be an effective initial treatment for reducing pollutant loading into stormwater.

Structural Practices

Structural erosion and sedimentation controls to be used on the site include barriers and catch basin inlet protection.

Erosion Control Barriers

Prior to any ground disturbance, approved erosion control barriers will be installed at the limits of work. As construction progresses, additional barriers will be installed around the base of stockpiles and other erosion prone areas.

If sediment has accumulated to a depth which impairs proper functioning of the barrier, it will be removed by hand or by machinery operating upslope of the barriers. This material will be either reused at the Project Site or disposed of at a suitable offsite location. Any damaged sections of the barrier will be repaired or replaced immediately upon discovery.

Catch Basin Inlet Protection

The inlets of existing and proposed catch basins will be protected from sediment inflow during the work period by surrounding them with a barrier of staked straw bales or by installing Silt Sacks®. If straw bales are used, a layer of non-woven filter fabric shall be placed beneath the grate of each basin. If sediment has collected behind the barrier or in the Silt Sack® to a point where it impairs proper functioning, it will be removed and will be either reused onsite or disposed of at a suitable offsite location.

Closed-Drainage System

Route 20, Boston Post Road and Wellesley Street are primarily crowned and catch basins will be located along the proposed curb to be installed adjacent to the proposed sidewalk. Catch basins will be placed intermittently along the proposed curb to intercept flow from the roadway.

The proposed drainage system is designed to meet gutter spread, hydraulic grade line, and velocity requirements to the maximum extent practicable.

Stormwater Management

Runoff generated from impervious surfaces will be collected and managed in accordance with the DEP policy. A stormwater management system will be constructed that includes measures to provide groundwater recharge, attenuate peak flows, and provide water quality treatment.

The Project will increase impervious cover on the Project Site by approximately 9% as a result of the proposed sidewalks and buffered bike lanes. The Project is considered a redevelopment project and as such has been designed to meet the Stormwater Management Standards to the maximum extent practicable, and to improve upon existing conditions. Full details on the system (including supporting calculations) and evaluation on compliance with the 10 stormwater management standards cited in Section 310 CMR 10.05(6)(k) of the WPA Regulations can be found in the accompanying Stormwater Memorandum (Attachment E).

Regulatory Compliance

The Applicant is requesting that the Project be approved as a Limited Project under 310 CMR 10.53 (3)(f), for the "maintenance and improvement of [an] existing public roadway". Although the Project qualifies as a limited project, the following sections describe how the Project meets applicable performance standards under the WPA for the resource areas impacted.

The Project will also protect the interests of the WCC NDZ Policy.

Alternatives Analysis

As a limited project and in accordance with 310 CMR 10.53(3), the Applicant has reviewed potential alternatives to the proposed Project. The alternatives included:

- Alternative 1 - Minor geometric Improvements
- Alternative 2 - Traffic Signal (5 lane geometry)
- Alternative 3 – Roundabout
- Alternative 4 – Traffic Signal (4 lane geometry) – Preferred Alternative

Minor geometric improvements at Route 20 intersection would not fully address the safety issues at the Project Site and would not satisfy the Project's purpose and need. Therefore, Alternative 1 was not considered as a viable option for the Project's design.

Alternative 2 and Alternative 3 would both cause significant Right-of-Way (ROW) impacts and require significant construction cost and pavement widening; therefore, they are not considered as viable alternatives.

The Preferred Alternative, Alternative 4, has been designed to minimize impacts to resource areas while also improving the roadway conditions at the Project Site. It also

minimizes pavement widening and results in no permanent ROW impacts. Many of the anticipated impacts associated with the Project will be temporary in nature, and any permanent impacts will be mitigated on site. The Preferred Alternative will increase transportation safety and effectively improve intersection operation and accessibility, while protecting resource areas and the interests of the WPA.

Work in Riverfront Area

WPA-Exempt Activity

A portion of the proposed work within RA is exempt from jurisdiction under the WPA as a minor activity, in accordance with 310 CMR 10.02(2)(b)(2)p:

Pavement repair, resurfacing, and reclamation of existing roadways within the right-of-way configuration provided that the roadway and shoulders are not widened, no staging or stockpiling of materials, all disturbed road shoulders are stabilized within 72 hours of completion of the resurfacing or reclamation, and no work on the drainage system is performed, other than adjustments and/or repairs to respective structures within the roadway.

Pavement reclamation is proposed for an existing portion of the Route 20 road layout located within the 200-foot Riverfront Area. As described above, this portion of the Project is exempt from review under the WPA regulations. The minor roadway widening and drainage work proposed as part of the Project is reviewed as redevelopment of a previously developed RA, and compliance with applicable performance standards is discussed in the section below.

Redevelopment of a Previously Developed RA

Compliance with each of the applicable performance standards contained in 310 CMR 10.58(5) for redevelopment of a previously developed RA is described below:

Notwithstanding the provisions of 310 CMR 10.58(4)(c) and (d), the issuing authority may allow work to redevelop a previously developed riverfront area, provided the proposed work improves existing conditions. Redevelopment means replacement, rehabilitation or expansion of existing structures, improvement of existing roads, or reuse of degraded or previously developed areas. A previously developed riverfront area contains areas degraded prior to August 7, 1996 by impervious surfaces from existing structures or pavement, absence of topsoil, junkyards, or abandoned dumping grounds.

Compliance: The Route 20 intersection at Boston Post Road and Wellesley Street was built prior to 1990. The proposed intersection improvements meet the definition of 'Redevelopment' at 310 CMR 10.58(5).

Work to redevelop previously developed riverfront areas shall conform to the following criteria:

> *(a) At a minimum, proposed work shall result in an improvement over existing conditions of the capacity of the riverfront area to protect the interests identified in*

M.G.L. c. 131 § 40. When a lot is previously developed but no portion of the riverfront area is degraded, the requirements of 310 CMR 10.58(4) shall be met.

Compliance: The Project seeks relief from this performance standard under the Limited Project provision. The proposed intersection improvements will provide similar conditions with respect to the capacity of the RA on the Project Site to protect the interests described in the WPA, and space constraints within the state highway layout prohibit any additional restoration or improvements from being proposed.

(b) Stormwater management is provided according to standards established by the Department.

Compliance: The Project is considered a redevelopment project and has been designed to comply with the Stormwater Management Standards to the maximum extent practicable. Refer to Attachment E – Stormwater Memorandum for additional details.

(c) Within 200-foot riverfront areas, proposed work shall not be located closer to the river than existing conditions or 100 feet, whichever is less, or not closer than existing conditions within 25-foot riverfront areas, except in accordance with 310 CMR 10.58(5)(f) or (g).

Compliance: Route 20 eastbound will be slightly widened to the south side to include the proposed bike lane, resulting in the final roadway layout being located closer to Stream 1 than in the existing conditions. This widening will provide a necessary safety area for bicyclists within the Project location while accommodating the proposed intersection improvements. Native plantings proposed on the Project Site but outside of the RA are proposed in order to provide partial mitigation for this work being located closer to Stream 1 than in existing conditions.

(d) Proposed work, including expansion of existing structures, shall be located outside the riverfront area or toward the riverfront area boundary and away from the river, except in accordance with 310 CMR 10.58(5)(f) or (g).

Compliance: Due to the location of the existing roadway, work within RA is unavoidable. Much of the existing RA within the Project Site has been previously degraded from its natural state, and a majority of the proposed work for the Project will be performed within the existing disturbed footprint. A minor expansion of pavement is proposed in the non-degraded RA to the south of Route 20 in order to construct the bike lanes proposed for bicyclists' safety. The impacts to the Riverfront Area are anticipated to be minor, and erosion and sedimentation controls will be in place to ensure there is no discharge of sediment or other construction materials downgradient to the resource area.

(e) The area of proposed work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area, except in accordance with 310 CMR 10.58(5)(f) or (g).

Compliance: The proposed work will generally be limited to the existing footprint, but there will be a de minimus increase in impervious areas within the RA. This increase in

pavement is not anticipated to adversely impact the functions or values of the resource area.

> *(f) When an applicant proposes restoration on-site of degraded riverfront area, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(5)(c), (d), and (e) at a ratio in square feet of at least 1:1 of restored area to area of alteration not conforming to the criteria. Areas immediately along the river shall be selected for restoration. Alteration not conforming to the criteria shall begin at the riverfront area boundary.*

Compliance: Due to existing space constraints within the Project Site, the Project does not propose restoration of degraded RA. However, disturbed, unpaved areas within the work limit will be loamed and seeded and/or restored to their original conditions after the completion of work.

> *(g) When an applicant proposes mitigation either on-site or in the riverfront area within the same general area of the river basin, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(5)(c), (d), or (e) at a ratio in square feet of at least 2:1 of mitigation area to area of alteration not conforming to the criteria or an equivalent level of environmental protection where square footage is not a relevant measure.*

Compliance: Due to existing space constraints within the Project Site, the Project does not propose RA mitigation.

As detailed, above, the Project has been designed to comply to the maximum extent practicable. The Limited Project provision at 310 CMR 10.53(3)f allows for the maintenance and improvements of existing public roadways, but limited to widening of less than a single lane, adding shoulders, correcting substandard intersections, and improving inadequate drainage systems where strict compliance with the regulatory standards cannot be met.

Work in Buffer Zone

Work within buffer zone is not governed by specific regulatory performance standards in the WPA. In general, work within buffer zones is permissible when said work has been designed, or can be conditioned, such that there will be no impact on the downgradient wetland resource area(s) being buffered. As identified in 310 CMR 10.53(1) of the WPA regulations:

For work in Buffer Zone subject to review under 310 CMR 10.02(2)(b)3., the issuing authority should consider the characteristics of the buffer zone, such as the presence of steep slopes, that may increase the potential for adverse impacts on resource areas. Conditions may include limitations on the scope and location of work in the buffer zone as necessary to avoid alteration of resource areas. The issuing authority may require erosion and sedimentation controls during construction, a clear limit of work, and the preservation of natural vegetation adjacent to the resource area and/or other measures commensurate with the scope and location of the work within the buffer zone to protect the interests of the Act.

The proposed Project has been designed to address these requirements. As identified in the Mitigation Measures section, an erosion and sedimentation control program will be implemented to prevent adverse impacts to areas within the 100-foot buffer zone during and after construction.

Work in 25-foot No Disturb Zone

The Project has been designed to avoid and minimize alteration within the Town of Weston Conservation Commission 25-foot NDZ to the extent practicable. However, due to the nature of the proposed work, temporary impact to the 25-foot NDZ is unavoidable. The Project meets Exceptions A and B as outlined in the WCC NDZ Policy, as well as the corresponding Conditions for Exceptions.

Exceptions

A. The work is proposed in an area of the NDZ that was altered prior to the adoption of Weston's 25-foot NDZ policy in 1998, or was legally permitted to be altered; or

B. No reasonable conditions or alternatives exist that would allow the proposed activity to proceed in compliance with the Wetlands Protection Act and this policy, and permitting the work will further an overriding public interest or prevent an unconstitutional taking of private property without just compensation

The Route 20 intersection at Boston Post Road and Wellesley Street was built prior to 1990. Due to the location of the existing road layout and the inadequate space for bicyclists' safety along Boston Post Road, no reasonable alternatives to the proposed work in this area exist that still meet the Project's purpose and need. Additionally, the Project has an overriding community and regional public interest, as the main purpose of the Project is to increase transportation safety and improve intersection operation and accessibility.

Conditions for Exceptions

A. Restore natural vegetation adjacent to a resource area in approximately a 2:1 ratio of area revegetated to area proposed to be altered;

Existing conditions within the 25' NDZ include existing pavement and adjacent areas of maintained grass along the roadway. Approximately 58 sf of vegetated NDZ will be converted to impervious area as a result of proposed roadway widening and the new sidewalks and ramps. Although not immediately adjacent to any resource areas, the proposed landscaping areas located southeast of the intersection will provide corresponding vegetation restoration in the vicinity of the Project Site and will represent an improvement over existing conditions.

B. Remove or reduce previous disturbances adversely affecting the wetland resource area;

Proposed drainage conditions and stormwater management features on the Project Site will be an improvement over existing conditions, and will improve the water quality of stormwater inputs to resource areas located near the Project Site.

C. *Meet other conditions, safeguards, and limitations that the Commission determines will result in improved protection of the resource area; and*

The Project has been designed in compliance with the performance standards outlined in the WPA regulations to the extent practicable, as demonstrated above.

D. *File the Commission's form entitled "Request for Permission to Conduct Work in 25-foot No Disturb Zone."*

Please refer to NOI Form section for the completed *Request for Permission to Conduct Work in 25-foot No Disturb Zone* form.

Summary

The Applicant is proposing signalization and geometric improvements at the intersection of Route 20, Boston Post Road, and Wellesley Street to increase transportation safety and improve intersection operation and accessibility. The proposed intersection improvements generally include reconfiguration of the intersection, installation of a traffic signal system, and creation of new pedestrian crossings and buffered bicycle lanes. Additionally, a proposed landscaped area which will be vegetated with native plants and shrubs will replace an area of existing pavement located to the southeast of the reconfigured intersection. The Applicant is requesting that the Project be approved as a Limited Project under 310 CMR 10.53(3)(f), for the "maintenance and improvement of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving inadequate drainage systems".

As proposed, the Project will result in temporary and permanent impacts to RA, temporary and permanent alterations to the 100-foot buffer zone, and temporary impacts to the 25' NDZ. No work is proposed within Bank, BVW, LUWW, or BLSF. The majority of the work will occur within the previously developed footprint. A suite of mitigation measures is proposed to prevent short-term and long-term impacts to resource area and buffer zones. Mitigation measures proposed include an erosion and sedimentation control program, which will include structural and non-structural practices.

The Applicant respectfully requests that the Weston Conservation Commission find these measures adequately protective of the interests identified in the WPA, the Bylaw, and the WCC NDZ Policy and issue an Order of Conditions approving the work described in this NOI and shown on the accompanying plans.

Attachment B
Photographic Log



NO. 1 / 8.22.2023 9:16 AM

DESCRIPTION

Looking upstream/south along the western Bank of the unnamed perennial stream (Stream 1) from flag BF1-101.



NO. 2 / 8.22.2023 9:16 AM

DESCRIPTION

Looking downstream/north along the western Bank of Stream 1 from flag BF1-101.



NO. 3 / 8.22.2023 9:16 AM

DESCRIPTION

Looking down at the Stream 1 channel bed from flag BF1-101.



NO. 4 / 8.22.2023 10:40 AM

DESCRIPTION

Looking south within Wetland 1 near flag WF1-404.



NO. 5 / 8.22.2023 11:18 AM

DESCRIPTION

Looking north at the eastern side of the Stream 1 headwall, near flag BF1-112. The location of Wetland 2 is to the right or the photograph.



NO. 6 / 8.22.2023 12:35 PM

DESCRIPTION

Looking west at the shoulder along Route 20 eastbound.

Attachment C
Wetland Delineation Form

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: **Town of Weston** Prepared by: **VHB, Inc.** Project location: **Route 20 at Boston Post Rd and Wellesley S** DEP File #:

Check all that apply:
- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **WF1-300** Transect Number: **Upgradient** Date of Delineation: **22-Aug-23**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
green ash	*Fraxinus pennsylvanica*	63.0%	56.8%	yes	FACW*
sugar maple	*Acer saccharum*	38.0%	34.2%	yes	FACU
black cherry	*Prunus serotina*	10.0%	9.0%	no	FACU
Sapling/Shrub Layer					
glossy buckthorn	*Rhamnus frangula*	38.0%	70.4%	yes	FAC*
jack-in-the-pulpit	*Arisaema triphyllum*	2.0%	3.7%	no	FACW*
red raspberry	*Rubus idaeus*	2.0%	3.7%	no	FAC*
goldenrod	*Solidago sp.*	2.0%	3.7%	no	NI
european privet	*Ligustrum vulgare*	5.0%	9.3%	no	FACU
multiflora rose	*Rosa multiflora*	5.0%	9.3%	no	FACU
Climbing Woody Vine					
honeysuckle	*Lonicera sp.*	25.0%	83.3%	yes	FACU
oriental bittersweet	*Celastrus orbiculata*	5.0%	16.7%	no	FACU
Ground Cover					
Virginia creeper	*Parthenocissus quinquefolia*	80.0%	100.0%	yes	FACU

Remarks:

Morphological Adaptations: 0 **Description:** Roadside slope upgradient of delineated wetland area. Likely receives overland flow from adjacent roadway.

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 2 **Number of dominant non-wetland indicator plants: 3**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? no

If vegetation alone is presumes adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

MA DEP; 3/95

Proposal No. 608940 133931

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ yes ☐ no

title/date: **Interim Soil Survey of Middlesex County - 1991 (Maps - 1989)**

map number:

soil type mapped: **Haven silt loam**

hydric soil inclusions:

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks:

A00860 - 46

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
A	0-10	10YR 2/2	
B	10-14	2.5 YR 5/2	10YR 4/6, 10%

Remarks: Roadside slope upgradient of delineated wetland area; likely receives overland flow from adjacent roadway.

3. Other:

Conclusion: Is soil hydric? ☑ yes ☐ no

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☐ Depth to soil saturation in observation hole:
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☐ Oxidized rhizoshperes:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☐ Other:

Proposal No. 608940-133931

Vegetation and Hydrology Conclusion for Upgradient of WF1-300

	yes	no
Number of wetland indicator plants >= number of non-wetland plants		X
Wetland hydrology present:		
hydric soils present	X	
other indicators of hydrology present		X
Sample location is in a BVW		X

Submit this form with the Request for Determination of Applicability or Notice of Intent

DEP Bordering Vegetated Wetland (310 CMR 10.55) Delineation Field Data Form

Applicant: **Town of Weston** Prepared by: **VHB, Inc.** Project location: **Route 20 at Boston Post Rd and Wellesley St** DEP File #:

Check all that apply:
- ☐ Vegetation alone presumed adequate to delineate BVW boundary: fill out Section I only
- ☑ Vegetation and other indicators of hydrology used to delineate BVW boundary: fill out Sections I and II
- ☐ Method other than dominance test used (attach additional information)

Section I. Vegetation Observation Plot Number: **WF1-300** Transect Number: **Downgradient** Date of Delineation: **22-Aug-23**

Sample Layer and Plant Species	Scientific name	% Cover	% Dominance	Dominant Plant (yes or no)	Wetland Indicator Category*
Tree Layer					
red maple	*Acer rubrum*	63.0%	75.9%	yes	FAC*
american elm	*Ulmus americana*	20.0%	24.1%	yes	FACW*
Sapling/Shrub Layer					
glossy buckthorn	*Rhamnus frangula*	38.0%	64.4%	yes	FAC*
spicebush	*Lindera benzoin*	5.0%	8.5%	no	FACW*
red raspberry	*Rubus idaeus*	10.0%	16.9%	no	FAC*
goldenrod	*Solidago sp.*	5.0%	8.5%	no	NI
multiflora rose	*Rosa multiflora*	1.0%	1.7%	no	FACU
Climbing Woody Vine					
oriental bittersweet	*Celastrus orbiculata*	10.0%	33.3%	yes	FACU
poison ivy	*Toxicodendron radicans*	20.0%	66.7%	yes	FAC*
Ground Cover					
Virginia creeper	*Parthenocissus quinquefolia*	80.0%	94.1%	yes	FACU
hay-scented fern	*Dennstaedtia punctilobula*	5.0%	5.9%	no	UPL

Remarks:

Morphological Adaptations: 0 **Description:**

* An asterisk after indicator status denotes wetlands plants: plants listed in the Wetlands Protection Act (MGL c.131, s.40); plants in the genus Sphagnum; or plants listed as FAC, FAC+, FACW-, FACW, FACW+, or OBL.

Vegetation conclusion:

Number of dominant wetland indicator plants: 4 **Number of dominant non-wetland indicator plants: 2**

Is the number of dominant wetland plants equal to or greater than the number of dominant non-wetland plants? yes

If vegetation alone is presumes adequate to delineate the BVW boundary, submit this form with the Request for Determination of Applicability or Notice of Intent.

MA DEP; 3/95

Proposal No. 608940 133931

608940-47

Section II. Indicators of Hydrology

Hydric Soil Interpretation

1. Soil Survey

Is there a published soil survey for this site? ☑ yes ☐ no

title/date: **Interim Soil Survey of Middlesex County - 1991 (Maps - 1989)**

map number:

soil type mapped: **Ridgebury fine sandy loam**

hydric soil inclusions:

Are field observations consistent with soil survey? ☑ yes ☐ no

Remarks:

A00860 - 48

2. Soil Description

Horizon	Depth (inches)	Matrix Color	Mottles Color or Texture
A1	0-3	10 YR 2/1	fibric, organic
A2	3-14	10YR 2/1	loamy sand w/ 10YR 3/4, 10%

Remarks:

3. Other:

Conclusion: Is soil hydric? ☑ yes ☐ no

Other Indicators of Hydrology: (check all that apply and describe)

- ☐ Site inundated:
- ☐ Depth to free water in observation hole:
- ☑ Depth to soil saturation in observation hole: 6"
- ☐ Water marks:
- ☐ Drift Lines:
- ☐ Sediment deposits:
- ☐ Drainage patterns in BVW:
- ☐ Oxidized rhizoshperes:
- ☐ Water-stained leaves:
- ☐ Recorded data (stream, lake, or tidal gauge; aerial photo; other):
- ☑ Other: shallow roots

Proposal No. 608940-133931

Vegetation and Hydrology Conclusion for Downgradient of WF1-300

	yes	no
Number of wetland indicator plants >= number of non-wetland plants	X	
Wetland hydrology present:		
hydric soils present	X	
other indicators of hydrology present	X	
Sample location is in a BVW	X	

Submit this form with the Request for Determination of Applicability or Notice of Intent

Attachment D
Abutter Information

› List of Abutters

TOWN OF WESTON REQUEST FOR LIST OF CERTIFIED ABUTTER

YOUR NAME: Taylor Donovan DATE: 10/28/24

YOU ARE: ☐ OWNER ☐ OWNER'S REPRESENTATIVE

TELEPHONE/CELL: TDonovan@vhb.com

CERTIFIED ABUTTERS LIST WILL BE AVAILABLE WITHIN 5 BUISINESS DAYS.
HOW WOULD YOU LIKE TO RECEIVE YOUR CERTIFIED ABUTTERS LIST?

☐ PLEASE CALL ME AND I WILL PICK UP THE CERTIFIED LIST _____

☐ PLEASE FAX MY LIST TO _____

☐ PLEASE MAIL MY CERTIFIED LIST TO _____

☐ APPEALS ☐ CONSERVATION COMMISSION ☐ HISTORIC ☐ PLAN BOARD

SITE LOCATION: Rte 20 @ Boston Post Rd

SITE MAP & LOT: MAP 28 LOT 104

OFFICE USE ONLY

1. MAP: _____	LOT: _____	16.MAP: _____	LOT: _____
2. MAP: _____	LOT: _____	17.MAP: _____	LOT: _____
3. MAP: _____	LOT: _____	18.MAP: _____	LOT: _____
4. MAP: _____	LOT: _____	19.MAP: _____	LOT: _____
5. MAP: _____	LOT: _____	20.MAP: _____	LOT: _____
6. MAP: _____	LOT: _____	21.MAP: _____	LOT: _____
7. MAP: _____	LOT: _____	22.MAP: _____	LOT: _____
8. MAP: _____	LOT: _____	23.MAP: _____	LOT: _____
9. MAP: _____	LOT: _____	24.MAP: _____	LOT: _____
10.MAP: _____	LOT: _____	25.MAP: _____	LOT: _____
11.MAP: _____	LOT: _____	26.MAP: _____	LOT: _____
12.MAP: _____	LOT: _____	27.MAP: _____	LOT: _____
13.MAP: _____	LOT: _____	28.MAP: _____	LOT: _____
14.MAP: _____	LOT: _____	29.MAP: _____	LOT: _____
15.MAP: _____	LOT: _____	30.MAP: _____	LOT: _____

CERTIFIED ABUTTERS
BOARD OF ASSESSORS
TOWN OF WESTON
OCT 23 2024
BY: [signature]

April 2013

Town of Weston Abutters List

Subject Property ID: 028_104_000
Search Distance: 500 Feet

Parcel_Id	Property Location	Owner 1	Owner 2	Book/Page	Mailing Address	Town	St	Zip
023_049_000	327 BOSTON POST RD	PARKER, T. BROOK	PARKER, JOANNE W.	30430/0135	327 BOSTON POST RD	WESTON	MA	02493
023_050_000	321 BOSTON POST RD	PARKER 3RD, BROOKS A	PARKER, GALE T	00771/0119	PO BOX 613	WESTON	MA	02493
023_051_000	8 HEMLOCK RD	NURCZYNSKI, MICHAEL	NURCZYNSKI, ARIELLE S	69330/0154	8 HEMLOCK RD	WESTON	MA	02493
023_055_000	11 HEMLOCK RD	SIMMONS, VIRGINIA A	SIMMONS, ALAN H	41792/0456	11 HEMLOCK RD	WESTON	MA	02493
023_056_000	9 HEMLOCK RD	PLANK, ETAL TRS, JANE C	JANE C PLANK 1996 REV TR	68478/0293	9 HEMLOCK RD	WESTON	MA	02493
028_007_000	334 BOSTON POST RD	PASCAL, CHARLES	PASCAL, MOLLY B	66560/0416	334 BOSTON POST RD	WESTON	MA	02493
028_008_000	320 BOSTON POST RD	ST. PETER'S PARISH		00000/0000	320 BOSTON POST RD	WESTON	MA	02493
028_009_000	0 BOSTON POST RD	TOWN OF WESTON	Park	00000/0000	PO BOX 378	WESTON	MA	02493
028_010_000	293 BOSTON POST RD	GOLDMAN, GREGORY I	GOLDMAN, CATHY T	59214/0019	293 BOSTON POST RD	WESTON	MA	02493
028_011_000	0 BOSTON POST RD	TOWN OF WESTON	Conservation	12782/0045	PO BOX 378	WESTON	MA	02493
028_057_010	1 WINSOR WY	CUNNINGHAM ETAL TRUSTEES, PAT	PATRICK AND MOLLY CUNNINGHA	81204/0417	1 WINSOR WY	WESTON	MA	02493
028_057_020	5 WINSOR WY	ELLIS, KATHARINE K		65497/0066	5 WINSOR WY	WESTON	MA	02493
028_058_000	23 WINSOR WY	23 WINSOR WAY LLC		76096/0443	105 GORDON ROAD	WABAN	MA	02468
028_071_000	40 WELLESLEY ST	CLUTZ, ANDREW H	CLUTZ, ANNE S	43253/0482	40 WELLESLEY ST	WESTON	MA	02493
028_073_000	18 WELLESLEY ST	ELLIS, THOMAS B		65497/0061	5 WINSOR WY	WESTON	MA	02493
028_074_000	10 WINSOR WY	EISEN ETAL TRUSTEES, DAVID	THE EISEN FAMILY REV TRUST	80467/0408	10 WINSOR WY	WESTON	MA	02493
028_076_020	20 WINSOR WY	BATTISTONI, LISA M	BATTISTONI, DARREN C	67286/0311	20 WINSOR WY	WESTON	MA	02493
028_082_000	286 BOSTON POST RD	SIROHI, JAI KISHORE	SIROHI, MANU	68791/0180	286 BOSTON POST RD	WESTON	MA	02493
028_097_000	39 WELLESLEY ST	PETERS, CAMERON G.	PETERS, HANNAH T.	27588/0019	39 WELLESLEY ST	WESTON	MA	02493
028_098_000	37 WELLESLEY ST	SCHULMAN TRUSTEE, MATTHEW G	MATTHEW G SCHULMAN LIV TR	74746/0179	37 WELLESLEY ST	WESTON	MA	02493
028_099_000	35 WELLESLEY ST	THORNLEY TRUSTEE, ANDREW A	THE 35 WELLESLEY STREET REALT	81770/0048	3 MAPLE RD	WESTON	MA	02493
028_100_000	33 WELLESLEY ST	ANDERSON, KATARINA	GUSTAFSSON, HANS TOBIAS	78159/0593	33 WELLESLEY ST	WESTON	MA	02493
028_101_000	27 WELLESLEY ST	CRONIN-BURCHARD, SUSAN ETAL T	WILLIAM J BURCHARD FAMILY TR	51892/0209	27 WELLESLEY ST	WESTON	MA	02493
028_102_000	23 WELLESLEY ST	HOWARD, NEAL	WAHR, CHRISTINE	80106/0284	23 WELLESLEY ST	WESTON	MA	02493
028_103_000	17 WELLESLEY ST	LEROY, GARY E.		25624/0258	17 WELLESLEY ST	WESTON	MA	02493
028_105_000	44 SCHOOL ST	TOWN OF WESTON	Elderly Housing Comm	05607/0598	PO BOX 378	WESTON	MA	02493
033_016_000	275 MEADOWBROOK RD	WESTON GOLF CLUB	C/O GENERAL MANAGER BYRAN C	11299/0424	275 MEADOWBROOK RD	WESTON	MA	02493
033_016_071	275 MEADOWBROOK RD	WESTON GOLF CLUB	C/O GENERAL MANAGER BRYAN C	00000/0000	275 MEADOWBROOK RD	WESTON	MA	02493

Created by The Weston Assessing Department

Proposal No. 608940-133931

RATIGAN ETAL TRS, SARAH
WESTON AFFORDABLE
PO BOX 171
WESTON, MA 02493

PARKER, T. BROOK
PARKER, JOANNE W.
327 BOSTON POST RD
WESTON, MA 02493

PARKER 3RD, BROOKS A
PARKER, GALE T
PO BOX 613
WESTON, MA 02493

NURCZYNSKI, MICHAEL
NURCZYNSKI, ARIELLE S
8 HEMLOCK RD
WESTON, MA 02493

SIMMONS, VIRGINIA A
SIMMONS, ALAN H
11 HEMLOCK RD
WESTON, MA 02493

PLANK, ETAL TRS, JANE C
JANE C PLANK 1996 REV TR
9 HEMLOCK RD
WESTON, MA 02493

PASCAL, CHARLES
PASCAL, MOLLY B
334 BOSTON POST RD
WESTON, MA 02493

ST. PETER'S PARISH
320 BOSTON POST RD
WESTON, MA 02493

TOWN OF WESTON
Park
PO BOX 378
WESTON, MA 02493

GOLDMAN, GREGORY I
GOLDMAN, CATHY T
293 BOSTON POST RD
WESTON, MA 02493

TOWN OF WESTON
Conservation
PO BOX 378
WESTON, MA 02493

CUNNINGHAM ETAL
PATRICK AND MOLLY
1 WINSOR WY
WESTON, MA 02493

ELLIS, KATHARINE K
5 WINSOR WY
WESTON, MA 02493

23 WINSOR WAY LLC
105 GORDON ROAD
WABAN, MA 02468

CLUTZ, ANDREW H
CLUTZ, ANNE S
40 WELLESLEY ST
WESTON, MA 02493

ELLIS, THOMAS B
5 WINSOR WY
WESTON, MA 02493

EISEN ETAL TRUSTEES,
THE EISEN FAMILY REV
10 WINSOR WY
WESTON, MA 02493

BATTISTONI, LISA M
BATTISTONI, DARREN C
20 WINSOR WY
WESTON, MA 02493

SIROHI, JAI KISHORE
SIROHI, MANU
286 BOSTON POST RD
WESTON, MA 02493

PETERS, CAMERON G.
PETERS, HANNAH T.
39 WELLESLEY ST
WESTON, MA 02493

SCHULMAN TRUSTEE,
MATTHEW G SCHULMAN LIV TR
37 WELLESLEY ST
WESTON, MA 02493

THORNLEY TRUSTEE, ANDREW
THE 35 WELLESLEY STREET
3 MAPLE RD
WESTON, MA 02493

ANDERSON, KATARINA
GUSTAFSSON, HANS TOBIAS
33 WELLESLEY ST
WESTON, MA 02493

CRONIN-BURCHARD, SUSAN
WILLIAM J BURCHARD
27 WELLESLEY ST
WESTON, MA 02493

HOWARD, NEAL
WAHR, CHRISTINE
23 WELLESLEY ST
WESTON, MA 02493

LEROY, GARY E.
17 WELLESLEY ST
WESTON, MA 02493

TOWN OF WESTON
Elderly Housing Comm
PO BOX 378
WESTON, MA 02493

WESTON GOLF CLUB
C/O GENERAL MANAGER
275 MEADOWBROOK RD
WESTON, MA 02493

WESTON GOLF CLUB
C/O GENERAL MANAGER
275 MEADOWBROOK RD
WESTON, MA 02493



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Weston MA

A00860 - 53

Proposal No. 608940-133931

Attachment E
Stormwater Memorandum (Bound Separately)

Attachment F
Project Plans (Bound Separately)

Memorandum

To: Town of Weston

Date: October 25, 2024

Project #: 14360.00 Route 20/Wellesley Street Intersection and Pedestrian Improvements

From: Madeline Schrott, PE
Eric Monkiewicz, PE

Re: Stormwater Management Memorandum

This Stormwater Management Memorandum has been prepared to show compliance with the Massachusetts Stormwater Management Standards to the maximum extent practicable, in accordance with the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00).

Project Description

The Applicant, Town of Weston, is proposing to reconstruct the intersection of Route 20 / Wellesley Street/ Boston Post Road (the Project), refer to Figures 1 and 2. The Project includes roadway realignment at the intersection, installation of buffered bicycle lanes, sidewalk reconstruction, pavement mill and overlay, traffic signal system upgrades and associated pavement markings and signage. The Project also proposes deep-sump catch basins in the project area.

Portions of the Project Area are within the 100-foot buffer zone to Bordering Vegetated Wetlands (BVW) and the 200-foot Riverfront Area which are subject to the jurisdiction of the Massachusetts Wetland Protections Act and within the 25-foot No Disturb zone which is subject to the local wetland bylaw. The Project is within an Outstanding Resource Water (ORW), Zones A and C surface water supply protection area, and adjacent to a Natural Heritage Endangered Species Program Potential Vernal Pool which are considered a critical area per 310 CMR 10.04.

Under the Stormwater Management Standards, the Project is considered a redevelopment project because it involves maintenance and improvement of an existing roadway, including widening less than a single lane, and correcting substandard intersections and drainage. The Project's increase in impervious area is to accommodate a new sidewalk and buffered bike lanes to provide pedestrian safety improvements. The Project has been designed to meet the Stormwater Management Standards to the maximum extent practicable, and to improve upon existing conditions.

Site Description

Watershed

The Project Area lies within the Charles River watershed which is covered by Final Pathogen TMDL[1] and a Final TMDL for Nutrients (Phosphorus)[2]. The final TMDLs implementation plan for stormwater management recommends starting with non-structural SCMs, and then using structural SCMs if the non-structural SCMs are not sufficient to address water quality.

[1] Massachusetts DEP. 2007. "Final Pathogen TMDL for the Charles River Watershed" CN156.0
[2] Massachusetts DEP. 2011. "Final TMDL for Nutrients in the Upper/Middle Charles River, Massachusetts" CN272.0

Memorandum

The TMDL implementation plan also references the six minimum control measures required under the MS4 permit.

A portion of the project is located in an area designated as an Outstanding Resource Water (ORW)[3] since it is located within a Public Water Supply Watershed.

Land Use

Land uses adjacent to the Project Area are primarily right-of-way, developed open space, and deciduous forest[4]. There are no known land uses with higher potential pollutant loads (LUHPPLs) in or with drainage areas directly tributary to the Project Area.

Utilities

Subsurface utilities include water, gas, drainage, sanitary sewer, and telecommunication lines. Above-ground utilities include utility poles and overhead wires.

Topography

The Project Area generally slopes up to the north and west. Slopes along the Project Area generally range between 0.3% and 6.2%.

Soils

The Natural Resources Conservation Service (NRCS) soil survey[5] has mapped the surface soils within the Project as Ridgebury fine sandy loam (HSG D), through the intersection and within the area identified as floodplain, Narragansett silt loam (HSG A) from Wellesley Road to the southeast extent of the project, and Haven-Urban Land complex (HSG A) to the northwest of the project. A map of existing NRCS Soil Survey in the Project Area is available in Attachment B.

Floodplain

A portion of the Project area is within Zone A, which is identified as Special Flood Hazard Area without a base flood elevation, as shown on the Flood Insurance Rate Map (FIRM) panel 25017C 0531 E with effective date June 4, 2010, included in Figure 4. However, based on coordination with the Weston Conservation Commission, the elevation of the 100-year floodplain (regulated as BLSF) on and near the Project Site is 169.2 ft NAVD88, which is below the present ground elevation of the Project Site. Therefore, the Project Site is located outside of the 100-year floodplain.

Existing Drainage Infrastructure

There is a closed drainage system within Route 20, Wellesley Street, and Boston Post Road. The stormwater collected in the closed drainage systems in Wellesley Street and Boston Post Road/Route 20 (east of the intersection) discharge to a 48-inch box culvert that outlets to a Weston Station Pond tributary to the northeast of the project area.

There is another 48-inch box culvert that carries a stream under Route 20 and Boston Post Road to Weston Station Pond. There is a pump station associated with this box culvert that diverts a small percentage of flow into Cooks Pond. See Attachment E for more information regarding the pump station.

[3] Massachusetts DEP, 2013. 314 CMR 4.00 Massachusetts Surface Water Quality Standards.
[4] MassGIS Land Cover Land Use 2016. https://maps.massgis.digital.mass.gov/MassMapper/MassMapper.html Accessed September 2023.
[5] Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey.

Memorandum

Proposed Drainage Conditions

Land Cover

The Project proposes to increase impervious cover by approximately 0.18 acres, which is an 8.98% increase from existing conditions. Proposed impervious cover will be comprised of sidewalks and the buffered bike lanes.

Structural SCMs

The Project proposes to install gutter inlets connected to deep-sump catch basins along the project corridor.

Erosion and Sediment Control

An erosion and sedimentation control program will be implemented to minimize temporary impacts to wetland resource areas prior to and during the construction phase of the Project. The program will incorporate SCMs specified in guidelines developed by the DEP[6] and the U.S. Environmental Protection Agency (EPA)[7].

Non-structural practices to be used during construction include permanent seeding and pavement sweeping. These practices will be initiated as soon as practicable during construction. Structural erosion and sedimentation controls include erosion control barriers and catch basin inlet protection.

Closed-Drainage System

Route 20, Boston Post Road and Wellesley Street are primarily crowned and catch basins will be located along the proposed curb to be installed adjacent to the proposed sidewalk. Catch basins will be placed intermittently along the proposed curb to intercept flow from the roadway.

The proposed drainage system is designed to meet gutter spread, hydraulic grade line, and velocity requirements to the maximum extent practicable. Refer to Attachment D for a detailed discussion of compliance with Chapter 8 of the 2006 MassDOT Project Development & Design Guide (PDDG).

[6] DEP, 1997. *Massachusetts Erosion and Sediment Control Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers, and Municipal Officials.*
[7] EPA, 2007. *Interim Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites*. Office of Water. Report EPA 833-R-060-04.

Memorandum

Massachusetts Department of Environmental Protection (MassDEP) – Stormwater Management Standards

Under the Stormwater Management Standards, the Project is considered a redevelopment project because it involves maintenance and improvement of an existing roadway, including widening less than a single lane, and correcting substandard intersections and drainage. The Project has been designed to meet the Stormwater Management Standards to the maximum extent practicable, and to improve upon existing conditions.

Standard 1: No New Untreated Discharges or Erosion to Wetlands

The Project has been designed to comply with Standard 1.

The Project does not propose new untreated discharges to wetlands or receiving waters. All discharges will be treated through deep-sump catch basins and no new discharges are proposed.

Standard 2: Peak Rate Attenuation

As a redevelopment project, the Project has been designed to comply with Standard 2 to the maximum extent practicable.

The Project proposes to increase impervious cover by approximately 0.18 acres. This increase in impervious area is to accommodate a new sidewalk and buffered bike lanes to provide pedestrian safety improvements. Due to the increase in impervious area, the peak rates for this Project also increase from existing to proposed condition.

Due to limited space within the right-of-way in the project corridor, the Project does not propose any SCMs capable of attenuating peak rates.

Standard 3: Stormwater Recharge

As a redevelopment project, the Project complies with Standard 3 to the maximum extent practicable.

Based on the 0.18 acre increase in impervious area for the Project, the total decrease in recharge for the Project is:

0.18 acres x 0.60 inches of runoff (for HSG A) = **393 cubic feet**

Due to limited space within the right-of-way in the project corridor, SCMs capable of providing groundwater recharge are not able to be incorporated into the design.

Standard 4: Water Quality

As a redevelopment project, the Project complies with Standard 4 to the maximum extent practicable.

Under existing conditions, the majority of runoff from the Project Area is collected by existing catch basins. Additional catch basins are proposed along Route 20 and capture stormwater runoff from the road and sidewalk. These catch basins have been designed to provide a total of 25% TSS removal.

Due to limited space within the right-of-way in the project corridor, proposing additional treatment is not practicable.

The Long-Term Pollution Prevention Plan is included in Attachment C.

The Project Area, located within the Charles River Watershed, is covered by a Final TMDL for pathogens and a Final TMDL for nutrients (phosphorus). The TMDL implementation plan for stormwater management recommends starting with non-structural best management practices (SCMs), and then using structural SCMs if the non-structural BMPs are not sufficient to address water quality.

Standard 5: Land Uses with Higher Potential Pollutant Loads (LUHPPLs)

There are no known land uses with higher potential pollutant loads (LUHPPLs) in or with drainage areas directly tributary to the Project Area. As a result, the Project complies fully with Standard 5.

Standard 6: Critical Areas

The Project Area is within an Outstanding Resource Water (ORW), Zones A and C surface water supply protection area, as indicated in Figure 5. The Project has been designed to comply with Standard 6 to the maximum extent practicable.

Runoff from the Project's proposed impervious cover will be treated by deep-sump catch basins, which provide 25% treatment for TSS.

Due to limited space within the right-of-way in the project corridor, proposing additional treatment is not practicable.

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the Maximum Extent Practicable

The Project is considered a redevelopment project and has been designed to comply with the Stormwater Management Standards to the maximum extent practicable. The project fully complies with Standards 1, 5, 8, 9, and 10. Due to site constraints, the Project complies with Standards 2, 3, 4, and 6 to the maximum extent practicable.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Controls

The Project will disturb greater than 1 acre of land and is therefore required to obtain coverage under the Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) Construction General Permit. As required under this permit, a Stormwater Pollution Prevention Plan (SWPPP) will be developed and submitted by the contractor before land disturbance begins.

Recommended construction period pollution prevention and erosion and sedimentation controls will be finalized in the SWPPP.

Standard 9: Operation and Maintenance Plan

In compliance with Standard 9, a Post-Construction Stormwater Operation and Maintenance (O&M) Plan has been developed for the Project. The O&M Plan is included in Attachment C as part of the Long-Term Pollution Prevention Plan.

Standard 10: Prohibition of Illicit Discharges

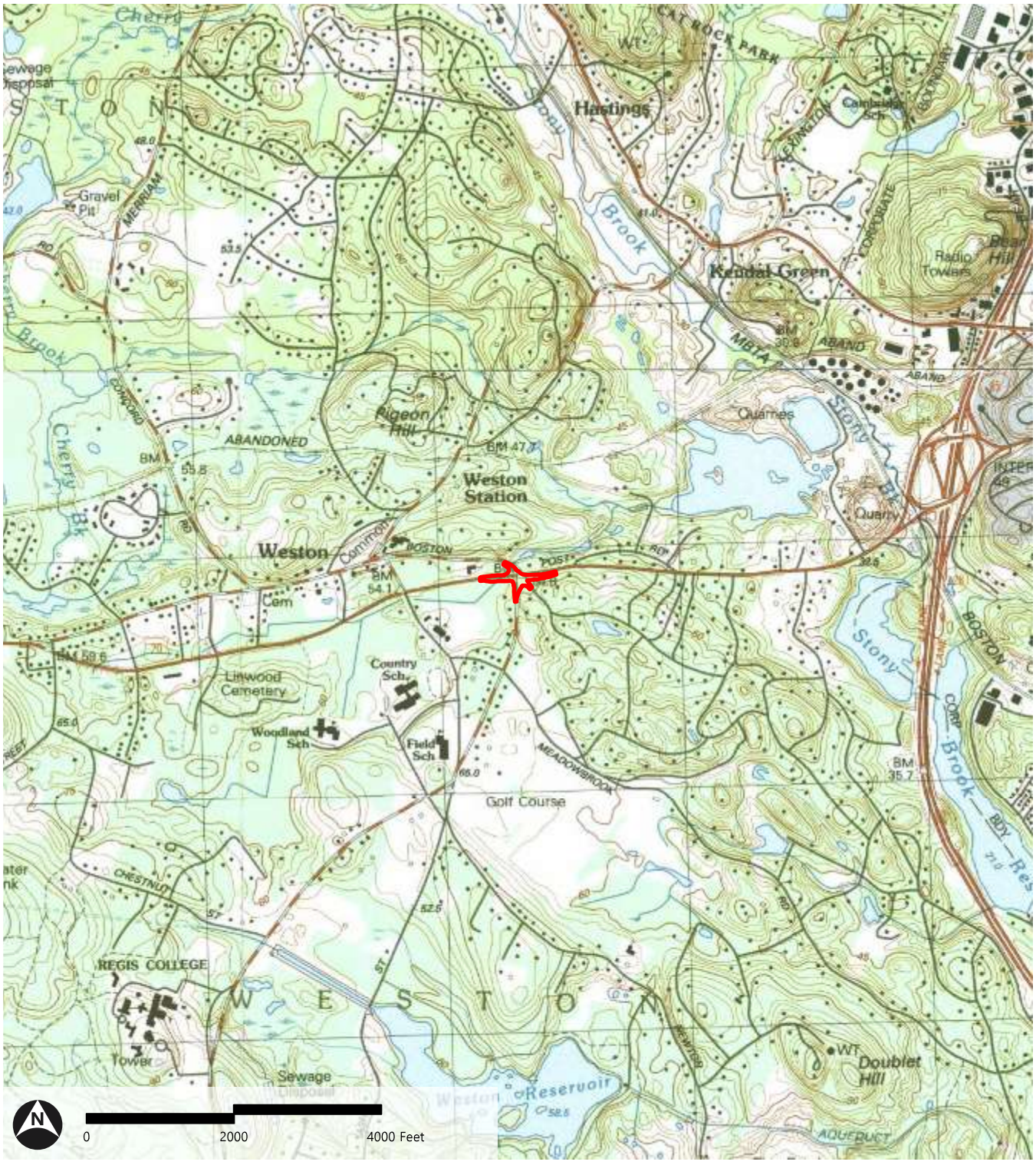
The Project Area does not have any known illicit connections. Any illicit connections to sanitary sewer or storm drainage structures found in the project limit of work will be removed or incorporated into the project. The Long-Term Pollution Prevention Plan, provided in Attachment C, includes measures to prevent illicit discharges.

Memorandum

Figures:
Figure 1 – USGS Site Location
Figure 2 – Aerial Overview
Figure 3 – NHESP
Figure 4 – FEMA Floodplain
Figure 5 – Critical Areas

Attachments:
Attachment A – Stormwater Checklist
Attachment B – Soils Data
Attachment C – Operation and Maintenance Plan and Long-Term Pollution Prevention Plan
Attachment D – Roadway Drainage Analysis
Attachment E – Cooks Pond Pump Station Memo

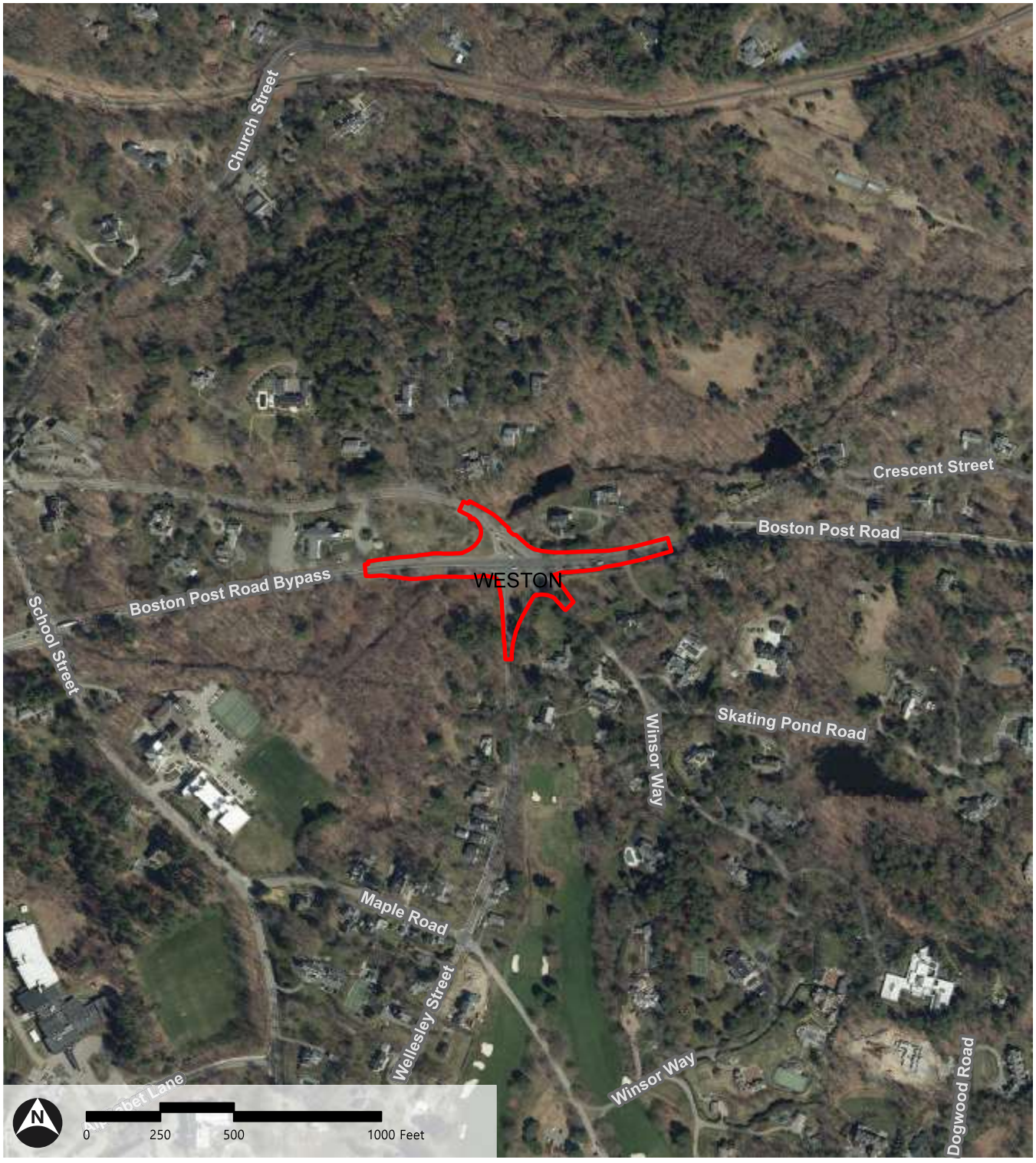
Figure 1: USGS Site Location
Route 20 Intersection Improvement
Weston MA



Path: \\azrgisds\gisshare\gis3\arcgissystem\arcgisinput\NOIFigures\NOIExportMap.GPServer\extracted\p30\noi_template\NOI_Template.aprx (gmsaGIS$, 8/18/2023)

Sources: VHB, MassGIS

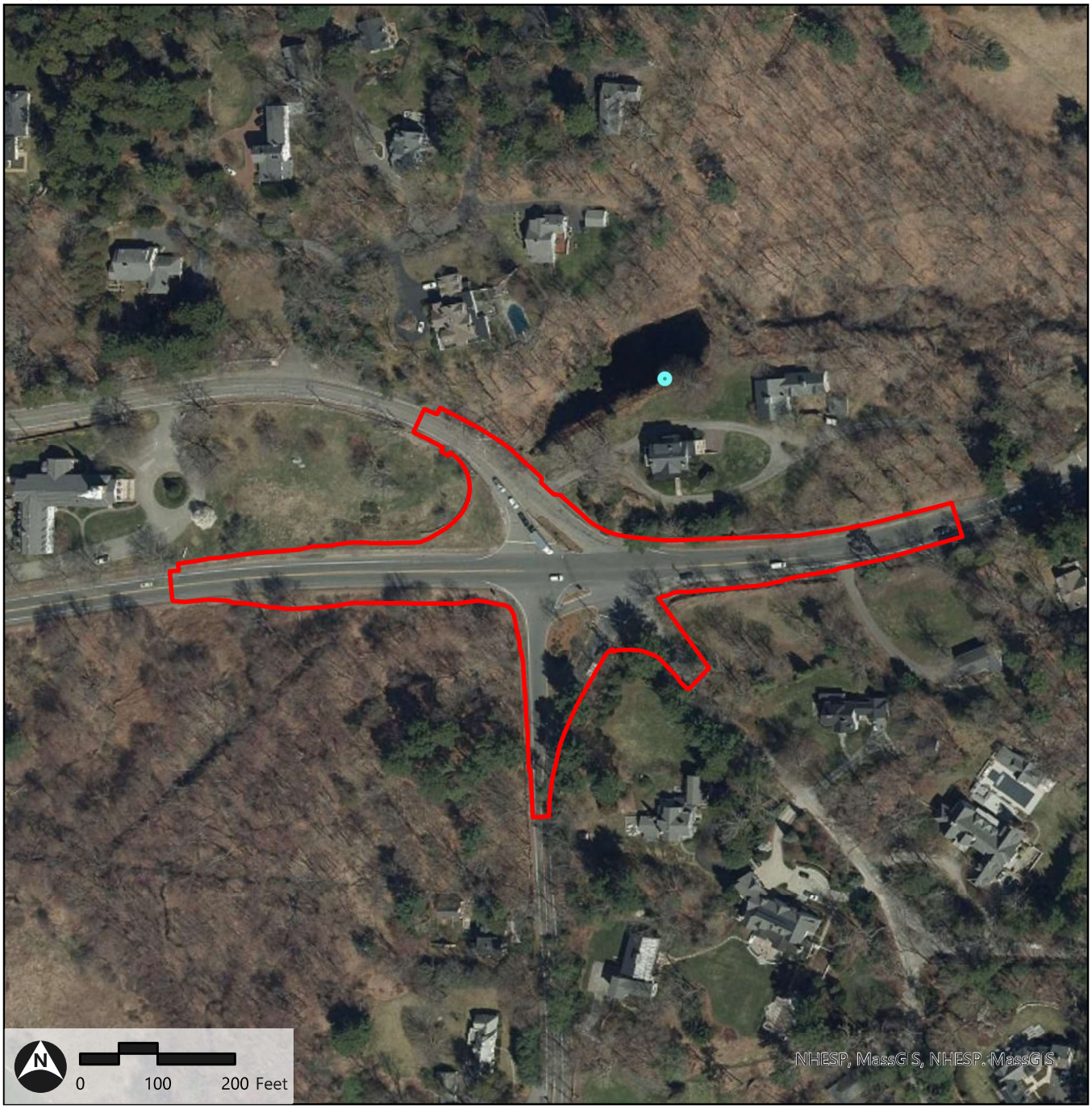
Figure 2: Aerial Overview
Route 20 Intersection Improvement
Weston MA



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Sources: VHB, MassGIS

Figure 3: NHESP
Route 20 Intersection Improvement
Weston MA



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Project Alignment

NHESP Potential Vernal Pools

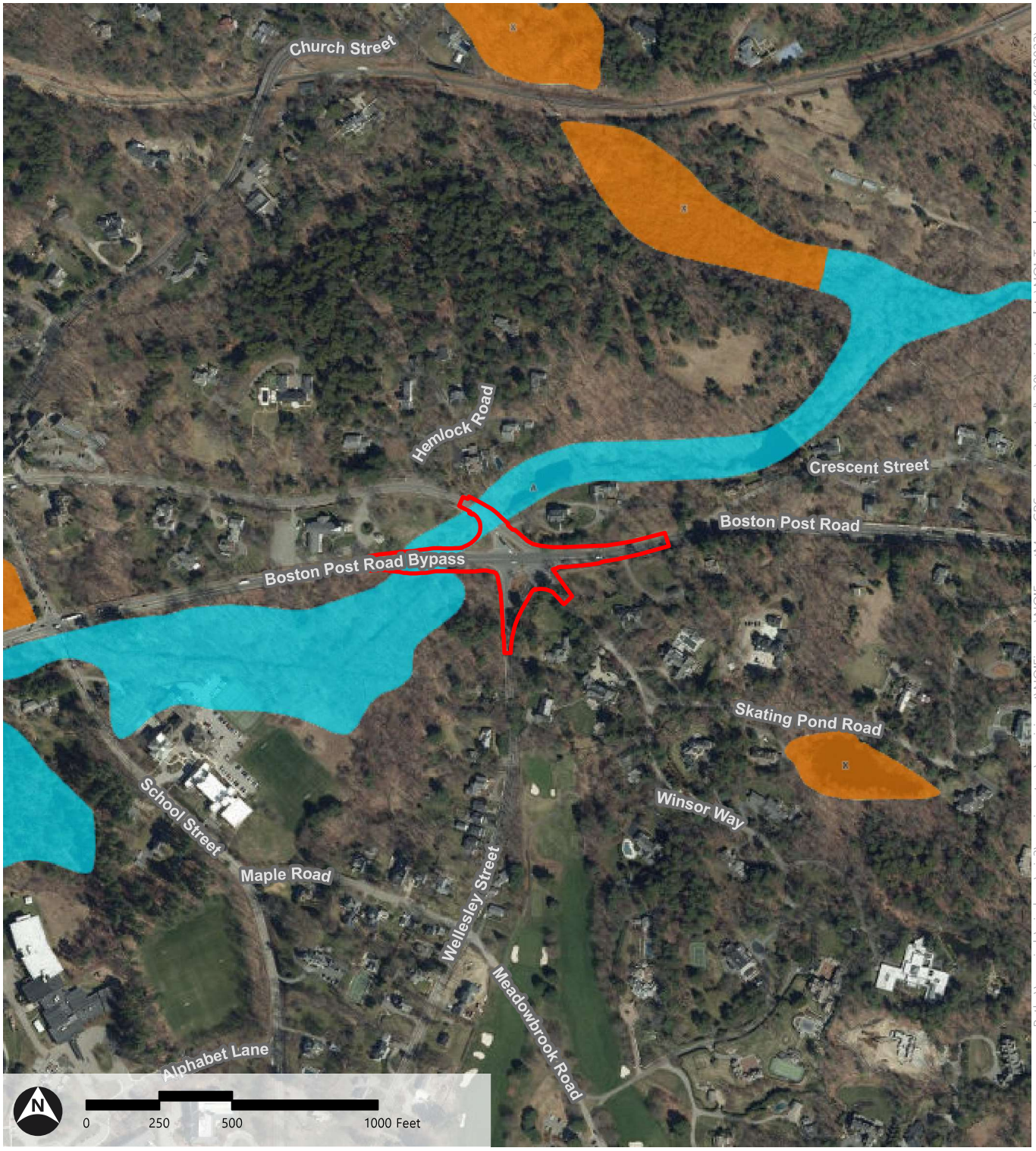
NHESP Certified Vernal Pools

NHESP Priority Habitats of Rare Species

NHESP Estimated Habitats of Rare Wildlife

Source: NHESP, MassGIS

Figure 4: FEMA Floodplain
Route 20 Intersection Improvement
Weston MA



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Sources: VHB, MassGIS

Figure 5: CRITICAL AREAS
Route 20 Intersection Improvement
Weston MA



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Project Alignment

Outstanding Resource Waters

Outstanding Resource Waters

Public Water Supply Contributor

Other ORW

Source: NHESP, MassGIS

Memorandum

Attachment A

Stormwater Checklist

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

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



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

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[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.

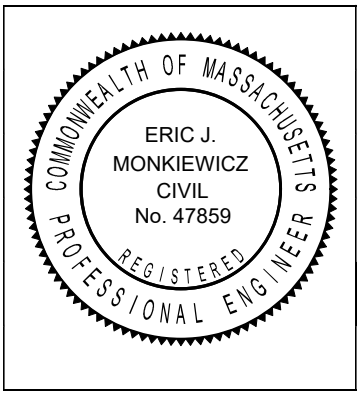
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the 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~~ Memorandum, 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~~ Memorandum accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



Monkiewicz, Eric Digitally signed by Monkiewicz, Eric Date: 2024.10.29 14:04:28-04'00'

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

☒ 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 (Maximum Extent Practicable)

☐ 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 (Maximum Extent Practicable)

☒ 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
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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 (Maximum Extent Practicable)

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
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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 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

☒ 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~~ Memorandum 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.

☒ The project area is owned by MassDOT and the Town of Weston and will be maintained in accordance with the Town's standard Operation and Maintenance Plan for roadway maintenance.

Standard 10: Prohibition of Illicit Discharges

☒ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☐ An Illicit Discharge Compliance Statement is attached;

☐ NO Illicit Discharge Compliance Statement is attached but will be submitted prior to the discharge of any stormwater to post-construction BMPs.

Memorandum

Attachment B

Soils Data

Hydrologic Soil Group—Middlesex County, Massachusetts



Map Scale: 1:2,090 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 30 60 120 180

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Massachusetts
Survey Area Data: Version 22, Sep 9, 2022

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 22, 2022—Jun 5, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

A00860 - 79

Proposal No. 608940-133931

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
71B	Ridgebury fine sandy loam, 3 to 8 percent slopes, extremely stony	D	6.2	28.4%
106C	Narragansett-Hollis-Rock outcrop complex, 3 to 15 percent slopes	A	4.9	22.4%
251B	Haven silt loam, 3 to 8 percent slopes	A	2.0	9.2%
415C	Narragansett silt loam, 8 to 15 percent slopes	A	6.4	29.3%
624B	Haven-Urban land complex, 0 to 8 percent slopes	A	2.4	10.8%
656	Udorthents-Urban land complex		0.0	0.0%
Totals for Area of Interest			**21.9**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Memorandum

Attachment C

Operation and Maintenance/Long-Term Pollution Prevention Plan

Route 20 Intersection Improvements at Boston Post Road and Wellesley Street

Stormwater Management System Operation and Maintenance Plan and Long-Term Pollution Prevention Plan

Weston

PREPARED FOR

massDOT

10 Park Plaza
Boston, MA 02116

PREPARED BY

101 Walnut Street
PO Box 9151
Watertown, MA 02471

March 2024

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1

Stormwater Management System Operation and Maintenance (O&M) Plan

This Stormwater Management System Operation and Maintenance (O&M) Plan describes the approach for inspection and maintenance of drainage infrastructure to minimize contaminant loading for the Route 20 Intersection Improvements at Boston Post Road and Wellesley Street project in Weston. In general, inspection and maintenance activities will be conducted consistent with the National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer System (MS4) and MassDOT's anticipated NPDES Transportation Separate Storm Sewer System (TS4) Permit.

This document has been prepared per the requirements of Massachusetts Department of Environmental Protection (MassDEP) Regulations 310 CMR 10.05 (6)(k)(9) and satisfies the requirements of Massachusetts Stormwater Standard 9.

1.1 Responsible Party

In accordance with MassDOT procedures, the MassDOT District 6 office located in Weston, MA, is responsible for the maintenance of all stormwater management systems on MassDOT roads within the project area.

Questions or concerns regarding activities associated with this O&M Plan should be addressed to MassDOT's District 6 office located at 185 Kneeland Street Boston, MA 02111 phone (857) 368-6100, during regular weekday hours, or to MassDOT's Highway Operations Center located in South Boston, MA at (800) 227-0608 during all other times and days, including weekends and holidays.

1.2 Inspection and Maintenance Measures and Record-Keeping

The stormwater management system covered by this O&M Plan consists of the proposed catch basins.

For catch basins, MassDOT's overall approach is to perform maintenance at an interval that maintains the functionality of the catch basin (e.g., sump is less than 50% full of sediment). Catch basin inspections, including documentation of sediment accumulation, and maintenance will generally occur simultaneously.

MassDOT's O&M program is data driven. Inspections and maintenance are recorded by personnel using hand-held tablets in the field to document sediment accumulation, maintenance action performed, and follow-up actions needed. Data are recorded in MassDOT's asset management system which is accessible in the field (mobile) or the office (desktop).

The table below summarizes data that is generally collected for each asset type. For all assets, the inspector and inspection date are recorded. Photo documentation of structure condition is taken and attached to the inspection record.

Inspection Form	Applicable Stormwater Assets	Information Collected
Inlets	› Catch basins	› Sediment accumulation › Trash/Debris accumulation › Signs of contamination › Frame and grate condition › Overall structure condition
SCMs	Consistent with the MassDOT Stormwater Design Guide (SDG), SCM categories include: › Infiltration SCMs › Stormwater wetland SCMs › Bioretention SCMs › Other SCMs	› SCM accessibility › Presence of standing water › Level of erosion › Sediment accumulation › Trash/Debris accumulation › Vegetation condition › Overall SCM condition
Storm Discharge Points	› Outlets	› Presence of flow › Signs of contaminated flow › Sediment accumulation › Level of erosion › Pipe condition › Scour protection condition › Overall structure condition

Inspection and maintenance records can be made available using the asset management system through request with the MassDOT District 6 Environmental Engineer. Records will be kept for at least three years. Representatives of the Weston Conservation Commission(s), MassDEP, and US EPA may obtain access to these records, upon request. Additionally, MassDOT will allow members and agents of MassDEP and the Conservation Commission(s) to enter and inspect the premises, upon request, to evaluate and ensure that the Operation and Maintenance Plan requirements are being followed.

Maintenance actions will not occur at any set frequency, but rather will be based on condition and impact to functionality.

Stormwater Feature	Potential Maintenance Actions	

Surface SCMs	• Remove and properly dispose of accumulated material (e.g., sediment, trash, leaf litter, debris)
	• Mow vegetated areas and remove and dispose of grass clippings
	• Regrade areas that show signs of unwanted ponding and channelization
	• Stabilize or reconstruct eroded areas and reseed
	• Replace stones/soil and/or replant vegetation
		• Remove woody growth
		• Treat invasive plants according to MassDOT Landscape Design Section
		• Infiltration and bioretention SCMs only:
		  ○ Address issues of standing water
		  ○ Drain and reconstruct SCM
		  ○ If rehabilitation is not possible, then retrofit to be a wet SCM while considering safety implications

Underground SCMs	• Remove and properly dispose of trash, sediment, debris, and root intrusions • Clean out sumps at an interval to maintain functionality (less than 50% full of sediment) • Jet and repair pipes	• Rehabilitate filtering and infiltration materials (e.g., geotextile fabric, crushed stone) • Stabilize and replace deteriorated structures • Perform evaluations (e.g., test pits) to evaluate subsurface conditions
Inlets and Outlets to SCMs	• Clear inlet and remove and properly dispose of sediment, trash, leaf litter, debris, and vegetation • Regrade areas that show signs of ponding and channelization • Repair or replace structural components • Repair damaged or eroded areas	• Provide or rehabilitate erosion control at the outlet • Regrade and replace the channel materials • Remove woody growth • Stabilize or reconstruct eroded areas • Treat invasive plants according to MassDOT Vegetation Management Plan

Based on the results of the inspection, repairs will be made in accordance with MassDOT standard practices. Maintenance will be prioritized given the urgency of the required maintenance and availability of staff, contracts, etc. Maintenance may require contracting if existing contracts are unavailable to perform the work. More intensive remedial activities may require permitting and/or an engineering solution.

1.3 Erosion and Sediment Control Measures during Maintenance Activities

For maintenance activities that could result in discharges of sediments or other contaminants into wetlands, waterways, or other resource areas regulated under 310 CMR 10.00, the responsible maintenance personnel will employ measures to prevent migration of these sediments/contaminants. Such temporary measures may include, but are not necessarily limited to, the use of siltation barriers, catch basin silt sacks/filter bags, pipe plugs, cofferdams deployed within the stormwater structure, turbidity curtains, or other practices designed to prevent such discharges.

Where maintenance occurs in areas that are confined, with no risk of discharge to adjacent water bodies, no special measures may be needed. Examples include, but are not limited to: (1) cleaning of a forebay under dry conditions when the work can be completed and exposed surfaces stabilized prior to placing it back into service; and (2) catch basin cleaning where the activity is limited to removing material from a sump below the elevation of the outlet pipe.

1.4 O&M Budget

MassDOT performs maintenance for stormwater management systems as part of their routine operation and maintenance budget for roadways and bridges. Budgets are managed at the district level and vary by fiscal year, depending on funding sources.

2

Long-Term Pollution Prevention Plan

This Long-Term Pollution Prevention Plan (LTPPP) describes the approach for pollution prevention and related maintenance activities for the Route 20 Intersection Improvements at Boston Post Road and Wellesley Street project in Weston. In general, long-term pollution prevention and related maintenance activities will be conducted consistent with:

- The National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer System (MS4),
- MassDOT's anticipated NPDES Transportation Separate Storm Sewer System (TS4) Permit, and
- Measures outlined in MassDOT's Stormwater Management Plan (SWMP).

This LTPPP satisfies the requirements related to pollution prevention under Massachusetts Stormwater Standards 4, 5, 6, and 10.

2.1 Practices for Long-Term Pollution Prevention

For the facilities covered, long-term pollution prevention includes the following measures.

2.1.1 Litter Pick-up

MassDOT will conduct litter pick-up from the stormwater management facilities in conjunction with routine road maintenance activities.

2.1.2 Inspection and Maintenance of Stormwater Assets

MassDOT will conduct inspection and maintenance of drainage infrastructure and the stormwater control measures (SCMs) in accordance with the O&M Plan, as described in Section 1.

2.1.3 Maintenance of Landscaped Areas

Routine mowing will be conducted according to standard MassDOT practices. SCM basin bottoms and embankments designed to impound water should be mowed as required to prevent establishment of woody vegetation.

Except in rare circumstances, MassDOT does not use fertilizers, herbicides, and pesticides for the maintenance of facilities. Exceptions include using fertilizer to ensure the survival of new plantings and herbicides to control invasive plants. Use of fertilizers and herbicides is reviewed and approved by the MassDOT Landscape Design Section and District 6 Environmental Engineer prior to application. Local Conservation Commission review may also be required.

2.1.4 Snow and Ice Management

Snow and Ice Management will be conducted consistent with the practices outlined in the MassDOT Snow and Ice Control Program Environmental Status and Planning Report (ESPR), formerly known as the Snow and Ice Control Generic Environmental Impact Report (GEIR).

In accordance with the Snow and Ice Control ESPR, no sand is used on MassDOT properties for snow and ice control. The exception to this rule is within reduced salt areas where high sodium levels have been found in drinking water sources.

2.1.5 Street Sweeping

Routine highway cleaning, with a brush-type street sweeper, will be conducted in accordance with standard MassDOT practices. Sweeping will occur annually in the Spring.

2.1.6 Prohibition of Illicit Discharges

The MassDEP Stormwater Management Standard 10 prohibits illicit discharges to the stormwater management system. Illicit discharges are discharges that do not consist entirely of stormwater, except for certain specified non-stormwater discharges.

In accordance with the existing MS4 permit and anticipated TS4 permit requirements, examples of discharges from the following sources are not considered illicit discharges:

- Firefighting activities*
- Foundation drains
- Water line flushing
- Footing drains
- Landscape irrigation
- Individual residential car washing
- Uncontaminated groundwater
- Rising groundwater
- Diverted stream flows
- Flows from riparian habitats/wetlands
- Potable water sources
- Dechlorinated swimming pool water
- Street wash waters
- Wash water from residential buildings (no detergents)
- Condensation from air conditioning units
- Run-on from private driveways caused by precipitation
- Lawn watering
- Water from crawl space pumps

*Water from firefighting activities is allowed and need only be addressed where they are identified as significant sources of pollutants to waters of the United States.

Based on plan review and confirmation in the field, there are no known or proposed illicit connections associated with the the Route 20 Intersection Improvements at Boston Post Road and Wellesley Street project in Weston. Should an interconnection to the stormwater management system be identified, the MassDOT PM will coordinate with the District Permits Engineer to confirm if the connections are authorized. For unauthorized connections, the MassDOT PM and/or MassDOT Environmental Services Section will investigate the connections and if they are determined to be illicit, the connections will be managed through MassDOT's Illicit Discharge Detection and Elimination (IDDE) program and/or through other agencies.

2.1.7 Spill Prevention and Response

Response procedures will be implemented for any significant release of hazardous materials such as fuels, oils, or chemical materials that have the potential of discharging to Stony Brook Reservoir an Outstanding Resource Water.

Reportable quantities will immediately be reported to the applicable Federal, State, and local agencies as required by law. Reportable quantities of chemical, fuels, or oils are established under the Clean Water Act and enforced through MassDEP. The MassDEP Emergency Response Program shall be immediately notified in accordance with required procedures for the report of a release (telephone (888) 304-1133).

MassDOT works with first responders and/or public water supply owners to determine the best approach to protect water supplies, and provides training and materials to carry out action plans. In the case of a spill, applicable containment and clean-up procedures will be performed immediately. These procedures are implemented in accordance with the Unified Response Manual at the local level by first responders, which includes the Weston's local public safety departments (e.g., fire, police, public works, board of health). MassDOT will be on-site to aid with traffic control and to provide clean-up supplies, as necessary. Spill material collected during the response will be promptly removed and disposed of in accordance with Federal, State, and local requirements. If necessary, a licensed emergency response contractor will assist in cleanup of releases depending on the amount of the release and the ability of the responsible party to perform the required response.

Memorandum

Attachment D

Roadway Drainage Analysis

Roadway Drainage Analysis

VHB designed a closed drainage system on Route 20 (Boston Post Road) in Weston, MA to improve stormwater drainage within the project area. This closed drainage system discharges to existing drainage infrastructure and neighboring wetlands. The drainage analysis followed procedures in Chapter 8 of the 2006 MassDOT Project Development & Design Guide (PDDG).

Methodology

The following design criteria were used in the drainage analysis:

- The design storm is the 10% Annual Exceedance Probability (AEP) event (10-year storm).
- The 10-year storm, 5-minute duration rainfall intensity is 7.08 inches per hour in Weston, MA (NOAA Atlas 14).
- The Rational Method was used to predict stormwater runoff.
- Wellesley Street is classified as an urban collector road with a speed limit of less than 45 miles per hour. Per the MassDOT PDDG, the maximum allowable gutter spread for a road of this classification is the shoulder plus half of through traffic lane (six feet minimum).
- Boston Post Road is classified as an urban arterial road with a speed limit of less than 45 miles per hour. Per the MassDOT PDDG, the maximum allowable gutter spread for a road of this classification is the shoulder width plus 3 feet (six feet minimum).
- Minimum pipe size is 12-inch diameter.
- Minimum pipe velocity is typically 3 feet per second (fps) when the pipe is flowing 1/3 full.
- Maximum pipe velocity is typically 10 fps.

There are several instances where some of the above design criteria were unable to be achieved due to site and geometric constraints. These instances are described in later sections.

Gutter Spread Analysis

VHB used Bentley StormCAD Version V8i (StormCAD) to calculate the gutter spread at each proposed catch basin. Catch basins are proposed to achieve gutter spreads below the maximum allowable according to MassDOT PDDG Chapter 8 standards to the maximum extent practicable. See the attached Gutter Spread Analysis Results.

Catch basins that were evaluated for gutter spread are at or below the maximum allowable spread requirement for the 10-year storm except CB-19. CB-19 exceeds the allowable gutter spread of 6’ by 0.9’. CB-19 is a relocated inlet due to the curb re-alignment and receives the same volume of runoff as in the existing condition.

Hydraulic Grade Line Analysis

StormCAD was also used to establish pipe inverts, sizes, and material in the drainage system. These pipe characteristics were determined through evaluation of the Hydraulic Grade Line (HGL), pipe capacity, and velocity of stormwater in the proposed pipes. The analysis also included a determination of pipe materials based on the minimum cover allowed for pipe materials per MassDOT PDDG Chapter 8.

The recommended amount of freeboard between the HGL and the rim elevations of the proposed structures is 2 feet. Calculated HGL at all proposed structures comply with this recommendation.

Additionally, all proposed pipes meet the minimum cover requirements. All proposed pipes are designed to maintain a minimum of 3 fps velocity when flowing at a depth of 1/3 full of the diameter, and not to exceed 10 fps during the 10-year storm. There is one proposed pipe that has a velocity of 2.87 fps. This pipe carries water from CB30, which is a catch basin designed for redundancy in the event of a snow curb or major storm event. See the attached HGL Analysis Results.

evation ound) (ft)	Inlet C	Local CA (ft^2)	System Intensity (in/h)	Inlet	Manning's n (Inlet)	Inlet Location	Intercepted Rational Flow (ft^3/s)	Capture Efficiency (Calculated) (%)	Bypassed Rational Flow (ft^3/s)	Longitudinal Slope (Inlet) (%)	Road Cross Slope (%)	Depth (Gutter) (ft)	Spread / Top Width (ft)	Bypass Targ
176.03	0.9	0.122	7.072	CB	0.013	On Grade	0.95	72.5	0.36	0.001	0.03	3.2	9	
176.05	0.9	0.135	7.072	CB	0.013	On Grade	1.08	66.3	0.55	0.003	0.03	2.8	7.8	
176.77	0.9	0.09	7.072	CB	0.013	On Grade	1	69.4	0.44	0.006	0.03	2.3	6.5	01 (PR-Rte20 Dra
176.77	0.9	0.15	7.072	CB	0.013	On Grade	1.24	64.8	0.67	0.006	0.03	2.6	7.3	02 (PR-Rte20 Dra
178.79	0.9	0.09	7.072	CB	0.013	On Grade	0.53	82	0.12	0.04	0.02	1	4.4	06 (PR-Rte20 Dra
179	0.9	0.126	7.072	CB	0.013	On Grade	0.69	76.5	0.21	0.04	0.02	1.2	4.9	06 (PR-Rte20 Dra
178.29	0.65	0.143	7.072	CB	0.013	On Grade	0.79	62.7	0.47	0.01	0.02	1.7	7.3	06 (PR-Rte20 Dra
178.22	0.9	0.081	7.072	CB	0.013	On Grade	0.61	48.5	0.65	0.02	0.01	1.2	9.8	07 (PR-Rte20 Dra
177.9	0.9	0.099	7.072	CB	0.013	On Grade	0.51	72.2	0.2	0.01	0.02	1.4	5.9	07 (PR-Rte20 Dra
178.41	0.9	0.108	7.072	CB	0.013	On Grade	0.53	68.6	0.24	0.005	0.02	1.7	6.9	14 (PR-Rte20 Dra
178.97	0.9	0.162	7.072	CB	0.013	On Grade	0.72	62.2	0.44	0.005	0.02	1.9	8	14 (PR-Rte20 Dra
179.4	0.9	0.108	7.072	CB	0.013	On Grade	0.53	68.6	0.24	0.005	0.02	1.7	6.9	12 (PR-Rte20 Dra
180.49	(N/A)	0	7.072	CB	0.013	On Grade	0	100	0	0.02	0.02	0	0	
181.23	(N/A)	0	7.072	CB	0.013	On Grade	0	100	0	0.02	0.02	0	0	
181.49	0.9	0.009	7.072	CB	0.013	On Grade	0.06	96.51	0	0.001	0.02	0.9	3.7	

ode	Diameter (in)	Length (User Defined) (ft)	Material	Manning's n	Flow (ft^3/s)	Capacity (Full Flow) (ft^3/s)	Flow / Capacity (Design) (%)	Invert (Start) (ft)	Invert (Stop) (ft)	Slope (Calculated) (%)	Velocity (ft/s)	Cover (Start) (ft)	Cover (Stop) (ft)	Elevation Ground (Start) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (In) (ft)	Hydraulic Grade Line (Out) (ft)	
inage)	12	25.6	RCP	0.013	0.06	7.38	0.0	177.5	176.4	0.043	2.87	2.99	3.09	181.49	180.49	177.60	176.53	
inage)	12	38.8	RCP	0.013	0.06	1.81	0.0	176.4	176.3	0.003	1.07	3.09	3.93	180.49	181.23	176.53	176.40	
inage)	12	49	RCP	0.013	0.06	1.61	0.0	175.3	175.4	-0.002	0.08	4.93	2.88	181.23	179.28	175.57	175.53	
inage)	12	44.6	RCP	0.013	0.71	6.08	11.7	173.6	174.9	-0.029	0.91	4.72	3.6	179.32	179.5	175.60	175.57	
inage)	12	54.3	RCP	0.013	1.18	2.65	44.6	174.8	174.5	0.006	3.27	3.7	3.78	179.5	179.28	175.57	175.53	
inage)	12	9	RCP	0.013	0.53	3.75	14.1	175	174.9	0.011	3.37	3.4	3.6	179.4	179.5	175.57	175.57	
inage)	15	190.6	RCP	0.013	6.24	5.54	120.6	174.1	172.7	0.007	5.09	3.93	4.55	179.28	178.5	175.53	173.71	
inage)	10	48.9	DIP	0.012	0.72	5.21	13.8	176.47	173.7	0.057	7.09	1.66	4.79	178.97	179.32	176.84	175.60	
inage)	12	32.1	RCP	0.013	0.69	6.6	10.4	174.3	173.2	0.034	5.44	3.7	4.09	179	178.29	174.65	173.71	
inage)	12	58	RCP	0.013	3.00	5.92	50.7	171.3	169.7	0.028	7.56	5.87	8.12	178.17	178.83	172.04	170.20	
inage)	15	48.1	RCP	0.013	6.51	11.4	62.2	171.2	169.7	0.031	9.60	6.05	7.87	178.5	178.83	172.23	170.40	
inage)	48	20.3	RCP	0.013	8.16	805.9	1.2	168.6	162.2	0.315	20.68	6.22	12	178.83	178.2	169.43	162.51	
inage)	12	54.9	RCP	0.013	0.53	5.04	10.4	174.3	173.2	0.02	4.16	3.49	4.09	178.79	178.29	174.60	173.71	
inage)	12	29.3	RCP	0.013	0.53	2.94	17.9	174.8	174.6	0.007	2.83	2.61	2.9	178.41	178.5	175.10	174.89	
inage)	12	70.5	RCP	0.013	1.98	2.32	85.2	173	172.7	0.004	3.32	4.29	4.41	178.29	178.11	173.71	173.30	
inage)	12	9	RCP	0.013	0.79	6.51	12.2	173.5	173.2	0.033	5.61	3.79	4.09	178.29	178.29	173.87	173.71	
inage)	12	12.7	RCP	0.013	0.51	7.07	7.2	173.5	173	0.039	5.23	3.4	4.17	177.9	178.17	173.80	173.19	
inage)	12	45.9	RCP	0.013	2.53	4.99	50.7	172.2	171.3	0.02	6.37	4.91	5.87	178.11	178.17	172.88	172.04	
inage)	12	10.3	RCP	0.013	0.61	7.02	8.7	172.9	172.5	0.039	5.48	4.27	4.61	178.17	178.11	173.22	172.88	
inage)	10	19.3	DIP	0.012	0.61	3.86	15.8	175.6	175	0.031	5.47	1.79	2.34	178.22	178.17	175.94	175.22	
inage)	12	53.2	RCP	0.013	1.24	5.98	20.7	172	170.5	0.028	6.01	3.77	5.2	176.77	176.7	172.47	171.45	
inage)	12	58.5	RCP	0.013	1.00	5.89	16.9	172.6	171	0.027	5.59	3.17	4.69	176.77	176.69	173.02	171.63	
inage)	12	41.8	RCP	0.013	4.08	3.49	117.1	170.4	170	0.01	5.20	5.3	0.25	176.7	171.25	171.45	170.85	Exist
inage)	12	44.4	RCP	0.013	2.92	3.38	86.4	170.9	170.5	0.009	4.85	4.79	5.2	176.69	176.7	171.63	171.45	
inage)	12	126.2	RCP	0.013	2.01	3.62	55.7	172.3	171	0.01	4.73	2.92	4.69	176.22	176.69	172.91	171.63	
inage)	12	45.2	RCP	0.013	1.08	3.75	28.9	172.9	172.4	0.011	4.13	2.15	2.82	176.05	176.22	173.34	172.91	
inage)	12	15.5	RCP	0.013	0.95	4.05	23.4	172.6	172.4	0.013	4.21	2.43	2.82	176.03	176.22	173.01	172.91	
	48" BOX CULVERT	63	RCP	0.013	8.16	333.9	2.9	159.8	157.7	0.033	7.84	14.4	17.27	178.2	178.97	160.31	158.52	
	48" BOX CULVERT	99.1	RCP	0.013	8.15	1.83	534.5	157.7	157.7	0	0.51	17.27	3.3	178.97	165	158.52	158.21	Unk (Ass

Memorandum

Attachment E

Cooks Pond Pump Station Memo

TOWN OF WESTON
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC WORKS

THOMAS E. CULLEN, JR., P.E.
DIRECTOR OF OPERATIONS

RICHARD E. SULLIVAN
Deputy Director of Operations

JASON LAVOIE, P.E.
Town Engineer

DAVID FAVA
Water Superintendent

INTEROFFICE MEMORANDUM

TO: TIM MCINTOSH, P.E. - VHB

FROM: JASON LAVOIE, P.E. – TOWN OF WESTON

SUBJECT: RT 20/WELLESLEY TIP – COOKS POND PUMP STATION

DATE: MARCH 8, 2024

CC:

Good Afternoon Tim,

The Cooks Pond pump station is maintained by The Town of Weston. The pump station sits atop a drainage pipe that conveys both Route 20 surface flows and flow from a stream that begins in the Highland Street area and makes its way to the Route 20/Wellesley Intersection.

A portion of the drainage pipe that conveys this water is exposed within the pump house. A pump is then used to lift a small percentage of the flow and discharge said flow into Cooks Pond. The whole flow comes back together just east of Cooks Pond and eventually flows into Mill Pond, and then into Duck Pond.

This pump station came about years ago when Boston Post Road By-Pass was constructed. The new drainage system associated with this construction was basically taking away the water source for Cooks Pond, so the pump station was installed with the agreement that the Town would maintain the pump station and Cooks Pond.

If you have any questions please feel free to contact me.

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	1	71
	PROJECT FILE NO.	608940	

TITLE SHEET & INDEX

14360_HDI(COV) - NOI.DWG Plotted on 29-Oct-2024 1:09 PM

INTERSECTION IMPROVEMENTS

ROUTE 20 AT BOSTON POST ROAD & WELLESLEY STREET

IN THE TOWN OF

WESTON

MIDDLESEX COUNTY

FEDERAL AID PROJECT NO. TBD

100% SUBMITTAL

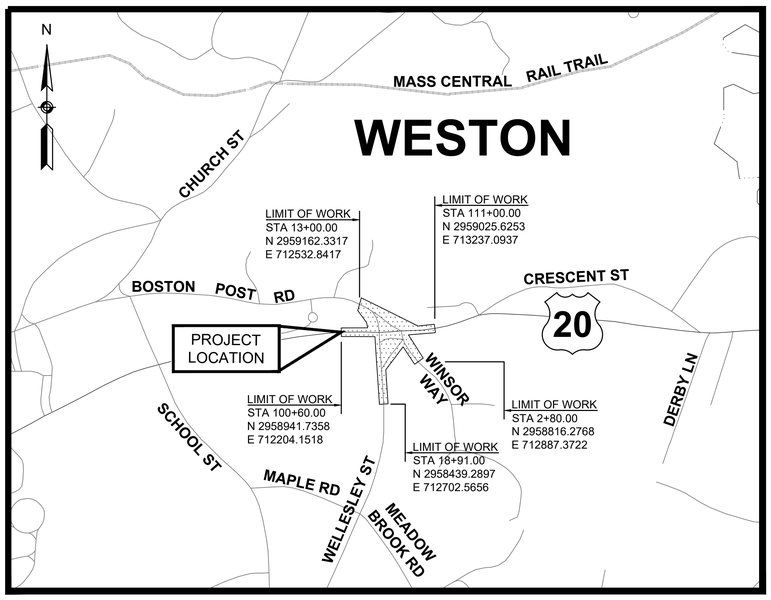
THESE PLANS ARE SUPPLEMENTED BY THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

INDEX

SHEET NO.	DESCRIPTION	
1	TITLE SHEET & INDEX	
2 - 3	LEGEND & ABBREVIATIONS	
4	KEY PLAN	
~~5~~	~~BORING LOGS~~	NOT INCLUDED
~~6 - 9~~	~~BASELINE TIE PLANS~~	NOT INCLUDED
10 - 13	TYPICAL SECTIONS	
14 - 16	CONSTRUCTION PLANS	
~~17 - 21~~	~~PROFILES~~	NOT INCLUDED
~~22 - 25~~	~~CURB TIE & GRADING PLANS~~	NOT INCLUDED
26 - 28	DRAINAGE AND UTILITY PLANS	
~~29 - 31~~	~~TRAFFIC SIGN & PAVEMENT MARKINGS~~	NOT INCLUDED
~~32 - 33~~	~~TRAFFIC SIGN SUMMARY SHEET~~	NOT INCLUDED
~~34 - 35~~	~~TRAFFIC SIGNAL PLANS~~	NOT INCLUDED
~~36 - 40~~	~~TEMPORARY TRAFFIC CONTROL PLANS~~	NOT INCLUDED
~~41 - 43~~	~~SUGGESTED CONSTRUCTION STAGING~~	NOT INCLUDED
44 - 48	CONSTRUCTION DETAILS	
~~49 - 53~~	~~PEDESTRIAN CURB RAMP DETAILS~~	NOT INCLUDED
~~54~~	~~RETAINING WALL~~	NOT INCLUDED
~~55 - 61~~	~~CROSS SECTIONS - ROUTE 20~~	NOT INCLUDED
~~62 - 66~~	~~CROSS SECTIONS - WELLESLEY STREET~~	NOT INCLUDED
~~67 - 69~~	~~CROSS SECTIONS - BOSTON POST ROAD~~	NOT INCLUDED
~~70 - 71~~	~~CROSS SECTIONS - WINSOR WAY~~	NOT INCLUDED

COLOR CODES RA IMPACT PLAN

- 25-FT NDZ
- 100-FT RA
- 200-FT RA



0 500 1000 2000 3000

SCALE: 1" = 500'

LENGTH OF PROJECT = 1,050 FEET = 0.199 MILES

DESIGN DESIGNATION

	ROUTE 20 WEST OF BOSTON POST ROAD	ROUTE 20 EAST OF BOSTON POST ROAD	BOSTON POST ROAD NORTH OF ROUTE 20	WELLESLEY STREET SOUTH OF ROUTE 20
DESIGN SPEED	40 MPH	40 MPH	35 MPH	30 MPH
ADT (2018)	19,600 VPD	33,100 VPD	5,000 VPD	8,900 VPD
ADT (2028)	20,600 VPD	34,600 VPD	5,300 VPD	9,400 VPD
K	8%	7%	12%	11%
D	51.1% WB	55.6% WB	90.9% NB	53.1% NB
T (PEAK HOUR)	2.6%	2.6%	3.3%	0.6%
T (AVERAGE DAY)	2.9%	2.9%	5.9%	1.6%
DHV	1,575 VPH	2,535 VPH	645 VPH	990 VPH
DDHV	805 VPH	1,409 VPH	585 VPH	525 VPH
FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL	URBAN PRINCIPAL ARTERIAL	URBAN MINOR ARTERIAL	URBAN COLLECTOR

DRAFT
NOTICE OF INTENT

FOR PERMITTING PURPOSES ONLY
NOT APPROVED FOR CONSTRUCTION

DATE	DESCRIPTION	REV #
12/02/2024	100% SUBMISSION	
03/25/2024	75% RE-SUBMISSION	
06/13/2023	75% SUBMISSION	
03/13/2020	25% SUBMISSION	

massDOT Massachusetts Department of Transportation Highway Division

APPROVED

CHIEF ENGINEER DATE

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
CB	CB	CATCH BASIN
		CATCH BASIN CURB INLET
		CHANGE IN TYPE (CIT)
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
x	x	CHAIN LINK OR METAL FENCE
		WOOD FENCE
		HAY BALES/SILT FENCE
		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 OR MAST ARM 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 (12" WIDTH)
	CW	CROSSWALK (SEE DETAIL SHEET ##) (WIDTHS AS NOTED)
	SWL	SOLID WHITE LINE (6" LINE WIDTH)
	BWL	BROKEN WHITE LINE (6" LINE WIDTH)
	DWLEx	DOTTED WHITE LINE, 2' LINE W/6' SPACING (6" LINE WIDTH)
	DBYL	DOUBLE YELLOW LINE (6" LINE WIDTH)
		BIKE LANE SYMBOL (SEE DETAIL SHEET ##)
	SWCHL	SOLID WHITE CHANNELIZED LINE (12" LINE WIDTH)
	SYCHL	SOLID YELLOW CHANNELIZED LINE (12" LINE WIDTH) (SEE DETAIL SHEET ##)
		LANE-REDUCTION ARROW (SEE DETAIL SHEET ##)
		SHARED LANE MARKING (SHARROW) (SEE DETAIL SHEET ##)
		BICYCLE CROSSING (SEE DETAIL SHEET ##)
		TWO STAGE TURN QUEUE BOX (SEE DETAIL SHEET ##)
		SEPARATED BIKE LANE MARKING (SEE DETAIL SHEET ##)
		BIKE LEGEND AT STOP LINE (SEE DETAIL SHEET ##)

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
PCR	PEDESTRIAN CURB RAMP
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

ABBREVIATIONS (cont.)

GENERAL

PWW	PAVED WATER WAY
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
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

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	2	71
PROJECT FILE NO.	608940		

LEGEND & ABBREVIATIONS

14380_HDLEG.DWG Plotted on 23-Oct-2024 8:43 PM

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	3	71
PROJECT FILE NO.	608940		

LEGEND & ABBREVIATIONS

14360_HDLEG).DWG Plotted on 23-Oct-2024 8:43 PM

GENERAL ABBREVIATIONS

ABAN	ABANDON
ADJ	ADJUST
ADJ (BO-EV)	ADJUST BY OTHERS EVERSOURCE
ADJ (BO-NG)	ADJUST BY OTHERS NATIONAL GRID
ADJ (BO-VZ)	ADJUST BY OTHERS VERIZON
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
BO-EV	BY OTHERS EVERSOURCE
BO-NG	BY OTHERS NATIONAL GRID
BO-VZ	BY OTHERS VERIZON
BOS	BOTTOM OF SLOPE
BR.	BRIDGE
CC	CEMENT CONCRETE
CCM	CEMENT CONCRETE MASONRY
CEM	CEMENT
CI	CURB INLET
CLF	CHAIN LINK FENCE
CL	CENTERLINE
CO.	COUNTY
CONC	CONCRETE
CONT	CONTINUOUS / CONTINUED
CONST	CONSTRUCTION
CR GR	CROWN GRADE
DIA	DIAMETER
DWY	DRIVEWAY
ELEV (or EL.)	ELEVATION
EMB	EMBANKMENT
EOP	EDGE OF PAVEMENT
EQ	EQUAL
EXIST (or EX)	EXISTING
EXC	EXCAVATION
FDN.	FOUNDATION
FDP	FULL DEPTH PAVEMENT
FLDSTN	FIELDSTONE
GAR	GARAGE
GD	GROUND
GRAN	GRANITE
GRAV	GRAVEL
GRD	GUARD
HMA	HOT MIX ASPHALT
HOR	HORIZONTAL
HWY	HIGHWAY
JCT	JUNCTION
LOAM	LOAM BORROW
LSA	LANDSCAPED AREA
LT	LEFT
MAHWL	MEAN AVERAGE HIGH WATER LINE
MAX	MAXIMUM
MB	MAILBOX
MHB	MASSACHUSETTS HIGHWAY BOUND
MIN	MINIMUM
MOD	MODIFIED
MSE	MECHANICALLY STABILIZED EARTH
NERR	NEW ENGLAND RAILROAD
NIC	NOT IN CONTRACT
NO.	NUMBER
NTS	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
P.G.L.	PROFILE GRADE LINE
PREV	PREVIOUS/PREVIOUSLY
PROJ	PROJECT
PROP	PROPOSED
PSB	PLANTABLE SOIL BORROW
PVMT	PAVEMENT
R&D	REMOVE AND DISCARD
R&R	REMOVE AND RESET
R&S	REMOVE AND STACK
RD	ROAD
RDWY	ROADWAY
REB	REBUILD
REM	REMOVE
REMOD	REMODEL
RET	RETAIN
RET WALL	RETAINING WALL
ROW	RIGHT OF WAY
RR	RAILROAD
RT	RIGHT
SB	STONE BOUND

GENERAL ABBREVIATIONS (CONT)

SHLD	SHOULDER
SHLO/S.H.L.O.	STATE HIGHWAY LAYOUT LINE
ST	STREET
STA	STATION
STD	STANDARD
SW	SIDEWALK
TEMP	TEMPORARY
TC	TOP OF CURB
TOS	TOP OF SLOPE
TRANS	TRANSITION
TRM	TURF REINFORCING MAT
TYP	TYPICAL
VAR	VARIES
VERT	VERTICAL
WCR	WHEEL CHAIR RAMP
WP	WORKING POINT
X-SECT	CROSS SECTION

UTILITY ABBREVIATIONS

CB	CATCH BASIN
CBCI	CATCH BASIN WITH CURB INLET
CIP	CAST IRON PIPE
CIT	CHANGE IN TYPE
CMP	CORRUGATED METAL PIPE
CSP	CORRUGATED STEEL PIPE
DI	DROP INLET
DIP	DUCTILE IRON PIPE
FES	FLARED END SECTION
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
GG	GAS GATE
GI	GUTTER INLET
GIP	GALVANIZED IRON PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HDW	HEADWALL
HYD	HYDRANT
INV	INVERT
LB	LEACH BASIN
LP	LIGHT POLE
MH	MANHOLE
MW	MONITORING WELL
OHW	OVERHEAD WIRE
PVC	POLYVINYLCHLORIDE PIPE
PWW	PAVED WATER WAY
RCP	REINFORCED CONCRETE PIPE
SMH	SEWER MANHOLE
TSV&B	TAPPING SLEEVE VALVE & BOX
UP	UTILITY POLE
WG	WATER GATE
WIP	WROUGHT IRON PIPE
WM	WATER METER/WATER MAIN

ALIGNMENT & GRADING ABBREVIATIONS

CC	CENTER OF CURVE
HP	HIGH POINT
I.T.	INTERSECTION OF TANGENT
LP	LOW POINT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
PNT	POINT
POC	POINT ON CURVE
POT	POINT ON TANGENT
PRC	POINT OF REVERSE CURVATURE
PT	POINT OF TANGENCY
∠PT	ANGLE POINT
R	RADIUS OF CURVATURE
T	TANGENT DISTANCE OF CURVE
TAN	TANGENT
25.45	SPOT ELEVATION

PROFILE ABBREVIATIONS

AD	ALGEBRAIC DIFFERENCE IN RATES OF GRADE
HSD	HORIZONTAL SIGHT DISTANCE
K	RATE OF VERTICAL CURVATURE
L	LENGTH OF CURVE
PVC	POINT OF VERTICAL CURVATURE
PVCC	POINT OF VERTICAL COMPOUND CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVRC	POINT OF VERTICAL REVERSE CURVATURE
PVT	POINT OF VERTICAL TANGENCY
SSD	STOPPING SIGHT DISTANCE
VC	VERTICAL CURVE

TRAFFIC SIGNAL

AADT	ANNUAL AVERAGE DAILY TRAFFIC
CAB.	CABINET
CCVE	CLOSED CIRCUIT VIDEO EQUIPMENT
DW	STEADY DON'T WALK
FDW	FLASHING DON'T WALK
FR	FLASHING RED LEFT ARROW
FR	FLASHING RED RIGHT ARROW
FR	FLASHING CIRCULAR RED
FY	FLASHING YELLOW LEFT ARROW
FY	FLASHING YELLOW RIGHT ARROW
FY	FLASHING CIRCULAR YELLOW
G	STEADY GREEN LEFT ARROW
G	STEADY GREEN RIGHT ARROW
G	STEADY GREEN VERTICAL ARROW
GSL	STEADY GREEN SLASH LEFT ARROW
GSR	STEADY GREEN SLASH RIGHT ARROW
G	STEADY CIRCULAR GREEN
OL	OVERLAP
PED	PEDESTRIAN
PTZ	PAN, TILT, ZOOM
R	STEADY RED LEFT ARROW
R	STEADY RED RIGHT ARROW
R	STEADY CIRCULAR RED
TR SIG	TRAFFIC SIGNAL
TSC	TRAFFIC SIGNAL CONDUIT
W	STEADY WALK
Y	STEADY YELLOW LEFT ARROW
Y	STEADY YELLOW RIGHT ARROW
Y	STEADY CIRCULAR YELLOW

GENERAL NOTES:

1. EXISTING CONDITIONS AND TOPOGRAPHICAL INFORMATION FROM AN ACTUAL FIELD SURVEY CONDUCTED BY VHB, INC. IN OCTOBER, 2018 AND AUGMENTED WITH ADDITIONAL SURVEY IN SEPTEMBER 2019 AND MARCH 2023. VHB FIELD BOOK #1282.
2. THE RIGHT-OF-WAY LINES AND RECORD BASELINES SHOWN ON THIS PLAN ARE BASED ON STATE HIGHWAY LAYOUTS #289 DATED 1898, #2746 DATED 1931, #2747 DATED 1931, #2786 DATED 1931. THE MONUMENTS FOUND ON THIS PLAN WERE FIELD LOCATED AND USED TO ESTABLISH THE RIGHT-OF-WAY LINES. THE PROPERTY LINES OF INDIVIDUAL OWNERS ALONG THE RIGHT-OF-WAY SHOWN ON THIS PLAN ARE FROM RECORD DEEDS AND PLANS. INDIVIDUAL ABUTTER PROPERTIES WERE NOT SURVEYED.
3. THE WETLANDS SHOWN ON THIS PLAN WERE FLAGGED AND FIELD LOCATED BY VHB ENVIRONMENTAL DEPARTMENT IN AUGUST, 2023.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND GRADES IN THE FIELD BEFORE COMMENCING WORK AND PROMPTLY NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
5. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
6. CONTRACTOR SHALL NOTIFY DIG SAFE 72 HOURS PRIOR TO ANY ACTIVITY.
7. THE EXISTING DRAINAGE INVERT ELEVATIONS ARE LISTED IN A CLOCKWISE DIRECTION WITH THE OUTLET ELEVATION LAST.
8. DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE & GRADE UP TO A DEPTH OF 5' SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5' WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.
9. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH PROPOSED CONDUIT AND SIGNAL EQUIPMENT. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER.
10. 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.
11. THE CONTRACTOR SHALL ALTER THE MASONRY OF THE TOP SECTION OF ALL EXISTING DRAINAGE AND SEWER STRUCTURES AS NECESSARY FOR CHANGES IN GRADE, AND RESET ALL WATER AND DRAINAGE FRAMES, GRATES AND BOXES TO THE PROPOSED FINISH SURFACE GRADE. REQUIRED NEW MASONRY SHALL BE CLAY BRICK.
12. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
13. EXISTING UTILITY POLES WILL BE RELOCATED BY OTHERS IF REQUIRED.
14. TREES AND SHRUBS WITHIN THE LIMITS OF GRADING SHALL BE REMOVED ONLY UPON APPROVAL OF THE ENGINEER.
15. 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 EXPENSE TO THE OWNER.
16. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R).
17. JOINTS BETWEEN NEW ASPHALT CONCRETE ROADWAY PAVEMENT AND SAWCUT EXISTING PAVEMENT SHALL BE THOROUGHLY COATED WITH A HOT APPLIED PAVEMENT JOINT ADHESIVE MEETING THE REQUIREMENTS OF SUBSECTION 450 OF 2023 STANDARD SPECIFICATIONS.
18. AFTER MILLING OPERATIONS AND PRIOR TO PAVING THE SUPERPAVE INTERMEDIATE OR SURFACES COURSES THE ENGINEER SHALL EVALUATE THE MILLED SURFACE AND SHALL APPLY THE APPROPRIATE REPAIR METHOD IF REQUIRED.
19. EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE R&S UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
20. MOUNTING HEIGHT OF POST MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE THE CURB OR SIDEWALK, OR TO THE ELEVATION OF THE NEAR EDGE OF THE TRAVELED WAY, SHALL BE 7 FEET UNLESS OTHERWISE SPECIFIED ON THE PLANS.
21. IF SUITABLE, EXISTING GRANITE CURB & EDGING SHALL BE RE-USED IN THE PROPOSED WORK, EXCEPT CURVED STONES OF A DIFFERENT RADIUS THAN PROPOSED CURB.
22. THE CONTRACTOR SHALL EXERCISE DUE CARE WHEN WORKING AROUND ALL PROPERTY BOUNDS WHICH ARE TO REMAIN. SHOULD ANY DAMAGE TO A BOUND RESULT FROM THE ACTIONS OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE THE BOUND REPLACED AND/OR REALIGNED BY A LICENSED PROFESSIONAL SURVEYOR AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST.
23. DISPOSAL OF ALL SURPLUS MATERIAL SHALL BE AS APPROVED BY THE ENGINEER AND OWNER.
24. LATERAL DRAIN PIPES SHALL BE INSTALLED WITH A PITCH OF 0.01 FOOT PER FOOT (MINIMUM) UNLESS NOTED OTHERWISE ON THE PLANS.
25. IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.

HORIZONTAL AND VERTICAL DATUM NOTES:

1. THE COORDINATES SHOWN HEREON THAT ARE EXPRESSED IN US SURVEY FEET ARE RESULTANT FROM VHB EXISTING CONTROLS, GNSS RTK SURVEY USING LEICA SMARTNET FOR POINTS 1-2, CONVENTIONAL TOTAL STATION TRAVERSING FOR POINTS 3-8, AND ARE RELATED TO THE NORTH AMERICAN DATUM OF 1983/NAD83(2011), SPC83/MASSACHUSETTS (MAINLAND ZONE), EPOCH 2010.00. SOURCE CONTROL POINTS COORDINATES, ELEVATIONS AND COMBINED SCALE FACTOR WERE ESTABLISHED BY VHB AND ARE LISTED BELOW:

POINT ID	NORTHING (USFT)	EASTING (USFT)	ELEV (USFT)	COMBINED GROUND TO GRID S.F.
1	2958988.438	712746.751	179.140	0.9999646002
2	2958981.128	712470.394	176.170	0.9999647415

2. ELEVATIONS SHOWN HEREON ARE RESULTANT FROM VHB EXISTING CONTROLS AND DIFFERENTIAL LEVELING AND ARE RELATED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) GEOID 12B AND ARE RELATIVE POINTS 1 AND 2, AS LISTED ABOVE.
3. THE TRAVERSE LINES ARE OPEN ENDED. THE SCALE FACTOR AT POINT 1 IS 0.9999646002 WHICH SHOULD PROVIDE A GOOD AVERAGE SCALE FACTOR FOR THE SITE.
4. VERTICAL MISCLOSURE BETWEEN 2 AND 1 WAS 0.045' USING GNSS RTK LEICA SMARTNET WHEN COMPARED TO DIFFERENTIAL LEVELS.
5. HORIZONTAL MISCLOSURE BETWEEN 2 AND 1 WAS 0.01' WHEN COMPARED TO TOTAL STATION DATA. POINT 2 WAS HELD FOR A FIXED LOCATION HORIZONTALLY AND VERTICALLY DUE TO ITS BETTER SUSTAINABILITY FOR GNNS SURVEYS.

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	4	71
PROJECT FILE NO.	608940		

KEY PLAN

14300_HDK(KEY).DWG Plotted on 23-Oct-2024 8:45 PM

N

BEGINING OF WORK
LIMIT OF PAVING
STA 100+60.00
N 2958941.7358
E 712204.1518

END OF WORK
LIMIT OF PAVING
STA 13+00.00
N 2959162.3317
E 712532.8417

END OF WORK
LIMIT OF PAVING
STA 111+00.00
N 2959025.6253
E 713237.0937

END OF WORK
LIMIT OF PAVING
STA 2+80.00
N 2958816.2768
E 712887.3722

END OF WORK
LIMIT OF PAVING
STA 18+91.00
N 2958439.2897
E 712702.5656

BOSTON POST RD

ROUTE 20

WELLESLEY STREET

WINSOR WAY

B-1 B-2 B-3 B-4 B-5 B-6

15 | 18 | 23 | 27 | 30

14 | 17, 20 | 22 | 26 | 29

16 | 19, 21 | 24 | 28 | 31

LEGEND

- XX CONSTRUCTION PLANS
- XX PROFILES
- XX CURB TIE AND GRADING PLANS
- XX DRAINAGE AND UTITLITY PLANS
- XX SIGN AND PAVEMENT MARKINGS PLANS
- BORINGS

0 50 100 150 200
SCALE: 1" = 50'

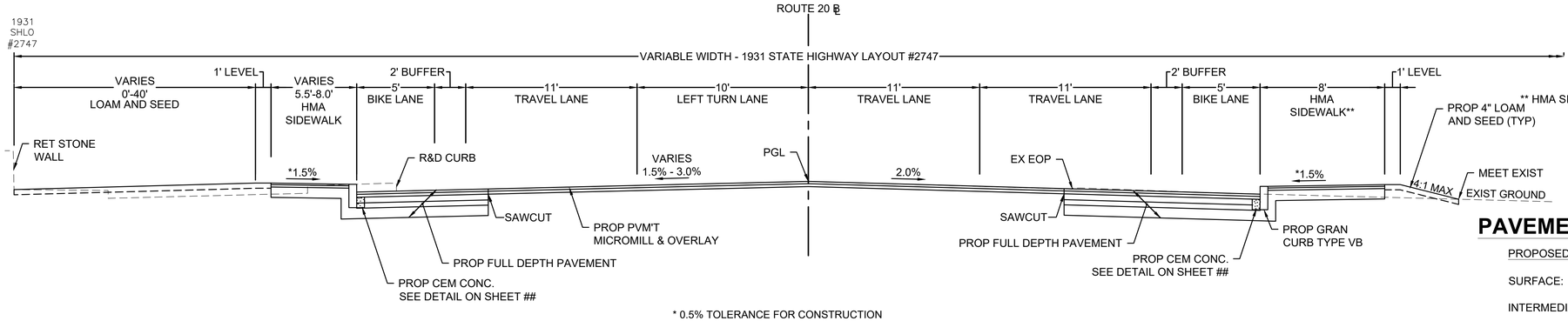
4.3 March 2019

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	10	71
PROJECT FILE NO.	608940		

TYPICAL SECTIONS

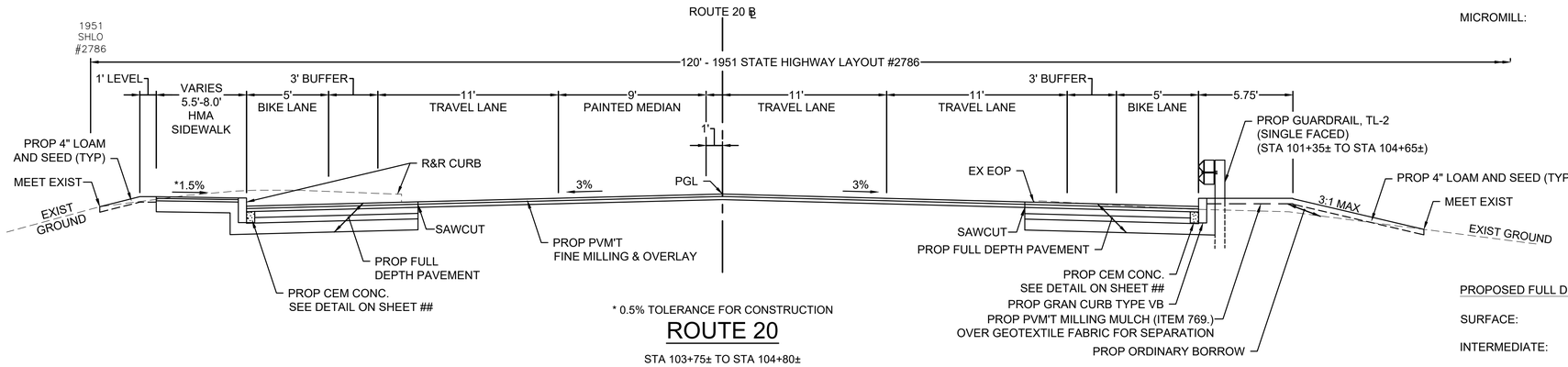
14360_HD(TYP).DWG Plotted on 23-Oct-2024 8:46 PM



* 0.5% TOLERANCE FOR CONSTRUCTION

ROUTE 20

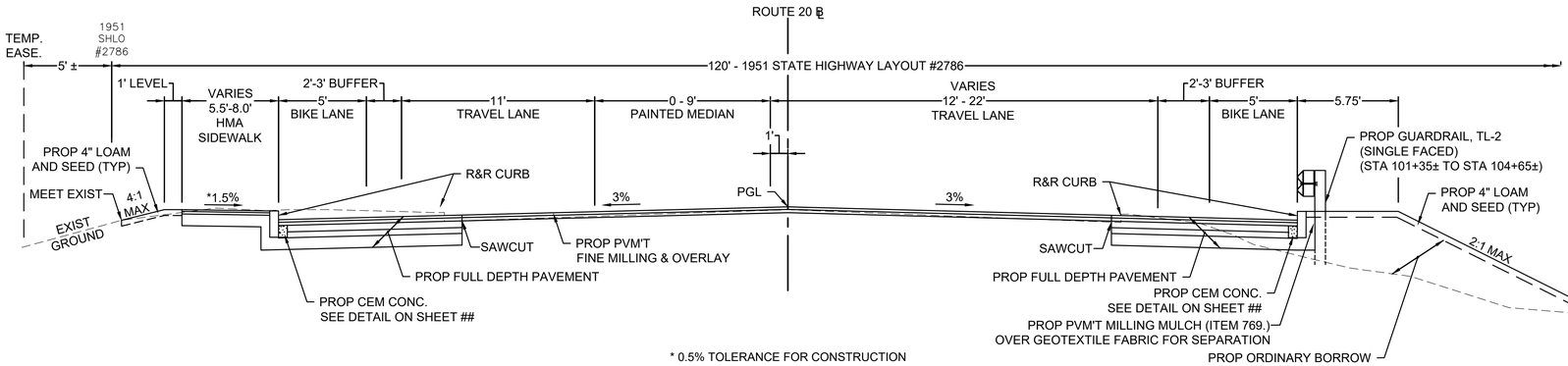
STA 106+00± TO STA 107+00±
NTS



* 0.5% TOLERANCE FOR CONSTRUCTION

ROUTE 20

STA 103+75± TO STA 104+80±
NTS



* 0.5% TOLERANCE FOR CONSTRUCTION

ROUTE 20

STA 100+60± TO STA 103+75±
NTS

PAVEMENT NOTES

PROPOSED PAVEMENT FINE MILLING AND OVERLAY - ROUTE 20

SURFACE:	1¾"	SUPERPAVE SURFACE COURSE 12.5 - P (SSC-12.5-P)
INTERMEDIATE:	2¼"	MIN*** SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)
MICROMILL:		VARIES: 1¾" MIN TO 4" MAX

PROPOSED PAVEMENT FINE MILLING AND OVERLAY - BOSTON POST RD & WELLESLEY ST

SURFACE:	1¾"	MIN*** SUPERPAVE SURFACE COURSE 12.5 - P (SSC-12.5-P)
MICROMILL:	1¾"	

*** IN ORDER TO MEET THE LINE AND GRADE AS SHOWN ON THE PLAN AND IN CONJUNCTION WITH THE VARIABLE DEPTH MICROMILL, THE INTERMEDIATE PAVEMENT COURSE THICKNESS MAY ALSO VARY, BUT SHALL NOT BE LESS THAN THE MINIMUM THICKNESS NOTED ABOVE.

PROPOSED FULL DEPTH PAVEMENT GREATER THAN 4 FEET WIDE

SURFACE:	1¾"	SUPERPAVE SURFACE COURSE 12.5 - P (SSC-12.5-P)
INTERMEDIATE:	2¼"	SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)
BASE COURSE:	4½"	SUPERPAVE BASE COURSE 37.5 (SBC-37.5)
SUBBASE:	4"	DENSE GRADED CRUSHED STONE FOR SUB-BASE
SUBBASE:	8"	GRAVEL BORROW (TYPE b)

PROPOSED FULL DEPTH PAVEMENT LESS THAN 4 FEET WIDE

SURFACE:	1¾"	SUPERPAVE SURFACE COURSE 12.5 - P (SSC-12.5-P)
INTERMEDIATE:	2¼"	SUPERPAVE INTERMEDIATE COURSE 19.0 (SIC-19.0)
BASE COURSE:	6"	HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE
SUBBASE:	8"	GRAVEL BORROW (TYPE b)

PROPOSED CEMENT CONCRETE WHEELCHAIR RAMP / SIDEWALK / ISLAND

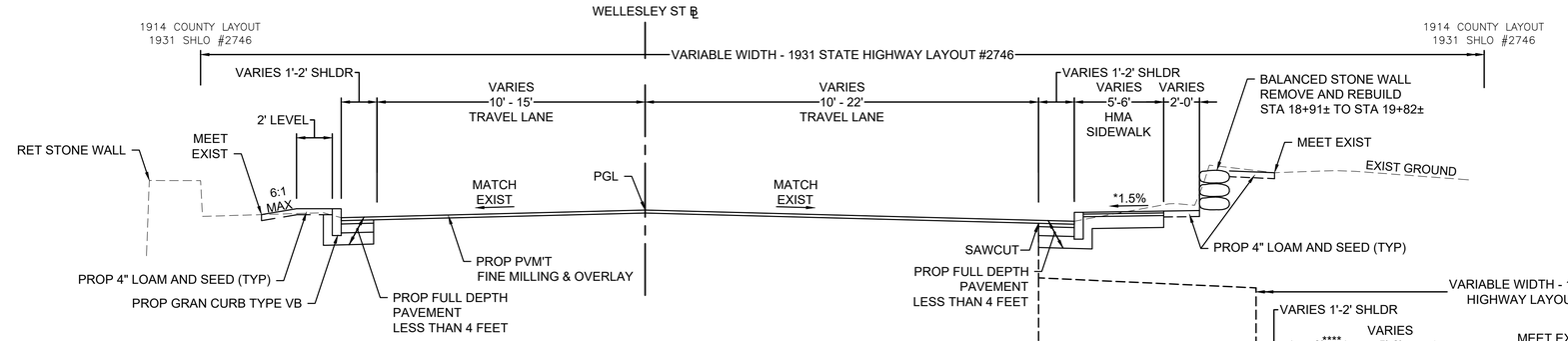
SURFACE:	4"	CEMENT CONCRETE AIR ENTRAINED (4000 PSI, ¾", 610 LB)
SUBBASE:	8"	GRAVEL BORROW, (TYPE b)

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	11	71
PROJECT FILE NO.	608940		

TYPICAL SECTIONS

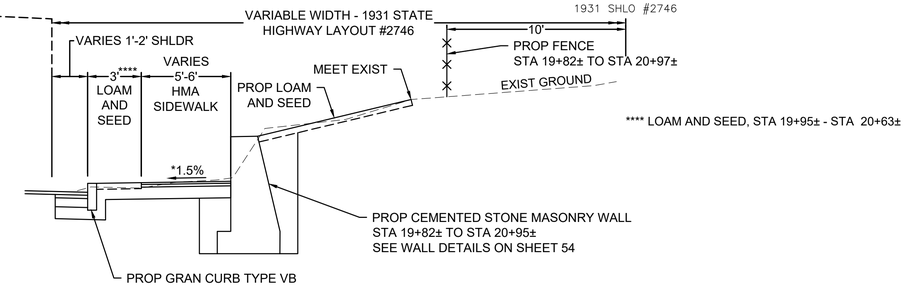
14360_HD(TYP).DWG Plotted on 23-Oct-2024 8:46 PM



* 0.5% TOLERANCE FOR CONSTRUCTION

WELLESLEY STREET

STA 18+91± TO STA 22+75±
NTS



**** LOAM AND SEED, STA 19+95± - STA 20+63±

* 0.5% TOLERANCE FOR CONSTRUCTION

WELLESLEY STREET

STA 19+82± TO STA 20+95±
NTS

PAVEMENT NOTES (CONTINUED)

PROPOSED HOT MIX ASPHALT DRIVEWAY

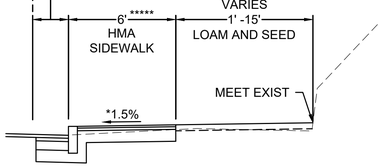
SURFACE:	1½"	SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5)
INTERMEDIATE:	2½"	SUPERPAVE INTERMEDIATE COURSE 12.5 (SIC-12.5)
SUBBASE:	8"	GRAVEL BORROW (TYPE b)

PROPOSED HOT MIX ASPHALT WALK

SURFACE:	1¼" 1¾"	SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5) OVER SUPERPAVE SURFACE COURSE 9.5 (SSC-9.5)
SUBBASE:	8"	GRAVEL BORROW, (TYPE b)

NOTES:

1. ALL HOT MIX ASPHALT PAVEMENTS SHALL BE PRODUCED AND CONSTRUCTED IN ACCORDANCE WITH SECTION 450 QUALITY ASSURANCE FOR HMA.
2. ALL HOT MIX ASPHALT DRIVEWAYS SHALL BE ESTIMATED AND PAID FOR UNDER ITEM 702. OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES.
3. VARIABLE DEPTH MILLING SHALL BE UTILIZED TO MEET PROPOSED CROSS SLOPES.
4. ALL MILLED SURFACES SHALL RECEIVE A TACK COAT APPLIED AT 0.08 GALLONS PER SQUARE YARD AND ALL UNMILLED SURFACES SHALL RECEIVE A TACK COAT APPLIED AT 0.07 GALLONS PER SQUARE YARD PRIOR TO PAVING.

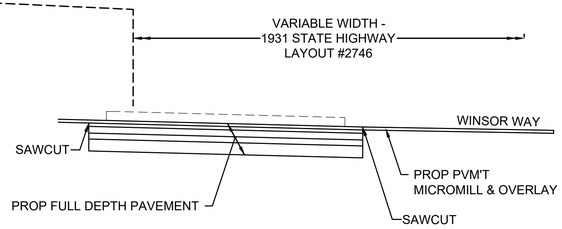


***** HMA SIDEWALK ENDS AT, STA 22+45±

* 0.5% TOLERANCE FOR CONSTRUCTION

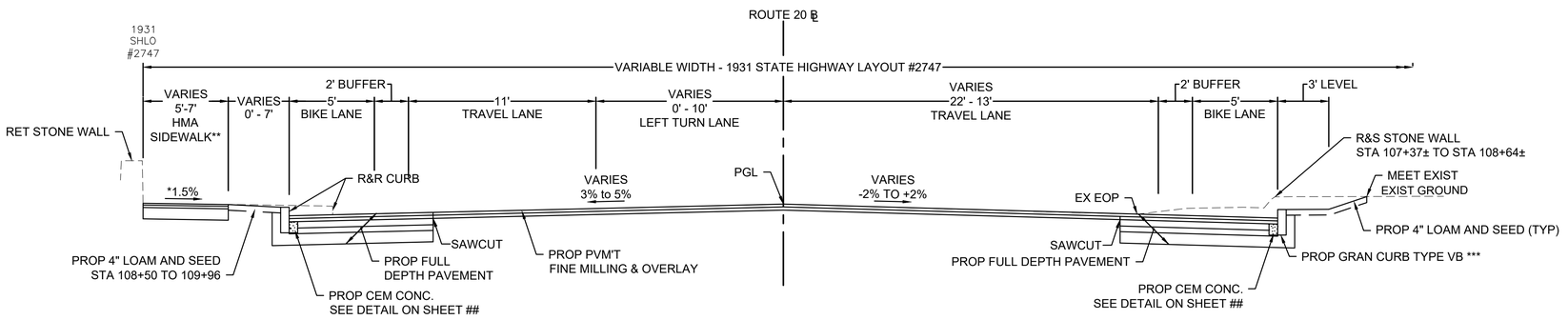
WELLESLEY STREET

STA 20+95± TO STA 21+95±
NTS



WELLESLEY STREET

STA 22+40± TO STA 22+75±
NTS



** MEET EXIST HMA WALK, STA 108+92±

* 0.5% TOLERANCE FOR CONSTRUCTION

ROUTE 20

STA 107+00± TO STA 111+00±
NTS

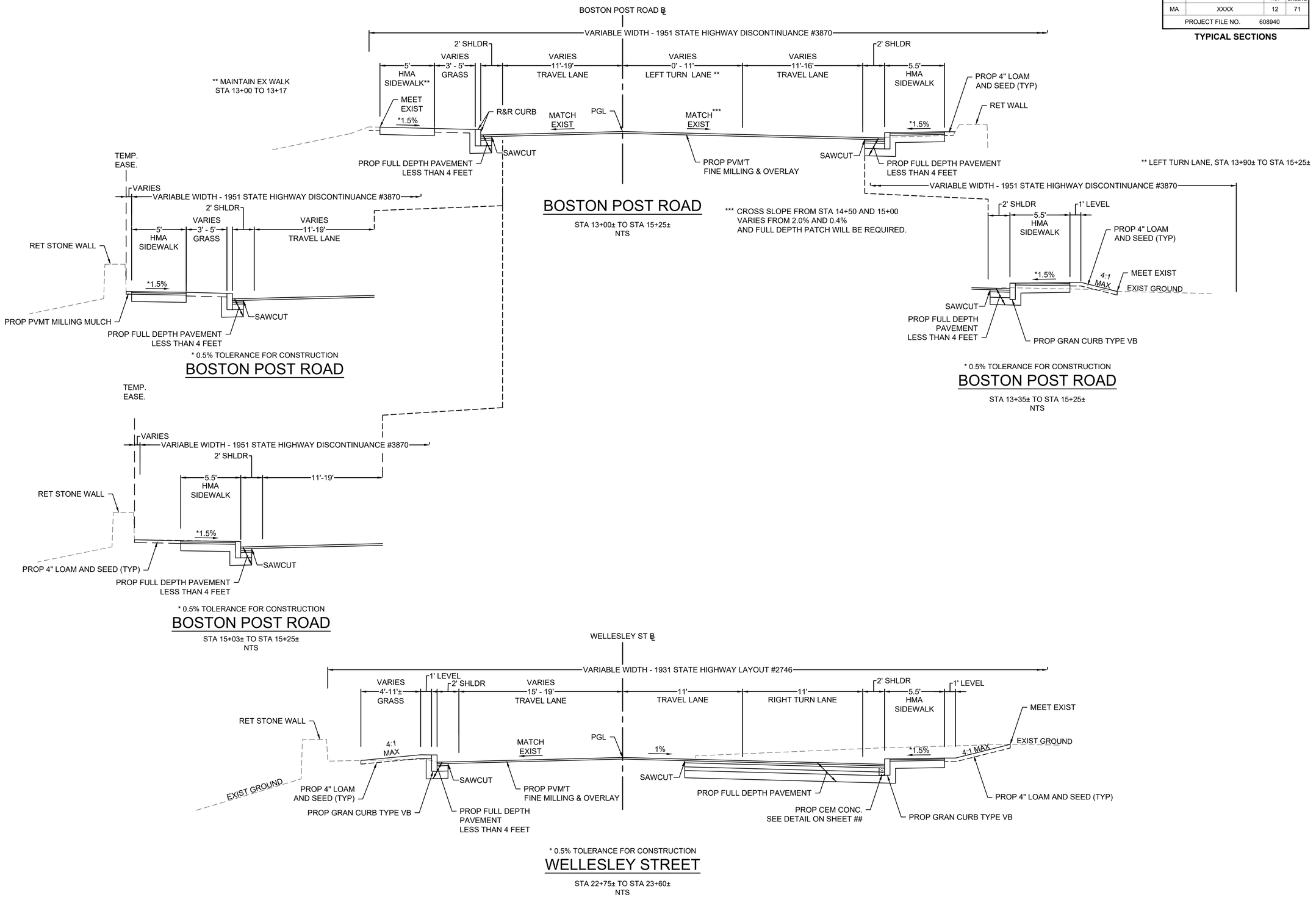
*** MEET EXIST EOP, STA 109+35±

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	12	71
PROJECT FILE NO.	608940		

TYPICAL SECTIONS

14360_HD(TYP).DWG Plotted on 23-Oct-2024 8:46 PM

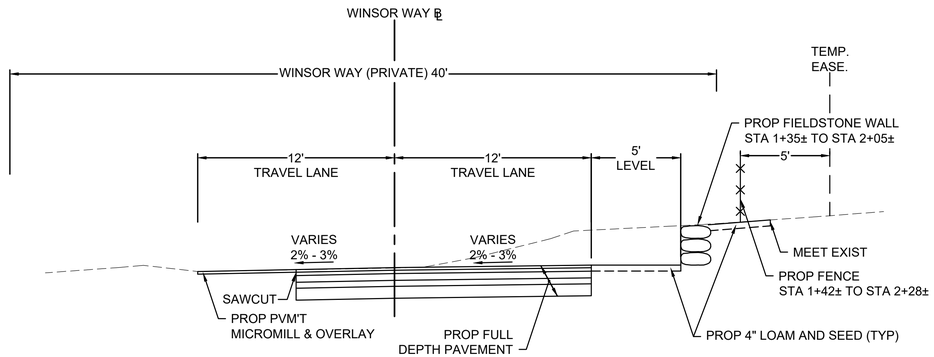


WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	13	71
PROJECT FILE NO.	608940		

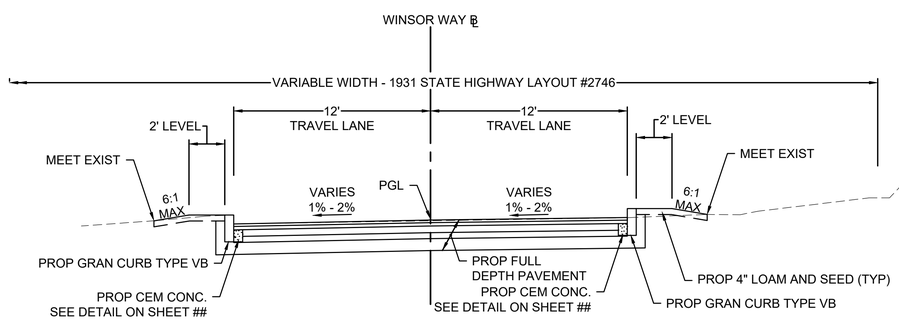
TYPICAL SECTIONS

14380_HD(TYP).DWG Plotted on 23-Oct-2024 8:46 PM



WINSOR WAY

STA 0+86± TO STA 2+70±
NTS



WINSOR WAY

STA 0+60± TO STA 0+86±
NTS

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	14	71
PROJECT FILE NO.	608940		

CONSTRUCTION PLANS

14360_HD(CONST) - NOI.DWG Plotted on 24-Oct-2024 4:21 PM

HIGHWAY GUARD DETAILS

DESCRIPTION	LOCATION
PROP GUARDRAIL, TANGENT END TREATMENT, TL-2	STA 101+34.4 RT TO STA 101+68.1 RT
PROP GUARDRAIL, TL-2 (SINGLE FACED)	STA 101+68.1 RT TO STA 104+55.6 RT
PROP TRAILING ANCHORAGE	STA 104+55.6 RT TO STA 104+65.0 RT

TRAFFIC SIGNAL CONDUIT
SEE SHEET NO. 34

WATER SUPPLY ALTERATIONS
SEE SHEET NO. 26

DRAINAGE DETAILS
SEE SHEET NO. 26

- TEMPORARY IMPACT AREA TO 0'-100' RA
- TEMPORARY IMPACT AREA TO 100'-200' RA
- PERMANENT IMPACT AREA TO 0'-200' RA
- PERMANENT IMPACT AREA TO 100'-200' RA
- 25 FT NDZ
- PORTION OF NDZ CURRENTLY NATURAL
- PORTION OF NDZ PREVIOUSLY DISTURBED
- NEW LAND IN NDZ PROPOSED TO BE ALTERED

BOSTON POST ROAD
(PUBLIC - 50' WIDE)
1898 RECORD BASELINE #289
1951 TOWN LAYOUT SHOWN ON SHLO #3870
BOSTON POST RD CONST ℄
Δ=53°30'58" R=476.14' L=444.73' T=240.08
SBCL (FND)
L=0.17' L=345.97'

ST. PETER'S PARISH
320 BOSTON POST RD
028_008_000
BOOK 07445 PAGE 108

LIMIT OF 100' BUFFER TO VEGETATED WETLAND AND VERNAL POOL

JEFFEREY OTTO PLANK & JANE C. PLANK
9 HEMLOCK RD
023_056_000
BOOK 58041 PAGE 468

BENCHMARK: HYDRANT BOLT EL=181.22'

END OF WORK
LIMIT OF PAVING
STA 13+00.00
N 2959162.3317
E 712532.8417

LIMIT OF 25' NO DISTURBANCE ZONE

PORTION OF NDZ PREVIOUSLY DISTURBED = 58.0 SF
PORTION OF NDZ CURRENTLY NATURAL = 114.6 SF
NEW LAND IN NDZ PROPOSED TO BE ALTERED = 216.0 SF

SAWCUT MEET EXIST, +17.0
SAWCUT, MEET EXIST LIMITS OF MILL AND OVERLAY
PROP 12" PL GAS MAIN (BO-NG)
PROP CEM CONC PCR BEGIN SIDEWALK, +19.7
PROP MILL AND OVERLAY
PROP LOAM AND SEED
APPROX LIMIT OF GRADING
APPROX LIMIT OF GRADING
PROP LOAM AND SEED
PROP TREE PROTECTION (TYP)
PROP TEMP CONSTR EASEMENT
EXIST WETLAND
COOKS POND
GREGORY I. & CATHY T. GOLDMAN
293 BOSTON POST RD
028_010_000
BOOK 59214 PAGE 19
LIMIT OF 25' NO DISTURBANCE ZONE
EXIST WETLAND
R&R GRAN CURB
PROP GRAN CURB
PROP 14' 5 HMA WALK
25-FT NDZ = 330.6 SF
PROP CBCI (TYP)
PROP LOAM & SEED
RET ULT #21-49
RET BOUND
PROP LOAM & SEED
LIMIT OF 100' BUFFER TO VEGETATED WETLAND
PROP 12" PL GAS MAIN (BO-NG)
PROP HMA DRIVEWAY
SAWCUT, MEET EXIST
LIMIT OF 100' BUFFER TO VEGETATED WETLAND AND VERNAL POOL
RET EXIST PIPES
RET CB
PROP LOAM & SEED
1931 SHLO #2746
REMOD
PROP HMA WALK WIDTH VARIES (5'-8')
PROP CBCI (TYP)
PROP LOAM & SEED
PROP FULL DEPTH PAVEMENT
PROP LOAM & SEED
1898 SHLO #289
RET BOUND
PROP TEMP CONSTR EASEMENT
REM WALK
PROP PERM DRAINAGE EASEMENT
TOWN OF WESTON SELECT BOARD
0 BOSTON POST RD
028_009_000
BOOK/PAGE UNKNOWN
RET SHRUB
PROP TEMP CONSTR EASEMENT
APPROX LIMIT OF GRADING
PROP LOAM AND SEED
PROP 5.5' HMA WALK
PROP FULL DEPTH PAVEMENT
PROP HMA WALK WIDTH VARIES (5.5'-8')
PROP TS POLE W/40' MAST ARM
PROP 8' TS POST
PROP 8' TS POST
R&R LP
PROP CBCI (TYP)
PROP CIT
PROP GRAN CURB
PROP CEM CONC SIDEWALK
PROP CEM CONC PCR
REM UPL #21-48 W/RISER (BO)
PROP CEM CONC PCR
R&R ULT #21-47 PROP W/RISER (BO)
ADJ R&D F&G PROP F&C
PROP GI
ADJ WG
PROP HMA WALK WIDTH VARIES (5.5'-8')
PROP TS POLE W/30' MAST ARM
SEE INSET A ON SHEET 16
105+46.31 ROUTE 20= 15+71.19 BOSTON POST RD
PC +08.04
PROP GRAN CURB
105+46.31 ROUTE 20= 24+13.77 WELLESLEY ST
PROP DMH
PROP 5' STONE DUST WALK
R&R UPL #13-1(BO)
PROP TS POLE W/35' MAST ARM
PROP 8' TS POST
PROP GRAN CURB
ADJ WG
REM CB
R&R LP
PROP 10' GUY (BO)
RET HYD
ADJ WG
PROP CB
PROP CBCI
PROP CONDUIT
PROP 10.5' HMA WALK
PROP 5.5' HMA WALK
A=106° 59' 35" L=117.64' R=63.00'
PC +03.10
CONTINUED ON SHEET NO. 16

LIMIT OF 200' RIVERFRONT AREA
BEGINNING OF WORK
LIMIT OF PAVING
STA 100+60.00
N 2958941.7358
E 712204.1518
TEMPORARY IMPACT AREA TO 100'-200' RA = 651 SF
PROP PAVEMENT RECLAMATION EXEMPT WORK IN RA
PROP HMA SIDEWALK WIDTH VARIES (5.5'-8')
LIMIT OF 200' RIVERFRONT AREA
PROP TEMP CONSTR EASEMENT
APPROX LIMIT OF GRADING
PROP LOAM AND SEED
PROP 5.5' HMA WALK
PROP FULL DEPTH PAVEMENT
1951 SHLO #2768
SAWCUT MEET EXIST, +74.0
PROP 6' GRAN TRANSITION CURB
BOSTON POST ROAD
(ROUTE 20)
(PUBLIC - 120' WIDE)
ROUTE 20 CONST ℄
PERMANENT IMPACT AREA TO 0'-100' RA = 182 SF
PROP CBCI (TYP)
SAWCUT
R&R GRAN CURB
RET PIPE
PROP GRAN CURB
PROP CEM CONC PCR
PROP MILL AND OVERLAY
PROP FULL DEPTH PAVEMENT
LIMIT OF 100' BUFFER TO VEGETATED WETLAND
PRC +60.64
R&R GRAN CURB
PROP CBCI (TYP)
PROP GRAN CURB
105+46.31 ROUTE 20= 15+71.19 BOSTON POST RD
S86°53'04"W 472.02'
PC +43.03
SAWCUT, MEET EXIST LIMITS OF MILL AND OVERLAY
SAWCUT
PC +26.66
Δ=9°10'40" R=361.11' L=506.35' T=253.72'
PROP DMH (TYP)
PROP GRAN CURB
PROP DMH (TYP)
PROP CEM CONC PCR (TYP)
PROP 8' CEM CONC SIDEWALK
PROP TS POLE W/40' MAST ARM
PROP TANGENT END
PROP 6' GRAN TRANSITION CURB
TEMPORARY IMPACT AREA TO 100'-200' RA= 635 SF
PROP GUARDRAIL TL-2 (SINGLE FACED)
PROP LOAM AND SEED
APPROX LIMIT OF GRADING
PROP SEDIMENT CONTROL BARRIER
PROP LOAM AND SEED
RET CONCRETE HEADWALL
RET EXIST PIPE
LIMIT OF 25' NO DISTURBANCE ZONE
LIMIT OF 100' BUFFER TO VEGETATED WETLAND
FLOOD ZONE A ELEV 169.2
LIMIT OF 25' NO DISTURBANCE ZONE
EXIST WETLAND
PERMANENT IMPACT AREA TO 100'-200' RA = 103 SF
PROP PERM DRAINAGE EASEMENT
TEMPORARY IMPACT AREA TO 0'-100' RA = 1106 SF
LIMIT OF 100' RIVERFRONT AREA
EXIST WETLAND
WESTON AFFORDABLE HOUSING TRUST FUND
0 WELLESLEY ST
028_104_000
BOOK 75586 PAGE 289
PROP CONDUIT
CONTINUED ON SHEET NO. 16

0 20 50 100
SCALE: 1" = 20'

FOR PROFILE SEE SHEETS NO. 17 AND 20

HIGHWAY GUARD DETAILS
NONE

TRAFFIC SIGNAL CONDUIT
SEE SHEET NO. 34

WATER SUPPLY ALTERATIONS
SEE SHEET NO. 27

DRAINAGE DETAILS
SEE SHEET NO. 27

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	15	71
PROJECT FILE NO.	608940		

CONSTRUCTION PLANS

14360_HD(CONST) - NOI.DWG Plotted on 24-Oct-2024 4:20 PM

N

GREGORY I. & CATHY T. GOLDMAN
293 BOSTON POST RD
028_010_000
BOOK 59214 PAGE 19

N/F
TOWN OF WESTON
0 BOSTON POST RD
028_011_000
BOOK 12782 PAGE 45

END OF WORK
LIMIT OF PAVING
STA 111+00.00
N 2959025.6253
E 713237.0937

BOSTON POST ROAD
(ROUTE 20)
(PUBLIC - VARIABLE WIDTH)

SAWCUT, MEET EXIST LIMITS OF MILL AND OVERLAY
PRC +30.15

MEET EXIST, +95.7

RET EXIST CURB AND REVEAL

ROUTE 20 CONST. ℄

PROP 12" PL GAS MAIN (BO-NG)

PROP EOP
Δ=25°34'45"
R=452.20'
L=201.88'
T=102.65'

MEET EXIST, +34.5

RET UPL #21-43

RET UPL #21-44

PROP 6' GRAN TRANSITION CURB

RET WALL

R&R UPL #21-45 W/RISER (BO)

PROP 22' GUY (BO)

APPROX LIMIT OF GRADING

PROP TEMP CONSTR EASEMENT

PROP FULL DEPTH PAVEMENT

PROP TEMP CONSTR EASEMENT

PROP LOAM & SEED MEET EXIST WALK

SAWCUT MEET EXIST, +92.0

RET UPL #21-45-1X

PROP PERM UTILITY EASEMENT

PROP FULL DEPTH PAVEMENT

RET FIELDSTONE WALL

RET FENCE

ADJ (BO)

RET

PROP HMA WALK WIDTH VARIES (5' - 7')

PROP PVMT MILLING MULCH STA 106+83± TO STA 107+33±

RET BOUND

PROP TEMP CONSTR EASEMENT

RET BOUND

ADJ (BO)

R&R ULT #21-47
PROP W/RISER (BO)

ADJ WG

PROP GICI

PROP 12" PL GAS MAIN (BO-NG)

REM F&G, PROP F&C RETAIN SUMP

PROP TS POLE W/30' MAST ARM

PROP 5.5' HMA WALK

1931 SHLO BASELINE #2747
N 82°39'50" E
267.92'

PROP MILL AND OVERLAY

PCC +21.85

PROP GRAN CURB

R&R GRAN CURB

SAWCUT

PROP CIT

PROP CBCI (TYP)

RET

ADJ WG

PROP TS POLE W/35' MAST ARM

PROP 8' TS POST

END SIDEWALK +16.0

ADJ WG

PROP GRAN CURB

PROP 5' STONE DUST WALK

R&R UPL #13-1(BO)

REM CB

CIT

R&R LP

PROP 10' GUY (BO)

RET HYD

ADJ WG

PROP CB

REM 50' SECTION OF EXIST WALL

PROP 10.5' HMA WALK

PROP 5.5' HMA WALK

Δ=106° 5' 35" CUT
L=117.64' R=64.00'

PC +03.10

RET

R&S

RET

REM. EXIST PAVEMENT PROP LOAM & SEED

R&S WALL
STA 107+00± TO STA 108+64±

R&R UPL #21-46 W/RISER (BO)
SEE NOTE 1

PROP 15' GUY (BO)

PROP FULL DEPTH PAVEMENT

PROP FIELDSTONE WALL

WINSOR WAY
(PRIVATE - 40' WIDE)

REM

CC +20.74

PT +41.30

SEE INSET A ON SHEET 16

PROP TREE PROTECTION FENCE

PROP TEMP CONSTR EASEMENT

RET

CONTINUED ON SHEET NO. 16

CONTINUED ON SHEET NO. 14

GREGORY I. & CATHY T. GOLDMAN
293 BOSTON POST RD
028_010_000
BOOK 59214 PAGE 19

LAURA J. & DAVID EISEN
10 WINSOR WY
028_074_000
BOOK 80467 PAGE 408

N/F
JAI KISHORE & MANU SIROHI
286 BOSTON POST RD
028_082_000
BOOK 68791 PAGE 180

N/F
MULDOON, MARY EILEEN, TRUSTEE
280 BOSTON POST RD
028_081_000
BOOK 32499 PAGE 001

BENCHMARK
LEFT OUTER CORNER OF LOWEST STONE STEP
EL=182.46'

1931 SHLO #2747

BF#1-200

BF#1-207

BF#1-206

EXIST WETLAND

LIMIT OF 25' NO DISTURBANCE ZONE

LIMIT OF 100' BUFFER TO VEGETATED WETLAND AND VERNAL POOL

IDZ = 330.6 SF

PROP LOAM & SEED

1898 SHLO #289

DMH
RIM=178.76'
INV.=171.2' 15"RCP

CB
RIM=178.88'
INV.=173.6' 12"RCP

CB
RIM=180.76'
INV.=174.8' 12"RCP

NOTE:
1. FINAL LOCATION OF R&R UPL #21-46 IS WITHIN THE EXISTING ROADWAY. BASED UPON THE CONTRACTOR CONSTRUCTION STAGING THE UTILITY POLE SHALL BE PROTECTED WITH TRAFFIC BARRIER .

0 20 50 100
SCALE: 1" = 20'

FOR PROFILE SEE SHEET NO. 18

HIGHWAY GUARD DETAILS

DESCRIPTION	LOCATION
PROP GUARDRAIL, TANGENT END TREATMENT, TL-2	STA 101+34.4 RT TO STA 101+68.1 RT
PROP GUARDRAIL, TL-2 (SINGLE FACED)	STA 101+68.1 RT TO STA 104+55.6 RT
PROP TRAILING ANCHORAGE	STA 104+55.6 RT TO STA 104+65.0 RT

TRAFFIC SIGNAL CONDUIT
SEE SHEET NO. 34

WATER SUPPLY ALTERATIONS
SEE SHEET NO. 28

DRAINAGE DETAILS
SEE SHEET NO. 28

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	16	71
PROJECT FILE NO.	608940		

CONSTRUCTION PLANS

CONTINUED ON SHEET NO. 14

CONTINUED ON SHEET NO. 14

CONTINUED ON SHEET NO. 15

FOR PROFILE SEE SHEETS NO. 19 AND 21

N/F
LEROY, GARY E.
17 WELLESLEY ST
028_103_000
BOOK 25624 PAGE 258

N/F
WESTON AFFORDABLE HOUSING TRUST FUND
0 WELLESLEY ST
028_104_000
BOOK 75586 PAGE 289

N/F
THOMAS B. ELLIS
18 WELLESLEY ST
028_073_000
BOOK 65497 PAGE 61

CUNNINGHAM, PATRICK ROBERT & MOLLY MELICAN
1 WINSOR WY
028_057_010
K 81204 PAGE 417

LIMIT OF 200' RIVERFRONT AREA
EXIST WETLAND
LIMIT OF 25' NO DISTURBANCE ZONE
LIMIT OF 100' BUFFER TO VEGETATED WETLAND
PROP SEDIMENT CONTROL BARRIER
PROP GUARDRAIL TL-2 (SINGLE FACED)
FLOOD ZONE A ELEV 169.2
APPROX LIMIT OF GRADING
R&R CURB
PROP DMH
PROP CBCI
PROP 8' TS POST
PROP CEM CONC SW
PROP TS POLE W/40' MAST ARM
PROP CEM CONC PCR (TYP)
PROP CEM CONC WCR (TYP)
105+46.31 ROUTE 20= 15+71.19 BOSTON POST RD
PROP LOAM AND SEED
APPROX LIMIT OF GRADING
PROP CBCI
SAWCUT
PROP GRAN CURB
REM BERM
PROP CEM CONC PCR (TYP)
PROP FULL DEPTH PAVEMENT
R&R GRAN CURB
PROP FULL DEPTH PAVEMENT
R&R LP
PROP DMH (TYP)
PROP CBCI (TYP)
PROP CEM CONC SW
R&R UPL
R&R GRAN CURB
PROP 10.5' HMA WALK
ADJ WG
REM HYD
REM CBCI
PROP CEM CONC PCR (TYP)
R&R UPL #13-1(BO)
PROP CEM CONC SW
PROP 10' GUY (BO)
REM 50' SECTION OF EXIST WALL
PROP 5' STONE DUST WALK
REM EXIST PVMT, PROP LOAM & SEED
ADJ WG
ADJ (BO)
PROP 12" PL GAS MAIN (BO-NG)
PROP FULL DEPTH PAVEMENT
SEE INSET A
R&R UPL #21-46 (BO)
R&S WALL STA 107+00± TO STA 108+64±
RET TREE
RET FENCE
PROP TREE PROTECTION
PROP LOAM & SEED
PROP TEMP CONSTR EASEMENT
APPROX LIMIT OF GRADING
SELECTIVE CLEARING AND THINNING (SEE NOTE 1)
LIMIT OF FULL DEPTH PAVEMENT
PROP TEMP CONSTR EASEMENT
PROP MILL AND OVERLAY
SAWCUT, MEET EXIST LIMITS OF MILL AND OVERLAY
PROP TREE PROTECTION (TYP)
PROP 6' GRAN TRANSITION CURB
PROP FIELDSTONE WALL, STA 1+35± TO STA 2+05±
TREE AND PLANT PROTECTION FENCE
END OF WORK LIMIT OF PAVING STA 2+80.00 N 2958816.2768 E 712887.3722
TREE AND PLANT PROTECTION FENCE
WINSOR WAY (PRIVATE - 40' WIDE)
WINSOR WAY CONST. ℄
PT +58.77
PC +03.10
PT +41.40 PCC
L=17.64'
Δ=106°
R=9.00'
T=15.35'
END PROJECT LIMIT OF WORK STA 18+91.00 N 2958439.2897 E 712702.5656
PROP 6' GRAN TRANSITION CURB
MEET EXIST
1914 COUNTY LAYOUT
RET FENCE
RET MB
PROP 6' GRAN TRANSITION CURB
RET WALL
RET STEPS
RET
FIELDSTONE RET. WALL
1931 SHLO #2746
WELLESLEY STREET (PUBLIC - 50' WIDE)
SAWCUT
18+60
SAWCUT, MEET EXIST LIMITS OF MILL AND OVERLAY
MEET EXIST
REM EXIST WALL STA 19+82 ± TO STA 20+92 ±
PROP GRAN CURB PT +21.64
WELLESLEY ST CONST. ℄
20 PC +04.15
PROP 8.0' HMA WALK
REM STAIRS
2+16.47 WELLESLEY ST= 0+00.00 WINSOR WAY
PROP 12" PL GAS MAIN (BO)
REM
RET
REM
RET
RET
RET

ROUTE 20 DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. IN	INV. OUT	REMARKS
01	CBCI	102+50.0 25.5 R	176.03		172.60	
02	CBCI	102+50.0 24.9 L	176.05		172.90	
04	DMH	102+65.0 21.0 R	176.22	(02) 172.40 (01) 172.40	172.30	PROP FRAME AND COVER
05	DMH	103+92.0 22.5 R	176.69	(06) 171.00 (04) 171.00	170.90	PROP FRAME AND COVER
06	CBCI	104+50.0 28.0 R	176.77		172.60	
07	CBCI	104+50.0 28.0 L	176.77		172.00	
09	CIT	103+91.8 21.9 L	176.70	(05) 170.50 (07) 170.50	170.40	CHANGE IN TYPE
14	GI	105+78.0 36.0 L	178.10		175.60	

BOSTON POST RD DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. IN	INV. OUT	REMARKS
15	CB	15+32.2 19.7 L	178.17	(14) 175.00	172.90	PROP F&C
16	EX DMH	15+37.9 11.3 L	178.11	(15) 172.50 (13) 172.70	172.20	ADJ
17	CBCI	14+98.4 23.7 R	177.90		173.50	
18	DMH	14+97.7 11.0 R	178.17	(17) 173.00 (16) 171.30	171.30	CONSTRUCT OVER EXIST 12" RCP
19	CBCI	14+47.2 16.2 L	178.41		174.80	CONSTRUCT IN LINE WITH EXIST LATERAL
20	EX DMH	14+72.8 6.6 L	178.49	(23) 172.70 (19) 174.60	171.20	ADJ
21	EX DMH	14+32.9 25.2 R	178.82	(18) 169.70 (20) 169.70	168.60	REMODEL
22	EX DMH	14+13.0 34.9 R	178.08	(21) 162.20	159.80	REMODEL

NOTE:

1. IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.
2. A MINIMUM 80" VERTICAL CLEARANCE SHALL BE PROVIDED IN AREAS ADJOINING AN ACCESSIBLE ROUTE.
3. PROPOSED 10' GUY ANCHOR FOR ULT #21-47 SHALL BE INSTALLED AFTER THE SLIP LANE HAS BEEN CLOSED TO TRAFFIC.

WELLESLEY ST DRAINAGE STRUCTURE DATA						
NO.	TYPE	STATION	RIM ELEV.	INV. IN	INV. OUT	REMARKS
10	CBCI	23+48.1 19.9 L	178.79		174.30	
11	CBCI	23+44.0 23.0 R	179.23		174.30	
12	CBCI	23+79.0 33.4 R	178.20		173.50	
13	DMH	23+80.3 24.5 R	178.29	(12) 173.20 (11) 173.20 (10) 173.20	173.00	CONSTRUCT OVER EXIST 12" RCP

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	26	71
PROJECT FILE NO.	608940		

DRAINAGE AND UTILITY PLANS

14360_HD(UT).DWG Plotted on 23-Oct-2024 9:02 PM

CONTINUED ON SHEET NO. 27

CONTINUED ON SHEET NO. 28

SCALE: 1" = 20'

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	27	71
PROJECT FILE NO.	608940		

DRAINAGE AND UTILITY PLANS

14360_HD(UT).DWG Plotted on 23-Oct-2024 9:02 PM

ROUTE 20 DRAINAGE STRUCTURE DATA

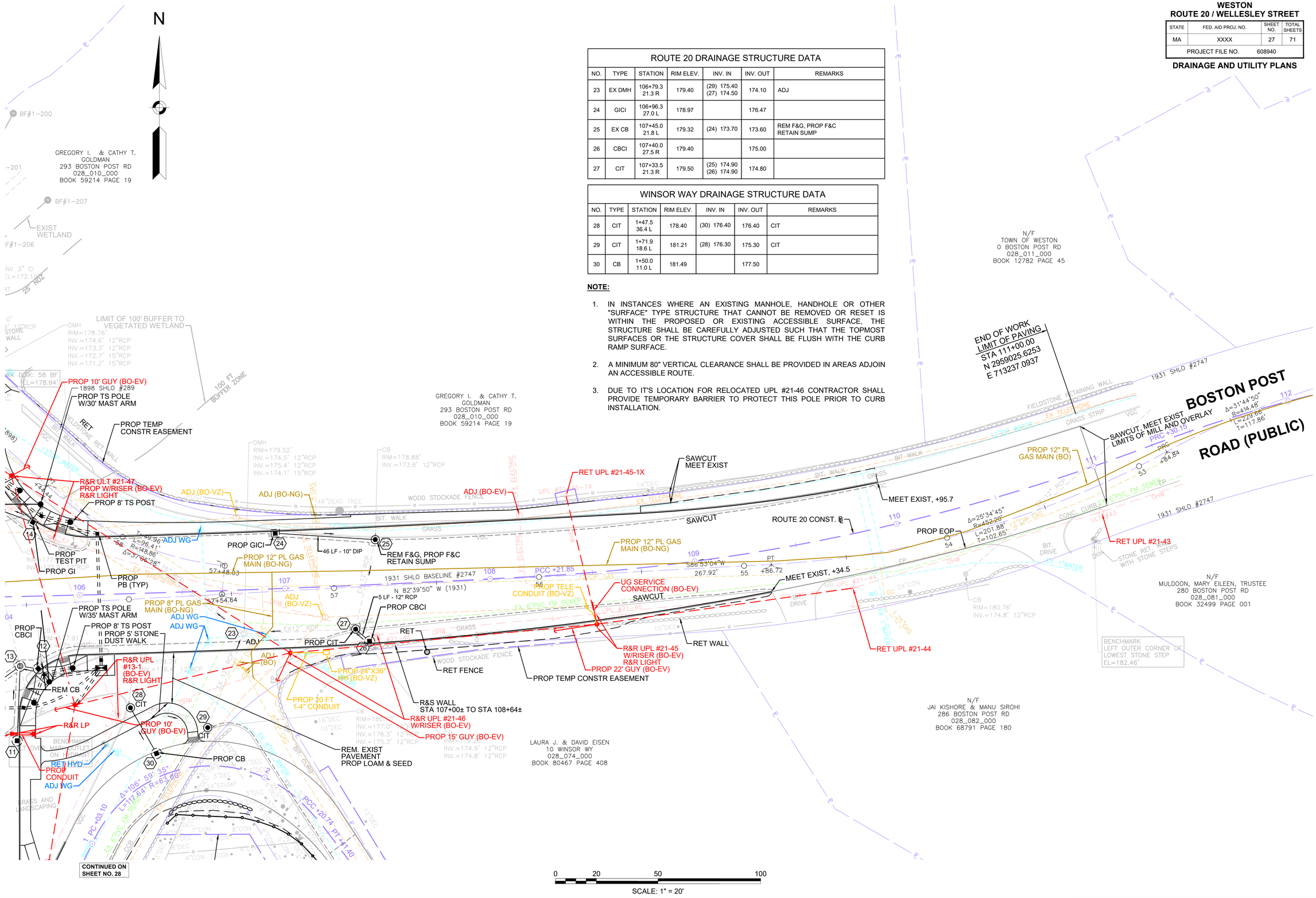
NO.	TYPE	STATION	RIM ELEV.	INV. IN	INV. OUT	REMARKS
23	EX DMH	106+79.3 21.3 R	179.40	(29) 175.40 (27) 174.50	174.10	ADJ
24	GICI	106+96.3 27.0 L	178.97		176.47	
25	EX CB	107+45.0 21.8 L	179.32	(24) 173.70	173.60	REM F&G, PROP F&C RETAIN SUMP
26	CBCI	107+40.0 27.5 R	179.40		175.00	
27	CIT	107+33.5 21.3 R	179.50	(25) 174.90 (26) 174.90	174.80	

WINSOR WAY DRAINAGE STRUCTURE DATA

NO.	TYPE	STATION	RIM ELEV.	INV. IN	INV. OUT	REMARKS
28	CIT	1+47.5 36.4 L	178.40	(30) 176.40	176.40	CIT
29	CIT	1+71.9 18.6 L	181.21	(28) 176.30	175.30	CIT
30	CB	1+50.0 11.0 L	181.49		177.50	

NOTE:

1. IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.
2. A MINIMUM 80" VERTICAL CLEARANCE SHALL BE PROVIDED IN AREAS ADJOIN AN ACCESSIBLE ROUTE.
3. DUE TO IT'S LOCATION FOR RELOCATED UPL #21-46 CONTRACTOR SHALL PROVIDE TEMPORARY BARRIER TO PROTECT THIS POLE PRIOR TO CURB INSTALLATION.



WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	28	71
PROJECT FILE NO.	608940		

DRAINAGE AND UTILITY PLANS

14360_HD(UT).DWG Plotted on 23-Oct-2024 9:02 PM

N/F
WESTON AFFORDABLE
HOUSING TRUST FUND
0 WELLESLEY ST
028_104_000
BOOK 75586 PAGE 289

N/F
LEROY, GARY E.
17 WELLESLEY ST
028_103_000
BOOK 25624 PAGE 258

N/F
THOMAS B. ELLIS
18 WELLESLEY ST
028_073_000
BOOK 65497 PAGE 61

CUNNINGHAM, PATRICK ROBERT &
MOLLY MELICAN
1 WINSOR WY
028_057_010
BOOK 81204 PAGE 417

200 FT RIVERFRONT AREA
100 FT BUFFER ZONE
25' NOZ
35' NOZ
WF#1-405
WF#1-406
WF#1-407
WF#1-408
WF#1-409
WF#1-410

END PROJECT
LIMIT OF WORK
STA 18+91.00
N 2958439.2897
E 712702.5656

WELLESLEY
STREET (PUBLIC)

WELLESLEY ST CONST. ℄

WINSOR WAY CONST. ℄

WINSOR WAY
(PRIVATE)

END OF WORK
LIMIT OF PAVING
STA 2+80.00
N 2958816.2768
E 712887.3722

22+16.47 WELLESLEY ST=
0+00.00 WINSOR WAY

105+46.31 ROUTE 20=
15+71.19 BOSTON POST RD

PC +04.15
PT +21.64
PC +08.04
PT +58.77
PC +03.10
PT +41.40
PCC +20.74

1914 COUNTY LAYOUT
1931 SHLO #2746
1951 SHLO #2768
1931 SHLO BASELINE
N 82°39'50" W (19...
S86°53'04"W 472.02'

PROP DMH
PROP CBCI
PROP 8' TS POST
PROP TS POLE W/35' MAST ARM
PROP TS POLE W/40' MAST ARM
PROP PB (TYP)
PROP 8' TS POST
SAWCUT
PROP 12" PL GAS MAIN (BO)
PROP PB
R&R LP
PROP CBCI
R&R UPL (BO)
PROP CONDUIT
PROP DMH
PROP 10' GUY (BO-EV)
REM CB
PROP TS POLE W/35' MAST ARM
PROP 8' TS POST
ADJ WG
RET HYD
BENCHMARK
BOLT OVER MAIN OUTLET
ON HYDRANT
EL=184.17
R&R UPL #13-1 (BO-EV) R&R LIGHT
CIT
PROP CB
PROP TEMP CONSTR EASEMENT
ADJ (BO-NG)
ADJ
PROP GICI
ADJ WG
ADJ (BO-WZ)
CIT
PROP CBCI
R&R UPL #21-46 W/RISER (BO-EV)
PROP 12" PL GAS MAIN (BO-NG)
ADJ PROP CB WITH F&C
PROP TS POLE W/30' MAST ARM
PROP GI
PROP CB WITH F&C
PROP 8' TS POST
PROP PB (TYP)
PROP 8' TS POST
PROP CBCI
PROP 8' TS POST
PROP TS POLE W/40' MAST ARM
PROP PB (TYP)
PROP 8' TS POST

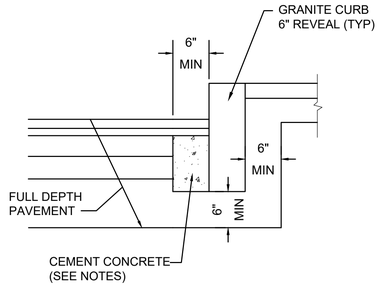
RET UPL #13-3
RET UPL #1
RET ULT #13-2
RET FIELDSTONE RET. WALL
FIELDSTONE RET. WALL
STEPS DOWN
STOCKADE FENCE
EX 6"PVC FM SEWER
12"CIP WATER
12"CIP GAS
EX TEL
EX 8"PVC FM SEWER
EX 12"PVC FM SEWER
EX 8" WATER
EX 6" GAS
EX 4" GAS
EX 12" RCP
EX 15" RCP
EX 18" RCP
EX 24" RCP
EX 30" RCP
EX 36" RCP
EX 48" RCP
EX 60" RCP
EX 72" RCP
EX 12"CMP
EX 18"CMP
EX 24"CMP
EX 30"CMP
EX 36"CMP
EX 48"CMP
EX 60"CMP
EX 72"CMP
EX 8"CMP
EX 10"CMP
EX 15"CMP
EX 4"CMP
EX 6"CMP
EX 12"CMP A
EX 10"PVC B
EX 8"PVC FM SEWER
EX 6"PVC FM SEWER
EX 8" WATER
EX 6" WATER
EX 6" GAS
EX 4" GAS
EX TEL
EX ELECTRIC
EX 4"PVC FM SEWER

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	44	71
PROJECT FILE NO.	608940		

CONSTRUCTION DETAILS

14360_HD(DET).DWG Plotted on 23-Oct-2024 9:06 PM

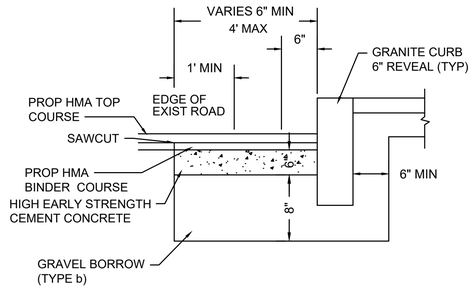


NOTES:

1. TO BE PLACED IF CURB IS INSTALLED AFTER HOT MIX ASPHALT.
2. CONCRETE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB.
3. 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.

GRANITE CURB IN FULL DEPTH PAVEMENT

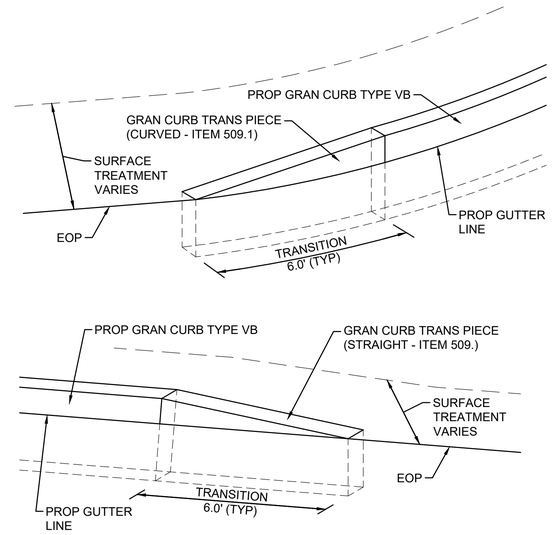
SCALE: N.T.S. DWG: CURB-05 DATE: MARCH 2013



* 6" OF HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE SHALL BE INCLUDED IN PRICE BID FOR GRANITE CURB.

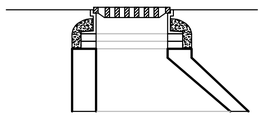
GRANITE CURB IN FULL DEPTH PAVEMENT LESS THAN 4' WIDE

SCALE: N.T.S. DWG: CURB-06 DATE: FEB. 2013

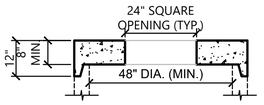


GRANITE CURB TRANSITION PIECE

SCALE: NTS



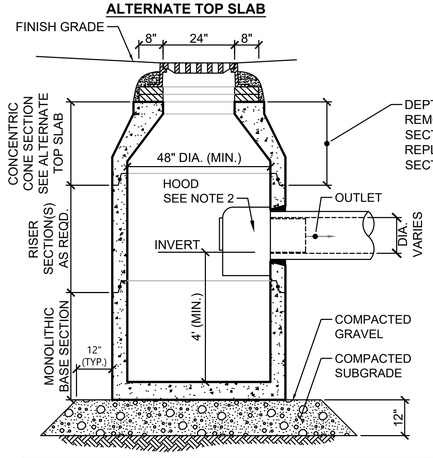
ALTERNATE ECCENTRIC CONE SECTION



ALTERNATE TOP SLAB

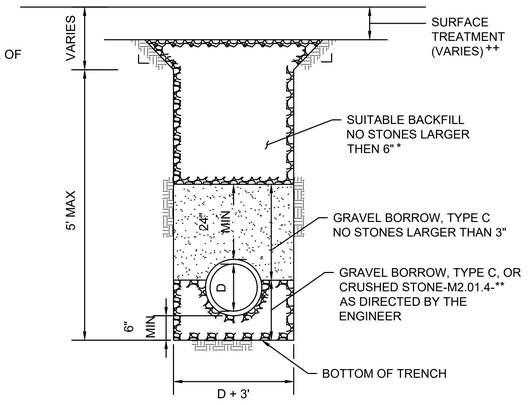
NOTES:

1. BASED ON ACTUAL FIELD CONDITIONS; THE CONTRACTOR SHALL DETERMINE WHICH STYLE OF THE SECTION SHOULD BE USED.
2. HOODS TO BE INSTALLED IN ALL CATCH BASINS LOCATED WITHIN TOWN LAYOUT



CATCH BASIN

SCALE: N.T.S.



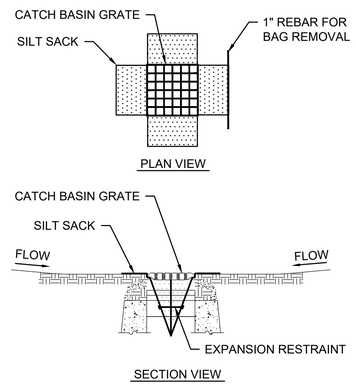
++ MINIMUM REQUIREMENTS:
IN ROADWAY MATCH EXISTING ROADWAY PAVEMENT DEPTHS (ITEM 451.)

* CONTROLLED DENSITY FILL TO BE USED ONLY WHEN CONVENTIONAL METHODS ARE UNUSUALLY DIFFICULT AS DETERMINED BY THE ENGINEER DUE TO OBSTRUCTIONS.

** CRUSHED STONE TO BE USED DURING WET CONDITIONS AS DIRECTED BY THE ENGINEER.

TRENCH DETAIL

SCALE: NTS DWG: TRENCH-05 DATE: MARCH 2013

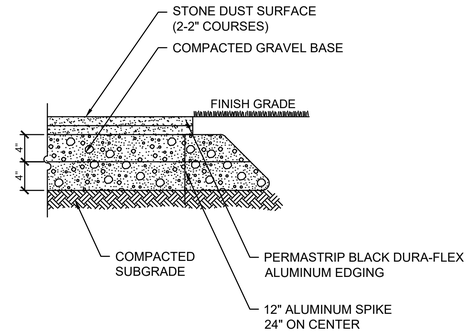


NOTES:

1. INSTALL SILT SACK IN EXISTING CATCH BASINS, BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. REMOVE AFTER BINDER COURSE PAVING IS COMPLETE AND A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. GRATE TO BE PLACED OVER SILT SACK.
3. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED

INLET PROTECTION - SILT SACK IN CATCH BASIN

SCALE: N.T.S. DWG: EV-03 DATE: MARCH 2013



STONEDUST WALK

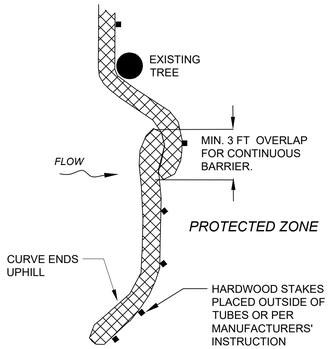
SCALE: NTS SOURCE:VHN DATE: JAN 2016

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	45	71
PROJECT FILE NO.	608940		

CONSTRUCTION DETAILS

14360_HD(DET).DWG Plotted on 23-Oct-2024 9:06 PM



PLACE TUBE ALONG CONTOURS AND PERPENDICULAR TO FLOW.

PLACE AS CLOSE TO LIMIT OF SOIL DISTURBANCE AS POSSIBLE

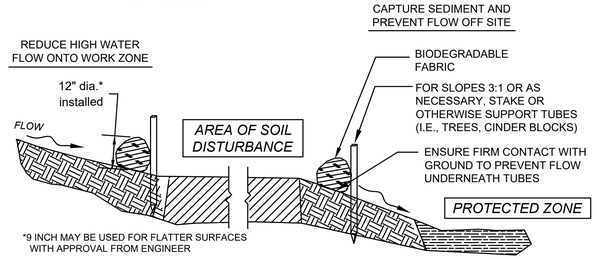
ADJUST LOCATION AS REQUIRED FOR OPTIMUM EFFECTIVENESS. DO NOT INSTALL IN WATERWAYS.

PLACE STAKES AS NEEDED TO SECURE TUBES IN PLACE.

PLAN VIEW

SEDIMENT BARRIERS

NOT TO SCALE

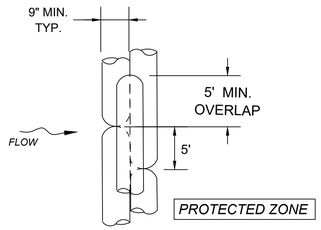


SECTION

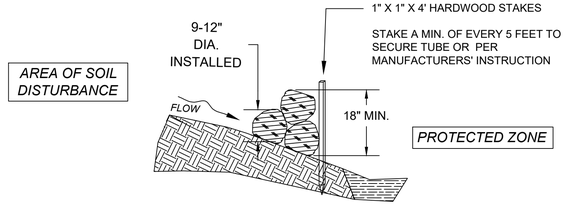
SEDIMENT BARRIER - COMPOST FILTER TUBE

NOT TO SCALE

WHERE SPECIFIED ON CONSTRUCTION PLANS OR AS REQUIRED



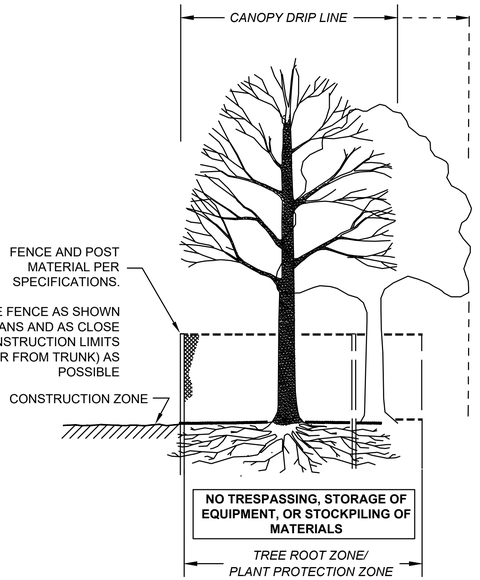
PLAN VIEW



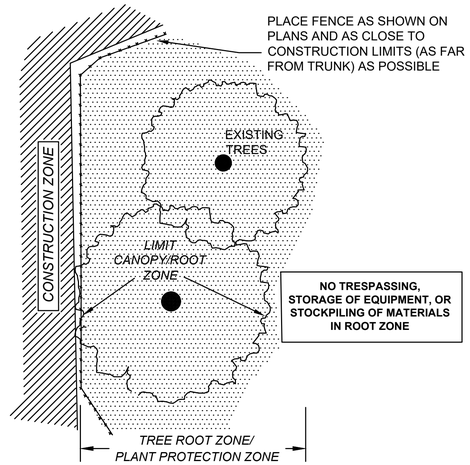
SECTION

COMPOST FILTER TUBE STACKED

NOT TO SCALE



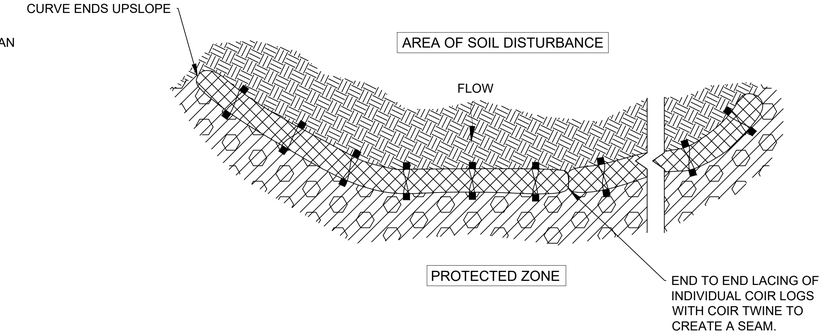
SECTION - FENCE PROTECTION OF ROOT ZONE



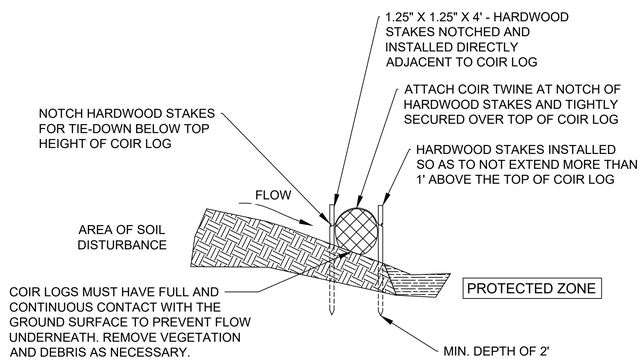
PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION ROOT ZONE

NOT TO SCALE



PLAN VIEW

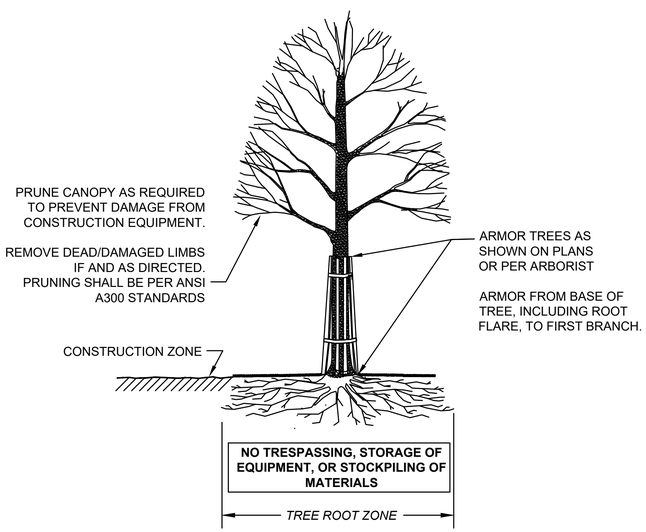


*IF, UPON APPROVAL OF THE ENGINEER, COIR WATTLE IS USED IN PLACE OF COIR LOGS FOR REPAIRS DURING CONSTRUCTION, DIAMETER OF COIR WATTLE MAY BE 12 INCHES.

SECTION

SEDIMENT BARRIER - COIR LOG

NOT TO SCALE



SECTION - TRUNK ARMORING & PRUNING

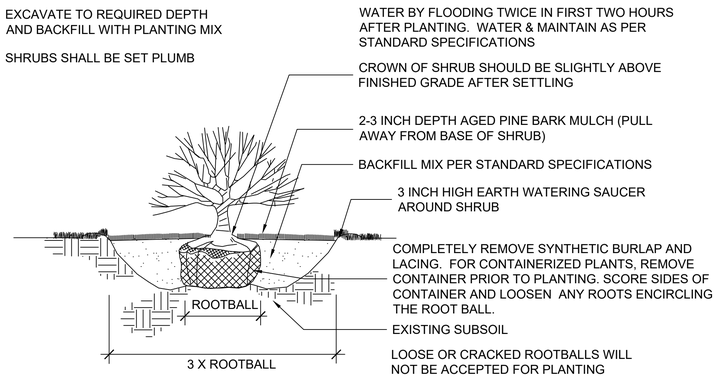
TREE PROTECTION TRUNK

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	46	71
PROJECT FILE NO.	608940		

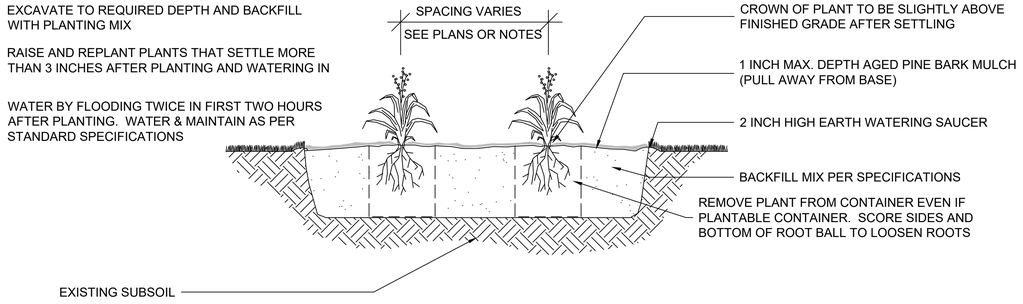
CONSTRUCTION DETAILS

14360_HD(DET).DWG Plotted on 23-Oct-2024 9:06 PM



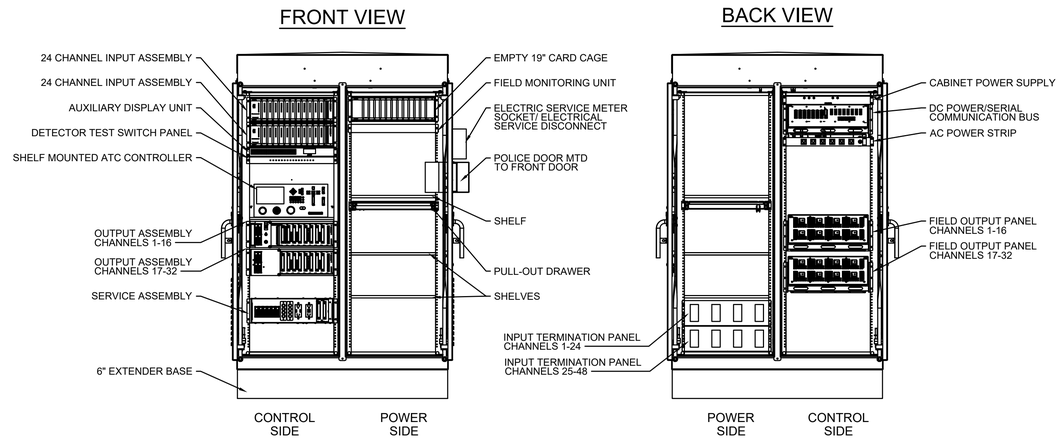
SHRUB PLANTING

NOT TO SCALE



PERENNIAL PLANTING

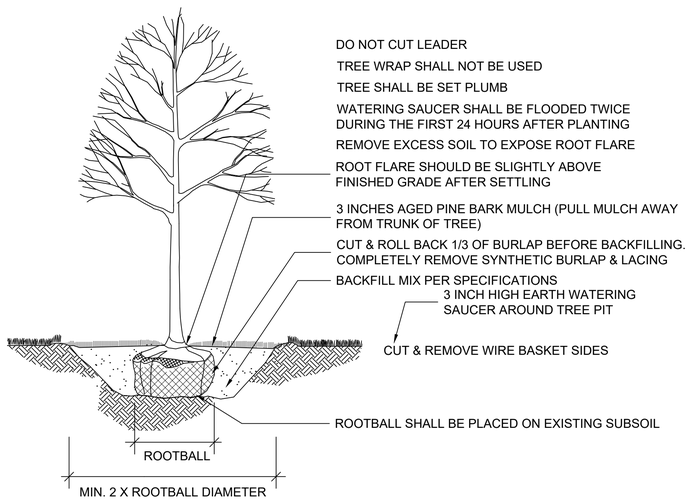
NOT TO SCALE



NOTES:
1. DRAWING SHOWN IS A SCHEMATIC REPRESENTATION OF THE ATC CABINET DEPICTING THE RELATIVE LOCATION OF VARIOUS IN-CABINET DEVICES AND SUBASSEMBLIES. THE EXACT SIZE OF VARIOUS ELEMENTS MAY VARY PER MANUFACTURER.
2. INPUT TERMINATION PANEL SHOWN IS FOR VIDEO BASED INPUTS.
3. DRAWING DEPICTS TWO INPUT PANELS AND TWO OUTPUT PANELS. THIS QUANTITY MAY BE REDUCED DEPENDING ON APPLICATION; SEE SPECIAL PROVISIONS FOR NUMBER OF PANELS TO BE SUPPLIED.
4. FAN AND THERMOSTAT SHALL BE INSTALLED ON CABINET FRAME ABOVE THE DOOR.
5. LED LIGHT STRIPS SHALL BE INSTALLED ON CABINET FRAME ABOVE THE DOOR AND ON THE UNDERSIDE OF THE LOWER SHELF.
6. THE SIZE OF THE METER SOCKET WILL VARY BASED ON THE LOCAL ELECTRIC UTILITY COMPANY REQUIREMENT.
7. THE METER SHALL BE INSTALLED SUCH THAT THE BOTTOM OF THE METER IS AT LEAST 48 INCHES ABOVE FINAL GRADE.
8. THE LOAD SIDE CABLE SHALL BE ROUTED THROUGH THE INTERIOR OF THE CABINET SUCH THAT IT DOES NOT BLOCK OR ENTER INTO AVAILABLE RACK SPACE. THE CABLE SHALL BE ROUTED BETWEEN THE EDGE OF THE RACK SYSTEM AND THE CABINET SIDE WALL, ALONG THE BOTTOM OF THE CABINET AND BELOW THE BOTTOM OPENING OF THE DOORS.

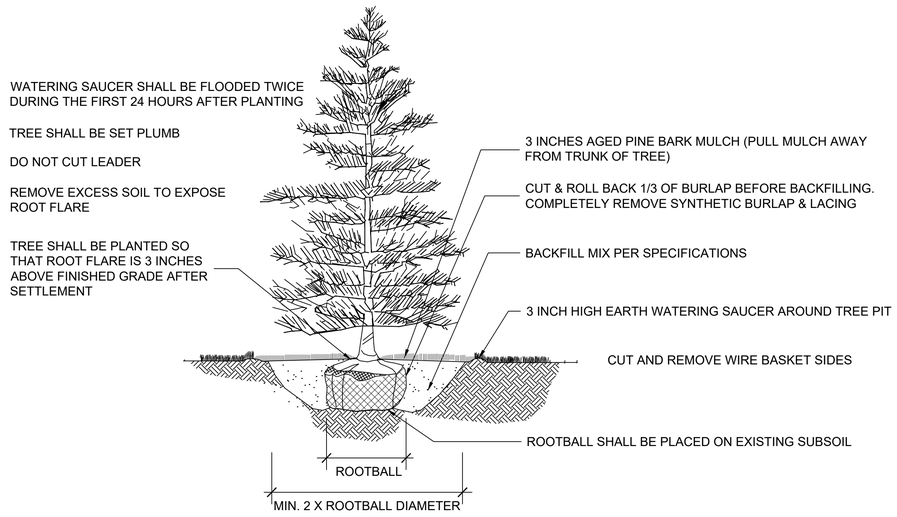
NOMINAL TERMINAL PANEL SIZE
PER 24 INPUT RACK:
LOOP = 6U HIGH (10.5")
VIDEO = 3U HIGH (5.25")

MassDOT 32/48 ATC CABINET - FOUR DOOR



DECIDUOUS TREE PLANTING

NOT TO SCALE



EVERGREEN TREE PLANTING

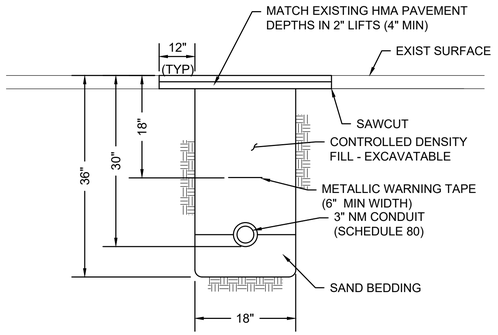
NOT TO SCALE

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	47	71
PROJECT FILE NO.	608940		

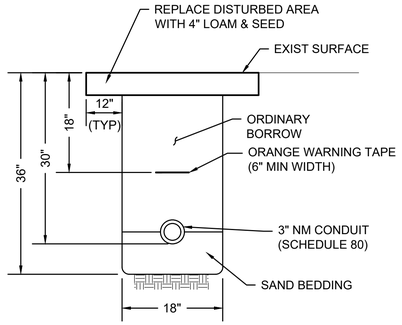
CONSTRUCTION DETAILS

14360_HD(DET).DWG Plotted on 23-Oct-2024 9:07 PM



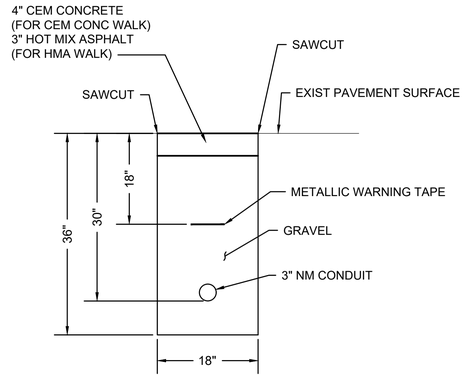
CONDUIT CROSSING ROADWAY/DRIVEWAY

SCALE: N.T.S.



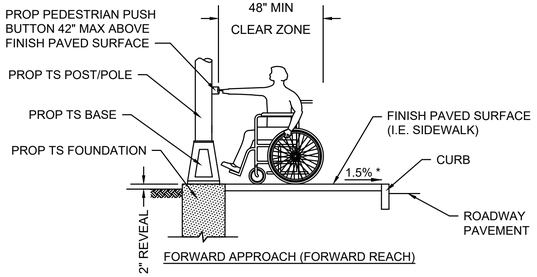
CONDUIT IN GRASS

SCALE: N.T.S. DWG: TRENCH-02 DATE: MARCH 2013



CONDUIT IN SIDEWALK

SCALE: N.T.S.



NOTE:
A CLEAR GROUND SPACE SHALL CONSIST OF A STABLE AND FIRM AREA, COMPLYING WITH 521 CMR 6.5 (FORWARD REACH) OR 521 CMR 6.6 (SIDE REACH) AND SHALL BE PROVIDED AT EACH OF THE PEDESTRIAN PUSH BUTTONS.

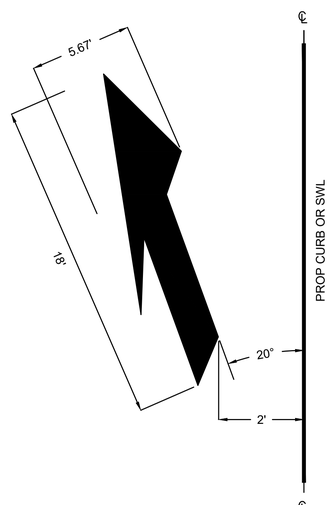
a. WHERE A FORWARD APPROACH IS PROVIDED, PEDESTRIAN PUSH BUTTONS SHALL ABUT AND BE CENTERED ON THE CLEAR GROUND SPACE.

b. WHERE A PARALLEL APPROACH IS PROVIDED, PEDESTRIAN PUSH BUTTONS SHALL BE WITHIN TEN INCHES (10") HORIZONTALLY OF AND CENTERED ON THE CLEAR GROUND SPACE.

* TOLERANCE FOR CONSTRUCTION ±0.5%

PEDESTRIAN PUSH BUTTON CLEAR ZONE

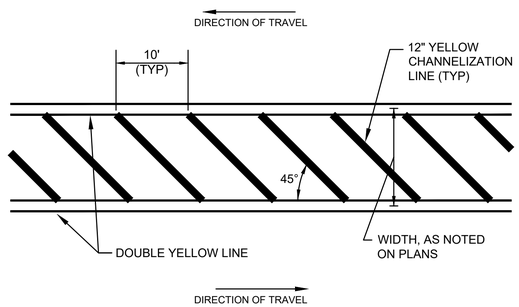
SCALE: N.T.S. DWG: PM-10 DATE: APRIL 2013



NOTES:
1. SEE MUTCD FIGURE 3B-24 FOR MORE INFORMATION.
2. LANE REDUCTION MARKING SHALL BE REFLECTORIZED PREFORMED THERMOPLASTIC.

LANE-REDUCTION ARROW

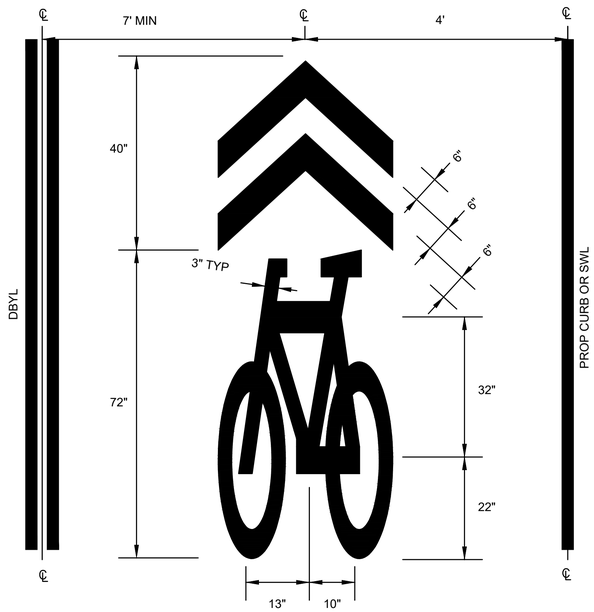
SCALE: N.T.S. DWG: PM-22 DATE: JUNE 2016



NOTES:
1. ALL 12" LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (e.g. TWO - 6" LINES) WILL BE ACCEPTED.

CHANNELIZED MARKINGS - MEDIAN FOR ROADWAYS 40MPH OR LESS

SCALE: NTS DWG: PM-13 DATE: OCT 2015



NOTES:
1. SEE MUTCD FIGURE 9C-9 FOR MORE INFORMATION.
2. SHARED LANE MARKINGS SHALL BE REFLECTORIZED PREFORMED THERMOPLASTIC.

SHARED LANE (SHARROW) PAVEMENT MARKING LAYOUT

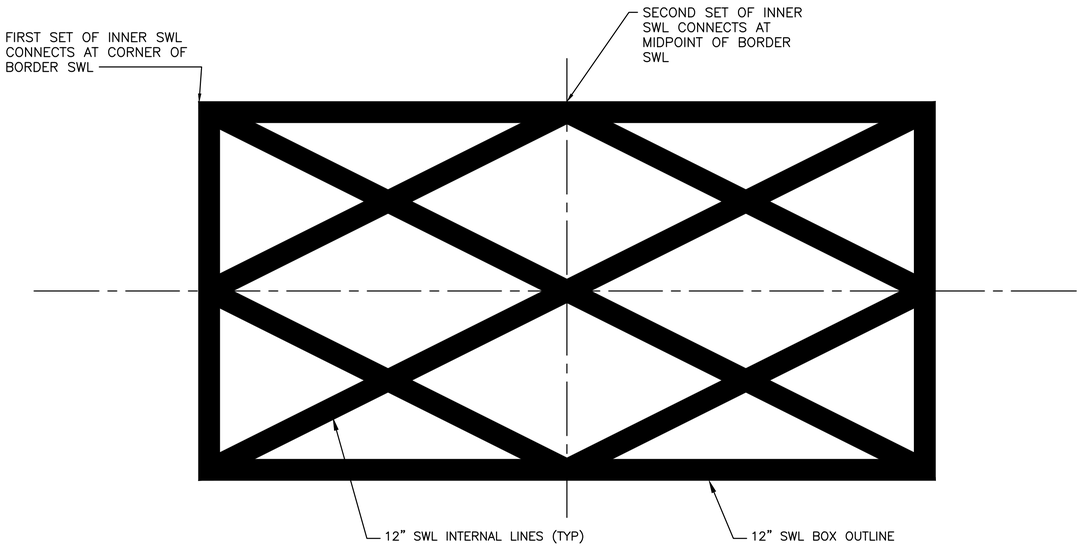
SCALE: N.T.S. DWG: PM-14 DATE: NOVEMBER 2022

WESTON
ROUTE 20 / WELLESLEY STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	XXXX	48	71
PROJECT FILE NO.	608940		

CONSTRUCTION DETAILS

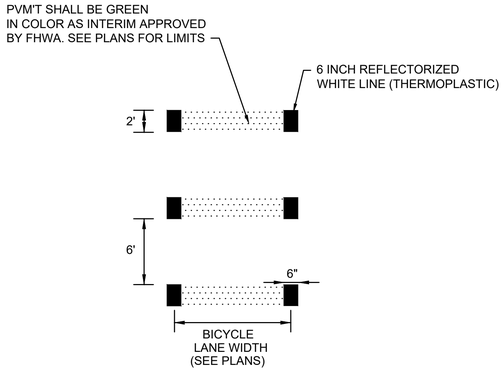
14360_HD(DET).DWG Plotted on 23-Oct-2024 9:07 PM



NOTE:
ALL 12" REFLECTORIZED THERMOPLASTIC LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO – 6" LINES) WILL BE ACCEPTED.

DO NOT BLOCK INTERSECTION MARKINGS

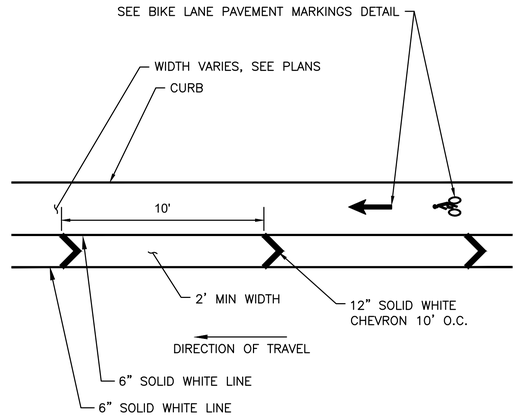
SCALE: NTS



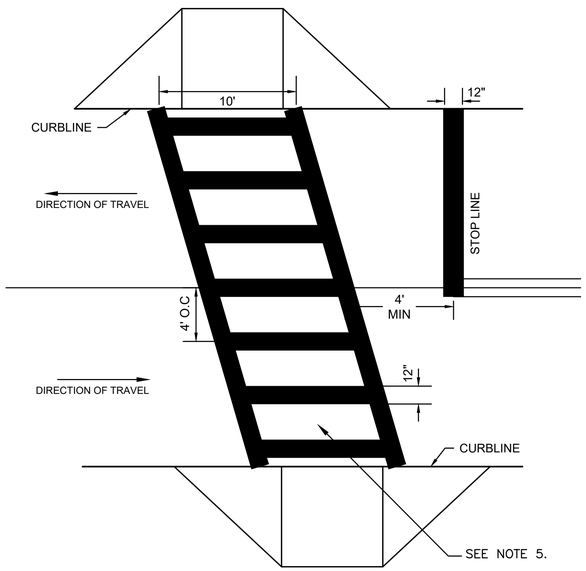
NOTES:
1. SEE ITEM 864.1 FOR COLORED BICYCLE LANES.

BICYCLE CROSSING

SCALE: N.T.S.



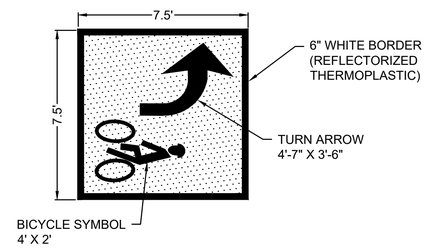
SEPARATED BIKE LANE MARKINGS



NOTES:
1. ALL EXISTING CROSSWALK MARKINGS SHALL BE FULLY ERADICATED BY APPROVED METHOD PRIOR TO THE APPLICATION OF PROPOSED MARKINGS.
2. ALL 12" THERMOPLASTIC LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6" LINES) WILL BE ACCEPTED.
3. LAYOUT OF CROSSWALKS SHALL BE ORIENTATED IN THE DIRECTION OF TRAVEL AND LOCATED OUTSIDE OF THE WHEEL PATH OF VEHICLES. LAYOUT SHALL BE APPROVED BY MASSDOT PRIOR TO APPLICATION OF THERMOPLASTIC.
4. ALL CROSSWALKS INSTALLED SHALL CONFORM TO THE RELEVANT PROVISIONS OF THE MASSACHUSETTS HIGHWAY DEPARTMENT "STANDARD SPECIFICATION FOR HIGHWAY AND BRIDGES" DATED 2023, SECTION 860 FOR REFLECTORIZED LINE (THERMO-PLASTIC) & MATERIAL M7.01.03, LATEST REVISIONS.
5. THE CROSSWALK SHALL BE LOCATED SUCH THAT THERE IS A 4' DIAMETER LOWER LANDING AREA IN THE ROADWAY ADJACENT TO THE RAMP OPENING THAT FITS ENTIRELY WITHIN THE LONGITUDINAL LINES OF THE CROSSWALK.

LADDER-STYLE CROSSWALK - 12" WIDE LINES

SCALE: N.T.S. DWG: PM-27 DATE: MAY 2017

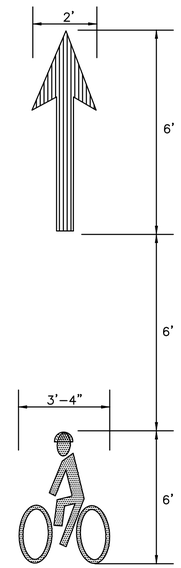


LIMITED SPACE

NOTES:
1. LEGEND MARKINGS SHALL BE REFLECTORIZED PREFORMED THERMOPLASTIC.
2. PAVEMENT SHALL BE PAINTED GREEN IN COLOR AS INTERIM APPROVED BY FHWA. SEE PLANS FOR LIMITS OF PAINTED LANES.

TWO-STAGE TURN QUEUE BOX

SCALE: N.T.S. DWG: PM-25 DATE: MARCH 2021



NOTES:
1. SEE MUTCD FIGURE 9C–3B FOR MORE INFORMATION.
2. BIKE LANE MARKINGS SHALL BE REFLECTORIZED PREFORMED THERMOPLASTIC.

BIKE LANE PAVEMENT MARKINGS

SCALE: N.T.S. DWG: PM-11 DATE: NOV 2015

DOCUMENT A00861

MASSACHUSETTS

DEPARTMENT OF ENVIRONMENTAL PROTECTION

ORDER OF CONDITIONS

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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:
337-1496
MassDEP File #

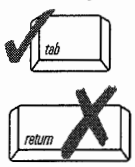
eDEP Transaction #

Weston
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: Weston
Conservation Commission

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

3. To: Applicant:

Thomas — a. First Name
Cullen — b. Last Name
Town of Weston Public Works Dept. — c. Organization
11 Town House Rd — d. Mailing Address
Weston — e. City/Town
MA — f. State
02493 — g. Zip Code

4. Property Owner (if different from applicant):

a. First Name
b. Last Name
MASSDOT - Highway Division — c. Organization
10 Park Plaza — d. Mailing Address
Boston — e. City/Town
MA — f. State
02116 — g. Zip Code

5. Project Location:

Route 20/Boston Post Rd at Wellesley St — a. Street Address
Weston — b. City/Town
c. Assessors Map/Plat Number
d. Parcel/Lot Number
Latitude and Longitude, if known: 42d367m36s — d. Latitude; 71d290m72s — e. Longitude

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: 337-1496 (MassDEP File #)
eDEP Transaction #
Weston (City/Town)

A. General Information (cont.)

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

7. Dates: 10/30/2024 (a. Date Notice of Intent Filed) | 11/19/2024 (b. Date Public Hearing Closed) | 12/23/2024 (c. Date of Issuance)

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
Intersection Improvements Route 20 At Boston Post Road & Wellesley St (a. Plan Title)
MassDOT Highway Division (b. Prepared By) | (c. Signed and Stamped by)
12/13/2024 (d. Final Revision Date) | 1" = 20' (e. Scale)
(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: 337-1496 (MassDEP File #)
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Weston (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 — 16 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	2677 a. total sq. feet	2677 b. total sq. feet		
Sq ft within 100 ft	1288 c. square feet	1288 d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	1389 g. square feet	1389 h. square feet	i. square feet	j. square feet

Massachusetts Department of Environmental Protection
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Provided by MassDEP: 337-1496 (MassDEP File #)
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Weston (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
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Provided by MassDEP:
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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
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 12/23/2027 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.

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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 337-1496 "

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.

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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
    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:
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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement) for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.

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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):

Please see Findings of Fact and Special Conditions on pages 10a to 10g.

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

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D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No

2. The Weston (Conservation Commission) hereby finds (check one that applies):

   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:

   See Attachment B (1. Municipal Ordinance or Bylaw) Article XVI (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):

   Please see Findings of Fact and Special Conditions on pages 10a to 10g.

Special Conditions for: Route 20 Intersection Improvements- Rt. 20/Boston Post Rd at Wellesley St (DEP File # 337-1496; BL 2024-07)

Special Conditions for: Route 20 Intersection
Applicant: Thomas Cullen/Town of Weston Department of Public Works
DEP FILE # 337-1496; BL 2024-07

Contact Information:

Applicant: Thomas Cullen
11 Town House Road
Weston, MA 02493
cullen.t@westonma.gov

Representative: Taylor Donovan
VHB
101 Walnut St, P.O. Box 9151
Watertown, MA 02472
tdonovan@vhb.com
617-607-6310

Findings of Fact

The Applicant has filed this Notice of Intent for reconfiguration of the intersection, installation of a traffic signal system, creation of new pedestrian crossings and buffered bicycle lanes, and stormwater system upgrades at the intersection of Rt. 20/Boston Post Rd, Wellesley St, and Winsor Way.

Jurisdiction:

- *310 CMR 10.02(2)(b)(3): Buffer Zone-* Activities within the Buffer Zone which do not meet the requirements of 310 CMR 10.02(2)(b)1. and 2. are subject to preconstruction review through the filing of a Determination of Applicability to clarify jurisdiction or a Notice of Intent under the provisions of 310 CMR 10.53(1).
- *310 CMR 10.02(1)(f) & 10.*02(2)(a): *Riverfront Area-* Any activity proposed or undertaken within an area specified in 310 CMR 10.02(1), which will remove, fill, dredge or alter that area, is subject to Regulation under the applicable performance standards of 310CMR 10.58 and requires the filing of a Notice Intent under the provisions of 310 CMR 10.53(1).
- The Applicant has requested review of this project under the Limited Project provisions of 310 CMR 10.53(3)(f): "Maintenance and improvement of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving inadequate drainage systems."

Existing Conditions: The Project Site is located at the intersection of Boston Post Road Bypass (Route 20), Wellesley Street, Boston Post Road, and Winsor Way. Route 20, Boston Post Road, and Wellesley Street each consist of one travel lane in each direction within the Project Site. The intersection of Route 20 with Wellesley Street, Boston Post Road, and Winsor Way is an unsignalized intersection. Currently, there are no marked crosswalks at the intersections and no formal existing bicycle lanes within the Project Site. The sidewalks along the north side of Boston Post Road to the north and east of the intersection are in poor condition and in need of repair.

Resource Areas: The Project Site has one (1) perennial stream, one (1) pond, and two (2) wetland complexes in close proximity and subjecting the site to jurisdictional review by the Commission.

Special Conditions for: Route 20 Intersection Improvements- Rt. 20/Boston Post Rd at Wellesley St
(DEP File # 337-1496; BL 2024-07)

Table 1 Delineated Wetland Resource Areas

Wetland	Flag Numbers	Type	Resource Areas
Stream 1	BF1-100 to BF1-115	Perennial stream channel flowing southwest to northeast, conveyed through a culvert beneath the Project Site	Bank, LUWW, BLSF, and RA
Cook's Pond	BF1-200 to BF1-207	Open water pond located north of the Project Site which receives flow from Stream 1	Bank, BLSF, and LUWW
Wetland 1	WF1-300 to WF1-305	Area of vegetated wetland associated with Stream 1 to the west	BVW, BLSF
Wetland 2	WF1-400 to WF1-410	Area of vegetated wetland associated with Stream 1 to the east	BVW, BLSF

Both wetland complexes and the perennial stream are designated as Outstanding Resource Waters (ORWs) and Zone A Surface Water Supply Protection Areas due to their hydrologic connection to the Stony Brook Reservoir.

Proposed Work: The proposed intersection improvements generally include reconfiguration of the intersection, installation of a traffic signal system, and creation of new pedestrian crossings and buffered bicycle lanes. Additionally, a proposed landscaped area which will be vegetated with native plants and shrubs will replace an area of existing pavement located to the southeast of the reconfigured intersection. All work will occur within previously disturbed areas.

The following geometric improvements are proposed:

- Provide two lanes on Route 20 eastbound (one dedicated through lane and one shared through/right-turn lane),
- Provide two lanes on Route 20 westbound (one dedicated left-turn lane and one shared through/right-turn lane),
- Provide two lanes on Boston Post Road southbound (one dedicated left-turn lane and one shared through/right-turn lane),
- Provide two lanes on Wellesley Street northbound (one shared through/left-turn lane and one dedicated right-turn lane),
- Remove the existing right-turn slip lane from Route 20 westbound to Boston Post Road northbound, and
- Adjust geometry to shift access from Windsor Way south from Route 20 to just have access via Wellesley Street
- Install a new traffic signal system and add new pedestrian crossings on all four approaches to the intersection

Ancillary work to support these improvements includes pavement saw cutting, box widening, full depth reconstruction, and milling and overlay, sidewalk reconstruction, minor grading and drainage modifications, and restoration of landscape elements, as well as pavement markings, signage, and other incidental work as required.

Work to redevelop previously developed Riverfront Areas shall conform to the following criteria under 310 CMR 10.58(5):

(a) At a minimum, proposed work shall result in an improvement over existing conditions of the capacity of the riverfront area to protect the interests identified in M.G.L. c. 131 § 40. When a lot is previously developed but no portion of the riverfront area is degraded, the requirements of 310 CMR 10.58(4) shall be met. APPLICANT RESPONSE: *The Project seeks relief from this performance standard under the Limited Project provision. The proposed intersection improvements will provide similar conditions with respect to*

the capacity of the RA on the Project Site to protect the interests described in the WPA, and space constraints within the state highway layout prohibit any additional restoration or improvements from being proposed.

(b) Stormwater management is provided according to standards established by the Department. APPLICANT RESPONSE: *The Project is considered a redevelopment project and has been designed to comply with the Stormwater Management Standards to the maximum extent practicable.*

(c) Within 200-foot riverfront areas, proposed work shall not be located closer to the river than existing conditions or 100 feet, whichever is less, or not closer than existing conditions within 25-foot riverfront areas, except in accordance with 310 CMR 10.58(5)(f) or (g). APPLICANT RESPONSE: *Route 20 eastbound will be slightly widened to the south side to include the proposed bike lane, resulting in the final roadway layout being located closer to Stream 1 than in the existing conditions. This widening will provide a necessary safety area for bicyclists within the Project location while accommodating the proposed intersection improvements. Native plantings proposed on the Project Site but outside of the RA are proposed in order to provide partial mitigation for this work being located closer to Stream 1 than in existing conditions.*

(d) Proposed work, including expansion of existing structures, shall be located outside the riverfront area or toward the riverfront area boundary and away from the river, except in accordance with 310 CMR 10.58(5)(f) or (g). APPLICANT RESPONSE: *Due to the location of the existing roadway, work within RA is unavoidable. Much of the existing RA within the Project Site has been previously degraded from its natural state, and a majority of the proposed work for the Project will be performed within the existing disturbed footprint. A minor expansion of pavement is proposed in the non-degraded RA to the south of Route 20 in order to construct the bike lanes proposed for bicyclists' safety. The impacts to the Riverfront Area are anticipated to be minor, and erosion and sedimentation controls will be in place to ensure there is no discharge of sediment or other construction materials downgradient to the resource area.*

(e) The area of proposed work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area, except in accordance with 310 CMR 10.58(5)(f) or (g). APPLICANT RESPONSE: *The proposed work will generally be limited to the existing footprint, but there will be a de minimus increase in impervious areas within the RA. This increase in pavement is not anticipated to adversely impact the functions or values of the resource area.*

The Applicant is not proposing any restoration or mitigation work under 310 CMR 10.58(5)(f) or (g) and is seeking relief from those requirements as a Limited Project.

The total permanent and temporary impact within the Riverfront Area will be 2,677 sq. ft.; 285 sq. ft. is proposed as permanent impact.

Buffer Zone Performance Standards:

The Applicant is proposing to alter 58 sq. ft. of previously undisturbed land and redevelop existing degraded land within the 25-Foot No Disturb Zone (NDZ) for sidewalk improvements to meet MassDOT standards. The Applicant is seeking relief from the 25-foot No Disturb Zone performance standard under Section 2.9.3.1.: Buffer Zone- Performance Standards-25-Foot No Disturb Zone of the Town of Weston Wetland Protection Bylaws.

The Applicant has submitted a waiver request per the requirements of Section 2.10 of the Weston Wetlands Protection Regulations.

Stormwater Management:

This project is subject to review under the Massachusetts Stormwater Management Standards. The Applicant is requesting review as a redevelopment project under Standard 7 because it involves "*maintenance and improvement of existing roadways, including widening less than a single lane, adding*

shoulders, correcting substandard intersections, improving existing drainage systems, and repaving." This is consistent with the definition of redevelopment as found in the Massachusetts Stormwater Handbook, Volume 1, Chapter 1.

The Applicant worked closely with Jamie O' Connell, Cambridge Water Department, to incorporate a series of leaching catch basins to the stormwater design to provide additional on-site recharge and phosphorous reduction. At the time of the issuance of this Order of Conditions (OOC), the Applicant has submitted 100% design plans to MassDOT for review, and those plans are referenced in this OOC as the final project plans.

At the public hearing for this project on 11/19/24, the Commission requested that the restoration of the "slip-lane" conveying west-bound traffic on Rt. 20 northbound onto Boston Post Rd be seeded with a no-mow conservation seed mix, if possible.

Erosion Control Barriers: The Project proposes a variety of erosion and sedimentation and tree protection controls. See Project Plans, Construction Details, Sheet 45.

On November 19th, 2024, the Commission voted 4-0-0 to close the hearing and issue an Order of Conditions approving the project with the special conditions noted below.

Special Conditions under the Wetlands Protection Act

Overall Conditions

20. Violation of any condition may result in **Enforcement Action**.
21. **This document shall be included in all construction contracts**, subcontracts, and specifications dealing with the work proposed and shall supersede any conflicting contract requirements. The Applicant shall assure that all contractors, subcontractor and other personnel performing the permitted work are fully aware of the permit's terms and conditions. Thereafter, **the contractor will be held jointly liable for any violation** of this Order resulting from failure to comply with its conditions.
22. This Order and a copy of approved drawings and **plans shall be available at the project site** at all times for easy reference.
23. **Work shall be halted** on the site if an Agent of the Commission or DEP determines that any of the work is not in compliance with this Order of Conditions.
24. If any **unforeseen problem** occurs during the construction which affects any of the statutory interests of the Wetlands Protection Act, Chapter 131, Section 40, upon discovery, the applicant shall notify the Conservation Commission, and an immediate meeting shall be held between the Conservation Commission, the applicant, the applicant's engineer & contractor and other concerned parties to determine the corrective measures to be employed. The applicant shall then act to correct the problems using the corrective measures agreed upon.
25. The Commission reserves the **right to require additional conditions if deemed necessary** to protect resource areas and interests as defined in MGL Chapter 131 Section 40 (310 CMR 10.00).
26. **A Resident Engineer and/or staff employed or obtained by MassDOT shall assist in overall oversight of the activities approved by this Order**. Any selected contractor shall designate a Stormwater Pollution Prevention Plan (SWPPP) Inspector, as required by the NPDES Construction General Permit. The name, e-mail address and cell phone number of the Resident Engineer and SWPPP Inspector shall be provided to the Commission upon designation.
27. The Resident Engineer and/or SWPPP Inspector shall:

i. Advise on current erosion control practices and make recommendations for proposed changes if necessary to protect the interests of the WPA. Specifically, Erosion Control methods to control sediment at the source shall be implemented;

ii. Ensure adherence to the Order of Conditions and report any non-compliance to the Commission;

iii. Contact the Commission to implement additional impact mitigation measures on site whenever necessary to prevent or halt existing or imminent violations of this Order;

iv. Be present on site during:

1. Preconstruction meeting
2. All times when work is occurring in a Resource Area
3. Be present for all stormwater inspections as required by the SWPPP

Conditions Prior to Construction

28. Prior to commencement of work, the Applicant shall sign the attached "**Certificate of Understanding**".

29. Final Approved Stormwater Operations and Maintenance Plan – The Final Approved O&M plan shall be submitted to the WCC prior to construction.

30. Prior to construction the general contractor shall designate a **construction staging area**, located within the approved limit of work or on paved surfaces. All construction trailers, portable sanitary facilities, material storage shall be in the staging area. The perimeter of the staging area shall be protected as necessary with silt fence or other suitable controls and the ground surface shall be protected with washed stone or another suitable non-erosive material.

31. The **erosion controls** shall be properly installed as shown on the plan. The Commission may require additional control methods if site conditions warrant.

32. This Conservation Commission will be notified one week prior to construction to allow for a **pre-construction meeting.** The following people shall be present for the pre-construction meeting: the Conservation Agent, the Applicant or their representative, the Environmental Monitor, and the Contractor. The purpose of the pre-construction site visit shall be to review the Order of Conditions and the approved limit of work, discuss erosion control monitoring and confirm who is responsible for maintenance of erosion controls. The Applicant shall provide the Commission (in writing) with the names, addresses, business number and emergency contact numbers of both the project supervisor and his/her alternate.

33. A detailed construction schedule sequencing plan that identifies timelines for commencement and completion of different phases of the project

Conditions During Construction

34. All **erosion control barriers shall be maintained** in good repair until all disturbed areas have been fully stabilized with vegetation or other means. 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.

35. At the end of each workday, the applicant shall **mechanically sweep** or manually sweep sediments from the adjacent streets, unless tracking and sediment is not evident on the streets.

36. If **unforeseen problems** occur during construction which may affect the statutory interests of the Wetlands Protection Act and/or regulations, the Commission shall immediately be notified, and an immediate meeting shall be held between the Commission or its Agent, the Applicant, and other

concerned parties to determine the correct measures to be employed. The Applicant shall then act to correct the problems using the corrective measures agreed upon. Subsequent to resolution, the activity and resulting actions shall be documented in writing.

37. If dewatering proves to be necessary, a **dewatering plan shall be submitted to the Commission** for review and approval. Dewatering activities shall be monitored daily to ensure that sediment-laden water is appropriately settled prior to discharge toward the wetland resource areas. No discharge of water is allowed directly into an area subject to jurisdiction of the Wetlands Protection Act.
38. Any **stockpiling** of topsoil or other materials shall occur within the approved limit of work and be surrounded by a row of entrenched silt fence or other appropriate erosion control material.
39. All **waste products** (grubbed stumps, slash, construction materials, etc.), shall be deposited at an approved landfill and shall not be in any manner incorporated into the project site with the exception of the reduction of stumps and slash to mulch.
40. If soils are to be disturbed for longer than 30 days, such soils shall be **temporarily stabilized.** Temporary stabilization methods may include, but not be limited to, rye grass, hydro-seeding, straw mats, jute netting, sod, or other Commission approved method.
41. An **area for cleanup/ maintenance of equipment** shall be designated prior to construction.
42. **No fuel, oil, trash dumpsters or other pollutants shall be stored** in any resource area or the buffer zone thereto, unless specified in this Order of Conditions.

Final Site Stabilization and Removal of Erosion Controls

43. Within thirty days of completion of construction on any given portion of the project, all disturbed areas on site shall be **permanently stabilized** (immediately landscaped and stabilized, or loamed, seeded and fully stabilized). Where necessary, the loam and seeding shall be held in place with jute netting or other effective means of stabilization. Outside of the growing season, exposed soil finish grade surfaces shall be stabilized until climate conditions allow for seeding.
44. Once the site has been stabilized, the Applicant/Owner/Assign shall **remove and properly dispose of all erosion controls.** Removal of said erosion controls shall be accomplished utilizing the least invasive means possible.

Conditions related to Certificate of Compliance

45. Upon completion of construction and final soil stabilization, the Applicant/Owner/Assign shall submit the following to the Conservation Commission to request a Certificate of Compliance:
    a. A Completed Request for a Certificate of Compliance form (WPA Form 8A or other form if required by the Conservation Commission at the time of request);
    b. A letter from a Registered Professional Engineer certifying compliance of the property with this Order of Conditions, and detailing any deviations that exist, and their potential effect on the project. A statement that the work is in "substantial compliance" with no detailing of the deviations shall not be accepted;
    c. A copy of the Stormwater O&M Plan with a log of inspections made at the time of submission. The Applicant shall submit a memo to the Commission acknowledging this O&M Plan and acknowledging the required annual inspections needed prior to the issuance of a Certificate of Compliance. Evidence that all stormwater BMPs, including all catch basins and leaching catch basins, are clean and functional at the close of this project shall also be provided.
    d. An "As-Built" plan signed and stamped by a Registered Professional Engineer or Land Surveyor showing post-construction conditions within all areas under the jurisdiction of the Massachusetts Wetlands Protection Act. This plan shall include at a minimum:

i. All wetland resource area boundaries with associated buffer zones and regulatory setback areas taken from the plan(s) approved in this OOC;

ii. Locations and elevations of all stormwater management conveyances, structures and best management designs, including foundation drains, constructed under this Order within any wetland resource area or buffer zone;

iii. Distances from any structures constructed under this Order to wetland resource areas - "structures" include, but are not limited to, all buildings, septic system components, wells, utility lines, fences, retaining walls, and roads/driveways;

iv. A line delineating the limit of work - "work" includes any filling, excavating and/or disturbance of soils or vegetation approved under this Order;

v. Location of all restoration and mitigation work;

vi. Edge of lawn.

Conditions in Perpetuity - The following conditions shall run with the land and be binding in perpetuity on all successors in title and assigns of the applicant; they are ongoing and do not end upon completion of this project or the issuance of a Certificate of Compliance; they shall be the responsibility of the owner of record of this property.

46. **The use of pesticides, fungicides or insecticides is prohibited** within the Buffer Zone except by express permission from the Commission. Only the use of slow-release organic granular type fertilizer is allowed in the Buffer Zone. This condition shall be recorded on the Certificate of Compliance.

DEP #: 337-1496
BYLAW #: 2024-07
LOCATION: Route 20/Boston Post Rd at Wellesley St
APPLICANT: Thomas Cullen/Town of Weston Department of Public Works

ATTACHMENT B:
ORDER OF CONDITIONS
Town of Weston Wetlands Protection Bylaw
General Municipal By-Laws Article XVI
ISSUING AUTHORITY: Weston Conservation Commission

Applicant: Thomas Cullen
11 Town House Rd
Weston MA 02493
cullen.t@westonma.gov

Representative: Taylor Donovan
VHB
101 Walnut St, P.O. Box 9151
Watertown, MA 02472
tdonovan@vhb.com
617-607-6310

Public Hearing Opened: 11/19/24
Public Hearing Closed: 11/19/24
Date of Issue: 12/23/24
Date of Expiration: 12/23/27
Delivered by: Certified Mail

PLAN INFORMATION:

I. FINDINGS & PROJECT SUMMARY

The Applicant has filed this Notice of Intent for reconfiguration of the intersection, installation of a traffic signal system, and creation of new pedestrian crossings and buffered bicycle lanes to increase the safety of the intersection for motorists and pedestrians.

Jurisdiction:

- *Section 2(5) Buffer Zone (Bylaw); Section 2.9 Buffer Zone (Regulations)*
- *Section 2(7) Riverfront Area (Bylaw); Section 2.7 Riverfront Area (Regulations)*
- The Applicant has requested review of this project under the Limited Project provisions of 310 CMR 10.53(3)(f): "Maintenance and improvement of existing public roadways, but limited to widening less than a single lane, adding shoulders, correcting substandard intersections, and improving inadequate drainage systems."

Existing Conditions: The Project Site is located at the intersection of Boston Post Road Bypass (Route 20), Wellesley Street, Boston Post Road, and Winsor Way. Route 20, Boston Post Road, and Wellesley Street each consist of one travel lane in each direction within the Project Site. The intersection of Route 20 with Wellesley Street, Boston Post Road, and Winsor Way is an unsignalized intersection. Currently, there are

no marked crosswalks at the intersections and no formal existing bicycle lanes within the Project Site. The sidewalks along the north side of Boston Post Road to the north and east of the intersection are in poor condition and in need of repair.

Resource Areas: The Project Site has one (1) perennial stream, one (1) pond, and two (2) wetland complexes in close proximity and subjecting the site to jurisdictional review by the Commission.

Table 1 Delineated Wetland Resource Areas

Wetland	Flag Numbers	Type	Resource Areas
Stream 1	BF1-100 to BF1-115	Perennial stream channel flowing southwest to northeast, conveyed through a culvert beneath the Project Site	Bank, LUWW, BLSF, and RA
Cook's Pond	BF1-200 to BF1-207	Open water pond located north of the Project Site which receives flow from Stream 1	Bank, BLSF, and LUWW
Wetland 1	WF1-300 to WF1-305	Area of vegetated wetland associated with Stream 1 to the west	BVW, BLSF
Wetland 2	WF1-400 to WF1-410	Area of vegetated wetland associated with Stream 1 to the east	BVW, BLSF

Both wetland complexes and the perennial stream are designated as Outstanding Resource Waters (ORWs) and Zone A Surface Water Supply Protection Areas due to their hydrologic connection to the Stony Brook Reservoir.

Proposed Work: The proposed intersection improvements generally include reconfiguration of the intersection, installation of a traffic signal system, and creation of new pedestrian crossings and buffered bicycle lanes. Additionally, a proposed landscaped area which will be vegetated with native plants and shrubs will replace an area of existing pavement located to the southeast of the reconfigured intersection. All work will occur within previously disturbed areas.

The following geometric improvements are proposed:

- Provide two lanes on Route 20 eastbound (one dedicated through lane and one shared through/right-turn lane),
- Provide two lanes on Route 20 westbound (one dedicated left-turn lane and one shared through/right-turn lane),
- Provide two lanes on Boston Post Road southbound (one dedicated left-turn lane and one shared through/right-turn lane),
- Provide two lanes on Wellesley Street northbound (one shared through/left-turn lane and one dedicated right-turn lane),
- Remove the existing right-turn slip lane from Route 20 westbound to Boston Post Road northbound, and
- Adjust geometry to shift access from Windsor Way south from Route 20 to just have access via Wellesley Street
- Install a new traffic signal system and add new pedestrian crossings on all four approaches to the intersection

Ancillary work to support these improvements includes pavement saw cutting, box widening, full depth reconstruction, and milling and overlay, sidewalk reconstruction, minor grading and drainage modifications, and restoration of landscape elements, as well as pavement markings, signage, and other incidental work as required.

Work to redevelop previously developed riverfront areas shall conform to the following criteria under 310 CMR 10.58(5):

(a) At a minimum, proposed work shall result in an improvement over existing conditions of the capacity of the riverfront area to protect the interests identified in M.G.L. c. 131 § 40. When a lot is previously developed but no portion of the riverfront area is degraded, the requirements of 310 CMR 10.58(4) shall be met. APPLICANT RESPONSE: *The Project seeks relief from this performance standard under the Limited Project provision. The proposed intersection improvements will provide similar conditions with respect to the capacity of the RA on the Project Site to protect the interests described in the WPA, and space constraints within the state highway layout prohibit any additional restoration or improvements from being proposed.*

(b) Stormwater management is provided according to standards established by the Department. APPLICANT RESPONSE: *The Project is considered a redevelopment project and has been designed to comply with the Stormwater Management Standards to the maximum extent practicable.*

(c) Within 200-foot riverfront areas, proposed work shall not be located closer to the river than existing conditions or 100 feet, whichever is less, or not closer than existing conditions within 25-foot riverfront areas, except in accordance with 310 CMR 10.58(5)(f) or (g). APPLICANT RESPONSE: *Route 20 eastbound will be slightly widened to the south side to include the proposed bike lane, resulting in the final roadway layout being located closer to Stream 1 than in the existing conditions. This widening will provide a necessary safety area for bicyclists within the Project location while accommodating the proposed intersection improvements. Native plantings proposed on the Project Site but outside of the RA are proposed in order to provide partial mitigation for this work being located closer to Stream 1 than in existing conditions.*

(d) Proposed work, including expansion of existing structures, shall be located outside the riverfront area or toward the riverfront area boundary and away from the river, except in accordance with 310 CMR 10.58(5)(f) or (g). APPLICANT RESPONSE: *Due to the location of the existing roadway, work within RA is unavoidable. Much of the existing RA within the Project Site has been previously degraded from its natural state, and a majority of the proposed work for the Project will be performed within the existing disturbed footprint. A minor expansion of pavement is proposed in the non-degraded RA to the south of Route 20 in order to construct the bike lanes proposed for bicyclists' safety. The impacts to the Riverfront Area are anticipated to be minor, and erosion and sedimentation controls will be in place to ensure there is no discharge of sediment or other construction materials downgradient to the resource area.*

(e) The area of proposed work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area, except in accordance with 310 CMR 10.58(5)(f) or (g). APPLICANT RESPONSE: *The proposed work will generally be limited to the existing footprint, but there will be a de minimus increase in impervious areas within the RA. This increase in pavement is not anticipated to adversely impact the functions or values of the resource area.*

The Applicant is not proposing any restoration or mitigation work under 310 CMR 10.58(5)(f) or (g) and is seeking relief from those requirements as a Limited Project.

The total permanent and temporary impact within the Riverfront Area will be 2,677 sq. ft.; 285 sq. ft. is proposed as permanent impact.

Buffer Zone and 25-foot No Disturb Zone Performance Standards:

The Applicant is proposing to alter 58 sq. ft. of previously undisturbed land and redevelop existing degraded land within the 25-Foot No Disturb Zone (NDZ) for sidewalk improvements to meet MassDOT standards. The Applicant is seeking relief from the 25-foot No Disturb Zone performance standard under Section 2.9.3.1.: Buffer Zone- Performance Standards-25-Foot No Disturb Zone of the Town of Weston Wetland Protection Bylaws.

Stormwater Management:

This project is subject to review under the Massachusetts Stormwater Management Standards. The Applicant is requesting review as a redevelopment project under Standard 7 because it involves "*maintenance and improvement of existing roadways, including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems, and repaving.*" This is consistent with the definition of redevelopment as found in the Massachusetts Stormwater Handbook, Volume 1, Chapter 1.

The Applicant worked closely with Jamie O' Connell, Cambridge Water Department, to incorporate a series of leaching catch basins to the stormwater design to provide additional on-site recharge and phosphorous reduction. At the time of the issuance of this Order of Conditions (OOC), the Applicant has submitted 100% design plans to MassDOT for review, and those plans are referenced in this OOC as the final project plans.

At the public hearing for this project on 11/19/24, the Commission requested that the restoration of the "slip-lane" conveying west-bound traffic on Rt. 20 northbound onto Boston Post Rd be seeded with a no-mow conservation seed mix, if possible.

Erosion Control Barriers: The Project proposes a variety of erosion and sedimentation and tree protection controls. See Project Plans, Construction Details, Sheet 45.

Approved Plans & Documents:

- *Massachusetts Department of Transportation Highway Division Intersection Improvements Route 20 At Boston Post Road & Wellesley St*, MassDOT Highway Division, Sheets 1-48, Revised 12/13/24

II. DELIBERATION AND DECISION

On November 19th, 2024, the Commission voted 4-0-0 to close the hearing and issue an Order of Conditions approving the project with the special conditions noted below.

III. REGULATORY STANDARDS AND COMMISSION COMMENTS

The work approved under this Order of Conditions is subject to the regulatory standards of *Section 2.7 Riverfront Area* and *Section 2.9 Buffer Zone* and as such, the Commission reviewed the proposed work for compliance with the 25-foot No-Disturb Zone under Section 2.9.3.1. The Applicant has submitted a waiver request per the requirements of Section 2.10 of the Weston Wetlands Protection Regulations.

IV. SPECIAL CONDITIONS

The Special Conditions put forth under the Wetlands Protection Act filing, DEP 337-1496, and included with this Order of Conditions as pages 10a-10g are sufficient to protect the interests of the Town of Weston Wetlands Protection By-Law (Article XVI) and meet the regulatory standards of the Weston Wetlands Protection Regulations.

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:
337-1496
MassDEP File #

eDEP Transaction #

Weston
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.

12/23/2024
1. Date of Issuance

Please indicate the number of members who will sign this form.
This Order must be signed by a majority of the Conservation Commission.

4
2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures

By Vote on 8/9/22, the individuals listed below have authorized the Conservation Administrator to sign on their behalf pursuant to the signature authorization recorded with the Middlesex South Registry of Deeds in Book 80636 Page 393. They also intend for their typed names below to serve their electronic signatures for any entity (MassDEP) that accepts electronic signatures.

/Rees Tulloss/

/Eileen Fava/

/Ellen Freeman Roth/

/Alison Barlow/

Jordan McCarron, Conservation Administrator, duly authorized (Book 80636, Page 393)

☒ by hand delivery on

12/23/2024
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

Provided by MassDEP:
337-1496
MassDEP File #

eDEP Transaction #

Weston
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:
337-1496
MassDEP File #

eDEP Transaction #

Weston
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.

Weston
Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Weston
Conservation Commission

Please be advised that the Order of Conditions for the Project at:

Project Location _____ MassDEP File Number _____

Has been recorded at the Registry of Deeds of:

County _____ Book _____ Page _____

for: Property Owner _____

and has been noted in the chain of title of the affected property in:

Book _____ Page _____

In accordance with the Order of Conditions issued on:

Date _____

If recorded land, the instrument number identifying this transaction is:

Instrument Number _____

If registered land, the document number identifying this transaction is:

Document Number _____

Signature of Applicant _____

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

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

DEP File Number:

337-1496
Provided by DEP

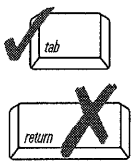
A. Request Information

1. Location of Project

a. Street Address _____ b. City/Town, Zip _____

c. Check number _____ d. Fee amount _____

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



2. Person or party making request (if appropriate, name the citizen group's representative):

Name _____

Mailing Address _____

City/Town _____ State _____ Zip Code _____

Phone Number _____ Fax Number (if applicable) _____

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name _____

Mailing Address _____

City/Town _____ State _____ Zip Code _____

Phone Number _____ Fax Number (if applicable) _____

4. DEP File Number: _____

B. Instructions

1. When the Departmental action request is for (check one):

☐ Superseding Order of Conditions – Fee: $120.00 (single family house projects) or $245 (all other projects)

☐ Superseding Determination of Applicability – Fee: $120

☐ Superseding Order of Resource Area Delineation – Fee: $120

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

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

DEP File Number:

337-1496
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.

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

WESTON

For: **Intersection Improvements Boston Post Road (Route 20) at Wellesley Street**

COMMONWEALTH OF MASSACHUSETTS

LOCATION

The work referred to herein is in the Town of WESTON in Middlesex 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:

Route 20

Beginning – Station 100+60.00 +/-
Ending –Station 111+00.00 +/-

Boston Post Road

Ending – Station 13+00.00 +/-

Winsor Way

Ending – Station 2+80.00 +/-

Wellesley Street

Ending – Station 18+91.00 +/-

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 **827 CALENDAR DAYS** upon receipt of a Notice to Proceed, except that if the completion date falls between December 1 and March 15 then the same number of days beyond December 1st will be extended after March 15th.

The Work of this project is described by the following Items and quantities.

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Project # 608940	Contract # 133931			
Location : WESTON				
Description : Intersection Improvements Boston Post Road (Route 20) at Wellesley Street				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
102.	0.05	SELECTIVE CLEARING AND THINNING AT _____ PER ACRE		
102.511	15	TREE PROTECTION – ARMORING & PRUNING AT _____ EACH		
102.521	115	TREE AND PLANT PROTECTION FENCE AT _____ PER FOOT		
103.	15	TREE REMOVED - DIAMETER UNDER 24 INCHES AT _____ EACH		
104.	2	TREE REMOVED - DIAMETER 24 INCHES AND OVER AT _____ EACH		
105.	1	STUMP REMOVED AT _____ EACH		
120.1	2,100	UNCLASSIFIED EXCAVATION AT _____ PER CUBIC YARD		
141.	100	CLASS A TRENCH EXCAVATION AT _____ PER CUBIC YARD		
141.1	120	TEST PIT FOR EXPLORATION AT _____ PER CUBIC YARD		

Project # 608940	Contract # 133931			
Location : WESTON				
Description : Intersection Improvements Boston Post Road (Route 20) at Wellesley Street				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
142.	70	CLASS B TRENCH EXCAVATION AT _____ PER CUBIC YARD		
144.	20	CLASS B ROCK EXCAVATION AT _____ PER CUBIC YARD		
146.	5	DRAINAGE STRUCTURE REMOVED AT _____ EACH		
150.	280	ORDINARY BORROW AT _____ PER CUBIC YARD		
151.	1,200	GRAVEL BORROW AT _____ PER CUBIC YARD		
151.2	190	GRAVEL BORROW FOR BACKFILLING STRUCTURES AND PIPES AT _____ PER CUBIC YARD		
156.	30	CRUSHED STONE AT _____ PER TON		
170.	3,600	FINE GRADING AND COMPACTING - SUBGRADE AREA AT _____ PER SQUARE YARD		
180.01	1	ENVIRONMENTAL HEALTH AND SAFETY PROGRAM AT _____ LUMP SUM		

Project # 608940	Contract # 133931			
Location : WESTON				
Description : Intersection Improvements Boston Post Road (Route 20) at Wellesley Street				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
180.02	40	PERSONAL PROTECTION LEVEL C UPGRADE AT _____ PER HOUR		
180.03	60	LICENSED SITE PROFESSIONAL SERVICES AT _____ PER HOUR		
181.11	1,120	DISPOSAL OF UNREGULATED SOIL AT _____ PER TON		
181.12	400	DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY AT _____ PER TON		
181.13	90	DISPOSAL OF REGULATED SOIL - OUT-OF-STATE FACILITY AT _____ PER TON		
181.14	90	DISPOSAL OF HAZARDOUS WASTE AT _____ PER TON		
182.1	1	INSPECTION AND TESTING FOR ASBESTOS AT _____ LUMP SUM		
182.2	100	REMOVAL OF ASBESTOS AT _____ PER FOOT		
201.	14	CATCH BASIN AT _____ EACH		

Project # 608940	Contract # 133931			
Location : WESTON				
Description : Intersection Improvements Boston Post Road (Route 20) at Wellesley Street				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
202.	6	MANHOLE AT _____ EACH		
204.	2	GUTTER INLET AT _____ EACH		
205.	6	LEACHING BASIN AT _____ EACH		
220.	21	DRAINAGE STRUCTURE ADJUSTED AT _____ EACH		
220.3	3	DRAINAGE STRUCTURE CHANGE IN TYPE AT _____ EACH		
220.5	2	DRAINAGE STRUCTURE REMODELED AT _____ EACH		
221.	14	FRAME AND COVER AT _____ EACH		
222.1	12	FRAME AND GRATE - MASSDOT CASCADE TYPE AT _____ EACH		
223.2	12	FRAME AND GRATE (OR COVER) REMOVED AND DISCARDED AT _____ EACH		

Project # 608940	Contract # 133931			
Location : WESTON				
Description : Intersection Improvements Boston Post Road (Route 20) at Wellesley Street				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
227.3	15	REMOVAL OF DRAINAGE STRUCTURE SEDIMENT AT _____ PER CUBIC YARD		
227.31	360	REMOVAL OF DRAINAGE PIPE SEDIMENT AT _____ PER FOOT		
238.10	70	10 INCH DUCTILE IRON PIPE AT _____ PER FOOT		
241.12	510	12 INCH REINFORCED CONCRETE PIPE AT _____ PER FOOT		
358.	5	GATE BOX ADJUSTED AT _____ EACH		
402.	220	DENSE GRADED CRUSHED STONE FOR SUB-BASE AT _____ PER CUBIC YARD		
415.2	7,600	PAVEMENT FINE MILLING AT _____ PER SQUARE YARD		
431.	310	HIGH EARLY STRENGTH CEMENT CONCRETE BASE COURSE AT _____ PER SQUARE YARD		
440.	4,700	CALCIUM CHLORIDE FOR ROADWAY DUST CONTROL AT _____ PER POUND		

Project # 608940	Contract # 133931			
Location : WESTON				
Description : Intersection Improvements Boston Post Road (Route 20) at Wellesley Street				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
443.	5	WATER FOR ROADWAY DUST CONTROL AT _____ PER 1000 GALLONS		
450.231	960	SUPERPAVE SURFACE COURSE - 12.5 POLYMER (SSC - 12.5 - P) AT _____ PER TON		
450.32	1,300	SUPERPAVE INTERMEDIATE COURSE - 19.0 (SIC - 19.0) AT _____ PER TON		
450.42	610	SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5) AT _____ PER TON		
451.	160	HMA FOR PATCHING AT _____ PER TON		
452.	1,500	ASPHALT EMULSION FOR TACK COAT AT _____ PER GALLON		
453.	8,600	HMA JOINT SEALANT AT _____ PER FOOT		
472.	100	TEMPORARY ASPHALT PATCHING AT _____ PER TON		
482.5	2,600	SAWCUTTING ASPHALT PAVEMENT FOR BOX WIDENING AT _____ PER FOOT		

Project # 608940	Contract # 133931			
Location : WESTON				
Description : Intersection Improvements Boston Post Road (Route 20) at Wellesley Street				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
506.	1,870	GRANITE CURB TYPE VB - STRAIGHT AT _____ PER FOOT		
506.1	110	GRANITE CURB TYPE VB - CURVED AT _____ PER FOOT		
509.	110	GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - STRAIGHT AT _____ PER FOOT		
509.1	180	GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - CURVED AT _____ PER FOOT		
514.	7	GRANITE CURB INLET - STRAIGHT AT _____ EACH		
515.	4	GRANITE CURB INLET - CURVED AT _____ EACH		
580.	840	CURB REMOVED AND RESET AT _____ PER FOOT		
594.	1,090	CURB REMOVED AND DISCARDED AT _____ PER FOOT		
620.12	300	GUARDRAIL, TL-2 (SINGLE FACED) AT _____ PER FOOT		

Project # 608940	Contract # 133931			
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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
627.1	1	TRAILING ANCHORAGE AT _____ EACH		
627.82	1	GUARDRAIL TANGENT END TREATMENT, TL-2 AT _____ EACH		
655.3	120	WOOD FENCE AT _____ PER FOOT		
670.2	150	FENCE REMOVED AND DISCARED AT _____ PER FOOT		
685.	80	STONE MASONRY WALL IN CEMENT MORTAR AT _____ PER CUBIC YARD		
691.	145	BALANCE STONE WALL REMOVED AND REBUILT AT _____ PER FOOT		
697.1	23	SILT SACK AT _____ EACH		
698.3	530	GEOTEXTILE FABRIC FOR SEPARATION AT _____ PER SQUARE YARD		
701.	40	CEMENT CONCRETE SIDEWALK AT _____ PER SQUARE YARD		

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701.2	190	CEMENT CONCRETE PEDESTRIAN CURB RAMP AT _____ PER SQUARE YARD		
702.	170	HOT MIX ASPHALT SIDEWALK OR DRIVEWAY AT _____ PER TON		
704.	1	STONE DUST WALKS AT _____ PER TON		
722.3	1	SCHEDULE OF OPERATIONS (TYPE C) - FIXED PRICE $26500 AT Twenty Six Thousand Five Hundred Dollars LUMP SUM	$26,500.00	$26,500.00
740.	26	ENGINEERS FIELD OFFICE AND EQUIPMENT (TYPE A) AT _____ PER MONTH		
748.	1	MOBILIZATION AT _____ LUMP SUM		
751.	280	LOAM BORROW AT _____ PER CUBIC YARD		
751.1	190	LOAM FOR LAWNS AT _____ PER CUBIC YARD		
756.	1	NPDES STORMWATER POLLUTION PREVENTION PLAN AT _____ LUMP SUM		

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765.	3,400	SEEDING AT _____ PER SQUARE YARD		
767.121	380	SEDIMENT CONTROL BARRIER AT _____ PER FOOT		
769.	670	PAVEMENT MILLING MULCH UNDER GUARD RAIL AT _____ PER FOOT		
772.341	5	CEDAR - WESTERN RED 10 - 12 FEET AT _____ EACH		
783.467	4	TUPELO 2-2.5 INCH CALIPER AT _____ EACH		
785.734	48	INKBERRY - COMPACT 2-3 FEET / #3 AT _____ EACH		
787.094	2	RHODO - ROSEBAY 2-3 FEET AT _____ EACH		
790.637	37	DOGWOOD - ARCTIC FIRE RED TWIG 2-3 FEET AT _____ EACH		
796.125	112	ROSY RETURNS DAYLILY #1 POT AT _____ EACH		

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796.145	76	LITTLE SUZY BLACK - EYED SUSAN #1 POT AT _____ EACH		
796.236	24	SWITCH GRASS - SHENENDOAH #2 POT AT _____ EACH		
804.3	600	3 INCH ELECTRICAL CONDUIT TYPE NM - PLASTIC -(UL) AT _____ PER FOOT		
804.4	60	4 INCH ELECTRICAL CONDUIT TYPE NM - PLASTIC -(UL) AT _____ PER FOOT		
811.28	1	ELECTRIC HANDHOLE POLYMER CONCRETE AT _____ EACH		
811.31	15	PULL BOX 12 X 12 INCHES - SD2.031 AT _____ EACH		
815.1	1	TRAFFIC CONTROL SIGNAL LOCATION NO. 1 AT _____ LUMP SUM		
823.70	2	HIGHWAY LIGHTING POLE AND LUMINAIRE REMOVED AND RESET AT _____ EACH		
823.701	3	HIGHWAY LUMINAIRE AND BRACKET REMOVED AND RESET AT _____ EACH		

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831.11	200	ROADSIDE GUIDE SIGN (MA-D1-XX) - ALUMINUM PANEL (TYPE A) AT _____ PER SQUARE FOOT		
832.	200	WARNING-REGULATORY AND ROUTE MARKER - ALUMINUM PANEL (TYPE A) AT _____ PER SQUARE FOOT		
841.11	6	SUPPORTS FOR GUIDE SIGN - (5 INCH TUBULAR POST) STEEL AT _____ EACH		
847.1	30	SIGN SUP (N/GUIDE)+RTE MKR W/1 BRKWAY POST ASSEMBLY - STEEL AT _____ EACH		
848.1	1	SIGN SUP (N/GUIDE)+RTE MKR W/2 BRKWAY POST ASSEMBLIES-STEEL AT _____ EACH		
850.41	160	ROADWAY FLAGGER AT _____ PER HOUR		
852.	640	SAFETY SIGNING FOR TRAFFIC MANAGEMENT AT _____ PER SQUARE FOOT		
852.11	150	TEMPORARY PEDESTRIAN BARRICADE AT _____ PER FOOT		
852.12	2	TEMPORARY PEDESTRIAN CURB RAMP AT _____ EACH		

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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
853.1	4	PORTABLE BREAKAWAY BARRICADE TYPE III AT _____ EACH		
853.8	20	TEMPORARY ILLUMINATION FOR WORK ZONE AT _____ PER DAY		
854.016	8,000	TEMPORARY PAVING MARKINGS - 6 INCH (PAINTED) AT _____ PER FOOT		
854.036	400	TEMPORARY PAVING MARKINGS - 6 INCH (TAPE) AT _____ PER FOOT		
854.6	50	TEMPORARY PORTABLE RUMBLE STRIP AT _____ PER DAY		
856.12	112	PORTABLE CHANGEABLE MESSAGE SIGN AT _____ PER DAY		
859.	22,000	REFLECTORIZED DRUM AT _____ PER DAY		
859.1	1,040	REFLECTORIZED DRUMS WITH SEQUENTIAL FLASHING WARNING LIGHTS AT _____ PER DAY		
864.031	9	PAVEMENT LEGEND REFL. WHITE THERMOPLASTIC (PREFORMED) – BICYCLE RIDER AT _____ EACH		

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864.032	9	PAVEMENT LEGEND REFL. WHITE THERMOPLASTIC (PREFORMED) – BICYCLE STRAIGHT ARROW AT _____ EACH		
864.034	7	PAVEMENT LEGEND REFL. WHITE THERMOPLASTIC (PREFORMED) – BICYCLE AT STOP LINE AT _____ EACH		
864.04	300	PAVEMENT ARROWS AND LEGENDS REFLECTORIZED WHITE (THERMOPLASTIC) AT _____ PER SQUARE FOOT		
864.116	2	PAVEMENT LEGEND REFL. WHITE THERMOPLASTIC (PREFORMED) – BIKE BOX LEFT ARROW AT _____ EACH		
864.117	2	PAVEMENT LEGEND REFL. WHITE THERMOPLASTIC (PREFORMED) – LANE REDUCTION ARROW AT _____ EACH		
864.118	2	PAVEMENT LEGENDS REFL. WHITE THERMOPLASTIC (PREFORMED) - LANE REDUCTION ARROW AT _____ EACH		
864.41	4,600	GREEN FRICTION SURFACE FOR BIKE LANES AT _____ PER SQUARE FOOT		
866.106	5,800	6 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) AT _____ PER FOOT		
866.112	2,100	12 INCH REFLECTORIZED WHITE LINE (THERMOPLASTIC) AT _____ PER FOOT		

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ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
867.106	4,000	6 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC) AT _____ PER FOOT		
867.112	200	12 INCH REFLECTORIZED YELLOW LINE (THERMOPLASTIC) AT _____ PER FOOT		
874.	10	STREET NAME SIGN AT _____ EACH		
874.2	1	TRAFFIC SIGN REMOVED AND RESET AT _____ EACH		
874.4	25	TRAFFIC SIGN REMOVED AND STACKED AT _____ EACH		
Total Qty:	101,465.05			

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