MB

COMMONWEALTH OF MASSACHUSETTS

massDOT
Massachusetts Department of Transportation
Highway Division

CONTRACT DOCUMENTS AND SPECIAL PROVISIONS

PROPOSAL NO.	607597-132402
P.V. =	$3,228,000.00
PLANS	YES

FOR

Federal Aid Project No. HIP(NGB)-003S(900)X
Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook

in the Town of

LEE

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

This Proposal to be opened and read: **TUESDAY, DECEMBER 2, 2025 at 2:00 P.M.**

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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, DECEMBER 2, 2025 at 2:00 P.M. **
LEE
Federal Aid Project No. HIP(NGB)-003S(900)X
Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook
****Date Subject to Change**

PROJECT VALUE = $3,228,000.00

Bidders must be pre-qualified by the Department in the BRIDGE - 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 $625.00 per ton, Portland cement $425.13 per ton, diesel fuel $2.793 per gallon, and gasoline $2.471 per gallon, and Steel Base Price Index 374.7 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: Monica G. Tibbits-Nutt, Secretary and CEO, MassDOT
Jonathan L. Gulliver, Administrator, MassDOT Highway Division
SATURDAY, SEPTEMBER 13, 2025

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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.

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

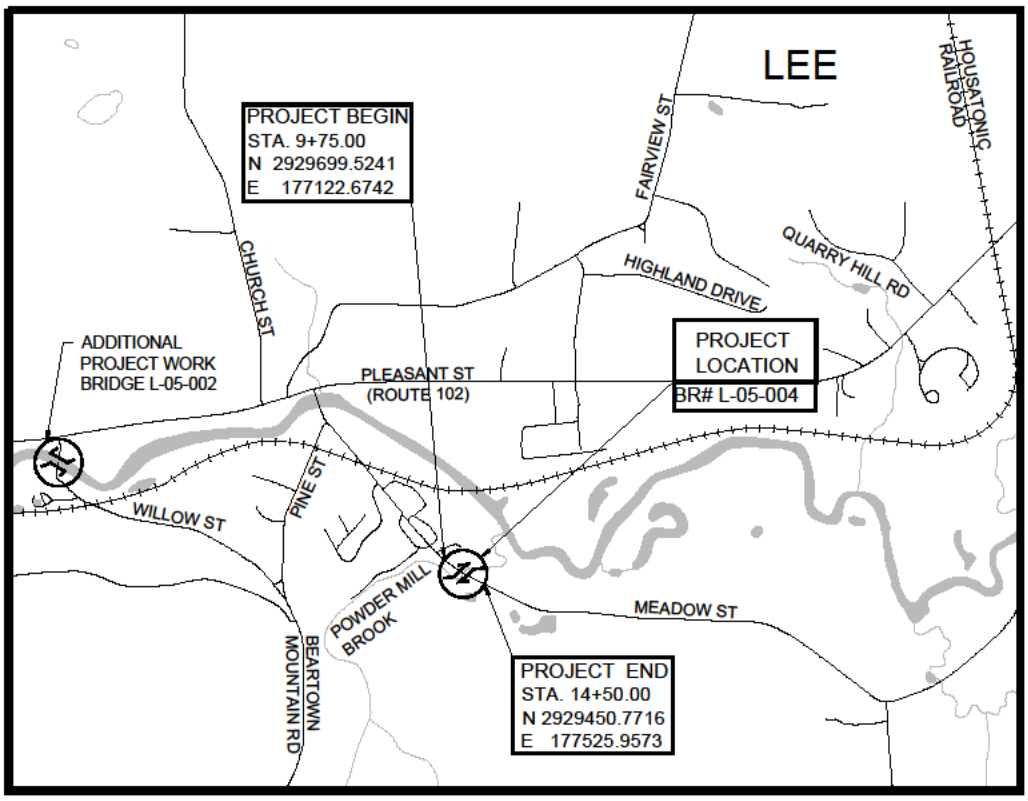
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DOCUMENT 00331

LOCUS MAP

LEE
Federal Aid Project No. HIP(NGB)-003S(900)X
Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook



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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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_____

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Revised: 04/28/17

*** END OF DOCUMENT ***

DOCUMENT 00710
GENERAL CONTRACT PROVISIONS
Revised: 04-16-25

NOTICE OF AVAILABILITY

The STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES dated 2025, the SUPPLEMENTAL SPECIFICATIONS, the 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS; the 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING and the CONSTRUCTION STANDARD DETAILS are available online at https://www.mass.gov/massdot-highway-division-manuals-and-publications

SPECIAL PROVISIONS FOR RIGHT-TO-KNOW ACT REQUIREMENTS

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

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

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

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

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

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

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

ALTERNATIVE DISPUTE RESOLUTION
Forum, Choice of Law and Mediations:

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

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DOCUMENT 00715

SUPPLEMENTAL SPECIFICATIONS

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 00719

(Revised September 14, 2023 – for all Federally Aided Projects)

SPECIAL PROVISIONS FOR PARTICIPATION BY DISADVANTAGED BUSINESS ENTERPRISES

(IMPLEMENTING TITLE 49 OF THE CODE OF FEDERAL REGULATIONS, PART 26)

Section: Page 00719-

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POLICY

The Massachusetts Department of Transportation (MassDOT) receives Federal financial assistance from the Federal Highway Administration (FHWA), United States Department of Transportation (U.S. DOT), and as a condition of receiving this assistance, has signed an assurance that it will comply with 49 CFR Part 26 (Participation By Disadvantaged Business Enterprises In Department Of Transportation Financial Assistance Programs). The U.S. DOT Disadvantaged Business Enterprise Program is authorized by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users ("SAFETEA-LU"), as amended, at Title 23, United States Code, § 1101.

Accordingly, MassDOT has established a Disadvantaged Business Enterprise (DBE) Program in accordance with 49 CFR Part 26. It is the policy of MassDOT to ensure that DBEs have an equal opportunity to receive and participate in U.S. DOT assisted Contracts, without regard to race, color, national origin, or sex. To this end, MassDOT shall not directly, or through contractual or other arrangements, use criteria or methods of administration that have the effect of defeating or substantially impairing accomplishment of the program objectives stated below:

- To ensure nondiscrimination in the award and administration of U.S. DOT assisted Contracts;
- To create a level playing field on which DBEs can compete fairly for U.S. DOT assisted Contracts;
- To ensure that the DBE Program is narrowly tailored in accordance with applicable law;
- To ensure that only firms that fully meet 49 CFR Part 26 eligibility standards are permitted to participate as DBEs;
- To help remove barriers to the participation of DBEs in U.S. DOT assisted Contracts; and
- To assist the development of firms that can compete successfully in the market place outside the DBE Program.

The Director of Civil Rights of MassDOT has been designated as the DBE Liaison Officer. The DBE Liaison Officer is responsible for implementing all aspects of the DBE Program. Other MassDOT employees are responsible for assisting the Office of Civil Rights in carrying out this obligation. Implementation of the DBE Program is accorded the same priority as compliance with all other legal obligations incurred by MassDOT in its financial assistance agreements with each operating administration of the U.S. DOT. Information on the Federal requirements and MassDOT's policies and information can be found at:

Type of Info	***Website***	***Description***
MassDOT Highway Division Policies and Info	https://www.mass.gov/disadvantaged-business-enterprise-goals-2019-2022	*MassDOT–Highway Div'n Page*
For copies of the Code of Federal Regulations	http://www.gpo.gov/fdsys/browse/collectionCfr.action?collectionCode=CFR	FDsys – US Gov't Printing Office
For information about the U.S.DOT DBE Program	https://www.transportation.gov/civil-rights/disadvantaged-business-enterprise	U.S. DOT/ FHWA page

1. DEFINITIONS

As used in these provisions, the terms set out below are defined as follows:

"Broker", for purposes of these provisions, shall mean a DBE Entity that has entered into a legally binding relationship to provide goods or services delivered or performed by a third party. A broker may be a DBE Entity that arranges or expedites transactions but performs no work or installation services.

"Contractor", "General" or "Prime" Contractor, "Bidder," and "DB Entity" shall mean a person, firm, or other entity that has contracted directly with MassDOT to provide contracted work or services.

"Contract" shall mean the Contract for work between the Contractor and MassDOT.

"DBB" or "Design-Bid-Build" shall mean the traditional design, bid and project delivery method consisting of separate contracts between awarding authority and a designer resulting in a fully designed project; and a separate bidding process and Contract with a construction Contractor or Bidder.

"DB" or "Design-Build" shall mean an accelerated design, bid and project delivery method consisting of a single contract between the awarding authority and a DB Entity, consisting of design and construction companies that will bring a project to full design and construction.

"Disadvantaged Business Enterprise" or "DBE" shall mean a for-profit, small business concern:

(a) that is at least fifty-one (51%) percent owned by one or more individuals who are both socially and economically disadvantaged, or, in the case of any corporation, in which at least fifty-one (51%) percent of the stock is owned by one or more such individuals; and

(b) where the management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

"FHWA" shall mean the Federal Highway Administration," an agency within U.S. DOT that supports State and local governments in the design, and maintenance of the Nation's highway system (Federal Aid Highway Program).

"Good faith efforts" shall mean efforts to achieve a DBE participation goal or other requirement of these Special Provisions that, by their scope, intensity, and appropriateness to the objective, can reasonably be expected to fulfill the program requirement. Such efforts must be deemed acceptable by MassDOT.

"Joint Venture" shall mean an association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which the parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the Contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest.

"Approved Joint Venture" shall mean a joint venture, as defined above, which has been approved by MassDOT's Prequalification Office and Office of Civil Rights for DBE participation on a particular Contract.

"Manufacturer" shall mean a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles or equipment required under the contract and of the general character described by the specifications.

"Regular Dealer" shall mean a DBE firm that owns, operates, or maintains a store, warehouse, or other establishment in which materials, supplies, articles or equipment of the general character described by the specifications and required under the Contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

(a) To be a regular dealer, the firm must be an established, regular business that engages, as its principal business, and under its own name, in the purchase and sale of the products in question.

(b) A person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business as provided above if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by long term lease agreement and not on an ad hoc or contract by contract basis.

(c) Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers within the meaning of this definition.

"Responsive" and "Responsible" refers to the bidder's submittal meeting all of the requirements of the advertised request for proposal. The term responsible refers to the ability of the Contractor to perform the work. This ability can be determined prior to bid invitations.

"Small Business or Small Business Concern" shall mean a small business concern or company as defined in Section 3 of the Small Business Act and SBA regulations implementing it (13 CFR Part 121); and is a business that does not exceed the cap on annual average gross receipts established by the U.S. Secretary of Transportation pursuant to 49 CFR Part 26.65; see also 49 CFR Part 26.39.

"SDO" shall mean the Massachusetts Supplier Diversity Office, formerly known as the State Office of Minority and Women Business Assistance (SOMWBA). In 2010, SOMWBA was abolished and the SDO was established. *See* St. 2010, c. 56. The SDO has assumed all the functions of SOWMBA. SDO is an agency within the Commonwealth of Massachusetts Executive office of Administration and Finance (ANF) Operational Services Division (OSD). The SDO mandate is to help promote the development of business enterprises and non-profit organizations owned and operated by minorities and women.

"Socially and economically disadvantaged individuals" shall mean individuals who are citizens of the United States (or lawfully admitted permanent residents) and who are:

(a) Individuals found by SDO to be socially and economically disadvantaged individuals on a case by case basis.

(b) Individuals in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:

(1) "Black Americans" which includes persons having origin in any of the Black racial groups of Africa; (2) "Hispanic Americans" which include persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race; (3) "Native Americans" which include persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians; (4) "Asian Pacific Americans" which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kiribati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong; (5) "Subcontinent Asian Americans" which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka; (6) Women; or (7) Any additional groups whose members are designated as socially and economically disadvantaged by the Small Business Administration (SBA), at such time as the SBA designation becomes effective.

Other terms and definitions applicable to the U.S. DOT DBE Program may be found at 49 CFR Part 26 and related appendices and guidance pages.

2. DBE PARTICIPATION

a. Goal

On this Contract, MassDOT has established the following goal(s) for participation by firms owned and controlled by socially and economically disadvantaged persons. At least half of the goal must be met in the form of DBE Subcontractor construction activity as opposed to material supplies or other services. The applicable goal remains in effect throughout the life of the contract regardless of whether pre-identified DBE Subcontractors remain on the Project or under Contract.

☒ Design-Bid-Build Projects: DBE Participation Goal **0 %**
(*One half of this goal shall be met in the form of Subcontractor construction activity*)

☐ Design-Build Projects: DBE Design Participation Goal ____**%** and DBE Construction Participation Goal **%**
(One half of the Construction Goal shall be met in the form of Subcontractor construction activity)

b. Bidders List

Pursuant to the provisions of 49 CFR Part 26.11(c), Recipients such as MassDOT, must collect from all Bidders who seek work on Federally assisted Contracts the firm full company name(s), addresses and telephone numbers of all firms that have submitted bids or quotes to the Bidders in connection with this Project. All bidders should refer to the Special Provision Document "A00801" of the Project proposal for this requirement.

In addition, MassDOT must provide to U.S. DOT, information concerning contractors firm status as a DBE or non-DBE, the age of the firm, and the annual gross receipts of the firm within a series of brackets (e.g., less than $500,000; $500,000–$1 million; $1–2 million; $2–5 million, etc.). The status, firm age, and annual gross receipt information will be sought by MassDOT regularly prior to setting its DBE participation goal for submission to U.S. DOT. MassDOT will survey each individual firm for this information directly.

Failure to comply with a written request for this information within fifteen (15) business days may result in the suspension of bidding privileges or other such sanctions, as provided for in Section 9 of this provision, until the information is received.

3. CONTRACTOR ASSURANCES

No Contractor or any Subcontractor shall 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 all respects and as applicable prior to, or subsequent to, award of U.S. DOT assisted Contracts. The Contractor agrees to affirmatively seek out and consider DBE firms as Contractors, Subcontractors, and/or suppliers of materials and services for this Contract. No Contract will be approved until MassDOT has reviewed Bidders'/Contractors' affirmative actions concerning DBEs. Failure to carry out these requirements is a material breach of this Contract which may result in the termination of the Contract or such other remedy as MassDOT or FHWA deem appropriate.

4. REQUIRED SUBCONTRACT PROVISIONS

The Prime Contractor shall include the provisions of Section 3 above in every subcontract, making those provisions binding on each Subcontractor; in addition, the Prime Contractor shall include a copy of this Special Provision, in its entirety, in every subcontract with a DBE firm which is, or may be, submitted for credit toward the Contract participation goal.

5. ELIGIBILITY OF DBES

Only firms that have been certified by SDO and confirmed by MassDOT as eligible in accordance with 49 CFR Part 26 to participate as DBEs on federally aided MassDOT Contracts may be used on this Contract for credit toward the DBE participation goal.

a. Massachusetts DBE Directory

MassDOT makes available to all bidders the most current Massachusetts Disadvantaged Business Enterprise Directory. This directory is made available for Contractors' convenience and is informational only. The Directory lists those firms that have been certified as eligible in accordance with the criteria of 49 CFR Part 26 to participate as DBEs on federally aided MassDOT contracts. The Directory also lists the kinds of work each firm is certified to perform but does not constitute an endorsement of the quality of performance of any business and does not represent MassDOT Subcontractor approval.

Contractors are encouraged to make use of the DBE Directory maintained by SDO on the Internet. This listing is updated daily and may be accessed at the SDO's website at:
https://www.diversitycertification.mass.gov/BusinessDirectory/BusinessDirectorySearch.aspx

b. DBE Certification

A firm must apply to SDO, currently acting as certification agent for MassDOT, for DBE certification to participate on federally aided MassDOT Contracts. A DBE application may be made in conjunction with a firm's application to SDO for certification to participate in state-funded minority and women business enterprise programs or may be for DBE certification only. An applicant for DBE certification must identify the area(s) of work it seeks to perform on U.S. DOT funded projects.

c. Joint Venture Approval

To obtain recognition as an approved DBE Joint Venture, the parties to the joint venture must provide to MassDOT's Office of Civil Rights and Prequalification Office, at least fourteen (14) business days before the bid opening date, an Affidavit of DBE/Non-DBE Joint Venture in the form attached hereto, and including, but not limited to the following:

1. a copy of the Joint Venture Agreement;
2. a description of the distinct, clearly defined portion of the contract work that the DBE will perform with its own forces; and,
3. all such additional information as may be requested by MassDOT for the purpose of determining whether the joint venture is eligible.

6. COUNTING DBE PARTICIPATION TOWARDS DBE PARTICIPATION GOALS

In order for DBE participation to count toward the Contract participation goal, the DBE(s) must have served a commercially useful function in the performance of the Contract and must have been paid in full for acceptable performance.

a. Commercially Useful Function

(1) In general, a DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. With respect to materials and supplies used on the Contract, the DBE must be responsible for negotiating price, determining quality and quantity, ordering the material, installing (where applicable) and paying for the material itself.

(2) To determine whether a DBE is performing a commercially useful function, MassDOT will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the Contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.

(3) A DBE does not perform a commercially useful function if its role is limited to that of an extra participant in a transaction, contract, or project through which funds are passed in order to obtain the appearance of DBE participation. In determining whether a DBE is such an extra participant, MassDOT will examine similar transactions, particularly those in which DBEs do not participate.

b. Counting Participation Toward The Contract Participation Goal

DBE participation which serves a commercially useful function shall be counted toward the DBE participation goal in accordance with the Provisions of 49 CFR Part 26.55(a) to (h), as follows:

(1) When a DBE participates in a construction Contract, MassDOT will count the value of the work performed by the DBE's own forces. MassDOT will count the cost of supplies and materials obtained by the DBE for the work of its contract, including supplies purchased or equipment leased by the DBE. Supplies, labor, or equipment the DBE Subcontractor uses, purchases, or leases from the Prime Contractor or any affiliate of the Prime Contractor will not be counted.

(2) MassDOT will count the entire amount of fees or commissions charged by a DBE firm for providing bona fide services, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a U.S. DOT assisted Contract, toward DBE participation goals, provided it is determined that the fee is reasonable and not excessive as compared with fees customarily allowed for similar services.

(3) When a DBE performs as a participant in a joint venture, MassDOT will count toward DBE participation goals a portion of the total dollar value of the contract that is equal to the distinct, clearly defined portion of the work of the Contract that the DBE performs with its own forces.

(4) MassDOT will use the following factors in determining whether a DBE trucking company is performing a commercially useful function:

(i) the DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract; there cannot be a contrived arrangement for the purpose of meeting DBE participation goals.

(ii) the DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the Contract.

(iii) the Contractor will receive DBE credit for the total value of the transportation services the DBE provides on the Contract using trucks owned, insured, and operated by the DBE itself and using drivers the DBE employs alone.

(iv) the DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The Contractor who has a contract with a DBE who leases trucks from another DBE will receive credit for the total value of the transportation services of the lease.

(v) the DBE may also lease trucks from a non-DBE firm, including an owner-operator. The Contractor who has a Contract with a DBE who leases trucks from a non-DBE is entitled to credit for the total value of the transportation services provided by non-DBE lessees not to the exceed the value of transportation services provided by DBE-owned trucks on the Contract. Additional participation by non-DBE lessees receives credit only for the fee or commission it receives as a result of the lease arrangement, fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by a DBE.

(vi) the lease must indicate that the DBE has exclusive use of, and control over, the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

(5) MassDOT will count the Prime Contractor's expenditures with DBEs for materials or supplies toward DBE participation goals as follows:

(i) if the materials or supplies are obtained from a DBE manufacturer, as defined in Section 1 above, MassDOT will count one hundred (100%) percent of the cost of the materials or supplies toward DBE participation goals, provided the DBE meets the other requirements of the regulations.

(ii) if the materials or supplies are purchased from a DBE regular dealer, as defined in Section 1 above, MassDOT will count sixty (60%) percent of the cost of the materials or supplies toward the Contract participation goal, provided the DBE meets the other requirements of the regulations.

(iii) for materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer, MassDOT will count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site toward the Contract participation goal, provided that MassDOT determines the fees to be reasonable and not excessive as compared with fees customarily allowed for similar services; the cost of the materials and supplies themselves will not be counted; and provided the DBE meets the other requirements of the regulations.

c. Joint Check Policy

MassDOT recognizes that the use of joint checks may be a business practice required by material suppliers and vendors in the construction industry. A joint check is a two-party check issued by a/the Prime Contractor to a DBE third party such as a regular dealer of material or supplies. The Prime Contractor issues the check as payor to the DBE and the third party jointly as payees to guarantee payment to the third party for materials or supplies obtained or to be used by the DBE. FHWA has established criteria to ensure that DBEs are in fact performing a commercially useful function ("CUF") while using a joint check arrangement. Contractors and DBEs must meet and conform to these conditions and criteria governing the use of joint checks.

In the event that a Contractor or DBE Subcontractor desires to a use joint check, MassDOT will require prior notice and will closely monitor the arrangement for compliance with FHWA regulations and guidance. MassDOT may allow a joint check arrangement and give credit to a Contractor for use of the DBE where one or more of the following conditions exist:

- The use of a joint check is in fact required by this type of vendor or supplier as a standard industry practice that applies to all Contractors (DBEs and non-DBEs); or is required by a specific vendor or supplier;
- Payment for supplies or materials would be delayed for an unreasonably extended period without the joint check arrangement;
- The DBE (or any of its Subcontractors) has a pattern or history of not paying a vendor or supplier within a reasonable time or has not established enough of a credit history with the supplier or vendor; and/or
- The presence of severe adverse economic conditions, where credit resources may be limited and such practices may be necessary or required to effect timely payments.

Other factors MassDOT may consider:

- Whether there is a requirement by the Prime Contractor that a DBE should use a specific vendor or supplier to meet their Subcontractor specifications;
- Whether there is a requirement that a DBE use the Prime Contractor's negotiated price;
- The independence of the DBE;
- Whether approval has been sought prior to use of a joint check arrangement; and
- Whether any approved joint check arrangement has exceeded a reasonable period of use;
- The operation of the joint check arrangement; and
- Whether the DBE has made an effort to establish alternate arrangements for following periods (i.e., the DBE must show it can, or has, or why it has not, established or increased a credit line with the vendor or supplier).

Even with the use of a Joint Check, both the Contractor and DBE remain responsible for compliance with all other elements under 49 CFR § 26.55 (c) (1), and must still be able to prove that a commercially useful function is being performed for the Contractor.

d. Joint Check Procedure(s)

- The DBE advises its General or Prime Contractor that it will have to use a Joint Check and provide proof of such requirement.
- The General or the Prime Contractor submits a request for approval to MassDOT, using MassDOT's approved Joint Check Request form (Document B00855) and by notification on the DBE Letter of Intent (Document B00854), and any other relevant documents. Requests that are not initiated during the bid process should be made in writing and comply with the procedure.
- The MassDOT Office of Civil Rights will review the request and render a decision as part of the approval process for DBE Schedules and Letters of Intent.
- Review and Approval will be project specific and relevant documents will be made part of the project Contract file.
- Payments should be made in the name of both the DBE and vendor or supplier. Payments should be issued and signed by the Contractor as only the guarantor for prompt payment of purchases to the vendor or supplier. The payment to the vendor or supplier should be handled by the DBE (i.e. if possible, funds or the joint check should be processed by the DBE and sent by the DBE to the vendor or supplier).
- MassDOT may request copies of cancelled checks (front and back) and transmittal information to verify any payments made to the DBE and vendor or supplier.
- MassDOT may request other information and documents, and may ask questions of the Contractor, Subcontractor and vendor or supplier prior to, during, and after the project performance to ascertain whether the Subcontractor is performing a commercially useful function and all parties are complying with DBE Program policies and procedures as part of the Subcontractor approval process.

7. AWARD DOCUMENTATION AND PROCEDURES

a. The two lowest bidders/the two bidders with the lowest price per quality score point, shall submit, by the close of business on the third (3rd) business day after the bid opening, a completed Schedule of Participation by DBEs (Document B00853) which shall list:

(1) The full company name, address and telephone number of each DBE with whom the bidder intends to make a commitment.

(2) The contract item(s), by number(s) and quantity(ies), if applicable, or specific description of other business activity to be performed by each DBE as set forth in the Letters of Intent. The Bidder shall list only firms which have the capacity to perform, manage and supervise the work proposed in accordance with the requirements of 49 CFR Part 26 and Section **6.b** of these Special Provisions.

(3) The total dollar amount to be paid to each DBE. (Bidders are cautioned that at least one half of the participation goal must be met with construction activity work.)

(4) The total dollar amount to be paid to each DBE that is eligible for credit toward the DBE participation goal under the counting rules set out in Section **6.b**.

(5) The total creditable DBE participation as a percentage of the total bid price.

b. All firms listed on the Schedule must be currently certified.

c. The two lowest bidders/the two bidders with the lowest price per quality score point, shall each submit, with their Schedules of Participation, fully completed, signed Letters of Intent (Document B00854) from each of the DBEs listed on the Schedule. The Letters of Intent shall be in the form attached and shall identify specifically the contract activity the DBE proposes to perform, expressed as contract item number, if applicable, description of the activity, NAICS code, quantity, unit price and total price. In the event of discrepancy between the Schedule and the Letter of Intent, the Letter of Intent shall govern.

d. Evidence of good faith efforts will be evaluated by MassDOT in the selection of the lowest responsible bidder.

All information requested by MassDOT for the purpose of evaluating the Contractor's efforts to achieve the participation goal must be provided within three (3) calendar days and must be accurate and complete in every detail. The apparent low bidder's attainment of the DBE participation goal or a satisfactory demonstration of good faith efforts is a prerequisite for award of the Contract.

e. Failure to meet, or to demonstrate good faith efforts to meet, the requirements of these Special Provisions shall render a bid non-responsive. Therefore, in order to be eligible for award, the bidder (1) must list all DBE's it plans to employ on the Schedule of Participation; and provide the required Letters of Intent for, DBE participation which meets or exceeds the Contract goal in accordance with the terms of these Special Provisions or (2) must demonstrate, to the satisfaction of MassDOT, that good faith efforts were made to achieve the participation goal. MassDOT will adhere to the guidance provided in Appendix A to 49 CFR Part 26 on the determination of a Contractor's good faith efforts to meet the DBE participation goal(s) set forth in Section 2 herein.

f. If MassDOT finds that the percentage of DBE participation submitted by the bidder on its Schedule does not meet the Contract participation goal, or that Schedule and Letters of Intent were not timely filed, and that the bidder has not demonstrated good faith efforts to comply with these requirements, it shall propose that the bidder be declared ineligible for award. In that case, the bidder may request administrative reconsideration. Such requests must be sent in writing within three (3) calendar days of receiving notice of proposed ineligibility to: The Office of the General Counsel, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA, 02116.

g. If, after administrative reconsideration, MassDOT finds that the bidder has not shown that sufficient good faith efforts were made to comply with the requirements of these Special Provisions, it shall reject the bidder's proposal and may retain the proposal guaranty.

h. Actions which constitute evidence of good faith efforts to meet a DBE participation goal include, but are not limited to, the following examples, which are set forth in 49 CFR Part 26, Appendix A:

(1) Soliciting through all reasonable and available means (e.g., attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the Contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

(2) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE participation goal will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Prime Contractor might otherwise prefer to perform these work items with its own forces.

(3) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(4) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE Subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE Subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone number of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

A bidder using good business judgment would consider a number of factors in negotiating with Subcontractors, including DBE Subcontractors, and would take a firm's price and capabilities as well as Contract participation goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the Contract DBE participation goal, as long as such costs are reasonable. Also, the ability or desire of a Prime Contractor to perform the work of a Contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime Contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

(5) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. Contractors should be careful of adding additional requirements of performance that would in effect limit participation by DBEs or any small business. The Contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. nonunion employee status) are not legitimate causes for the rejection or non-solicitation of bids in the Contractor's efforts to meet the Contract participation goal.

(6) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

(7) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

(8) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and federal minority/women business assistance offices; and other organizations as allowed on a case by case basis to provide assistance in the recruitment and placement of DBEs.

8. COMPLIANCE

a. All activity performed by a DBE for credit toward the Contract participation goal must be performed, managed and supervised by the DBE in accordance with all commercially useful function requirements of 49 CFR Part 26. The Prime Contractor shall not enter into, or condone, any other arrangement.

b. The Prime Contractor shall not perform with its own organization, or assign to any other business, an activity designated for the DBE(s) named on the Schedule(s) submitted by the Prime Contractor under Section 7 or under paragraph **8.f** of this section, without the approval of MassDOT in accordance with the requirements of paragraphs **8.f** and **8.j** of this section.

c. MassDOT may suspend payment for any activity that was not performed by the DBE to whom the activity was committed on the approved Schedule of Participation, or that was not performed in accordance with the requirements of Section 6.

d. MassDOT retains the right to approve or disapprove of any or all Subcontractors. Requests by the Prime Contractor for approval of participation by a DBE Subcontractor for credit toward the Contract participation goal must include, in addition to any other requirements for Subcontractor approval, the following:

(1) A copy of the proposed subcontract. The subcontract must be for at least the dollar amount, and for the work described, in the Bidder's Schedule of Participation.

(2) A resume stating the qualifications and experience of the DBE Superintendent and/or foreperson who will supervise the on-site work. A new resume will be required for any change in supervisory personnel during the progress of the work.

(3) A Schedule of Operations indicating when the DBE is expected to perform the work.

(4) A list of (1) equipment owned by the DBE to be used on the Project, and (2) equipment to be leased by the DBE for use on the Project.

(5) A list of: (1) all projects (public and private) which the DBE is currently performing; (2) all projects (public and private) to which the DBE is committed; and (3) all projects (public and private) to which the DBE intends to make a commitment. For each Contract, list the contracting organization, the name and telephone number of a contact person for the contracting organization, the dollar value of the work, a description of the work, and the DBE's work schedule for each project.

e. If, pursuant to the Subcontractor approval process, MassDOT finds that a DBE Subcontractor does not have sufficient experience or resources to perform, manage and supervise work of the kind proposed in accordance with the requirements of 49 CFR Part 26, approval of the DBE Subcontractor may be denied. In the event of such denial, the Prime Contractor shall proceed in accordance with the requirements paragraphs **8.f** and **8.j** of this section.

f. If, for reasons beyond its control, the Prime Contractor cannot comply with its DBE participation commitment in accordance with the Schedule of Participation submitted under Section 7, the Prime Contractor shall submit to MassDOT the reasons for its inability to comply with its obligations and shall submit, and request approval for, a revised Schedule of Participation. If approved by MassDOT, the revised Schedule shall govern the Prime Contractor's performance in meeting its obligations under these Special Provisions.

g. A Prime Contractor's compliance with the participation goal in Section 2 shall be determined by reference to the established percentage of the total contract price, provided, however, that no decrease in the dollar amount of a bidder's commitment to any DBE shall be allowed without the approval of MassDOT.

h. If the contract amount is increased, the Prime Contractor may be required to submit a revised Schedule of Participation in accordance with paragraphs **8.f** and **8.j** of this section.

i. In the event of the decertification of a DBE scheduled to participate on the Contract for credit toward the participation goal, but not under subcontract, the Contractor shall proceed in accordance with paragraphs **8.f** and **8.j** of this section.

j. The Prime Contractor shall notify MassDOT immediately of any facts that come to its attention indicating that it may or will be unable to comply with any aspect of its DBE obligation under this Contract.

k. Any notice required by these Special Provisions shall be given in writing to: (1) the Resident Engineer; (2) the District designated Compliance Officer; and (3) the DBE Liaison Officer, MassDOT Office of Civil Rights, 10 Park Plaza, – 3rd Floor - West, Boston, MA, 02116 and cc'd to the Deputy Chief of External Programs.

l. The Prime Contractor and its Subcontractors shall comply with MassDOT's Electronic Reporting System Requirements (MassDOT Document 00821) and submit all information required by MassDOT related to the DBE Special Provisions through the Equitable Business Opportunity Solution ("EBO"). MassDOT reserves the right to request reports in the format it deems necessary anytime during the performance of the Contract.

m. Termination of DBE by Prime Contractor

(1) A Prime Contractor shall not terminate a DBE Subcontractor or an approved substitute DBE firm without the prior written consent of MassDOT. This includes, but is not limited to, instances in which a Prime Contractor seeks to perform work originally designated for a DBE Subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

(2) MassDOT may provide such written consent only if MassDOT agrees, for reasons stated in its concurrence document, that the Prime Contractor has good cause to terminate the DBE firm.

(3) For purposes of this paragraph, good cause includes the following circumstances:

(i) The DBE Subcontractor fails or refuses to execute a written contract;

(ii) The DBE Subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Good cause, however, does not exist if the failure or refusal of the DBE Subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the Prime Contractor;

(iii) The DBE Subcontractor fails or refuses to meet the Prime Contractor's reasonable, nondiscriminatory bond requirements.

(iv) The DBE Subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;

(v) The DBE Subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable State law;

(vi) (vii) MassDOT has determined that the listed DBE Subcontractor is not a responsible contractor;

(vii) The listed DBE Subcontractor voluntarily withdraws from the Project and provides written notice of its withdrawal;

(viii) The listed DBE is ineligible to receive DBE credit for the type of work required;

(ix) A DBE owner dies or becomes disabled with the result that the listed DBE Contractor is unable to complete its work on the Contract;

(x) Other documented good cause that MassDOT determines compels the termination of the DBE Subcontractor. Good cause, however, does not exist if the Prime Contractor seeks to terminate a DBE it relied upon to obtain the Contract so that the Prime Contractor can self-perform the DBE work or substitute another DBE or non-DBE Contractor after Contract Award.

(4) Before transmitting to MassDOT a request to terminate and/or substitute a DBE Subcontractor, the Prime Contractor must give notice in writing to the DBE Subcontractor, with a copy to MassDOT, of its intent to request to terminate and/or substitute, and the reason for the request.

(5) The Prime Contractor must give the DBE five (5) business days to respond to the Prime Contractor's notice. The DBE must advise MassDOT and the Contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why MassDOT should not approve the Prime Contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), MassDOT may provide a response period shorter than five (5) business days.

(6) In addition to post-award terminations, the provisions of this section apply to pre-award deletions of or substitutions for DBE firms.

n. Prompt Payment.

Contractors are required to promptly pay Subcontractors under this Prime Contract within ten (10) business days from the receipt of each payment the Prime Contractor receives from MassDOT. Failure to comply with this requirement may result in the withholding of payment to the Prime Contractor until such time as all payments due under this provision have been received by the Subcontractor(s) and/or referral to the Prequalification Committee for action which may affect the Contractor's prequalification status.

9. SANCTIONS

If the Prime Contractor does not comply with the terms of these Special Provisions and cannot demonstrate to the satisfaction of MassDOT that good faith efforts were made to achieve such compliance, MassDOT may, in addition to any other remedy provided for in the Contract, and notwithstanding any other provision in the Contract:

a. Retain, in connection with final acceptance and final payment processing, an amount determined by multiplying the total contract amount by the percentage in Section 2, less the amount paid to approved DBE(s) for work performed under the Contract in accordance with the provisions of Section 8.

b. Suspend, terminate or cancel this Contract, in whole or in part, and call upon the Prime Contractor's surety to perform all terms and conditions in the Contract.

c. In accordance with 720 CMR 5.05(1)(f), modify or revoke the Prime Contractor's Prequalification status or recommend that the Prime Contractor not receive award of a pending Contract. The Prime Contractor may appeal the determination of the Prequalification Committee in accordance with the provisions of 720 CMR 5.06.

d. Initiate debarment proceedings pursuant to M.G.L. c. 29 §29F and, as applicable, 2 CFR Parts 180, 215 and 1,200.

e. Refer the matter to the Massachusetts Attorney General for review and prosecution, if appropriate, of any false claim or pursuant to M.G.L. c. 12, §§ 5A to 5O (the Massachusetts False Claim Act).

f. Refer the matter to the U.S. DOT's Office of the Inspector General or other agencies for prosecution under Title 18, U.S.C. § 1001, 49 CFR Parts 29 and 31, and other applicable laws and regulations.

10. FURTHER INFORMATION; ENFORCEMENT, COOPERATION AND CONFIDENTIALITY.

a. Any proposed DBE, bidder, or Contractor shall provide such information as is necessary in the judgment of MassDOT to ascertain its compliance with the terms of this Special Provision. Further, pursuant to 49 CFR, Part 26.107:

(1) If you are a firm that does not meet the eligibility criteria of 49 CFR, Parts 26.61 to 26.73 ("subpart D"), that attempts to participate in a DOT- assisted program as a DBE on the basis of false, fraudulent, or deceitful statements or representations or under circumstances indicating a serious lack of business integrity or honesty, MassDOT or FHWA may initiate suspension or debarment proceedings against you under 49 CFR Part 29.

(2) If you are a firm that, in order to meet DBE Contract participation goals or other DBE Program requirements, uses or attempts to use, on the basis of false, fraudulent or deceitful statements or representations or under circumstances indicating a serious lack of business integrity or honesty, another firm that does not meet the eligibility criteria of subpart D, FHWA may initiate suspension or debarment proceedings against you under 49 CFR Part 29.

(3) In a suspension or debarment proceeding brought either under subparagraph a.(1) or b.(2) of this section, the concerned operating administration may consider the fact that a purported DBE has been certified by a recipient. Such certification does not preclude FHWA from determining that the purported DBE, or another firm that has used or attempted to use it to meet DBE participation goals, should be suspended or debarred.

(4) FHWA may take enforcement action under 49 CFR Part 31, Program Fraud and Civil Remedies, against any participant in the DBE Program whose conduct is subject to such action under 49 CFR Part 31.

(5) FHWA may refer to the Department of Justice, for prosecution under 18 U.S.C. 1001 or other applicable provisions of law, any person who makes a false or fraudulent statement in connection with participation of a DBE in any DOT-assisted program or otherwise violates applicable Federal statutes.

b. Pursuant to 49 CFR Part 26.109, the rules governing information, confidentiality, cooperation, and intimidation or retaliation are as follows:

(1) Availability of records.

(i) In responding to requests for information concerning any aspect of the DBE Program, FHWA complies with provisions of the Federal Freedom of Information and Privacy Acts (5 U.S.C. 552 and 552a). FHWA may make available to the public any information concerning the DBE Program release of which is not prohibited by Federal law.

(ii) MassDOT shall safeguard from disclosure to unauthorized persons information that may reasonably be considered as confidential business information, consistent with Federal and Massachusetts General Law (M.G.L. c. 66, § 10, M.G.L. c. 4, §7 (26), 950 CMR 32.00).

(2) Confidentiality of information on complainants. Notwithstanding the provisions of subparagraph b.(1) of this section, the identity of complainants shall be kept confidential, at their election. If such confidentiality will hinder the investigation, proceeding or hearing, or result in a denial of appropriate administrative due process to other parties, the complainant must be advised for the purpose of waiving the privilege. Complainants are advised that, in some circumstances, failure to waive the privilege may result in the closure of the investigation or dismissal of the proceeding or hearing.

(3) Cooperation. All participants in FHWA's DBE Program (including, but not limited to, recipients, DBE firms and applicants for DBE certification, complainants and appellants, and Contractors using DBE firms to meet Contract participation goals) are required to cooperate fully and promptly with U.S. DOT and recipient compliance reviews, certification reviews, investigations, and other requests for information. Failure to do so shall be a ground for appropriate action against the party involved (e.g., with respect to recipients, a finding of noncompliance; with respect to DBE firms, denial of certification or removal of eligibility and/or suspension and debarment; with respect to a complainant or appellant, dismissal of the complaint or appeal; with respect to a Contractor which uses DBE firms to meet participation goals, findings of non-responsibility for future Contracts and/or suspension and debarment).

(4) Intimidation and retaliation. No recipient, Contractor, or any other participant in the program, may intimidate, threaten, coerce, or discriminate against any individual or firm for the purpose of interfering with any right or privilege secured by this part or because the individual or firm has made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing under this part. If any recipient or contractor violates this prohibition, that entity is in noncompliance with this 49 CFR Part 26.

11. LIST OF ADDITIONAL DOCUMENTS.

a. The following documents shall be completed and signed by the bidder and designated DBEs in accordance with Section 7 - Award Documentation and Procedures. These documents must be returned by the bidder to MassDOT's Bid Document Distribution Center:

- □ Schedule of DBE Participation (Document B00853)
- □ Letter of Intent (Document B00854)
- □ DBE Joint Check Arrangement Approval Form (Document B00855), if Contractor and DBE plan, or if DBE is required to use a Joint Check

b. The following document shall be signed and returned by Contractor and Subcontractors/DBEs to the MassDOT District Office overseeing the Project, as applicable:

- □ Contractor/Subcontractor Certification Form (Document No. 00859) (a checklist of other documents to be included with every subcontract (DBEs and non-DBEs alike)).

c. The following document shall be provided to MassDOT's Office of Civil Rights and Prequalification Office at least fourteen (14) business days before the bid opening date, if applicable:

- □ Affidavit of DBE/Non-DBE Joint Venture (Document B00856)

d. The following document shall be provided to MassDOT's District Office of Civil Rights within 30 calendar days after the work of the DBE is completed, or no later than 30 calendar days after the work of the DBE is on a completed and processed CQE. This document shall be completed and submitted by the Prime Contractor:

- □ Certificate of Completion by a Minority/Women or Disadvantaged Business Enterprise (M/W/DBE) (Form No. CSD-100)

*** END OF DOCUMENT ***

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

September 17, 2025

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	$0.58
2	ASTM A27 (AASHTO M103) Steel Castings, H-Pile Points & Pipe Pile Shoes (See Note below.)	$0.81
3	ASTM A668 / A668M (AASHTO M102) Steel Forgings	$0.81
4	ASTM A108 (AASHTO M169) Steel Forgings for Shear Studs	$0.83
5	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Plate	$0.87
6	ASTM A709/A709M Grade 36 / AASHTO M270M/M270 Grade 36 or 250 Structural Steel Shapes	$0.82
7	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Plate	$0.87
8	ASTM A709/A709M Grade 50 / AASHTO M270M/M270 Grade 50 or 345 Structural Steel Shapes	$0.82
9	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Plate	$0.90
10	ASTM A709/A709M Grade 50WT / AASHTO M270M/M270 Grade 50WT or 345WT Structural Steel Shapes	$0.83
11	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W 345W Structural Steel Plate	$0.90
12	ASTM A709/A709M Grade 50W / AASHTO M270M/M270 Grade 50W or 345W Structural Steel Shapes	$0.83
13	ASTM A709/A709M Grade HPS 50W / AASHTO M270M/M270 Grade HPS 50W or 345W Structural Steel Plate	$0.94
14	ASTM A709/A709M Grade HPS 70W / AASHTO M270M/M270 Grade HPS 70W or 485W Structural Steel Plate	$1.02
15	ASTM A514/A514M-05 Grade HPS 100W / AASHTO M270M/M270 Grade HPS 100W or 690W Structural Steel Plate	$1.55
16	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Plate	$0.90
17	ASTM A992/A992M Grade 50S / AASHTO M270M/M270 Grade 50S or 345S Structural Steel Shapes	$0.83
18	ASTM A276 Type 316 Stainless Steel	$4.67
19	ASTM A240 Type 316 Stainless Steel	$4.67
20	ASTM A148 Grade 80/50 Steel Castings (See Note below.)	$1.60
21	ASTM A53 Grade B Structural Steel Pipe	$1.02
22	ASTM A500 Grades A, B, 36 & 50 Structural Steel Pipe	$1.02
23	ASTM A252, Grades 240 (36 KSI) & 414 (60 KSI) Pipe Pile	$0.81
24	ASTM 252, Grade 2 Permanent Steel Casing	$0.81
25	ASTM A36 (AASHTO M183) for H-piles, steel supports and sign supports	$0.85
26	ASTM A328 / A328M, Grade 50 (AASHTO M202) Steel Sheetpiling	$1.53
27	ASTM A572 / A572M, Grade 50 Sheetpiling	$1.53
28	ASTM A36/36M, Grade 50	$0.87
29	ASTM A570, Grade 50	$0.85
30	ASTM A572 (AASHTO M223), Grade 50 H-Piles	$0.87
31	ASTM A1085 Grade A (50 KSI) Steel Hollow Structural Sections (HSS), heat-treated per ASTM A1085 Supplement S1	$1.02
32	AREA 140 LB Rail and Track Accessories	$0.52

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

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DOCUMENT 00814

SPECIAL PROVISIONS
PRICE ADJUSTMENT FOR PORTLAND CEMENT CONCRETE MIXES

January 12, 2009

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

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

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

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

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

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

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

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

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

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DOCUMENT 00820

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

I. Definitions

For purposes of this contract,

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

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

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

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

II. Equal Opportunity, Non-Discrimination and Affirmative Action

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

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

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

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

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

III. Minority and Women Workforce Participation

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

IV. Liaison Committee

At the discretion of the agency that administers the contract for the construction project there may be established for the life of the contract a body to be known as the Liaison Committee. The Liaison Committee shall be composed of one representative each from the agency or agencies administering the contract for the construction project, hereinafter called the administering agency, a representative from the Office of Affirmative action, and such other representatives as may be designated by the administering agency. The Contractor (or his/her agent, if any, designated by him/her as the on-site equal employment opportunity officer) shall recognize the Liaison Committee as an affirmative action body, and shall establish a continuing working relationship with the Liaison Committee, consulting with the Liaison Committee on all matters related to minority recruitment, referral, employment and training.

V. Reports and Records

The Contractor shall prepare projected workforce tables on a quarterly basis when required by the administering agency. These shall be broken down into projections, by week, of workers required in each trade. Copies shall be furnished one week in advance of the commencement of the period covered, and also, when updated, to the administering agency and the Liaison Committee when required.

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

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

The Contractor will provide all information and reports required by the administering agency on instructions issued by the administering agency and will permit access to its facilities and any books, records, accounts and other sources of information which may be determined by the administering agency to effect the employment of personnel. This provision shall apply only to information pertinent to the Commonwealth's supplementary non-discrimination, equal opportunity and access and opportunity contract requirements. Where information required is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the administering agency and shall set forth what efforts he has made to obtain the information.

VI. Access to Work Site

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

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

In all solicitations either by competitive bidding or negotiation made by the Contractor either for work to be performed under a subcontract or for the procurement of materials or equipment, each potential subcontractor or supplier shall be notified in writing by the Contractor of the Contractor's obligations under this contract relative to non-discrimination and equal opportunity.

VIII. Sanctions

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

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

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

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

IX. Severability

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

X. Contractor's Certification

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

XI. Subcontractor Requirements

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

Rev'd 03/07/14

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DOCUMENT 00821

ELECTRONIC REPORTING REQUIREMENTS
CIVIL RIGHTS PROGRAMS AND CERTIFIED PAYROLL

Implemented on March 2, 2009 Revised June 04, 2019

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

Contractor and Sub-Contractor EBO User Certification

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

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

Vetting of Firms and Designated Firm Individuals

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

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

Interim Reporting Requirements

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

*** END OF DOCUMENT ***

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DOCUMENT 00859

CONTRACTOR/SUBCONTRACTOR CERTIFICATION FORM ǂ

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

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

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

Contract No: 132402 **Project No.** 607597 **Federal Aid No.:** HIP(NGB)-003S(900)X

Location: LEE

Project Description: Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook

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 HEALY
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:	MassDOT Highway	**City/Town:**	LEE
Contract Number:	132402		
Description of Work:	LEE: Federal Aid Project No. HIP(NGB)-003S(900)X Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook		
Job Location:	Meadow Street over Powder Mill Broook		

Information about Prevailing Wage Schedules for Awarding Authorities and Contractors

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
(2 AXLE) DRIVER - EQUIPMENT TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2025	$40.95	$15.57	$20.17	$0.00	$0.00	$76.69
	12/1/2025	$40.95	$15.57	$21.78	$0.00	$0.00	$78.30
	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	6/1/2025	$41.02	$15.57	$20.17	$0.00	$0.00	$76.76
	12/1/2025	$41.02	$15.57	$21.78	$0.00	$0.00	$78.37
	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	6/1/2025	$41.14	$15.57	$20.17	$0.00	$0.00	$76.88
	12/1/2025	$41.14	$15.57	$21.78	$0.00	$0.00	$78.49
	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 3)	8/1/2024	$117.16	$10.08	$11.62	$12.67	$0.00	$151.53
For apprentice rates see "Apprentice- PILE DRIVER"							
AIR TRACK OPERATOR LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$32.29	$9.90	$9.25	$5.53	$0.00	$56.97
For apprentice rates see "Apprentice- LABORER"							
AIR TRACK OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	$35.98	$9.90	$9.25	$6.60	$0.00	$61.73
	12/1/2025	$37.21	$9.90	$9.25	$6.60	$0.00	$62.96
	6/1/2026	$39.25	$9.90	$9.25	$6.60	$0.00	$65.00
	12/1/2026	$40.54	$9.90	$9.25	$6.60	$0.00	$66.29
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
ASBESTOS WORKER (PIPES & TANKS) HEAT & FROST INSULATORS LOCAL 6 HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)	6/1/2025	$39.42	$14.50	$4.30	$6.25	$0.00	$64.47
	12/1/2025	$40.32	$14.50	$4.30	$6.25	$0.00	$65.37
ASPHALT RAKER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$31.79	$9.90	$9.25	$5.53	$0.00	$56.47
For apprentice rates see "Apprentice- LABORER"							
ASPHALT RAKER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	$35.48	$9.90	$9.25	$6.60	$0.00	$61.23
	12/1/2025	$36.71	$9.90	$9.25	$6.60	$0.00	$62.46
	6/1/2026	$38.75	$9.90	$9.25	$6.60	$0.00	$64.50
	12/1/2026	$40.04	$9.90	$9.25	$6.60	$0.00	$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
AUTOMATIC GRADER-EXCAVATOR (RECLAIMER) OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$39.56	$13.78	$12.15	$3.00	$0.00	$68.49
BACKHOE/FRONT-END LOADER OPERATOR OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$39.56	$13.78	$12.15	$3.00	$0.00	$68.49
BARCO-TYPE JUMPING TAMPER LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"	12/1/2024	$31.79	$9.90	$9.25	$5.53	$0.00	$56.47
BATCH/CEMENT PLANT - ON SITE OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96
BLOCK PAVER, RAMMER / CURB SETTER LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"	12/1/2024	$32.29	$9.90	$9.25	$5.53	$0.00	$56.97
BLOCK PAVER, RAMMER / CURB SETTER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY) For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"	6/1/2025	$35.98	$9.90	$9.25	$6.60	$0.00	$61.73
	12/1/2025	$37.21	$9.90	$9.25	$6.60	$0.00	$62.96
	6/1/2026	$39.25	$9.90	$9.25	$6.60	$0.00	$65.00
	12/1/2026	$40.54	$9.90	$9.25	$6.60	$0.00	$66.29
BOILER MAKER BOILERMAKERS LOCAL 29 BOILERMAKERS LOCAL 29	1/1/2024	$48.12	$7.07	$14.60	$6.00	$0.00	$75.79

Apprentice: BOILER MAKER

Effective Date: 1/1/2024

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

Apprentice to Journeyworker Ratio: 1:4

BRICK/STONE/ARTIFICIAL MASONRY (INCL. MASONRY WATERPROOFING)	8/1/2025	$56.36	$11.49	$15.57	$5.89	$0.00	$89.31
	2/1/2026	$57.71	$11.49	$15.57	$5.89	$0.00	$90.66

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BRICKLAYERS LOCAL 3	8/1/2026	$59.91	$11.49	$15.57	$5.89	$0.00	$92.86
BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	2/1/2027	$61.31	$11.49	$15.57	$5.89	$0.00	$94.26

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

Effective Date: 8/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$28.18	$11.49	$15.57	$5.89	$0.00	$61.13
2	60.00	$33.82	$11.49	$15.57	$5.89	$0.00	$66.77
3	70.00	$39.45	$11.49	$15.57	$5.89	$0.00	$72.40
4	80.00	$45.09	$11.49	$15.57	$5.89	$0.00	$78.04
5	90.00	$50.72	$11.49	$15.57	$5.89	$0.00	$83.67

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	$28.86	$11.49	$15.57	$5.89	$0.00	$61.81
2	60.00	$34.63	$11.49	$15.57	$5.89	$0.00	$67.58
3	70.00	$40.40	$11.49	$15.57	$5.89	$0.00	$73.35
4	80.00	$46.17	$11.49	$15.57	$5.89	$0.00	$79.12
5	90.00	$51.94	$11.49	$15.57	$5.89	$0.00	$84.89

Apprentice to Journeyworker Ratio: 1:5

BULLDOZER/POWER SHOVEL/TREE SHREDDER /CLAM SHELL OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	$39.56	$13.78	$12.15	$3.00	$0.00	$68.49
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
CAISSON & UNDERPINNING BOTTOM MAN LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2025	$48.85	$9.90	$9.25	$9.80	$0.00	$77.80
	12/1/2025	$50.35	$9.90	$9.25	$9.80	$0.00	$79.30
	6/1/2026	$51.90	$9.90	$9.25	$9.80	$0.00	$80.85
	12/1/2026	$53.40	$9.90	$9.25	$9.80	$0.00	$82.35
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING LABORER LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2025	$47.70	$9.90	$9.25	$9.80	$0.00	$76.65
	12/1/2025	$49.20	$9.90	$9.25	$9.80	$0.00	$78.15
	6/1/2026	$50.75	$9.90	$9.25	$9.80	$0.00	$79.70
	12/1/2026	$52.25	$9.90	$9.25	$9.80	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"							
CAISSON & UNDERPINNING TOP MAN LABORERS LABORERS - FOUNDATION AND MARINE	6/1/2025	$48.03	$9.90	$9.25	$9.80	$0.00	$76.98
	12/1/2025	$49.53	$9.90	$9.25	$9.80	$0.00	$78.48
	6/1/2026	$51.08	$9.90	$9.25	$9.80	$0.00	$80.03
	12/1/2026	$52.58	$9.90	$9.25	$9.80	$0.00	$81.53
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
CARBIDE CORE DRILL OPERATOR LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$31.79	$9.90	$9.25	$5.53	$0.00	$56.47

For apprentice rates see "Apprentice- LABORER"

CARPENTER CARPENTERS CARPENTERS LOCAL 336 - BERKSHIRE COUNTY	9/1/2025	$43.54	$8.56	$11.25	$6.90	$0.00	$70.25
	3/1/2026	$44.44	$8.56	$11.25	$6.90	$0.00	$71.15
	9/1/2026	$45.39	$8.56	$11.25	$6.90	$0.00	$72.10
	3/1/2027	$46.29	$8.56	$11.25	$6.90	$0.00	$73.00

Apprentice: CARPENTER

Effective Date: 9/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$19.59	$8.56	$0.00	$1.38	$0.00	$29.53
2	45.00	$19.59	$8.56	$0.00	$1.38	$0.00	$29.53
3	55.00	$23.95	$8.56	$0.00	$2.76	$0.00	$35.27
4	55.00	$23.95	$8.56	$0.00	$2.76	$0.00	$35.27
5	70.00	$30.48	$8.56	$11.25	$4.14	$0.00	$54.43
6	70.00	$30.48	$8.56	$11.25	$4.14	$0.00	$54.43
7	80.00	$34.83	$8.56	$11.25	$5.52	$0.00	$60.16
8	80.00	$34.83	$8.56	$11.25	$5.52	$0.00	$60.16

Apprentice: CARPENTER

Effective Date: 3/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$20.00	$8.56	$0.00	$1.38	$0.00	$29.94
2	45.00	$20.00	$8.56	$0.00	$1.38	$0.00	$29.94
3	55.00	$24.44	$8.56	$0.00	$2.76	$0.00	$35.76
4	55.00	$24.44	$8.56	$0.00	$2.76	$0.00	$35.76
5	70.00	$31.11	$8.56	$11.25	$4.14	$0.00	$55.06
6	70.00	$31.11	$8.56	$11.25	$4.14	$0.00	$55.06
7	80.00	$35.55	$8.56	$11.25	$5.52	$0.00	$60.88
8	80.00	$35.55	$8.56	$11.25	$5.52	$0.00	$60.88

Apprentice to Journeyworker Ratio: 1:5

CARPENTER WOOD FRAME CARPENTERS CARPENTERS-ZONE 3 (Wood Frame)	10/1/2024	$26.65	$7.02	$3.80	$1.00	$0.00	$38.47
	10/1/2025	$27.75	$7.02	$3.80	$1.00	$0.00	$39.57
	10/1/2026	$28.85	$7.02	$3.80	$1.00	$0.00	$40.67

All Aspects of New Wood Frame Work

Apprentice: CARPENTER WOOD FRAME

Effective Date: 10/1/2024

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: CARPENTER WOOD FRAME

Effective Date: 10/1/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$15.99	$7.02	$0.00	$0.00	$0.00	$23.01
2	60.00	$15.99	$7.02	$0.00	$0.00	$0.00	$23.01
3	65.00	$17.32	$7.02	$0.00	$1.00	$0.00	$25.34
4	70.00	$18.66	$7.02	$0.00	$1.00	$0.00	$26.68
5	75.00	$19.99	$7.02	$3.80	$1.00	$0.00	$31.81
6	80.00	$21.32	$7.02	$3.80	$1.00	$0.00	$33.14
7	85.00	$22.65	$7.02	$3.80	$1.00	$0.00	$34.47
8	90.00	$23.99	$7.02	$3.80	$1.00	$0.00	$35.81

Apprentice: CARPENTER WOOD FRAME

Effective Date: 10/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$16.65	$7.02	$0.00	$0.00	$0.00	$23.67
2	60.00	$16.65	$7.02	$0.00	$0.00	$0.00	$23.67
3	65.00	$18.04	$7.02	$0.00	$1.00	$0.00	$26.06
4	70.00	$19.43	$7.02	$0.00	$1.00	$0.00	$27.45
5	75.00	$20.81	$7.02	$3.80	$1.00	$0.00	$32.63
6	80.00	$22.20	$7.02	$3.80	$1.00	$0.00	$34.02
7	85.00	$23.59	$7.02	$3.80	$1.00	$0.00	$35.41
8	90.00	$24.98	$7.02	$3.80	$1.00	$0.00	$36.80

Apprentice to Journeyworker Ratio: 1:5

CEMENT MASONRY/PLASTERING BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 (SPRINGFIELD/PITTSFIELD)	7/1/2024	$44.56	$13.20	$16.30	$2.93	$1.69	$78.68

Apprentice: CEMENT MASONRY/PLASTERING

Effective Date: 7/1/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$22.28	$13.20	$16.30	$0.00	$0.00	$51.78
2	60.00	$26.74	$13.20	$16.30	$2.93	$1.69	$60.86
3	65.00	$28.96	$13.20	$16.30	$2.93	$1.69	$63.08
4	70.00	$31.19	$13.20	$16.30	$2.93	$1.69	$65.31
5	75.00	$33.42	$13.20	$16.30	$2.93	$1.69	$67.54
6	80.00	$35.65	$13.20	$16.30	$2.93	$1.69	$69.77
7	90.00	$40.10	$13.20	$16.30	$2.93	$1.69	$74.22

Apprentice to Journeyworker Ratio: 1:3

CHAIN SAW OPERATOR LABORERS	12/1/2024	$31.79	$9.90	$9.25	$5.53	$0.00	$56.47

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS - ZONE 4 (BUILDING & SITE)							
For apprentice rates see "Apprentice- LABORER"							
COMPRESSOR OPERATOR	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
CRANE OPERATOR	12/1/2023	$43.06	$13.78	$12.15	$3.00	$0.00	$71.99
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
DELEADER (BRIDGE)	7/1/2025	$58.51	$10.30	$11.95	$12.50	$0.00	$93.26
PAINTERS LOCAL 35	1/1/2026	$59.56	$10.35	$12.00	$12.60	$0.00	$94.51
PAINTERS LOCAL 35 - ZONE 3							

Apprentice: DELEADER (BRIDGE)

Effective Date: 7/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$29.26	$10.30	$0.00	$0.00	$0.00	$39.56
2	55.00	$32.18	$10.30	$0.00	$6.88	$0.00	$49.36
3	60.00	$35.11	$10.30	$0.00	$7.50	$0.00	$52.91
4	65.00	$38.03	$10.30	$0.00	$8.13	$0.00	$56.46
5	70.00	$40.96	$10.30	$11.95	$8.75	$0.00	$71.96
6	75.00	$43.88	$10.30	$11.95	$9.38	$0.00	$75.51
7	80.00	$46.81	$10.30	$11.95	$10.00	$0.00	$79.06
8	90.00	$52.66	$10.30	$11.95	$11.25	$0.00	$86.16

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	6/2/2025	$47.75	$9.90	$9.25	$9.65	$0.00	$76.55
LABORERS	12/1/2025	$49.25	$9.90	$9.25	$9.65	$0.00	$78.05
LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2026	$50.80	$9.90	$9.25	$9.65	$0.00	$79.60
	12/7/2026	$52.30	$9.90	$9.25	$9.65	$0.00	$81.10

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	6/7/2027	$53.90	$9.90	$9.25	$9.65	$0.00	$82.70
	12/6/2027	$55.50	$9.90	$9.25	$9.65	$0.00	$84.30
	6/5/2028	$57.18	$9.90	$9.25	$9.65	$0.00	$85.98
	12/4/2028	$58.85	$9.90	$9.25	$9.65	$0.00	$87.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BACKHOE/LOADER/HAMMER OPERATOR LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	6/2/2025	$48.75	$9.90	$9.25	$9.65	$0.00	$77.55
	12/1/2025	$50.25	$9.90	$9.25	$9.65	$0.00	$79.05
	6/1/2026	$51.80	$9.90	$9.25	$9.65	$0.00	$80.60
	12/7/2026	$53.30	$9.90	$9.25	$9.65	$0.00	$82.10
	6/7/2027	$54.90	$9.90	$9.25	$9.65	$0.00	$83.70
	12/6/2027	$56.50	$9.90	$9.25	$9.65	$0.00	$85.30
	6/5/2028	$58.18	$9.90	$9.25	$9.65	$0.00	$86.98
	12/4/2028	$59.85	$9.90	$9.25	$9.65	$0.00	$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: BURNERS LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	6/2/2025	$48.50	$9.90	$9.25	$9.65	$0.00	$77.30
	12/1/2025	$50.00	$9.90	$9.25	$9.65	$0.00	$78.80
	6/1/2026	$51.55	$9.90	$9.25	$9.65	$0.00	$80.35
	12/7/2026	$53.05	$9.90	$9.25	$9.65	$0.00	$81.85
	6/7/2027	$54.65	$9.90	$9.25	$9.65	$0.00	$83.45
	12/6/2027	$56.25	$9.90	$9.25	$9.65	$0.00	$85.05
	6/5/2028	$57.93	$9.90	$9.25	$9.65	$0.00	$86.73
	12/4/2028	$59.60	$9.90	$9.25	$9.65	$0.00	$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: CONCRETE CUTTER/SAWYER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	6/2/2025	$48.75	$9.90	$9.25	$9.65	$0.00	$77.55
	12/1/2025	$50.25	$9.90	$9.25	$9.65	$0.00	$79.05
	6/1/2026	$51.80	$9.90	$9.25	$9.65	$0.00	$80.60
	12/7/2026	$53.30	$9.90	$9.25	$9.65	$0.00	$82.10
	6/7/2027	$54.90	$9.90	$9.25	$9.65	$0.00	$83.70
	12/6/2027	$56.50	$9.90	$9.25	$9.65	$0.00	$85.30
	6/5/2028	$58.18	$9.90	$9.25	$9.65	$0.00	$86.98
	12/4/2028	$59.85	$9.90	$9.25	$9.65	$0.00	$88.65
For apprentice rates see "Apprentice- LABORER"							
DEMO: JACKHAMMER OPERATOR LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	6/2/2025	$48.50	$9.90	$9.25	$9.65	$0.00	$77.30
	12/1/2025	$50.00	$9.90	$9.25	$9.65	$0.00	$78.80
	6/1/2026	$51.55	$9.90	$9.25	$9.65	$0.00	$80.35
	12/7/2026	$53.05	$9.90	$9.25	$9.65	$0.00	$81.85
	6/7/2027	$54.65	$9.90	$9.25	$9.65	$0.00	$83.45
	12/6/2027	$56.25	$9.90	$9.25	$9.65	$0.00	$85.05
	6/5/2028	$57.93	$9.90	$9.25	$9.65	$0.00	$86.73
	12/4/2028	$59.60	$9.90	$9.25	$9.65	$0.00	$88.40
For apprentice rates see "Apprentice- LABORER"							
DEMO: WRECKING LABORER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	6/2/2025	$47.75	$9.90	$9.25	$9.65	$0.00	$76.55
	12/1/2025	$49.25	$9.90	$9.25	$9.65	$0.00	$78.05
	6/1/2026	$50.80	$9.90	$9.25	$9.65	$0.00	$79.60
	12/7/2026	$52.30	$9.90	$9.25	$9.65	$0.00	$81.10
	6/7/2027	$53.90	$9.90	$9.25	$9.65	$0.00	$82.70

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
	12/6/2027	$55.50	$9.90	$9.25	$9.65	$0.00	$84.30
	6/5/2028	$57.18	$9.90	$9.25	$9.65	$0.00	$85.98
	12/4/2028	$58.85	$9.90	$9.25	$9.65	$0.00	$87.65
For apprentice rates see "Apprentice- LABORER"							
DIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 3)	8/1/2024	$78.11	$10.08	$11.62	$12.67	$0.00	$112.48
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 3)	8/1/2024	$49.19	$10.08	$11.62	$12.67	$0.00	$83.56
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 3)	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 3)	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 (Including Core Drilling) ELECTRICIANS LOCAL 7 ELECTRICIANS LOCAL 7	6/29/2025	$52.16	$13.50	$8.31	$6.90	$0.00	$80.87
	12/28/2025	$53.26	$13.75	$8.40	$6.96	$0.00	$82.37
	6/28/2026	$54.41	$14.00	$8.43	$7.03	$0.00	$83.87
	1/3/2027	$55.56	$14.25	$8.47	$7.09	$0.00	$85.37

Apprentice: ELECTRICIAN (Including Core Drilling)

Effective Date: 6/29/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$20.86	$7.50	$0.63	$0.00	$0.00	$28.99
2	45.00	$23.47	$7.50	$0.70	$0.00	$0.00	$31.67
3	50.00	$26.08	$13.50	$7.53	$0.00	$0.00	$47.11
4	55.00	$28.69	$13.50	$7.61	$0.00	$0.00	$49.80
5	65.00	$33.90	$13.50	$9.84	$0.00	$0.00	$57.24
6	70.00	$36.51	$13.50	$11.30	$0.00	$0.00	$61.31

Apprentice: ELECTRICIAN (Including Core Drilling)

Effective Date: 12/28/2025

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

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
ELEVATOR CONSTRUCTOR ELEVATOR CONSTRUCTORS LOCAL 41 ELEVATOR CONSTRUCTORS LOCAL 41	1/1/2025	$62.83	$16.28	$10.96	$10.40	$0.00	$100.47
	1/1/2026	$63.68	$16.38	$11.06	$10.70	$0.00	$101.82
	1/1/2027	$64.53	$16.48	$11.16	$11.00	$0.00	$103.17

Apprentice: ELECTRICIAN (Including Core Drilling)

Effective Date: 12/28/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$21.30	$7.65	$0.63	$0.00	$0.00	$29.58
2	45.00	$23.97	$7.65	$0.70	$0.00	$0.00	$32.32
3	50.00	$26.63	$13.75	$7.53	$0.00	$0.00	$47.91
4	55.00	$29.29	$13.75	$7.61	$0.00	$0.00	$50.65
5	65.00	$34.62	$13.75	$9.84	$0.00	$0.00	$58.21
6	70.00	$37.28	$13.75	$11.30	$0.00	$0.00	$62.33

Apprentice to Journeyworker Ratio: 2:3

Apprentice: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$31.42	$16.28	$0.00	$0.00	$0.00	$47.70
2	55.00	$34.56	$16.28	$10.96	$10.40	$0.00	$72.20
3	65.00	$40.84	$16.28	$10.96	$10.40	$0.00	$78.48
4	70.00	$43.98	$16.28	$10.96	$10.40	$0.00	$81.62
5	80.00	$50.26	$16.28	$10.96	$10.40	$0.00	$87.90

Apprentice: ELEVATOR CONSTRUCTOR

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$31.84	$16.38	$0.00	$0.00	$0.00	$48.22
2	55.00	$35.02	$16.38	$11.06	$10.70	$0.00	$73.16
3	65.00	$41.39	$16.38	$11.06	$10.70	$0.00	$79.53
4	70.00	$44.58	$16.38	$11.06	$10.70	$0.00	$82.72
5	80.00	$50.94	$16.38	$11.06	$10.70	$0.00	$89.08

Apprentice to Journeyworker Ratio: 1:1

ELEVATOR CONSTRUCTOR HELPER ELEVATOR CONSTRUCTORS LOCAL 41 ELEVATOR CONSTRUCTORS LOCAL 41	1/1/2025	$43.98	$16.28	$10.96	$10.40	$0.00	$81.62
	1/1/2026	$44.58	$16.38	$11.06	$10.70	$0.00	$82.72
	1/1/2027	$45.17	$16.48	$11.16	$11.00	$0.00	$83.81

For apprentice rates see "Apprentice - ELEVATOR CONSTRUCTOR"

FENCE & BEAM RAIL ERECTOR LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$31.79	$9.90	$9.25	$5.53	$0.00	$56.47

For apprentice rates see "Apprentice- LABORER"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
FENCE & GUARD RAIL ERECTOR (HEAVY & HIGHWAY)	6/1/2025	$35.48	$9.90	$9.25	$6.60	$0.00	$61.23
LABORERS	12/1/2025	$36.71	$9.90	$9.25	$6.60	$0.00	$62.46
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	$38.75	$9.90	$9.25	$6.60	$0.00	$64.50
	12/1/2026	$40.04	$9.90	$9.25	$6.60	$0.00	$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
FIELD ENG.INST/ROD-BLDG,SITE,HVY/HWY	6/1/1999	$18.84	$4.80	$4.10	$0.00	$0.00	$27.74
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
FIELD ENG.PARTY CHIEF:BLDG,SITE,HVY/HWY	6/1/1999	$21.33	$4.80	$4.10	$0.00	$0.00	$30.23
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
FIELD ENG.SURVEY CHIEF-BLDG,SITE,HVY/HWY	6/1/1999	$22.33	$4.80	$4.10	$0.00	$0.00	$31.23
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
FIRE ALARM INSTALLER	6/29/2025	$52.16	$13.50	$8.31	$6.90	$0.00	$80.87
ELECTRICIANS LOCAL 7	12/28/2025	$53.26	$13.75	$8.40	$6.96	$0.00	$82.37
ELECTRICIANS LOCAL 7	6/28/2026	$54.41	$14.00	$8.43	$7.03	$0.00	$83.87
	1/3/2027	$55.56	$14.25	$8.47	$7.09	$0.00	$85.37
For apprentice rates see "Apprentice- ELECTRICIAN"							
FIRE ALARM REPAIR / MAINTENANCE	6/29/2025	$52.16	$13.50	$8.31	$6.90	$0.00	$80.87
/ COMMISSIONING	12/28/2025	$53.26	$13.75	$8.40	$6.96	$0.00	$82.37
ELECTRICIANS LOCAL 7	6/28/2026	$54.41	$14.00	$8.43	$7.03	$0.00	$83.87
ELECTRICIANS LOCAL 7	1/3/2027	$55.56	$14.25	$8.47	$7.09	$0.00	$85.37
For apprentice rates see "Apprentice- TELECOMMUNICATIONS TECHNICIAN"							
FIREMAN	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							

Apprentice: FIREMAN

Effective Date: 12/1/2023

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$23.42	$13.78	$12.15	$3.00	$0.00	$52.35
2	70.00	$27.32	$13.78	$12.15	$3.00	$0.00	$56.25
3	80.00	$31.22	$13.78	$12.15	$3.00	$0.00	$60.15
4	90.00	$35.13	$13.78	$12.15	$3.00	$0.00	$64.06

Apprentice to Journeyworker Ratio: 1:6

FLAGGER & SIGNALER (HEAVY & HIGHWAY)	6/1/2025	$28.09	$9.90	$9.25	$6.60	$0.00	$53.84
LABORERS	12/1/2025	$28.09	$9.90	$9.25	$6.60	$0.00	$53.84
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	$29.21	$9.90	$9.25	$6.60	$0.00	$54.96
	12/1/2026	$29.21	$9.90	$9.25	$6.60	$0.00	$54.96
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
FLOORCOVERER FLOORCOVERERS LOCAL 2168 FLOORCOVERERS LOCAL 2168 ZONE III	9/1/2025	$44.21	$7.91	$11.25	$6.90	$0.00	$70.27
	3/1/2026	$45.11	$7.91	$11.25	$6.90	$0.00	$71.17
	9/1/2026	$46.06	$7.91	$11.25	$6.90	$0.00	$72.12
	3/1/2027	$46.96	$7.91	$11.25	$6.90	$0.00	$73.02

Apprentice: FLOORCOVERER

Effective Date: 9/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$19.89	$7.91	$0.00	$1.38	$0.00	$29.18
2	45.00	$19.89	$7.91	$0.00	$1.38	$0.00	$29.18
3	55.00	$24.32	$7.91	$0.00	$2.76	$0.00	$34.99
4	55.00	$24.32	$7.91	$0.00	$2.76	$0.00	$34.99
5	70.00	$30.95	$7.91	$11.25	$4.14	$0.00	$54.25
6	70.00	$30.95	$7.91	$11.25	$4.14	$0.00	$54.25
7	80.00	$35.37	$7.91	$11.25	$5.52	$0.00	$60.05
8	80.00	$35.37	$7.91	$11.25	$5.52	$0.00	$60.05

Apprentice: FLOORCOVERER

Effective Date: 3/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$20.30	$7.91	$0.00	$1.38	$0.00	$29.59
2	45.00	$20.30	$7.91	$0.00	$1.38	$0.00	$29.59
3	55.00	$24.81	$7.91	$0.00	$2.76	$0.00	$35.48
4	55.00	$24.81	$7.91	$0.00	$2.76	$0.00	$35.48
5	70.00	$31.58	$7.91	$11.25	$4.14	$0.00	$54.88
6	70.00	$31.58	$7.91	$11.25	$4.14	$0.00	$54.88
7	80.00	$36.09	$7.91	$11.25	$5.52	$0.00	$60.77
8	80.00	$36.09	$7.91	$11.25	$5.52	$0.00	$60.77

Apprentice Notes

Steps are 750 hrs.

Apprentice to Journeyworker Ratio: 1:1

FORK LIFT OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	$39.25	$13.78	$12.15	$3.00	$0.00	$68.18

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GENERATORS/LIGHTING PLANTS OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	$35.80	$13.78	$12.15	$3.00	$0.00	$64.73

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

GLAZIER (GLASS PLANK/AIR BARRIER/INTERIOR SYSTEMS) GLAZIERS LOCAL 1333	6/1/2025	$43.13	$10.80	$8.25	$5.50	$0.00	$67.68
	6/1/2026	$44.73	$11.20	$8.40	$6.05	$0.00	$70.38

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
GLAZIERS LOCAL 1333	6/1/2027	$46.73	$11.60	$8.55	$6.60	$0.00	$73.48
	6/1/2028	$48.73	$12.00	$8.70	$7.20	$0.00	$76.63

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

Effective Date: 6/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$21.57	$10.80	$8.25	$5.50	$0.00	$46.12
2	56.25	$24.26	$10.80	$8.25	$5.50	$0.00	$48.81
3	62.50	$26.96	$10.80	$8.25	$5.50	$0.00	$51.51
4	68.75	$29.65	$10.80	$8.25	$5.50	$0.00	$54.20
5	75.00	$32.35	$10.80	$8.25	$5.50	$0.00	$56.90
6	81.25	$35.04	$10.80	$8.25	$5.50	$0.00	$59.59
7	87.50	$37.74	$10.80	$8.25	$5.50	$0.00	$62.29
8	93.75	$40.43	$10.80	$8.25	$5.50	$0.00	$64.98

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

Effective Date: 6/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$22.37	$11.20	$8.40	$6.05	$0.00	$48.02
2	56.25	$25.16	$11.20	$8.40	$6.05	$0.00	$50.81
3	62.50	$27.96	$11.20	$8.40	$6.05	$0.00	$53.61
4	68.75	$30.75	$11.20	$8.40	$6.05	$0.00	$56.40
5	75.00	$33.55	$11.20	$8.40	$6.05	$0.00	$59.20
6	81.25	$36.34	$11.20	$8.40	$6.05	$0.00	$61.99
7	87.50	$39.14	$11.20	$8.40	$6.05	$0.00	$64.79
8	93.75	$41.93	$11.20	$8.40	$0.00	$0.00	$61.53

Apprentice to Journeyworker Ratio: 3:1

GRADER/TRENCHING MACHINE/DERRICK OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98	12/1/2023	$39.56	$13.78	$12.15	$3.00	$0.00	$68.49

For apprentice rates see "Apprentice- OPERATING ENGINEERS"

HVAC (DUCTWORK) SHEETMETAL WORKERS LOCAL 63 SHEETMETAL WORKERS LOCAL 63	7/1/2025	$43.48	$12.94	$11.01	$8.72	$2.13	$78.28
	7/1/2026	$43.48	$13.24	$11.01	$9.92	$2.13	$79.78
	1/1/2027	$43.48	$13.54	$11.01	$11.12	$2.13	$81.28
	7/1/2027	$44.98	$13.54	$11.01	$11.12	$2.13	$82.78
	1/1/2028	$46.48	$13.54	$11.01	$11.12	$2.13	$84.28

For apprentice rates see "Apprentice- SHEET METAL WORKER"

HVAC (ELECTRICAL CONTROLS) ELECTRICIANS LOCAL 7 ELECTRICIANS LOCAL 7	6/29/2025	$52.16	$13.50	$8.31	$6.90	$0.00	$80.87
	12/28/2025	$53.26	$13.75	$8.40	$6.96	$0.00	$82.37
	6/28/2026	$54.41	$14.00	$8.43	$7.03	$0.00	$83.87
	1/3/2027	$55.56	$14.25	$8.47	$7.09	$0.00	$85.37

For apprentice rates see "Apprentice- ELECTRICIAN"

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
HVAC (TESTING AND BALANCING - AIR)	7/1/2025	$43.48	$12.94	$11.01	$8.72	$2.13	$78.28
SHEETMETAL WORKERS LOCAL 63	7/1/2026	$43.48	$13.24	$11.01	$9.92	$2.13	$79.78
SHEETMETAL WORKERS LOCAL 63	1/1/2027	$43.48	$13.54	$11.01	$11.12	$2.13	$81.28
	7/1/2027	$44.98	$13.54	$11.01	$11.12	$2.13	$82.78
	1/1/2028	$46.48	$13.54	$11.01	$11.12	$2.13	$84.28
For apprentice rates see "Apprentice- SHEET METAL WORKER"							
HVAC (TESTING AND BALANCING -WATER)	9/17/2025	$53.01	$10.31	$10.85	$7.10	$0.00	$81.27
PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2026	$55.01	$10.31	$10.85	$7.10	$0.00	$83.27
PLUMBERS & PIPEFITTERS LOCAL 104	9/17/2026	$57.01	$10.31	$10.85	$7.10	$0.00	$85.27
	3/17/2027	$59.01	$10.31	$10.85	$7.10	$0.00	$87.27
	9/17/2027	$61.01	$10.31	$10.85	$7.10	$0.00	$89.27
	3/17/2028	$63.01	$10.31	$10.85	$7.10	$0.00	$91.27
	9/17/2028	$65.01	$10.31	$10.85	$7.10	$0.00	$93.27
	3/17/2029	$67.01	$10.31	$10.85	$7.10	$0.00	$95.27
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HVAC MECHANIC	9/17/2025	$53.01	$10.35	$10.85	$7.10	$0.00	$81.31
PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2026	$55.01	$10.35	$10.85	$7.10	$0.00	$83.31
PLUMBERS & PIPEFITTERS LOCAL 104	9/17/2026	$57.01	$10.35	$10.85	$7.10	$0.00	$85.31
	3/17/2027	$59.01	$10.35	$10.85	$7.10	$0.00	$87.31
	9/17/2027	$61.01	$10.35	$10.85	$7.10	$0.00	$89.31
	3/17/2028	$63.01	$10.35	$10.85	$7.10	$0.00	$91.31
	9/17/2028	$65.01	$10.35	$10.85	$7.10	$0.00	$93.31
	3/17/2029	$67.01	$10.35	$10.85	$7.10	$0.00	$95.31
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
HYDRAULIC DRILLS (HEAVY & HIGHWAY)	6/1/2025	$35.98	$9.90	$9.25	$6.60	$0.00	$61.73
LABORERS	12/1/2025	$37.21	$9.90	$9.25	$6.60	$0.00	$62.96
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	$39.25	$9.90	$9.25	$6.60	$0.00	$65.00
	12/1/2026	$40.54	$9.90	$9.25	$6.60	$0.00	$66.29
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
INSULATOR (PIPES & TANKS)	9/1/2025	$48.27	$14.75	$9.52	$10.09	$0.00	$82.63
HEAT & FROST INSULATORS LOCAL 6	9/1/2026	$51.01	$14.75	$9.52	$10.09	$0.00	$85.37
HEAT & FROST INSULATORS LOCAL 6 (SPRINGFIELD)							

Apprentice: INSULATOR (PIPES & TANKS)

Effective Date: 9/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$24.14	$14.75	$9.27	$5.05	$0.00	$53.21
2	60.00	$28.96	$14.75	$9.32	$6.05	$0.00	$59.08
3	70.00	$33.79	$14.75	$9.37	$7.06	$0.00	$64.97
4	80.00	$38.62	$14.75	$9.42	$8.07	$0.00	$70.86

Construction

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

Apprentice: INSULATOR (PIPES & TANKS)

Effective Date: 9/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$25.51	$14.75	$9.27	$5.05	$0.00	$54.58
2	60.00	$30.61	$14.75	$9.32	$6.05	$0.00	$60.73
3	70.00	$35.71	$14.75	$9.37	$7.06	$0.00	$66.89
4	80.00	$40.81	$14.75	$9.42	$8.07	$0.00	$73.05

Apprentice to Journeyworker Ratio: 1:4

IRONWORKER/WELDER IRONWORKERS LOCAL 7 IRONWORKERS LOCAL 7 (SPRINGFIELD AREA)	3/16/2024	$40.66	$8.25	$12.70	$10.00	$0.00	$71.61

Apprentice: IRONWORKER/WELDER

Effective Date: 3/16/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$24.40	$8.25	$12.70	$10.00	$0.00	$55.35
2	70.00	$28.46	$8.25	$12.70	$10.00	$0.00	$59.41
3	75.00	$30.50	$8.25	$12.70	$10.00	$0.00	$61.45
4	80.00	$32.53	$8.25	$12.70	$10.00	$0.00	$63.48
5	85.00	$34.56	$8.25	$12.70	$10.00	$0.00	$65.51
6	90.00	$36.59	$8.25	$12.70	$10.00	$0.00	$67.54

Apprentice to Journeyworker Ratio: 1:4

JACKHAMMER & PAVING BREAKER OPERATOR LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"	12/1/2024	$31.79	$9.90	$9.25	$5.53	$0.00	$56.47

LABORER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$31.54	$9.90	$9.25	$5.53	$0.00	$56.22

Apprentice: LABORER

Effective Date: 12/1/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$18.92	$9.90	$9.25	$5.53	$0.00	$43.60
2	70.00	$22.08	$9.90	$9.25	$5.53	$0.00	$46.76
3	80.00	$25.23	$9.90	$9.25	$5.53	$0.00	$49.91
4	90.00	$28.39	$9.90	$9.25	$5.53	$0.00	$53.07

Apprentice to Journeyworker Ratio: 1:5

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	$35.23	$9.90	$9.25	$6.60	$0.00	$60.98
	12/1/2025	$36.46	$9.90	$9.25	$6.60	$0.00	$62.21
	6/1/2026	$38.50	$9.90	$9.25	$6.60	$0.00	$64.25
	12/1/2026	$39.79	$9.90	$9.25	$6.60	$0.00	$65.54

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 6/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$21.14	$9.90	$9.25	$6.60	$0.00	$46.89
2	70.00	$24.66	$9.90	$9.25	$6.60	$0.00	$50.41
3	80.00	$28.18	$9.90	$9.25	$6.60	$0.00	$53.93
4	90.00	$31.71	$9.90	$9.25	$6.60	$0.00	$57.46

Apprentice: LABORER (HEAVY & HIGHWAY)

Effective Date: 12/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$21.88	$9.90	$9.25	$6.60	$0.00	$47.63
2	70.00	$25.52	$9.90	$9.25	$6.60	$0.00	$51.27
3	80.00	$29.17	$9.90	$9.25	$6.60	$0.00	$54.92
4	90.00	$32.81	$9.90	$9.25	$6.60	$0.00	$58.56

Apprentice to Journeyworker Ratio: 1:5

LABORER: CARPENTER TENDER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$31.54	$9.90	$9.25	$5.53	$0.00	$56.22
For apprentice rates see "Apprentice- LABORER"							
LABORER: CEMENT FINISHER TENDER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$31.54	$9.90	$9.25	$5.53	$0.00	$56.22
For apprentice rates see "Apprentice- LABORER"							
LABORER: HAZARDOUS WASTE/ASBESTOS REMOVER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	6/1/2025	$34.40	$9.65	$9.00	$5.41	$0.00	$58.46
	12/1/2025	$35.63	$9.65	$9.00	$5.41	$0.00	$59.69
	6/1/2026	$37.67	$9.65	$9.00	$5.41	$0.00	$61.73
	12/1/2026	$38.96	$9.65	$9.00	$5.41	$0.00	$63.02
	6/1/2027	$40.26	$9.65	$9.00	$5.41	$0.00	$64.32
	12/1/2027	$41.56	$9.65	$9.00	$5.41	$0.00	$65.62
	6/5/2028	$42.91	$9.65	$9.00	$5.41	$0.00	$66.97
	12/4/2028	$44.26	$9.65	$9.00	$5.41	$0.00	$68.32
For apprentice rates see "Apprentice- LABORER"							
LABORER: MASON TENDER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$33.54	$9.90	$9.25	$5.53	$0.00	$58.22
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORER: MASON TENDER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	$35.48	$9.90	$9.25	$6.60	$0.00	$61.23
	12/1/2025	$36.71	$9.90	$9.25	$6.60	$0.00	$62.46
	6/1/2026	$38.75	$9.90	$9.25	$6.60	$0.00	$64.50
	12/1/2026	$40.04	$9.90	$9.25	$6.60	$0.00	$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
LABORER: MULTI-TRADE TENDER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$31.54	$9.90	$9.25	$5.53	$0.00	$56.22
For apprentice rates see "Apprentice- LABORER"							
LABORER: TREE REMOVER LABORERS LABORERS - ZONE 4 (BUILDING & SITE)	12/1/2024	$31.54	$9.90	$9.25	$5.53	$0.00	$56.22
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 4 (BUILDING & SITE)	12/1/2024	$31.79	$9.90	$9.25	$5.53	$0.00	$56.47
For apprentice rates see "Apprentice- LABORER"							
LASER BEAM OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	$35.48	$9.90	$9.25	$6.60	$0.00	$61.23
	12/1/2025	$36.71	$9.90	$9.25	$6.60	$0.00	$62.46
	6/1/2026	$38.75	$9.90	$9.25	$6.60	$0.00	$64.50
	12/1/2026	$40.04	$9.90	$9.25	$6.60	$0.00	$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
MARBLE & TILE FINISHERS BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	8/1/2025	$44.75	$11.49	$15.10	$5.68	$0.00	$77.02
	2/1/2026	$45.83	$11.49	$15.10	$5.68	$0.00	$78.10
	8/1/2026	$47.59	$11.49	$15.10	$5.68	$0.00	$79.86
	2/1/2027	$48.71	$11.49	$15.10	$5.68	$0.00	$80.98

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 8/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$22.38	$11.49	$15.10	$5.68	$0.00	$54.65
2	60.00	$26.85	$11.49	$15.10	$5.68	$0.00	$59.12
3	70.00	$31.33	$11.49	$15.10	$5.68	$0.00	$63.60
4	80.00	$35.80	$11.49	$15.10	$5.68	$0.00	$68.07
5	90.00	$40.28	$11.49	$15.10	$5.68	$0.00	$72.55

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$22.92	$11.49	$15.10	$5.68	$0.00	$55.19
2	60.00	$27.50	$11.49	$15.10	$5.68	$0.00	$59.77

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
MECH. SWEEPER OPERATOR (ON CONST. SITES) OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$39.56	$13.78	$12.15	$3.00	$0.00	$68.49
MECHANIC/WELDER/BOOM TRUCK OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96
MILLWRIGHT (Zone 3) MILLWRIGHTS LOCAL 1121	1/6/2025	$43.48	$10.08	$11.47	$9.75	$0.00	$74.78
MILLWRIGHTS LOCAL 1121 - Zone 3	1/5/2026	$45.76	$10.08	$11.47	$9.75	$0.00	$77.06

Apprentice: MARBLE & TILE FINISHERS

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
3	70.00	$32.08	$11.49	$15.10	$5.68	$0.00	$64.35
4	80.00	$36.66	$11.49	$15.10	$5.68	$0.00	$68.93
5	90.00	$41.25	$11.49	$15.10	$5.68	$0.00	$73.52

Apprentice to Journeyworker Ratio: 1:5

Apprentice: MILLWRIGHT (Zone 3)

Effective Date: 1/6/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	$23.91	$10.08	$0.00	$5.36	$0.00	$39.35
2	65.00	$28.26	$10.08	$0.00	$6.34	$0.00	$44.68
3	75.00	$32.61	$10.08	$11.47	$7.31	$0.00	$61.47
4	85.00	$36.96	$10.08	$11.47	$8.29	$0.00	$66.80

Apprentice: MILLWRIGHT (Zone 3)

Effective Date: 1/5/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	55.00	$25.17	$10.08	$0.00	$5.36	$0.00	$40.61
2	65.00	$29.74	$10.08	$0.00	$6.34	$0.00	$46.16
3	75.00	$34.32	$10.08	$11.47	$7.31	$0.00	$63.18
4	85.00	$38.90	$10.08	$11.47	$8.29	$0.00	$68.74

Apprentice Notes

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

Apprentice to Journeyworker Ratio: 1:4

MORTAR MIXER	12/1/2024	$31.79	$9.90	$9.25	$5.53	$0.00	$56.47

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"							
OILER OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$35.02	$13.78	$12.15	$3.00	$0.00	$63.95
OTHER POWER DRIVEN EQUIPMENT - CLASS VI OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$32.74	$13.78	$12.15	$3.00	$0.00	$61.67
PAINTER (BRIDGES/TANKS) PAINTERS LOCAL 35	7/1/2025	$58.51	$10.30	$11.95	$12.50	$0.00	$93.26
PAINTERS LOCAL 35 - ZONE 3	1/1/2026	$59.56	$10.35	$12.00	$12.60	$0.00	$94.51

Apprentice: PAINTER (BRIDGES/TANKS)

Effective Date: 7/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$29.26	$10.30	$0.00	$0.00	$0.00	$39.56
2	55.00	$32.18	$10.30	$0.00	$6.88	$0.00	$49.36
3	60.00	$35.11	$10.30	$0.00	$7.50	$0.00	$52.91
4	65.00	$38.03	$10.30	$0.00	$8.13	$0.00	$56.46
5	70.00	$40.96	$10.30	$11.95	$8.75	$0.00	$71.96
6	75.00	$43.88	$10.30	$11.95	$9.38	$0.00	$75.51
7	80.00	$46.81	$10.30	$11.95	$10.00	$0.00	$79.06
8	90.00	$52.66	$10.30	$11.95	$11.25	$0.00	$86.16

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	7/1/2025	$41.13	$10.30	$11.95	$8.25	$0.00	$71.63
	1/1/2026	$42.03	$10.35	$12.00	$8.35	$0.00	$72.73

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PAINTERS LOCAL 35 - ZONE 3							

Apprentice: PAINTER (SPRAY OR SANDBLAST, NEW) *

Effective Date: 7/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$20.57	$10.30	$0.00	$0.00	$0.00	$30.87
2	55.00	$22.62	$10.30	$0.00	$4.54	$0.00	$37.46
3	60.00	$24.68	$10.30	$0.00	$4.95	$0.00	$39.93
4	65.00	$26.73	$10.30	$0.00	$5.36	$0.00	$42.39
5	70.00	$28.79	$10.30	$11.95	$5.78	$0.00	$56.82
6	75.00	$30.85	$10.30	$11.95	$6.19	$0.00	$59.29
7	80.00	$32.90	$10.30	$11.95	$6.60	$0.00	$61.75
8	90.00	$37.02	$10.30	$11.95	$7.43	$0.00	$66.70

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	$21.02	$10.35	$0.00	$0.00	$0.00	$31.37
2	55.00	$23.12	$10.35	$0.00	$4.59	$0.00	$38.06
3	60.00	$25.22	$10.35	$0.00	$5.01	$0.00	$40.58
4	65.00	$27.32	$10.35	$0.00	$5.43	$0.00	$43.10
5	70.00	$29.42	$10.35	$12.00	$5.85	$0.00	$57.62
6	75.00	$31.52	$10.35	$12.00	$6.26	$0.00	$60.13
7	80.00	$33.62	$10.35	$12.00	$6.68	$0.00	$62.65
8	90.00	$37.83	$10.35	$12.00	$7.52	$0.00	$67.70

Apprentice to Journeyworker Ratio: 1:1

PAINTER (SPRAY OR SANDBLAST, REPAINT)	7/1/2025	$38.45	$10.30	$11.95	$8.25	$0.00	$68.95
PAINTERS LOCAL 35	1/1/2026	$39.35	$10.35	$12.00	$8.35	$0.00	$70.05
PAINTERS LOCAL 35 - ZONE 3							

Apprentice: PAINTER (SPRAY OR SANDBLAST, REPAINT)

Effective Date: 7/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$19.23	$10.30	$0.00	$0.00	$0.00	$29.53
2	55.00	$21.15	$10.30	$0.00	$4.54	$0.00	$35.99
3	60.00	$23.07	$10.30	$0.00	$4.95	$0.00	$38.32
4	65.00	$24.99	$10.30	$0.00	$5.36	$0.00	$40.65
5	70.00	$26.92	$10.30	$11.95	$5.78	$0.00	$54.95
6	75.00	$28.84	$10.30	$11.95	$6.19	$0.00	$57.28
7	80.00	$30.76	$10.30	$11.95	$6.60	$0.00	$59.61
8	90.00	$34.61	$10.30	$11.95	$7.43	$0.00	$64.29

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
PAINTER / TAPER (BRUSH, NEW) *	7/1/2025	$39.73	$10.30	$11.95	$8.25	$0.00	$70.23
* If 30% or more of surfaces to be painted are new construction, NEW paint rate shall be used.	1/1/2026	$40.63	$10.35	$12.00	$8.35	$0.00	$71.33
PAINTERS LOCAL 35							
PAINTERS LOCAL 35 - ZONE 3							

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	$19.68	$10.35	$0.00	$0.00	$0.00	$30.03
2	55.00	$21.64	$10.35	$0.00	$4.59	$0.00	$36.58
3	60.00	$23.61	$10.35	$0.00	$5.01	$0.00	$38.97
4	65.00	$25.58	$10.35	$0.00	$5.43	$0.00	$41.36
5	70.00	$27.55	$10.35	$12.00	$5.85	$0.00	$55.75
6	75.00	$29.51	$10.35	$12.00	$6.26	$0.00	$58.12
7	80.00	$31.48	$10.35	$12.00	$6.68	$0.00	$60.51
8	90.00	$35.42	$10.35	$12.00	$7.52	$0.00	$65.29

Apprentice to Journeyworker Ratio: 1:1

Apprentice: PAINTER / TAPER (BRUSH, NEW) *

Effective Date: 7/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$19.87	$10.30	$0.00	$0.00	$0.00	$30.17
2	55.00	$21.85	$10.30	$0.00	$4.54	$0.00	$36.69
3	60.00	$23.84	$10.30	$0.00	$4.95	$0.00	$39.09
4	65.00	$25.82	$10.30	$0.00	$5.36	$0.00	$41.48
5	70.00	$27.81	$10.30	$11.95	$5.78	$0.00	$55.84
6	75.00	$29.80	$10.30	$11.95	$6.19	$0.00	$58.24
7	80.00	$31.78	$10.30	$11.95	$6.60	$0.00	$60.63
8	90.00	$35.76	$10.30	$11.95	$7.43	$0.00	$65.44

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	$20.32	$10.35	$0.00	$0.00	$0.00	$30.67
2	55.00	$22.35	$10.35	$0.00	$4.59	$0.00	$37.29
3	60.00	$24.38	$10.35	$0.00	$5.01	$0.00	$39.74
4	65.00	$26.41	$10.35	$0.00	$5.43	$0.00	$42.19
5	70.00	$28.44	$10.35	$12.00	$5.85	$0.00	$56.64
6	75.00	$30.47	$10.35	$12.00	$6.26	$0.00	$59.08
7	80.00	$32.50	$10.35	$12.00	$6.68	$0.00	$61.53
8	90.00	$36.57	$10.35	$12.00	$7.52	$0.00	$66.44

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice to Journeyworker Ratio: 1:1							
PAINTER / TAPER (BRUSH, REPAINT)	7/1/2025	$37.05	$10.30	$11.95	$8.25	$0.00	$67.55
PAINTERS LOCAL 35	1/1/2026	$37.95	$10.35	$12.00	$8.35	$0.00	$68.65
PAINTERS LOCAL 35 - ZONE 3							

Apprentice: PAINTER / TAPER (BRUSH, REPAINT)

Effective Date: 7/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$18.53	$10.30	$0.00	$0.00	$0.00	$28.83
2	55.00	$20.38	$10.30	$0.00	$4.54	$0.00	$35.22
3	60.00	$22.23	$10.30	$0.00	$4.95	$0.00	$37.48
4	65.00	$24.08	$10.30	$0.00	$5.36	$0.00	$39.74
5	70.00	$25.94	$10.30	$11.95	$5.78	$0.00	$53.97
6	75.00	$27.79	$10.30	$11.95	$6.19	$0.00	$56.23
7	80.00	$29.64	$10.30	$11.95	$6.60	$0.00	$58.49
8	90.00	$33.35	$10.30	$11.95	$7.43	$0.00	$63.03

Apprentice: PAINTER / TAPER (BRUSH, REPAINT)

Effective Date: 1/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$18.98	$10.35	$0.00	$0.00	$0.00	$29.33
2	55.00	$20.87	$10.35	$0.00	$4.59	$0.00	$35.81
3	60.00	$22.77	$10.35	$0.00	$5.01	$0.00	$38.13
4	65.00	$24.67	$10.35	$0.00	$5.43	$0.00	$40.45
5	70.00	$26.57	$10.35	$12.00	$5.85	$0.00	$54.77
6	75.00	$28.46	$10.35	$12.00	$6.26	$0.00	$57.07
7	80.00	$30.36	$10.35	$12.00	$6.68	$0.00	$59.39
8	90.00	$34.16	$10.35	$12.00	$7.52	$0.00	$64.03

Apprentice to Journeyworker Ratio: 1:1							
PAINTER TRAFFIC MARKINGS (HEAVY/HIGHWAY)	6/1/2025	$35.23	$9.90	$9.25	$6.60	$0.00	$60.98
LABORERS	12/1/2025	$36.46	$9.90	$9.25	$6.60	$0.00	$62.21
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	$38.50	$9.90	$9.25	$6.60	$0.00	$64.25
	12/1/2026	$39.79	$9.90	$9.25	$6.60	$0.00	$65.54
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PANEL & PICKUP TRUCKS DRIVER	6/1/2025	$40.78	$15.57	$20.17	$0.00	$0.00	$76.52
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	$40.78	$15.57	$21.78	$0.00	$0.00	$78.13
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	8/1/2024	$49.19	$10.08	$11.62	$12.67	$0.00	$83.56

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
DECK) PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 3) For apprentice rates see "Apprentice- PILE DRIVER"							
PILE DRIVER PILE DRIVER LOCAL 56 PILE DRIVER LOCAL 56 (ZONE 3)	8/1/2024	$49.19	$10.08	$11.62	$12.67	$0.00	$83.56

Apprentice: PILE DRIVER

Effective Date: 8/1/2024

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$22.14	$10.08	$0.00	$2.53	$0.00	$34.75
2	55.00	$27.05	$10.08	$0.00	$5.07	$0.00	$42.20
3	70.00	$34.43	$10.08	$11.62	$7.60	$0.00	$63.73
4	80.00	$39.35	$10.08	$11.62	$10.14	$0.00	$71.19

Apprentice to Journeyworker Ratio: 1:5

PIPELAYER LABORERS LABORERS - ZONE 4 (BUILDING & SITE) For apprentice rates see "Apprentice- LABORER"	12/1/2024	$31.79	$9.90	$9.25	$5.53	$0.00	$56.47
PIPELAYER (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	$35.48	$9.90	$9.25	$6.60	$0.00	$61.23
	12/1/2025	$36.71	$9.90	$9.25	$6.60	$0.00	$62.46
	6/1/2026	$38.75	$9.90	$9.25	$6.60	$0.00	$64.50
	12/1/2026	$40.04	$9.90	$9.25	$6.60	$0.00	$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)							
PLUMBER & PIPEFITTER PLUMBERS & PIPEFITTERS LOCAL 104 PLUMBERS & PIPEFITTERS LOCAL 104	9/17/2025	$53.01	$10.35	$10.85	$7.10	$0.00	$81.31
	3/17/2026	$55.01	$10.35	$10.85	$7.10	$0.00	$83.31
	9/17/2026	$57.01	$10.35	$10.85	$7.10	$0.00	$85.31
	3/17/2027	$59.01	$10.35	$10.85	$7.10	$0.00	$87.31
	9/17/2027	$61.01	$10.35	$10.85	$7.10	$0.00	$89.31
	3/17/2028	$63.01	$10.35	$10.85	$7.10	$0.00	$91.31
	9/17/2028	$65.01	$10.35	$10.85	$7.10	$0.00	$93.31
	3/17/2029	$67.01	$10.35	$10.85	$7.10	$0.00	$95.31

Apprentice: PLUMBER & PIPEFITTER

Effective Date: 9/17/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$23.85	$10.35	$10.85	$0.00	$0.00	$45.05
2	50.00	$26.51	$10.35	$10.85	$0.00	$0.00	$47.71
3	55.00	$29.16	$10.35	$10.85	$0.00	$0.00	$50.36
4	60.00	$31.81	$10.35	$10.85	$0.00	$0.00	$53.01
5	65.00	$34.46	$10.35	$10.85	$0.00	$0.00	$55.66

Construction

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

Apprentice: PLUMBER & PIPEFITTER

Effective Date: 9/17/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
6	70.00	$37.11	$10.35	$10.85	$0.00	$0.00	$58.31
7	75.00	$39.76	$10.35	$10.85	$0.00	$0.00	$60.96
8	80.00	$42.41	$10.35	$10.85	$0.00	$0.00	$63.61
9	85.00	$45.06	$10.35	$10.85	$7.10	$0.00	$73.36
10	85.00	$45.06	$10.35	$10.85	$7.10	$0.00	$73.36

Apprentice: PLUMBER & PIPEFITTER

Effective Date: 3/17/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$24.75	$10.35	$10.85	$0.00	$0.00	$45.95
2	50.00	$27.51	$10.35	$10.85	$0.00	$0.00	$48.71
3	55.00	$30.26	$10.35	$10.85	$0.00	$0.00	$51.46
4	60.00	$33.01	$10.35	$10.85	$0.00	$0.00	$54.21
5	65.00	$35.76	$10.35	$10.85	$0.00	$0.00	$56.96
6	70.00	$38.51	$10.35	$10.85	$0.00	$0.00	$59.71
7	75.00	$41.26	$10.35	$10.85	$0.00	$0.00	$62.46
8	80.00	$44.01	$10.35	$10.85	$0.00	$0.00	$65.21
9	85.00	$46.76	$10.35	$10.85	$7.10	$0.00	$75.06
10	85.00	$46.76	$10.35	$10.85	$7.10	$0.00	$75.06

Apprentice Notes

**1:1,2:5,3:9,4:12

Apprentice to Journeyworker Ratio: 1:1

PNEUMATIC CONTROLS (TEMP.) PLUMBERS & PIPEFITTERS LOCAL 104 PLUMBERS & PIPEFITTERS LOCAL 104	9/17/2025	$53.01	$10.35	$10.85	$7.10	$0.00	$81.31
	3/17/2026	$55.01	$0.00	$10.85	$7.10	$0.00	$72.96
	9/17/2026	$57.01	$10.35	$10.85	$7.10	$0.00	$85.31
	3/17/2027	$59.01	$10.35	$10.85	$7.10	$0.00	$87.31
	9/17/2027	$61.01	$10.35	$10.85	$7.10	$0.00	$89.31
	3/17/2028	$63.01	$10.35	$10.85	$7.10	$0.00	$91.31
	9/17/2028	$65.01	$10.35	$10.85	$7.10	$0.00	$93.31
	3/17/2029	$67.01	$10.35	$10.85	$7.10	$0.00	$95.31
For apprentice rates see "Apprentice- PIPEFITTER" or "PLUMBER/PIPEFITTER"							
PNEUMATIC DRILL/TOOL OPERATOR (HEAVY & HIGHWAY) LABORERS LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2025	$35.48	$9.90	$9.25	$6.60	$0.00	$61.23
	12/1/2025	$36.71	$9.90	$9.25	$6.60	$0.00	$62.46
	6/1/2026	$38.75	$9.90	$9.25	$6.60	$0.00	$64.50
	12/1/2026	$40.04	$9.90	$9.25	$6.60	$0.00	$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
POWDERMAN & BLASTER LABORERS	12/1/2024	$32.54	$9.90	$9.25	$5.53	$0.00	$57.22

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
LABORERS - ZONE 4 (BUILDING & SITE)							
For apprentice rates see "Apprentice- LABORER"							
POWDERMAN & BLASTER (HEAVY & HIGHWAY)	6/1/2025	$36.23	$9.90	$9.25	$6.19	$0.00	$61.57
LABORERS	12/1/2025	$37.46	$9.90	$9.25	$6.19	$0.00	$62.80
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	$39.50	$9.90	$9.25	$6.19	$0.00	$64.84
	12/1/2026	$40.79	$9.90	$9.25	$6.19	$0.00	$66.13
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
PUMP OPERATOR (CONCRETE)	12/1/2023	$39.56	$13.78	$12.15	$3.00	$0.00	$68.49
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
PUMP OPERATOR (DEWATERING, OTHER)	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
READY-MIX CONCRETE DRIVER	5/1/2024	$26.14	$11.82	$7.25	$0.00	$0.00	$45.21
TEAMSTERS 404 - Construction Service (Northampton)							
TEAMSTERS 404 - Construction Service (Northampton)							
RIDE-ON MOTORIZED BUGGY OPERATOR	12/1/2024	$31.79	$9.90	$9.25	$5.53	$0.00	$56.47
LABORERS							
LABORERS - ZONE 4 (BUILDING & SITE)							
For apprentice rates see "Apprentice- LABORER"							
ROLLER OPERATOR	12/1/2023	$38.42	$13.78	$12.15	$3.00	$0.00	$67.35
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
ROOFER (Coal tar pitch)	7/16/2025	$43.88	$10.35	$8.70	$9.30	$0.00	$72.23
ROOFERS LOCAL 248	10/2/2025	$44.88	$10.35	$8.70	$9.30	$0.00	$73.23
ROOFERS LOCAL 248	7/16/2026	$46.88	$10.35	$8.70	$9.30	$0.00	$75.23
For apprentice rates see "Apprentice- ROOFER"							
ROOFER (Inc.Roofer Waterproofng &Roofer Damproofg)	7/16/2025	$43.38	$10.35	$8.70	$9.30	$0.00	$71.73
ROOFERS LOCAL 248	10/2/2025	$44.38	$10.35	$8.70	$9.30	$0.00	$72.73
ROOFERS LOCAL 248	7/16/2026	$46.38	$10.35	$8.70	$9.30	$0.00	$74.73
ROOFER SLATE / TILE / PRECAST CONCRETE	7/16/2025	$43.88	$10.35	$8.70	$9.30	$0.00	$72.23
ROOFERS LOCAL 248	10/2/2025	$44.88	$10.35	$8.70	$9.30	$0.00	$73.23
ROOFERS LOCAL 248	7/16/2026	$46.88	$10.35	$8.70	$9.30	$0.00	$75.23
For apprentice rates see "Apprentice- ROOFER"							
SCRAPER	12/1/2023	$39.03	$13.78	$12.15	$3.00	$0.00	$67.96
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
SELF-POWERED ROLLERS AND COMPACTORS (TAMPERS)	12/1/2023	$38.42	$13.78	$12.15	$3.00	$0.00	$67.35

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
SELF-PROPELLED POWER BROOM OPERATING ENGINEERS LOCAL 98 OPERATING ENGINEERS LOCAL 98 For apprentice rates see "Apprentice- OPERATING ENGINEERS"	12/1/2023	$35.80	$13.78	$12.15	$3.00	$0.00	$64.73
SHEETMETAL WORKER SHEETMETAL WORKERS LOCAL 63 SHEETMETAL WORKERS LOCAL 63	7/1/2025	$43.48	$12.94	$11.01	$8.72	$2.13	$78.28
	7/1/2026	$43.48	$13.24	$11.01	$9.92	$2.13	$79.78
	1/1/2027	$43.48	$13.54	$11.01	$11.12	$2.13	$81.28
	7/1/2027	$44.98	$13.54	$11.01	$11.12	$2.13	$82.78
	1/1/2028	$46.48	$13.54	$11.01	$11.12	$2.13	$84.28

Apprentice: SHEETMETAL WORKER

Effective Date: 7/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$19.57	$5.82	$4.95	$0.00	$0.85	$31.19
2	50.00	$21.74	$6.47	$5.51	$0.00	$0.94	$34.66
3	55.00	$23.91	$7.12	$9.91	$0.00	$1.15	$42.09
4	60.00	$26.09	$7.76	$9.91	$0.00	$1.23	$44.99
5	65.00	$28.26	$8.41	$9.91	$0.00	$1.31	$47.89
6	70.00	$30.44	$9.06	$9.91	$0.00	$1.39	$50.80
7	75.00	$32.61	$9.71	$9.91	$0.00	$1.47	$53.70
8	80.00	$34.78	$10.35	$9.91	$8.72	$1.78	$65.54
9	85.00	$36.96	$11.00	$9.91	$8.72	$1.86	$68.45
10	90.00	$39.13	$11.65	$9.91	$8.72	$1.94	$71.35

Apprentice: SHEETMETAL WORKER

Effective Date: 7/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	45.00	$19.57	$5.96	$4.95	$0.00	$0.85	$31.33
2	50.00	$21.74	$6.62	$5.51	$0.00	$0.94	$34.81
3	55.00	$23.91	$7.28	$9.91	$0.00	$1.15	$42.25
4	60.00	$26.09	$7.94	$9.91	$0.00	$1.23	$45.17
5	65.00	$28.26	$8.60	$9.91	$0.00	$1.31	$48.08
6	70.00	$30.44	$9.27	$9.91	$0.00	$1.39	$51.01
7	75.00	$32.61	$9.93	$9.91	$0.00	$1.47	$53.92
8	80.00	$34.78	$10.59	$9.91	$9.92	$1.78	$66.98
9	85.00	$36.96	$11.25	$9.91	$9.92	$1.86	$69.90
10	90.00	$39.13	$11.92	$9.91	$9.92	$1.94	$72.82

Apprentice to Journeyworker Ratio: 1:3

SPECIALIZED EARTH MOVING EQUIP < 35 TONS TEAMSTERS JOINT COUNCIL NO. 10	6/1/2025	$41.24	$15.57	$20.17	$0.00	$0.00	$76.98
	12/1/2025	$41.24	$15.57	$21.78	$0.00	$0.00	$78.59

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
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
SPECIALIZED EARTH MOVING EQUIP > 35 TONS TEAMSTERS JOINT COUNCIL NO. 10 TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	6/1/2025	$41.53	$15.57	$20.17	$0.00	$0.00	$77.27
	12/1/2025	$41.53	$15.57	$21.78	$0.00	$0.00	$78.88
	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 669 SPRINKLER FITTERS LOCAL 669	7/1/2025	$53.25	$12.40	$7.40	$9.41	$0.00	$82.46
	10/1/2025	$53.25	$12.40	$7.40	$9.41	$0.00	$82.46
	1/1/2026	$53.25	$13.60	$7.45	$9.41	$0.00	$83.71
	4/1/2026	$56.54	$13.60	$7.45	$9.41	$0.00	$87.00
	7/1/2026	$56.54	$13.60	$7.45	$9.41	$0.00	$87.00
	10/1/2026	$56.54	$13.60	$7.45	$9.41	$0.00	$87.00
	1/1/2027	$56.54	$14.55	$7.50	$9.41	$0.00	$88.00
	4/1/2027	$59.83	$14.55	$7.50	$9.41	$0.00	$91.29
	7/1/2027	$59.83	$14.55	$7.50	$9.41	$0.00	$91.29
	10/1/2027	$59.83	$14.55	$7.50	$9.41	$0.00	$91.29
	1/1/2028	$59.83	$15.50	$7.55	$9.41	$0.00	$92.29

Apprentice: SPRINKLER FITTER

Effective Date: 7/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	43.00	$26.94	$0.00	$0.00	$0.00	$0.00	$26.94
2	48.00	$30.08	$0.00	$0.00	$0.00	$0.00	$30.08
3	52.00	$32.58	$0.00	$0.00	$1.15	$0.00	$33.73
4	56.00	$35.09	$0.00	$0.00	$1.15	$0.00	$36.24
5	59.00	$36.97	$0.00	$0.00	$1.40	$0.00	$38.37
6	64.00	$40.10	$0.00	$0.00	$1.40	$0.00	$41.50
7	68.00	$42.61	$0.00	$0.00	$1.40	$0.00	$44.01
8	72.00	$45.12	$0.00	$0.00	$1.40	$0.00	$46.52
9	76.00	$47.62	$0.00	$0.00	$1.40	$0.00	$49.02
10	80.00	$50.13	$0.00	$0.00	$1.40	$0.00	$51.53

Apprentice: SPRINKLER FITTER

Effective Date: 10/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	43.00	$26.94	$0.00	$0.00	$0.00	$0.00	$26.94
2	48.00	$30.08	$0.00	$0.00	$0.00	$0.00	$30.08
3	52.00	$32.58	$0.00	$0.00	$1.15	$0.00	$33.73
4	56.00	$35.09	$0.00	$0.00	$1.15	$0.00	$36.24

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
TELECOMMUNICATION TECHNICIAN ELECTRICIANS LOCAL 7 ELECTRICIANS LOCAL 7	6/29/2025	$52.16	$13.50	$8.31	$6.90	$0.00	$80.87
	12/28/2025	$53.26	$13.75	$8.40	$6.96	$0.00	$82.37
	6/28/2026	$54.41	$14.00	$8.43	$7.03	$0.00	$83.87
	1/3/2027	$55.56	$14.25	$8.47	$7.09	$0.00	$85.37

Apprentice: SPRINKLER FITTER

Effective Date: 10/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
5	59.00	$36.97	$0.00	$0.00	$1.40	$0.00	$38.37
6	64.00	$40.10	$0.00	$0.00	$1.40	$0.00	$41.50
7	68.00	$42.61	$0.00	$0.00	$1.40	$0.00	$44.01
8	72.00	$45.12	$0.00	$0.00	$1.40	$0.00	$46.52
9	76.00	$47.62	$0.00	$0.00	$1.40	$0.00	$49.02
10	80.00	$50.13	$0.00	$0.00	$1.40	$0.00	$51.53

Apprentice to Journeyworker Ratio: 1:1

Apprentice: TELECOMMUNICATION TECHNICIAN

Effective Date: 6/29/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$20.86	$7.50	$0.63	$0.00	$0.00	$28.99
2	45.00	$23.47	$7.50	$0.70	$0.00	$0.00	$31.67
3	50.00	$26.08	$13.50	$7.53	$0.00	$0.00	$47.11
4	55.00	$28.69	$13.50	$7.61	$0.00	$0.00	$49.80
5	65.00	$33.90	$13.50	$9.84	$0.00	$0.00	$57.24
6	70.00	$36.51	$13.50	$11.30	$0.00	$0.00	$61.31

Apprentice: TELECOMMUNICATION TECHNICIAN

Effective Date: 12/28/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	40.00	$21.30	$7.65	$0.63	$0.00	$0.00	$29.58
2	40.00	$23.97	$7.65	$0.70	$0.00	$0.00	$32.32
3	26.63	$26.63	$13.75	$7.53	$0.00	$0.00	$47.91
4	55.00	$29.29	$13.75	$7.61	$0.00	$0.00	$50.65
5	65.00	$34.62	$13.75	$9.84	$0.00	$0.00	$58.21
6	70.00	$37.28	$13.75	$11.30	$0.00	$0.00	$62.33

Apprentice to Journeyworker Ratio: 1:1

TERRAZZO FINISHERS BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	8/1/2025	$66.89	$11.49	$15.57	$8.02	$0.00	$101.97
	2/10/2026	$68.24	$11.49	$15.57	$8.02	$0.00	$103.32
	8/1/2026	$70.44	$11.49	$15.57	$8.02	$0.00	$105.52
	2/1/2027	$71.84	$11.49	$15.57	$8.02	$0.00	$106.92

Construction

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

Apprentice: TERRAZZO FINISHERS

Effective Date: 8/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$33.45	$11.49	$15.57	$8.02	$0.00	$68.53
2	60.00	$40.13	$11.49	$15.57	$8.02	$0.00	$75.21
3	70.00	$46.82	$11.49	$15.57	$8.02	$0.00	$81.90
4	80.00	$53.51	$11.49	$15.57	$8.02	$0.00	$88.59
5	90.00	$60.20	$11.49	$15.57	$8.02	$0.00	$95.28

Apprentice: TERRAZZO FINISHERS

Effective Date: 2/10/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$34.12	$11.49	$15.57	$8.02	$0.00	$69.20
2	60.00	$40.94	$11.49	$15.57	$8.02	$0.00	$76.02
3	70.00	$47.77	$11.49	$15.57	$8.02	$0.00	$82.85
4	80.00	$54.59	$11.49	$15.57	$8.02	$0.00	$89.67
5	90.00	$61.42	$11.49	$15.57	$8.02	$0.00	$96.50

Apprentice to Journeyworker Ratio: 1:5

TERRAZZO MECHANIC BRICKLAYERS LOCAL 3 BRICKLAYERS LOCAL 3 (SPR/PITT) - MARBLE & TILE	8/1/2025	$67.97	$11.49	$15.57	$7.99	$0.00	$103.02
	2/1/2026	$69.32	$11.49	$15.57	$7.99	$0.00	$104.37
	8/1/2026	$71.52	$11.49	$15.57	$7.99	$0.00	$106.57
	2/1/2027	$72.92	$11.49	$15.57	$7.99	$0.00	$107.97

Apprentice: TERRAZZO MECHANIC

Effective Date: 8/1/2025

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$33.99	$11.49	$15.57	$7.99	$0.00	$69.04
2	60.00	$40.78	$11.49	$15.57	$7.99	$0.00	$75.83
3	70.00	$47.58	$11.49	$15.57	$7.99	$0.00	$82.63
4	80.00	$54.38	$11.49	$15.57	$7.99	$0.00	$89.43
5	90.00	$61.17	$11.49	$15.57	$7.99	$0.00	$96.22

Apprentice: TERRAZZO MECHANIC

Effective Date: 2/1/2026

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	50.00	$34.66	$11.49	$15.57	$7.99	$0.00	$69.71
2	60.00	$41.59	$11.49	$15.57	$7.99	$0.00	$76.64
3	70.00	$48.52	$11.49	$15.57	$7.99	$0.00	$83.57

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
Apprentice: TERRAZZO MECHANIC							
Effective Date: 2/1/2026							
Step / Percent		**Apprentice Base Wage**	**Health**	**Pension**	**Annuity**	**Supplemental Unemployment**	**Total Rate**
4 / 80.00		$55.46	$11.49	$15.57	$7.99	$0.00	$90.51
5 / 90.00		$62.39	$11.49	$15.57	$7.99	$0.00	$97.44
Apprentice to Journeyworker Ratio: 1:5							
TEST BORING DRILLER	6/1/2025	$51.70	$9.90	$9.25	$9.80	$0.00	$80.65
LABORERS	12/1/2025	$53.20	$9.90	$9.25	$9.80	$0.00	$82.15
LABORERS - FOUNDATION AND MARINE	6/1/2026	$54.75	$9.90	$9.25	$9.80	$0.00	$83.70
	12/1/2026	$56.25	$9.90	$9.25	$9.80	$0.00	$85.20
For apprentice rates see "Apprentice- LABORER"							
TEST BORING DRILLER HELPER	6/1/2025	$47.82	$9.90	$9.25	$9.80	$0.00	$76.77
LABORERS	12/1/2025	$49.32	$9.90	$9.25	$9.80	$0.00	$78.27
LABORERS - FOUNDATION AND MARINE	6/1/2026	$50.87	$9.90	$9.25	$9.80	$0.00	$79.82
	12/1/2026	$52.37	$9.90	$9.25	$9.80	$0.00	$81.32
For apprentice rates see "Apprentice- LABORER"							
TEST BORING LABORER	6/1/2025	$47.70	$9.90	$9.25	$9.80	$0.00	$76.65
LABORERS	12/1/2025	$49.20	$9.90	$9.25	$9.80	$0.00	$78.15
LABORERS - FOUNDATION AND MARINE	6/1/2026	$50.75	$9.90	$9.25	$9.80	$0.00	$79.70
	12/1/2026	$52.25	$9.90	$9.25	$9.80	$0.00	$81.20
For apprentice rates see "Apprentice- LABORER"							
TRACTORS	12/1/2023	$38.42	$13.78	$12.15	$3.00	$0.00	$67.35
OPERATING ENGINEERS LOCAL 98							
OPERATING ENGINEERS LOCAL 98							
For apprentice rates see "Apprentice- OPERATING ENGINEERS"							
TRAILERS FOR EARTH MOVING EQUIPMENT	6/1/2025	$41.82	$15.57	$20.17	$0.00	$0.00	$77.56
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	$41.82	$15.57	$21.78	$0.00	$0.00	$79.17
TEAMSTERS JOINT COUNCIL NO. 10 ZONE B	1/1/2026	$41.82	$16.17	$21.78	$0.00	$0.00	$79.77
	6/1/2026	$42.82	$16.17	$21.78	$0.00	$0.00	$80.77
	12/1/2026	$42.82	$16.17	$23.52	$0.00	$0.00	$82.51
	1/1/2027	$42.82	$16.77	$23.52	$0.00	$0.00	$83.11
TUNNEL WORK - COMPRESSED AIR	6/1/2025	$59.93	$9.90	$9.25	$10.25	$0.00	$89.33
LABORERS	12/1/2025	$61.43	$9.90	$9.25	$10.25	$0.00	$90.83
LABORERS (COMPRESSED AIR)	6/1/2026	$62.98	$9.90	$9.25	$10.25	$0.00	$92.38
	12/1/2026	$64.48	$9.90	$9.25	$10.25	$0.00	$93.88
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - COMPRESSED AIR (HAZ. WASTE)	6/1/2025	$61.93	$9.90	$9.25	$10.25	$0.00	$91.33
LABORERS	12/1/2025	$63.43	$9.90	$9.25	$10.25	$0.00	$92.83
LABORERS (COMPRESSED AIR)	6/1/2026	$64.98	$9.90	$9.25	$10.25	$0.00	$94.38
	12/1/2026	$66.48	$9.90	$9.25	$10.25	$0.00	$95.88
For apprentice rates see "Apprentice- LABORER"							

Construction

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
TUNNEL WORK - FREE AIR	6/1/2025	$52.00	$9.90	$9.25	$10.25	$0.00	$81.40
LABORERS	12/1/2025	$53.50	$9.90	$9.25	$10.25	$0.00	$82.90
LABORERS (FREE AIR TUNNEL)	6/1/2026	$55.05	$9.90	$9.25	$10.25	$0.00	$84.45
	12/1/2026	$56.55	$9.90	$9.25	$10.25	$0.00	$85.95
For apprentice rates see "Apprentice- LABORER"							
TUNNEL WORK - FREE AIR (HAZ. WASTE)	6/1/2025	$54.00	$9.90	$9.25	$10.25	$0.00	$83.40
LABORERS	12/1/2025	$55.50	$9.90	$9.25	$10.25	$0.00	$84.90
LABORERS (FREE AIR TUNNEL)	6/1/2026	$57.05	$9.90	$9.25	$10.25	$0.00	$86.45
	12/1/2026	$58.55	$9.90	$9.25	$10.25	$0.00	$87.95
For apprentice rates see "Apprentice- LABORER"							
VAC-HAUL	6/1/2025	$41.24	$15.57	$20.17	$0.00	$0.00	$76.98
TEAMSTERS JOINT COUNCIL NO. 10	12/1/2025	$41.24	$15.57	$21.78	$0.00	$0.00	$78.59
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
WAGON DRILL OPERATOR (HEAVY & HIGHWAY)	6/1/2025	$35.48	$9.90	$9.25	$6.60	$0.00	$61.23
LABORERS	12/1/2025	$36.71	$9.90	$9.25	$6.60	$0.00	$62.46
LABORERS - ZONE 4 (HEAVY & HIGHWAY)	6/1/2026	$38.75	$9.90	$9.25	$6.60	$0.00	$64.50
	12/1/2026	$40.04	$9.90	$9.25	$6.60	$0.00	$65.79
For apprentice rates see "Apprentice- LABORER (Heavy and Highway)"							
WATER METER INSTALLER	9/17/2025	$53.01	$10.35	$10.85	$7.10	$0.00	$81.31
PLUMBERS & PIPEFITTERS LOCAL 104	3/17/2026	$55.01	$10.35	$10.85	$7.10	$0.00	$83.31
PLUMBERS & PIPEFITTERS LOCAL 104	9/17/2026	$57.01	$10.35	$10.85	$7.10	$0.00	$85.31
	3/17/2027	$59.01	$10.35	$10.85	$7.10	$0.00	$87.31
	9/17/2027	$61.01	$10.35	$10.85	$7.10	$0.00	$89.31
	3/17/2028	$63.01	$10.35	$10.85	$7.10	$0.00	$91.31
	9/17/2028	$65.01	$10.35	$10.85	$7.10	$0.00	$93.31
	3/17/2029	$67.01	$10.35	$10.85	$7.10	$0.00	$95.31
For apprentice rates see "Apprentice- PLUMBER/PIPEFITTER" or "PLUMBER/GASFITTER"							

Marine Drilling

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BLASTER MARINE DRILLING MARINE DRILLING	1/1/2018	$41.82	$7.63	$2.35	$1.25	$0.00	$53.05
BOAT CAPTAIN MARINE DRILLING MARINE DRILLING	1/1/2018	$33.87	$7.63	$2.35	$0.95	$0.00	$44.80
BOAT CAPTAIN / Over 1,000 hp MARINE DRILLING MARINE DRILLING	1/1/2018	$38.06	$7.63	$2.35	$1.25	$0.00	$49.29
CORE DRILLER MARINE DRILLING MARINE DRILLING	1/1/2018	$31.43	$7.63	$2.25	$0.65	$0.00	$41.96
CORE DRILLER HELPER MARINE DRILLING MARINE DRILLING	1/1/2018	$28.47	$7.63	$2.35	$0.65	$0.00	$39.10
DRILLER MARINE DRILLING MARINE DRILLING	1/1/2018	$39.70	$7.63	$2.35	$1.25	$0.00	$50.93
ENGINEER MARINE DRILLING MARINE DRILLING	1/1/2018	$39.69	$7.63	$2.25	$1.25	$0.00	$50.82
HELPER MARINE DRILLING MARINE DRILLING	1/1/2018	$34.24	$7.63	$2.35	$0.65	$0.00	$44.87
MACHINIST MARINE DRILLING MARINE DRILLING	1/1/2018	$38.88	$7.63	$2.35	$0.95	$0.00	$49.81
OILER - MARINE DRILLING MARINE DRILLING MARINE DRILLING	1/1/2018	$34.24	$7.63	$2.35	$0.65	$0.00	$44.87
TUG DECKHAND MARINE DRILLING MARINE DRILLING	1/1/2018	$27.61	$7.63	$2.35	$0.65	$0.00	$38.24
WELDER MARINE DRILLING MARINE DRILLING	1/1/2018	$38.88	$7.63	$2.35	$0.95	$0.00	$49.81

Op Eng Marine (Dredging Work)

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
BOAT OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$29.26	$7.63	$2.35	$0.95	$0.00	$40.19
CERTIFIED WELDER OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$31.09	$7.63	$2.35	$1.25	$0.00	$42.32
CHIEF WELDER/ CHIEF MATE OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$33.02	$7.63	$2.35	$1.25	$0.00	$44.25
DERRICK / SPIDER / SPILLBARGE OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$33.02	$7.63	$2.35	$1.25	$0.00	$44.25
DRAG BARGE OPERATOR / WELDER / MATE OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$30.24	$7.63	$2.35	$0.95	$0.00	$41.17
ENGINEER / ELECTRICIAN OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$33.02	$7.63	$2.35	$1.25	$0.00	$44.25
LICENSED BOAT OPERATOR OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$33.02	$7.63	$2.35	$1.25	$0.00	$44.25
LICENSED TUG OPERATOR OVER 1000HP OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$38.18	$7.63	$2.35	$1.25	$0.00	$49.41
MAINTENANCE ENGINEER OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$33.03	$7.63	$2.35	$1.25	$0.00	$44.26
OILER - MARINE DIVISION OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$24.30	$7.63	$2.35	$0.65	$0.00	$34.93
OPERATOR / LEVERMAN OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$38.18	$7.63	$2.35	$1.25	$0.00	$49.41
RODMAN / SCOWMAN OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$24.30	$7.63	$2.35	$0.65	$0.00	$34.93
SHOREMAN / DECKHAND OPERATING ENGINEERS LOCAL 4 OPERATING ENGINEERS - MARINE DIVISION	10/1/2017	$24.30	$7.63	$2.35	$0.65	$0.00	$34.93

Outside Electrical

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
EQUIPMENT OPERATOR OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 For apprentice rates see "Apprentice- LINEMAN"	9/1/2019	$44.67	$8.00	$12.55	$0.00	$0.00	$65.22
GROUNDMAN OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 For apprentice rates see "Apprentice- LINEMAN"	9/1/2019	$30.58	$8.00	$5.48	$0.00	$0.00	$44.06
GROUNDMAN / TRUCK DRIVER OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 For apprentice rates see "Apprentice- LINEMAN"	9/1/2019	$39.97	$8.00	$10.96	$0.00	$0.00	$58.93
HEAVY EQUIPMENT OPERATOR OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 For apprentice rates see "Apprentice- LINEMAN"	9/1/2019	$47.01	$8.00	$13.22	$0.00	$0.00	$68.23
JOURNEYMAN LINEMAN OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42	9/1/2019	$51.71	$8.00	$15.55	$0.00	$0.00	$75.26

Apprentice: JOURNEYMAN LINEMAN

Effective Date: 9/1/2019

Step	Percent	Apprentice Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
1	60.00	$31.03	$8.00	$3.43	$0.00	$0.00	$42.46
2	65.00	$33.61	$8.00	$3.51	$0.00	$0.00	$45.12
3	70.00	$36.20	$8.00	$3.59	$0.00	$0.00	$47.79
4	75.00	$38.78	$8.00	$5.16	$0.00	$0.00	$51.94
5	80.00	$41.37	$8.00	$5.24	$0.00	$0.00	$54.61
6	85.00	$43.95	$8.00	$5.32	$0.00	$0.00	$57.27
7	90.00	$46.54	$8.00	$7.40	$0.00	$0.00	$61.94

Apprentice to Journeyworker Ratio: 1:2

TELEDATA CABLE SPLICER OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42	2/4/2019	$30.73	$4.70	$0.92	$2.25	$0.00	$38.60
TELEDATA LINEMAN/EQUIPMENT OPERATOR OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42	2/4/2019	$28.93	$4.70	$0.89	$2.25	$0.00	$36.77
TELEDATA WIREMAN/INSTALLER/TECHNICIAN OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42 OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42	2/4/2019	$28.93	$4.70	$0.89	$2.25	$0.00	$36.77
TRACTOR-TRAILER DRIVER OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42	9/1/2019	$44.67	$8.00	$12.55	$0.00	$0.00	$65.22

Outside Electrical

Classification	Effective Date	Base Wage	Health	Pension	Annuity	Supplemental Unemployment	Total Rate
OUTSIDE ELECTRICAL WORKERS - WEST LOCAL 42							

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: MA20250016 09/26/2025

Superseded General Decision Number: MA20240016

State: Massachusetts

Construction Type: Highway

County: Berkshire County in Massachusetts.

HIGHWAY CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally
required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.
Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 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.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	.	Executive Order 13658 generally applies to the contract. . 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 that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	03/14/2025
2	05/16/2025
3	07/11/2025
4	07/18/2025
5	08/15/2025
6	09/26/2025

ENGI0004-019 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: Broom/Sweeper; Crane; Gradall; Post Driver (Guardrail/Fences)
Group 2: Bulldozer; Grader/Blade

ENGI0098-010 12/01/2024

	Rates	Fringes
POWER EQUIPMENT OPERATOR		
Group 1	$ 42.88	31.04+A
Group 2	$ 42.57	31.04+A
Group 4	$ 39.12	31.04+A

Footnote:
A. Paid Holidays: New year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day and Christmas Day

POWER EQUIPMENT OPERATORS CLASSIFICATIONS
Group 1: Backhoe/Excavator/Trackhoe; Bobcat/Skid Steer/Skid Loader; Loader
Group 2: Milling Machine; Paver (Asphalt, Aggregate, and Concrete)
Group 4: Roller

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* IRON0007-027 09/16/2025

	Rates	Fringes
IRONWORKER (ORNAMENTAL AND STRUCTURAL)	$ 41.89	33.90

LABO0473-007 12/01/2024

	Rates	Fringes
LABORER (Common or General)	$ 31.54	26.65
TRAFFIC CONTROL (Flagger)	$ 27.01	26.65

LABO0596-005 06/01/2025

	Rates	Fringes
LABORER (Form Work Only)	$ 35.00	26.91

PAIN0035-023 07/01/2024

	Rates	Fringes
PAINTER (Steel)	$ 56.76	36.00

SUMA2014-006 01/11/2017

	Rates	Fringes
CARPENTER	$ 44.11	21.41
CEMENT MASON/CONCRETE FINISHER	$ 52.13	20.89
ELECTRICIAN	$ 47.13	13.41
IRONWORKER, REINFORCING	$ 46.21	21.27
LABORER: Asphalt, Includes Raker, Shoveler, Spreader and Distributor	$ 33.10	18.09
LABORER: Concrete Saw (Hand Held/Walk Behind)	$ 44.43	14.18
LABORER: Landscape	$ 36.62	16.00
OPERATOR: Forklift	$ 51.63	0.00
OPERATOR: Mechanic	$ 48.14	17.02
OPERATOR: Piledriver	$ 43.87	18.04
PAINTER: Spray (Linestriping)	$ 38.30	17.43
TRAFFIC CONTROL: Laborer-Cones/ Barricades/Barrels - Setter/Mover/Sweeper	$ 43.73	15.06
TRUCK DRIVER: Concrete Truck	$ 33.69	15.79
TRUCK DRIVER: Dump Truck	$ 38.94	12.00
TRUCK DRIVER: Flatbed Truck	$ 48.53	0.00

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

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

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"

"General Decision Number: MA20250010 09/26/2025

Superseded General Decision Number: MA20240010

State: Massachusetts

Construction Types: Heavy (Heavy and Marine)

Counties: Berkshire, Franklin, Hampden and Hampshire Counties
in Massachusetts.

HEAVY CONSTRUCTION PROJECTS; AND MARINE CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally
required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.
Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 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.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . 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 that contract in 2025.	

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker
protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	03/07/2025
2	03/14/2025
3	03/21/2025
4	03/28/2025
5	05/16/2025
6	07/11/2025
7	07/18/2025
8	08/15/2025
9	09/12/2025
10	09/26/2025

BOIL0029-001 01/01/2025

	Rates	Fringes
BOILERMAKER	$ 50.62	28.82

BRMA0001-005 08/01/2023

SPRINGFIELD CHAPTER

	Rates	Fringes
BRICKLAYER		
BRICKLAYERS; CEMENT MASONS; PLASTERERS; STONE MASONS; MARBLE, TILE & TERRAZZO WORKERS	$ 50.81	32.27

BRMA0001-007 08/01/2023

SPRINGFIELD/PITTSFIELD CHAPTER
BERKSHIRE COUNTY

	Rates	Fringes
BRICKLAYER BRICKLAYERS; CEMENT MASONS; PLASTERERS; STONE MASONS; MARBLE, TILE & TERRAZZO WORKERS	$ 50.81	32.27

CARP0056-004 08/01/2024

	Rates	Fringes
DIVER TENDER	$ 61.70	35.47
DIVER	$ 78.11	35.47

CARP0056-009 08/01/2024

	Rates	Fringes
PILEDRIVERMAN	$ 51.97	35.47

CARP0336-005 03/01/2025

FRANKLIN COUNTY (Erving, Orange, North Orange, and Warwick)

	Rates	Fringes
CARPENTER	$ 42.59	27.61

CARP0336-010 03/01/2025

BERKSHIRE

	Rates	Fringes
CARPENTER	$ 42.59	27.61

CARP0336-012 03/01/2025

HAMPDEN; HAMPSHIRE; AND FRANKLIN (Remainder of County)

	Rates	Fringes
CARPENTER	$ 42.59	27.61

CARP1121-004 04/21/2025

	Rates	Fringes
MILLWRIGHT	$ 43.42	33.00

ELEC0007-002 06/29/2025

HAMPDEN (Except Chester & Holyoke); HAMPSHIRE (Belchertown, Ware)

	Rates	Fringes
ELECTRICIAN	$ 52.16	29.56

ELEC0007-003 06/29/2025

BERKSHIRE; FRANKLIN; HAMPDEN (Chester, Holyoke); HAMPSHIRE (Except Belchertown, Ware)

	Rates	Fringes
ELECTRICIAN	$ 52.16	29.56

ENGI0098-007 12/01/2024

	Rates	Fringes

Power equipment operators:

Group 1	$ 42.88	31.04+A
Group 2	$ 42.57	31.04+A
Group 3	$ 42.35	31.04+A
Group 4	$ 39.12	31.04+A
Group 5	$ 38.00	31.04+A
Group 6	$ 36.06	31.04+A
Group 7	$ 54.38	31.04+A
Group 8	$ 44.06	31.04+A
Group 9	$ 44.37	31.04+A
Group 10	$ 46.38	31.04+A
Group 11	$ 47.38	31.04+A
Group 12	$ 48.88	31.04+A
Group 13	$ 49.88	31.04+A
Group 14	$ 50.88	31.04+A
Group 15	$ 52.38	31.04+A

HAZARDOUS WASTE PREMIUM $2.00

FOOTNOTE FOR POWER EQUIPMENT OPERATORS:
Group 8 and Group 9 are per day wages.
A. Paid Holidays: New year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Columbus Day, Veterans Day, Thanksgiving Day and Christmas Day

POWER EQUIPMENT OPERATORS CLASSIFICATIONS
Group 1: Shovels; crawlers and truck cranes including all tower; self-propelled hydraulic cranes 10 tons and over; draglines; clam shells; cableways; shaft hoists; mucking machines derricks; backhoes; bulldozers; gradalls; elevating graders; pile drivers; concrete pavers; trenching machines; front end loaders- 5 1/2 cu yds and over; dual drum paver; automatic grader-excavator(C.M.I. or equal); scrapers towing pan or wagon; tandem dozers or push cats(2 units in tandem); shotcrete machine; tunnel boring machine; combination backhoe/loader 3/4 cu yd hoe or over; jet engine dryer; tree shredder; post hole digger; post hole hammer; post extractor; truck mounted concrete pump with boom; roto-mill; Grader; Horizontal Drilling Machine; John

Henry Rock Drill and similar equipment.
Group 2: Rotary drill with mounted compressor; compressor house (3 to 6 compressors); rock and earth boring machines (excluding McCarthy and similar drills); front end loaders 4 cu yds to 5 1/2 cu yds); forklifts-7 ft lift and over 3 ton capacity; scraper 21 yds and over (struck load); sonic hammer console; reclaimers road planer/milling machine; cal tracks; ballast regulators; rail anchor machines; switch tampers, asphalt pavers; mechanic; welder and transfer machine.
Group 3: Combination backhoe/loader up to 3/4 cu yd; scrapers up to 21 cu yd (struck load, self propelled or tractor drawn); tireman; front end loaders up to 4 yds; well drillers; engineer or fireman on high pressure boiler; self-loading batch plant; well point operators electric pumps used in well point system; pumps, 16 inches and over (total discharge); compressor, one or two 900 cu ft and over; powered grease truck; tunnel locomotives and dingys; grout pumps; hydraulic jacks; boom truck; hydraulic cranes- up to 10 ton.
Group 4: Asphalt rollers; self-powered rollers and compactors; tractor without blade drawing sheepsfoot roller; rubber tire roller; vibratory roller or other type of compactors including machines for pulverizing and aerating soil; york rake.
Group 5: Hoists; conveyors; power pavement breakers; self-powered concrete pavement finishing machines; two bag mixers with skip; McCarthy and similar drills; batch plants (not self loading); bulk cement plants; self-propelled material spreaders; three or more 10 KW light plants; 30 KW or more generators; power broom.
Group 6: Compressor (one or two) 315 cu ft to 900 cu ft; pumps 4 inches to 16 inches (total discharge).

Group 7: Compressors up to 315 cu ft; small mixers with skip; pumps up to 4 inches; power heaters; oiler; A-frame trucks; forklifts-up to 7 ft. lift and up to 3 ton capacity; hydro broom; stud welder.
Group 8: Truck crane crews
Group 9: Oiler
Group 10: Master Mechanic
Group 11: Boom lengths over 150 feet including jib
Group 12: Boom lengths over 200 feet including jib
Group 13: Boom lengths over 250 feet including jib
Group 14: Boom lengths over 300 feet including jib
Group 15: Boom lengths over 350 feet including jib

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* IRON0007-014 09/16/2025

BERKSHIRE (Becket, East Otis, Hinsdale, Monterey, New Marlboro,
North Otis, Otis, Peru, Sandisfield, Savoy, Sheffield, Washington, Windsor); FRANKLIN; HAMPDEN; HAMPSHIRE

	Rates	Fringes
IRONWORKER	$ 41.89	33.90

IRON0012-003 07/01/2025

BERKSHIRE (Lee)

	Rates	Fringes
IRONWORKER	$ 40.75	31.91

IRON0012-004 07/01/2025

BERKSHIRE (Remainder of County)

	Rates	Fringes

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Ironworkers:
     Sheeter.....................$ 41.00            31.91
     Structural, Ornamental,
     Reinforcing, Fence
     Erector, Machinery Mover,
     Rigger, Rodman, Stone
     Derrickman..................$ 40.75            31.91
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 LABO0022-002 12/01/2024

FRANKLIN (Orange, Warwick)

                                    Rates          Fringes

Laborers:
     GROUP 1.....................$ 38.95            29.70
     GROUP 2.....................$ 39.20            29.70
     GROUP 3.....................$ 39.70            29.70
     GROUP 4.....................$ 39.95            29.70
     GROUP 5.....................$ 39.70            29.70
     GROUP 6.....................$ 40.95            29.70

LABORERS CLASSIFICATIONS

  GROUP 1:  Laborers; carpenter tenders; cement finisher
  tenders, plasterer tenders

  GROUP 2:  Asphalt raker; fence and guard rail erector;
laser
  beam operator; mason tenmder; pipelayer; pneumatic drill
  operator; pneumatic tool operator; wagon drill operatorm
  jackhammer operator, pavement breaker, carbide core
  drilling machine, chain saw operator, barco type jumping
  tampers, concrete pump, motorized mortar miner, ride-on
  motorized buggy

  GROUP 3:  Air track operator; block paver; rammer; curb
  setter, hydraulic and similar self-powered drills

GROUP 4:  Blaster; powderman

GROUP 5:  Precast floor and roof, plank erector
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GROUP 6: Asbestos Abatement, Toxic and Hazardous waste laborers

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LABO0473-005 12/01/2024

FRANKLIN (Except Orange and Warrick); HAMPDEN and HAMPSHIRE COUNTIES (with the exception of Chesterfield, Cummington, Goshen, Middlefield, Plainfield, and Worthington)

	Rates	Fringes
Laborers:		
Group 1	$ 35.00	29.70
Group 2	$ 35.00	29.70
Group 3	$ 35.00	29.70
Group 4	$ 35.00	29.70
Group 5	$ 27.01	29.70
Group 6	$ 35.00	29.70

LABORERS CLASSIFICATIONS

Group 1: Carpenter tenders, cement finisher tenders, laborers, wrecking laborers

Group 2: Asphalt rakers, fence and guard rail erectors, laser beam operator, mason tender, pipelayer, pneumatic drill operator, pneumatic tool operator, wagon drill operator

Group 3: Air track operator, block pavers, rammers, curb setters

Group 4: Blasters, powdermen

Group 5: Flaggers

Group 6: Asbestos abatement, toxic and Hazardous waste laborers

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LABO0473-006 12/01/2024

BERKSHIRE; HAMPSHIRE COUNTIES (the towns of Chesterfield, Cummington, Goshen, Middlefield, Plainfield, and Worthington
only)

	Rates	Fringes
Laborers:		
Group 1	$ 33.99	26.65
Group 2	$ 33.99	26.65
Group 3	$ 33.99	26.65
Group 4	$ 33.99	26.65
Group 5	$ 27.01	26.65
Group 6	$ 33.99	26.65

LABORERS CLASSIFICATIONS

Group 1: Carpenter tenders, cement finisher tenders, laborers, wrecking laborers

Group 2: Asphalt rakers, fence and guard rail erectors, laser beam operator, mason tender, pipelayer, pneumatic drill operator, pneumatic tool operator, wagon drill operator

Group 3: Air track operator, block pavers, rammers, curb setters

Group 4: Blasters, powdermen

Group 5: Flaggers

Group 6: Asbestos abatement, toxic and Hazardous waste laborers

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LABO1421-002 12/02/2024

	Rates	Fringes
Laborers:		
Group 1	$ 46.25	29.70
Group 2	$ 47.00	29.70
Group 3	$ 47.25	29.70
Group 4	$ 42.25	29.70
Group 5	$ 45.35	29.70
Group 6	$ 46.25	29.70

Group 1: Adzeman, Wrecking Laborer.
Group 2: Burners, Jackhammers.
Group 3: Small Backhoes, Loaders on tracks, Bobcat Type Loaders, Hydraulic ""Brock"" Type Hammer Operators, Concrete Cutting Saws.
Group 4: Yardman (Salvage Yard Only).
Group 5: Yardman, Burners, Sawyers.
Group 6: Asbestos, Lead Paint, Toxic and Hazardous Waste.

PAIN0035-010 07/01/2024

	Rates	Fringes
PAINTER		
NEW CONSTRUCTION:		
Brush, Taper	$ 38.78	31.85
Spray, Sandblast	$ 39.48	31.85
REPAINT:		
Bridge	$ 56.76	31.85
Brush, Taper	$ 35.40	31.85
Spray, Sandblast	$ 36.80	31.85

PLUM0004-003 09/01/2025

FRANKLIN (Orange)

	Rates	Fringes
Plumber and Steamfitter	$ 55.00	31.57

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* PLUM0104-004 09/17/2025

BERKSHIRE (Becket, Otis, Sandisfield); FRANKLIN (Except Monroe,
Rowe, and the Western part of Charlemont); HAMPDEN; HAMPSHIRE

	Rates	Fringes
Plumbers and Pipefitters.....$	52.26	31.05

FOOTNOTE:
A. Two paid holidays, Independence Day and Labor Day, provided the employee has been employed seven days prior to the holiday by the same employer

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* PLUM0104-009 09/17/2025

BERKSHIRE (Except Otis, Becket, Sandisfield); FRANKLIN (Monroe,
Rowe and the Western part of Charlemont)

	Rates	Fringes
Plumber and Steamfitter.....$	52.26	31.05

FOOTNOTE FOR PLUMBERS & STEAMFITTERS:
A. Paid holidays: Independence Day and Labor Day, provided the employee has been employed seven days prior to the holiday by the same employer.

TEAM0379-001 06/01/2025

	Rates	Fringes

Truck drivers:

Group 1	$ 40.78	37.35+a+b
Group 2	$ 40.95	37.35+a+b
Group 3	$ 41.02	37.35+a+b
Group 4	$ 41.14	37.35+a+b
Group 5	$ 41.24	37.35+a+b
Group 6	$ 41.53	37.35+a+b
Group 7	$ 41.82	37.35+a+b

POWER TRUCKS $.25 DIFFERENTIAL BY AXLE
TUNNEL WORK (UNDERGROUND ONLY) $.40 DIFFERENTIAL BY AXLE
HAZARDOUS MATERIALS (IN HOT ZONE ONLY) $2.00 PREMIUM

TRUCK DRIVERS CLASSIFICATIONS

Group 1: Station wagons; panel trucks; and pickup trucks

Group 2: Two axle equipment; & forklift operator

Group 3: Three axle equipment and tireman

Group 4: Four and Five Axle equipment

Group 5: Specialized earth moving equipment under 35 tons other than conventional type trucks; low bed; vachual; mechanics, paving restoration equipment

Group 6: Specialized earth moving equipment over 35 tons

Group 7: Trailers for earth moving equipment (double hookup)

FOOTNOTES:

A. PAID HOLIDAYS: New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Patriot's Day, Columbus Day, Veteran's Day, Thanksgiving Day and Christmas Day

B. PAID VACATION: Employees with 4 months to 1 year of service receive 1/2 day's pay per month; 1 week vacation for 1 - 5 years of service; 2 weeks vacation for 5 - 10 years of service; and 3 weeks vacation for more than 10 years of service

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

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

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"

"General Decision Number: MA20250006 02/21/2025

Superseded General Decision Number: MA20240006

State: Massachusetts

Construction Type: Heavy Dredging

Counties: Massachusetts Statewide.
STATEWIDE

Massacusetts All Dredging, except self-propelled hopper dredges, on the Atlantic Coast & tributary waters emptying into
the Atlantic Ocean.

Note: Contracts subject to the Davis-Bacon Act are generally
required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658.
Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $17.75 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.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . 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 that contract in 2025.	

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the
Executive Orders and a classification considered necessary for

performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker
protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2025
1	02/21/2025

* ENGI0025-001 10/01/2024

STATEWIDE

	Rates	Fringes
Dredging:		
CLASS A1	$ 47.07	15.34+a+b
CLASS A2	$ 41.94	14.99+a+b
CLASS B1	$ 40.71	14.90+a+b
CLASS B2	$ 38.31	14.73+a+b
CLASS C1	$ 37.26	14.66+a+b
CLASS C2	$ 36.07	14.57+a+b
CLASS D	$ 29.96	14.15+a+b

CLASSIFICATIONS:
CLASS A1: Deck Captain; Mechanical Dredge Operator, Leverman, Licensed Tug Operator over 1000 HP.
CLASS A2: Crane Operator (360 swing).
CLASS B1: Derrick Operator (180 swing), Spider/Spill Barge Operator, Engineer, Electrician, Chief Welder, Chief Mate, Fill Placer, Operator II, Maintenance Engineer, Licensed Boat Operator, Licensed Crew Boat Operator.
CLASS B2: Certified Welder.
CLASS C1: Mate, Drag Barge Operator, Assistant Fill Placer,

Welder, Steward.
CLASS C2: Boat Operator.
CLASS D: Oiler, Deckhand, Shoreman, Rodman, Scowman, Cook,
Messman, Porter/Janitor.

INCENTIVE PAY: (Add to Hourly Rate)
Operator (NCCCO License/Certification) $1.80 Licensed Tug
Operator over 1000 HP (Assigned as Master) (USCG licensed
Master of Towing Vessels (MOTV) $1.80; Licensed Boat
Operator (Assigned as lead boat captain) USCG licensed
boat operator $1.30; Engineer (QMED and Tankerman
endorsement or licensed engineer (USCG) $1.80
Oiler (QMED and Tankerman endorsement (USCG) $1.80; All
classifications (Tankerman endorsement only) USCG $1.55;
Deckhand or Mate (AB with Lifeboatman endorsement (USCG)
$1.80; All classifications (lifeboatman endorsement only
(USCG) $1.55; Welder (ABS certification) $1.55

FOOTNOTES APPLICABLE TO ABOVE CRAFTS:
a. PAID HOLIDAYS: New Year's Day, Martin Luther King, Jr.'s
Birthday, Memorial Day, Good Friday, Independence Day,
Labor Day, Veterans' Day, Thanksgiving Day and Christmas Day
b. VACATION: Eight percent (8%) of the straight time rate,
multiplied by the total hours worked.

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

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave

for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

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

LEE
Federal Aid Project No. HIP(NGB)-003S(900)X
Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook

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

The work under this Contract shall consist of the full replacement of the existing structure of Bridge L-05-004 (059) carrying Meadow Street over Powder Mill Brook (a.k.a. Beartown Brook) and associated approach roadway work in the Town of Lee. The new structure will consist of pre-stressed concrete NEXT F Beam bridge beams supported on integral abutments with a span length of 64 feet, and an out-to-out width of 27 feet 9 inches. In addition, the existing wingwalls and abutments will be demolished; a small portion of the existing abutment footings will remain in place to assist in scour countermeasures. Boulders will be used to construct two bendway weirs upstream of the bridge and a new retaining wall will be installed on the southeast corner of the bridge to reduce bend scour on the proposed structure. The stream bed will be reconstructed with natural stream bed material placed over rip rap. The proposed Meadow Street bridge replacement shall be carried out during a full roadway closure permitted to commence when the Willow Street Bridge, L-05-002 (057) Repairs are complete, and Willow Street is open to vehicle traffic. Meadow Street through traffic will be routed around the site via a signed detour and the site will be closed to pedestrians. Meadow Street will be fully reopened to vehicle traffic and pedestrians within 685 Days from Notice to Proceed.

To facilitate truck access to the Onyx Specialty Papers Inc. paper mill during the detour period, the existing closed bridge L-05-002 (057) Willow Street over the Housatonic River, shall be repaired and reopened to traffic prior to closing the Meadow Street Bridge L-05-049 (059) to traffic. The repairs shall consist of structural steel repairs to existing truss gusset plates, localized structural steel cleaning and painting, and limited reinforced concrete deck repairs.

The work conducted during the closure period shall include the following:

- Removal of the existing temporary bridge structure and transporting the structure to MassDOT District 1 facilities.
- Demolition of existing bridge superstructure which was constructed in 1939 and is a 36.64-foot single span steel stringer bridge with a concrete deck. Excavation and demolition of the existing concrete gravity abutments on spread footings.
- Installation of new piles behind the existing abutments.

SCOPE OF WORK (CONTINUED)

- Placement of new concrete integral abutments behind existing abutments.
- Phased dewatering in Powder Mill Brook and demolition of the existing concrete gravity abutments, with the existing spread footing to be capped and remain in place.
- Phased dewatering to place riprap and natural streambed material to reconstruct the channel for Powder Mill Brook.
- Placement of a new retaining wall on the east approach, and installation of boulder weirs within the stream for bridge scour resistance.
- Placement of the remaining concrete abutment portions, pedestals, and approach slabs.
- Erection of the bridge superstructure.
- Placement of concrete bridge safety curb and precast highway guardrail transitions, and installation ofS3-TL4 bridge railing.
- Installation of highway guard on the approaches.
- Hot mix asphalt full depth pavement, milling, intermediate course and surface course.

Work conducted before the closure period may include the following:

- Selective clearing and removal of existing trees for temporary utility pole alignment.
- Relocation of existing overhead wires to temporary utility pole alignment.
- Phased dewatering in Powder Mill Brook, during allowable in-water work periods, for dredging and installation of natural streambed restoration material.

Work conducted after the closure period may include the following:

- Installation of permanent pavement markings.
- Restore the site, final grading and planting of native saplings and seeding.
- Installation of permanent utility poles and relocation of overhead wires to permanent alignment within the right of way.

The site has been reviewed, and it has been determined that utility relocations are required for this project. Existing overhead wires are located adjacent to the bridge and are to be relocated to a temporary alignment outside of the existing right of way and remain in place throughout the project. The Contractor shall coordinate with all utility owners before and during construction. If the Contractor's means and methods require further utility relocations, these shall be done at the Contractor's own expense, and any delay resulting from this will be the responsibility of the Contractor. Work shall be generally performed within, and accessed by, existing State, City or Town roadway layouts and easements. Rights to enter on private property and relocate utilities have been acquired for this project. Permanent easements have been acquired for stream channel and retaining wall construction.

All work under this Contract shall be done in conformance with the *2025 Standard Specifications for Highways and Bridges, the Supplemental Specifications* contained in this book, the *Construction Standard Details* in effect as of June, 2025, the *1990 Standard Drawings for Signs and Supports*, the 2015 *Overhead Signal Structure and Foundation Standard Drawings*, the *2009 Manual on Uniform Traffic Control Devices (MUTCD) with Revisions 1, 2, and 3 and the November 2022 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.

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.

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.

WORK SCHEDULE

Work on this project shall be a normal 8-hour day, 5-day week (M-F) from 7:00 AM to 3:30 PM with the Contractor and all Subcontractors working on the same shift. Any modifications to these proposed work hours are subject to the written approval of the District Highway Director.

The Contractor shall notify the District 1 Highway Director at least two (2) weeks in advance of any anticipated night time work to be performed during a night time window, or any short-term temporary roadway closures necessary for the work. All detour traffic control requirements must be in place and approved by the Engineer a minimum of two days in advance of the closure.

No additional compensation will be made for work scheduled during night time or weekend hours.

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.

HOLIDAY WORK RESTRICTIONS (Continued)

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.

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.

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

BERKSHIRE GAS EMERGENCY TELEPHONE NUMBERS

GAS:
Outage/Emergency: 1-800-292-5012 or 413-499-1680
New Service: 1- 800-297-7144
Customer Support: 1-800-292-5012

SUBSECTION 8.03 PROSECUTION OF THE WORK

Add/amend the following at the end of the Section

Contractual Milestones:

This Contract contains the following Contractual Milestones and Durations that are to be included in the Contractor's Baseline Contract Progress Schedule submission. The Contractor shall identify the completion of the work pertaining to each Contractual Milestone and Duration through the inclusion of a Finish Milestone in the accepted baseline Contract Progress Schedule using the stated description.

MS#01 Contractor Field Completion: The Contractor shall achieve Contractor Field Completion within **935 calendar days from Notice to Proceed.**

Contractor Field Completion is defined as: All physical contract Work is complete including punchlist. The Contractor has fully de-mobilized from field operations.

MS#02 Substantial Completion: The Contractor shall achieve Substantial Completion within 706 **calendar days from Notice to Proceed**.

Substantial Completion is defined as: A walkthrough of the entire contract Work has been performed by the Resident Engineer, a Punch List has been generated and the Work required by the Contract, including paper work, has been completed, except for work having a Contract price of less than one percent of the adjusted total Contract price, including overruns, underruns and all contract amendments. All material submittals have been received by the District Materials Lab.

MS#03 Full Beneficial Use:

Full Beneficial Use is defined as: 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. Work must be complete and accepted by MassDOT to open the bridge to traffic and pedestrian use to achieve Full Beneficial Use.

Milestone No. 3 - Full Beneficial Use also includes the following:

- Final Paving and lane markings on approaches, and installation of guardrail transitions.
- Travel lanes of the completed bridge are in their final geometric configuration, including final paving and lane markings, permanent bridge barriers, and open to traffic.

The Contractor shall achieve Milestone MS#03 **within 685 calendar days from Notice to Proceed.**

SUBSECTION 8.06 LIMITATIONS OF OPERATIONS

Add/amend the following at the end of the Section:

Access Restraints:

This Contract will contain an Access Restraint to provide an anticipated start date of certain portions of the Work that are restrained by a Utility Party. An Access Restraint is a restriction of physical work, of a specific area or operation in the Contract, to allow all bidders to evaluate anticipated work restrictions, equally, during the pre-bid planning stages.

The Contract Time (duration) has considered these portions of the utility work and has been developed with the initial information that has been provided by the Utility Party and accepted by MassDOT. The Contractor shall be required to communicate and coordinate with all affected Utilities and may be required to perform support aspects of the utility relocation (as noted in the Contract Documents) well in advance of the start of the applicable utility relocation.

The Contractor must clearly identify all aspects of this work in the preparation of the Construction Schedule and throughout the Contract duration.

The Contract contains the following utility Access Restraint that is to be included in the Contractor's Baseline Schedule submission:

AR#1 – Access Restraint #01 – The contractor shall coordinate with Verizon and Eversource for the relocation of the existing utility poles and overhead wires to the temporary alignment shown on the utility plans and identified in the attached PUC form and shall cede the site to Verizon and Eversource's work crews during the relocation operations. This work shall be completed prior to the commencement of bridge demolition operations.

AR#2 – Access Restraint #02 – The contractor shall coordinate with Verizon and Eversource for the relocation of the temporary utility poles and overhead wires to the permanent alignment shown in the utility plans. The contractor shall cede the site to Verizon and Eversource's work crews during the utility pole and overhead wire relocation. This work shall be completed prior to the full beneficial use milestone MS #03.

AR#3 – Access Restraint #03 – To protect Coldwater Fisheries, no in-water, silt-producing work shall occur during the Time of Year (TOY) restriction between the dates of October 1 to April 30. Work may proceed behind dewatered cofferdams at any time, provided they are installed and removed outside of the TOY restriction. Refer to the DEP 401 WQC issued on August 8, 2025 attached to these specifications for further conditions.

In accordance with the requirements provided in Section 8.02 the Contractor shall provide a project baseline schedule, in accordance with the terms and conditions of the Contract that identifies all affected utilities and the Access Restraints noted above. During the prosecution of Work, and as part of the Monthly Schedule Update Submission, the Contractor shall provide proof of notification to those utilities.

SUBSECTION 8.06 LIMITATIONS OF OPERATIONS (Continued)

If, during the prosecution of the Work, the Contractor is delayed by a Utility (Third Party), the Contractor will identify delays, as identified with the most recent schedule update, evaluate options to recover, and present to MassDOT for approval. Should the Contractor's critical path be significantly impacted, by the actions or inactions of the Utility, and no viable recovery options are accepted by MassDOT, the Contractor may submit a request for Time Extension accompanied by a complete Time Entitlement Analysis, to clearly demonstrate the impact of the delay. Only after all the schedule requirements have been met (see Subsections 8.02 and 8.10 Determination and Extension of Contract Time for Completion), and it is clear that the Contactor demonstrates that it has coordinated properly and worked expeditiously with the Utility, and that none of the Contractor's actions or inactions contributed to the delay, will MassDOT approve a Time Extension request. Under no circumstances will compensation be provided for delays associated with a Utility or Third Party.

Work Restrictions:

Additionally, this Contract contains the following work restriction:

WR#1 – Work Restriction #01 – The bridge and associated limits of work shall not be closed before Willow Street L-05-002 (057) is open to vehicle traffic. All signs for the detour shall be in place before closing the bridge. Also, message boards shall be alerting the public of the impending detour for two weeks leading up to the closure.

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.

BIDDERS LIST

Pursuant to the provisions of 49 CFR Part 26.11 all official bidders will be required to report the names, addresses and telephone numbers of all firms that submitted bids or quotes in connection with this project. Failure to comply with a written request for this information within 15 business days may result in a recommendation to the Prequalification Committee that prequalification status be suspended until the information is received.

The Department will survey all firms that have submitted bids or quotes during the previous year prior to setting the annual goal and shall request that each firm report its age and gross receipts for the year.

BUILD AMERICA BUY AMERICA PREFERENCE

On Federally-aid projects the Buy America (23.CFR § 635.410) and Build America, Buy America Act. requires the following,

(1) all iron and steel used in the project are produced in the United States--this means all manufacturing processes, from the initial melting stage through the application of coatings, must occur in the United States. Foreign steel and iron can be used if the cost of the materials does not exceed 0.1% of the total Contract cost or $2,500, whichever is greater. The action of applying a coating to a covered material (i.e., steel and iron) is deemed a manufacturing process subject to Buy America. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to requirements of Build America, Buy America. Steel used for temporary support of excavation, including H piles, soldier piles, and sheeting when the steel is required to be left in place is subject to requirements of Build America, Buy America. Temporary steel, shall remain in place when it falls within the influence zone of the soil supporting any structure or railroad tracks.

(2) all manufactured products used in the project are produced in the United States—this means the manufactured product was manufactured in the United States and

(3) all construction materials are manufactured in the United States—this means that all manufacturing processes for the construction material occurred in the United States. “Construction materials” includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives—that is or consists primarily of:

- non-ferrous metals,
- plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables),
- glass (including optic glass),
- lumber; or
- drywall.

BUILD AMERICA BUY AMERICA PREFERENCE (Continued)

The Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computer equipment, that are used at or within the finished infrastructure project but are not an integral part of the structure or permanently affixed to the infrastructure project.

All articles, materials, and supplies should be classified as an iron or steel product, a manufactured product, or another product as specified by law or in 2 CFR part 184 (such other products specified by law or in 2 CFR part 184 include "excluded materials" and "construction materials"); an article, material, or supply must not be considered to fall into multiple categories.

NOTE: The requirements for manufactured products indicated in paragraph (2) above are not in effect for this contract.

ENVIRONMENTAL PERMITTING

The proposed work occurs in jurisdictional wetland resources subject to Section 401 or Section 404 of the Clean Water Act; therefore, a Water Quality Certification from the Massachusetts Department of Environmental Protection and/or authorization from the US Army Corps of Engineers has been obtained. The Contractor is advised that all terms and conditions within said permits shall be strictly adhered to. The proposed work qualifies for the bridge exemption authorized in the Transportation Bond Bill and is therefore not subject to the Massachusetts Wetlands Protection Act, the Massachusetts Public Waterfront Act (Chapter 91), or the Massachusetts Environmental Policy Act.

If field conditions and/or Contractor-proposed erection, demolition, staging, or other procedures 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 obtained allowing such work. The Contractor must notify the District Highway Director and Resident Engineer in writing at least 60 days prior to desire commencement of the proposed activity. All environmental submittals, including any Contract with Local, State, or Federal environmental agencies, must be coordinated with the District 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 obtain the environmental permits.

NORTHERN LONG-EARED BAT AND TRICOLORED BAT PROTECTION

The northern long-eared bat (*Myotis septentrionalis*; NLEB) and tricolored bat (*Perimyotis subflavus*; TCB) are listed as federally endangered or proposed endangered, respectfully, under the Endangered Species Act (ESA). The U.S. Fish and Wildlife Service (USFWS) developed this guidance to address ESA compliance and promote conservation of NLEB and TCB. MassDOT, on behalf of FHWA, submitted a Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key Consultation through Information for Planning and Consultation (IPaC) and generated a May Affect, Not Likely to Adversely Affect (NLAA) determination (see **Document A00870**). Subsequently, the project has completed Section 7 consultation under the ESA.

In advance of the uplisting of the TCB to endangered under the ESA, the following Avoidance and Minimization Measures (AMMs) must be strictly adhered to in order to protect NLEB and TCB and to be in compliance with the ESA. Contact MassDOT Environmental Services - Wildlife Unit Supervisor for questions about project limits, restrictions, or conservation measures.

General AMMs

- The Contractor shall ensure all personnel working in on the project site are aware of all environmental commitments related to NLEB and TCB, including all applicable AMMs. NLEB and TCB information (https://www.fws.gov/midwest/endangered/mammals/nleb/ and https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus) shall be made available to all personnel.
- On July 8, 2022, MassDOT Highway Division Environmental Services conducted a northern long-eared bat summer presence/absence survey, in accordance with the 2022 survey guidelines. The survey did confirm the presence of NLEB and/or TCB. If work is proposed by the Contractor past July 8, 2027, additional review is required by the MassDOT Highway Division's Environmental Services Section, and additional review and restrictions may be required by the USFWS.

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: **June 1 - August 15**
- The Contractor shall ensure all personnel working in on the project site are aware of all environmental commitments related to NLEB and/or TCB, including the **TOY** restriction. If this restriction needs to be waived at any location(s) the Resident Engineer shall send a locus map of the proposed work to MassDOT Highway Division's Environmental Services Section for review and a determination if the restriction can be waived.

NORTHERN LONG-EARED BAT AND TRICOLORED BAT PROTECTION (Continued)

Bridge AMMs

- On July 31, 2024, MassDOT Highway Division Environmental Services, conducted a northern long-eared bat bridge/structure bat assessment, in accordance with the USFWS guidelines. The assessment did not find presence of, or evidence of use by bats, and as stated within the guidelines, the assessment is valid for two years. If bridge work is not complete before July 31, 2026, assessment of the bridge for the presence of, or evidence of use by, bats shall be completed by the MassDOT Wildlife Unit prior to continuing bridge work. The Contractor shall notify the MassDOT Wildlife Unit no later than fourteen (14) days prior to July 31, 2026 to provide adequate time for inspection. If bats are found to be present, or, if there is evidence of bat usage, work at the bridge shall not commence until after the MassDOT Wildlife Unit has completed coordination with the US Fish and Wildlife Service to determine the appropriate follow up or mitigation actions.

WOOD TURTLE (Glyptemys insculpta) PROTECTION PLAN

General

This section outlines the requirements of the Natural Heritage and Endangered Species Program (NHESP) of the Division of Fisheries and Wildlife (DFW) for projects that occur in the vicinity of high-priority wood turtle (Glypemys insculpta) populations. The requirements consist of monitoring and protecting turtles during the replacement of the Meadow Street Bridge over Powder Mill Brook in the Town of Lee, Massachusetts.

One Time Sweeps – Prior to Vegetation Clearing and In-water Cofferdam Installation

The Turtle Monitor (the Monitor) shall be a MassDOT biologist (David J. Paulson, (857) 262-3378, david.j.paulson@dot.state.ma.us; or a representative from MassDOT Wildlife and Endangered Species Unit) approved by the Natural Heritage and Endangered Species Program (NHESP). The Monitor shall obtain a scientific collecting permit from the NHESP to handle wood turtles. The Monitor shall visit the site prior to the start of work, and the Contractor and/or Resident Engineer shall coordinate this site visit with the Monitor at least 60 days prior to construction commencement. The Monitor shall sweep the site prior to any site clearing, grubbing, earth disturbance, or site preparations. The Monitor shall inspect vegetation within 200’ of the stream, prior to the establishment of the limit of work line and Turtle Exclusion Fence Barrier.

WOOD TURTLE (Glyptemys insculpta) PROTECTION PLAN (Continued)

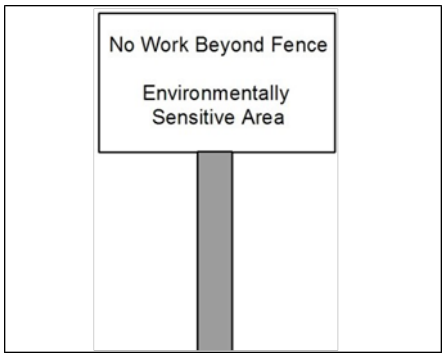
In addition, the Monitor shall provide a sweep of the site prior to any work in within the river. The Monitor shall inspect all areas of Land Under Water (LUW) where temporary or permanent impacts will occur, such as where cofferdams are to be installed and/or stream regrading or streambed restoration will occur, paying close attention to overhanging banks and in water coarse woody debris.

The Monitor shall visually sweep the described areas immediately before machines enter the area and relocate any turtles to suitable habitat immediately beyond the construction site. The Monitor shall provide contact information to the project supervisor in the event a wood turtle is discovered on-site. The Monitor may visit the site on only one day if the vegetation clearing and in-water work are initiated on the same day. Upon completion of the monitoring, the Monitor shall provide the NHESP with a summary of activities at the construction site. This report shall include the number and duration of visits and rare species observation forms for all state-listed species encountered. In the event of finding an injured turtle, the turtle shall be transported to a suitable veterinarian. In the event of finding a turtle with a radio transmitter, the NHESP and the contact on the transmitter shall be alerted immediately.

All state-listed species encountered in or near the project shall be reported to the NHESP through a Rare Animal/Plan Observation Report with the required supporting materials within 10 days of the observation. No state-listed species may be removed from the project site unless under the direct supervision of the Monitor or the NHESP.

Establishment of a Limit of Work Barrier

Following the sweep of the work site, a limit of work barrier shall be installed. This line shall consist of staked compost filter tubes and Turtle Exclusion Fence Barrier (silt fence as the outer boundary) and shall contain signage clearly identifying it as the limits of work in all four quadrants. Refer to the attached sketch for the approximate location of the Turtle Exclusion Fence Barrier.



Example limit of work sign

Installation of the barrier must be conducted using methods that result in a minimum of disturbance (i.e., hand-dug, “2-man” trencher or auger). It is not appropriate to clear large access paths prior to sweeps for turtle. No clearing may occur outside the limit of work approved by the NHESP without additional review and approval by the NHESP.

WOOD TURTLE (Glyptemys insculpta) PROTECTION PLAN (Continued)

1. The barrier must be composed of at least 2 1/2 feet of vertical barrier above ground and an additional 4-6 inches buried below ground.
2. The face of the material must be relatively smooth. Materials commonly used are staked at 6 – 10-foot intervals and include tightly woven geotextile, aluminum flashing, or other such materials stapled or tacked to stakes. Loosely woven geotextile fabrics, hay/straw bales, wattles or tubular materials are not generally sufficient.
3. The bottom of the silt fencing must be carefully buried in a 4-6 inch-deep trench. The trench must be backfilled and compacted. If it is not possible to dig a trench, then the bottom of the barrier must be affixed to the surface.
4. If project phasing and the traffic management plan allow, the barrier shall only include a single gap at each limit of the project large enough for vehicle passage to access the construction area. These gaps must be closed each night during the turtle active season (March 15 – October 31) with a gate and/or silt fence barrier, and the bottom of the silt barrier weighted down with a solid wood post or sand bags. A solid wooden, plastic or metal turtle barrier gate may be furnished by the contractor in order to close the gap locations. The turtle barrier gate must be keyed into the barrier so that turtles cannot enter the construction area.
5. If hay or straw bales are to be used with silt fencing, they shall be installed on the work-side of the silt fence to avoid turtles using these to breach the barrier.
6. Once installed, the barrier shall be taut between the stakes. Slumps or loose materials will undermine the effectiveness of the barrier. In some circumstances, geotextile fabrics may need to be reinforced with backer material to ensure integrity. Backer material is typically similar to hardware cloth.

Once per week, a person familiar with silt barrier maintenance and installation shall inspect the barrier and facilitate any repairs or alterations. The limit of work barrier should remain taut between stakes and any holes along the bottom repaired. MassDOT shall provide the NHESP with the name and contact information of the Resident Engineer responsible for coordinating necessary sweeps and maintaining appropriate barriers.

Construction Worker Training:

The Monitor shall provide to the construction foreperson wood turtle identification and handling pamphlets. All construction, landscaping, and other sub-contractors associated with the Project shall be informed in writing of the likely presence of State-listed Species on the Property and what measures (observation and injury protection) should be implemented to minimize direct harm to State-listed Species.

Further, no wildlife shall be removed from the Property without approval of a qualified wildlife biologist or the Division except as necessary to receive veterinary treatment in the case of harm during construction.

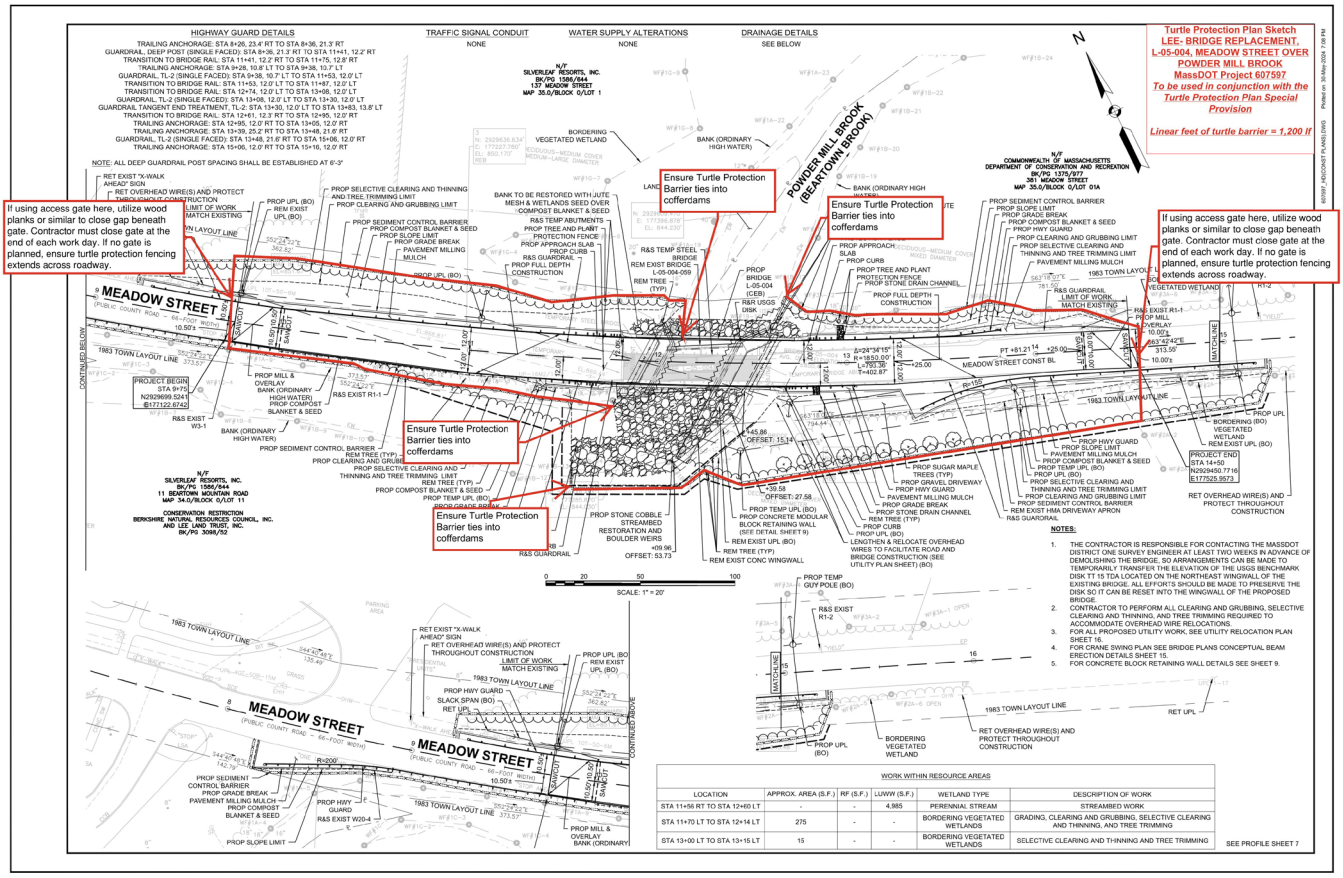
This protocol may require one to three days of labor, including field surveys and correspondence with the NHESP.

WOOD TURTLE (Glyptemys insculpta) PROTECTION PLAN (Continued)

There will be no separate payment for the work conducted by or coordination with the Turtle Monitor, the Monitor will be provided by MassDOT.

Installation of a limit of work barrier, turtle barrier gates, and limit of work signage shall be considered incidental under ITEM 767.121 SEDIMENT CONTROL BARRIER.

See sketch below for turtle protection installation limits.



Turtle Protection Plan Sketch:

EMERALD ASH BORER ADVISORY

To the extent possible, all trees and brush shall be disposed on site, typically chipped and spread in place. When trees or brush must be removed, such as in urban, or otherwise populated areas, Contractor shall identify proposed location for disposal, and provide written notification to the Engineer for approval. Disposal shall be in city or town of project, or at minimum, within county, of construction operations.

EQUIVALENT SINGLE AXLE LOADS (ESALS)

The estimated traffic level to be used for SUPERPAVE HMA mixture designs for this contract, expressed in Equivalent Single Axle Loads (ESALs) for the design travel lane over a 20-year period, is 22,539 18-kip (80-kn) ESALs.

CONTAMINATED SOIL

Soil to be removed from the project area shall not be assumed to be uncontaminated and must be evaluated prior to off-site management for potential contamination with hazardous materials. No soil may be disposed of off-site without proper assessment by the contractor and approval from the Resident Engineer (RE), District Environmental Engineer (DEE), or the project designee.

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.

PIGEON WASTE

The Contractor shall remove and dispose of the pigeon waste and any other debris accumulated on the steel members and bridge seats in areas where work is being performed. Pigeon waste and debris material contaminants will require special handling and disposal in accordance with all Federal, state, and local requirements. No separate payment will be made for removal and disposal of pigeon waste. Cost shall be incidental to the contract pay items.

2026 FIFA WORLD CUP – BOSTON, MASSACHUSETTS

The 2026 FIFA World Cup will be held at Gillette Stadium in Foxborough, related events, and significant tourist events such as Sail Boston and the 250th Anniversary of the United States will be held throughout the region. Matches and Fan Fest and other possible 250th Celebration activities are scheduled through June, July and August 2026. The District will be imposing work and/or traffic restrictions as necessary to minimize impacts during these periods when, as determined by MassDOT, the Contractor's operations could impact vehicular traffic, particularly on interstate highways and major arterials throughout the region and local roads near event sites. No additional compensation will be allowed for work restrictions except as determined under Subsection 8.10. nor will the Contractor have any claim for related costs, direct or indirect. The Contract time determinations have accounted for potential work restriction during this period and Contractor's should plan accordingly. Any necessary or emergency work required during this time will require District approval.

GENERAL REQUIREMENTS FOR DEMOLITION AND WORK INVOLVING PAINTED STEEL

(02/06/2020)

Demolition and work involving painted steel shall conform to the requirements of Document 00961.

Work Involving Painted Steel.

Hazardous materials shall be removed in the immediate area of any intended welding, heating, saw cutting or burning of steel. Hazardous material removal is required to allow the demolition of structural steel, railings, drainage systems, utility supports, steel lamp posts, etc.

The contractor shall assume that the coatings on the steel contain lead (Pb), unless otherwise determined by testing. The contractor shall certify in writing to the Engineer the results of all testing, and shall also certify that any lead (Pb) coated steel removed from the project was not reused or buried, but was sent to a scrap metal recycling facility.

Implement and maintain programs and procedures, which comply with the requirements of this specification and all applicable standards and regulations. Comply with all applicable regulations even if the regulation is not specifically referenced herein. If a state or local regulation is more restrictive than the regulation of this specification, follow the more restrictive requirements.

This requirement is intended only for the demolition and preparation prior to repair and does not include provisions for recoating of steel.

Environmental

All applicable portions of Subsections 961.65 “Worker Protection” and 961.66 “Environmental Protection and Monitoring” shall be followed when performing this work.

During chemical stripping a hand washing facility may be used in lieu of a decontamination/changing facility.

Hazardous material shall be collected during the disassembly and disposed of as outlined in Subsection 961.68 “Handling of Hazardous Waste and Reporting Release Programs”.

The applicable submittals shall be according to Subsection 961.69 “Submittals”.

GENERAL REQUIREMENTS FOR DEMOLITION AND WORK INVOLVING PAINTED STEEL (Continued)

Cleaning/Removal

Cutting Or Burning Of Steel

All surfaces to be welded, heated, saw cut or burned shall be cleaned so as to remove all contaminants and/or hazardous materials, which could be discharged to the environment as a function of the subsequent operations.

Lead paint shall be removed in its entirety in an area prescribed by a 6 inch (15 cm) minimum offset from the required work. The paint removal operation may be dry abrasive blasting, wet abrasive blasting or chemical stripping.

Proper level of containment shall be used when performing this work in accordance with Subsection 961.67 "Containment". Full containment is not required during chemical stripping operation however; the Contractor shall install proper shielding and/or tarpaulins under the chemical stripping operations in order to catch all debris generated during this procedure. A cleaned area must be inspected and approved before the demolition operations are started.

During cleaning operations the Contractor shall be required to furnish and erect temporary floodlights illuminating the steel surface at a minimum of 30-foot candles. This lighting shall be used in areas where there is insufficient lighting for proper cleaning operations and inspection. The Contractor shall supply electrical power.

The Contractor shall provide support for interim and final inspection of the bridge during cleaning operations. This support shall include the necessary traffic controls and safe access to the work.

Mechanical Disassembly Of Steel

All surfaces to be mechanically disassembled by shear cutting or removing bolts or rivets shall not require deleading. When shear cutting or removing bolts or rivets, the Contractor shall not use any method that will cause dust and/or particles to be emitted and/or dispersed into the environment to an extent that would expose the workers above the Action Levels of 30µg/m3.

For purposes of limiting the lead (Pb) dust, the Contractor will be required to dampen the lead paint work areas.

The contractor shall install a proper shielding and/or tarpaulins under all lead-paint-coated surfaces to be shear cut or bolts or rivets ordered removed in order to catch any loose lead paint chips, dust or particles.

SUBSECTION 8.14 UTILITY COORDINATION, DOCUMENTATION, AND MONITORING RESPONSIBILITIES

A. GENERAL

In accordance with the provisions of Section 8.00 Prosecution and Progress, utility coordination is a critical aspect to this Contract. This section defines the responsibility of the Contractor and MassDOT, with regard to the initial /utility relocation plan and changes that occur as the prosecution of the Work progresses. The Engineer, with assistance from the Contractor shall coordinate with Utility companies that are impacted by the Contractor's operations. To support this effort, the Contractor shall provide routine and accurate schedule updates, provide notification of delays, and provide documentation of the steps taken to resolve any conflicts for the temporary and/or permanent relocations of the impacted utilities. The Contractor shall provide copies to the Engineer of the Contractor communication with the Utility companies, including but not limited to:

- Providing advanced notice, for all utility-related meetings initiated by the Contractor.
- Providing meeting minutes for all utility-related meetings that the Contractor attends.
- Providing all test pit records.
- Request for Early Utility work requirements of this section (see below).
- Notification letters for any proposed changes to Utility start dates and/or sequencing.
- Written notification to the Engineer of all apparent utility delays within seven (7) Calendar Days after a recognized delay to actual work in the field – either caused by a Utility or the Contractor.
- Any communication, initiated by the Contractor, associated with additional Right-of-Way needs in support of utility work.
- Submission of completed Utility Completion Forms.

B. PROJECT UTILITY COORDINATION (PUC) FORM

The utility schedule and sequence information provided in the Project Utility Coordination Form (if applicable) is the best available information at the time of the bid and has been considered in setting the contract duration. The Contractor shall use all of this information in developing the bid price and the Baseline Schedule Submission, inclusive of the individual utility durations sequencing requirements, and any work that has been noted as potentially concurrent utility installations.

C. INITIATION OF UTILITY WORK

The Engineer will issue all initial notice-to-proceed dates to each Utility company based on either the:

1) Contractor's accepted Baseline Schedule
2) An approved Early Utility Request in the form of an Early Utility sub-net schedule (in accordance with the requirements of this Subsection)
3) An approved Proposal Schedule

C.1 - BASELINE SCHEDULE – UTILITY BASIS

The Contractor shall provide a Baseline Schedule submission in accordance with the requirements of Subsection 8.02 and inclusive of all of the information provided in the PUC Form that has been issued in the Contract documents. This is to include the utility durations, sequencing of work, allowable concurrent work, and all applicable considerations that have been depicted on the PUC Form.

SUBSECTION 8.14 (Continued)

C.2 – EARLY UTILITY REQUEST – (aka SUBNET SCHEDULE) PRIOR TO THE BASELINE

All early utility work is defined as any anticipated/required utility relocations that need to occur prior to the Baseline Schedule acceptance. In all cases of proposed early utility relocation, the Contractor shall present all known information at the pre-construction conference in the form of a 'sub-net' schedule showing when each early utility activity needs to be issued a notice-to-proceed. The Contractor shall provide advance notification of this intent to request early utility work in writing at or prior to the Pre-Construction meeting. Prior to officially requesting approval for early utility work, the Contractor shall also coordinate with MassDOT and all utility companies (private, state or municipal) which may be impacted by the Contract. If this request is acceptable to the Utilities and to MassDOT, the Engineer will issue a notice-to-proceed to the affected Utilities, based on these accepted dates.

C.3 – PROPOSAL SCHEDULE - CHANGES TO THE PUC FORM

If the Contractor intends to submit a schedule (in accordance with MassDOT Standard Specifications, Division I, Subsection 8.02) that contains durations or sequencing that vary from those provided in the Project Utility Coordination (PUC) Form, the Contactor must submit this as an intended change, in the form of a Proposal Schedule and in accordance with MassDOT Standard Specifications, Division I, Subsection 8.02. These proposed changes are subject to the approval of the Engineer and the impacted utilities, in the form of this Proposal Schedule and a proposed revision to the PUC form. The Contractor shall not proceed with any changes of this type without written authorization from the Engineer, that references the approved Proposal Schedule and PUC form changes. The submission of the Baseline Schedule should not include any of these types of proposed utility changes and should not delay the submission of the Baseline Schedule. As a prerequisite to the Proposal Schedule submission, and in advance of the utility notification(s) period, the Contractor shall coordinate the proposed utility changes with the Engineer and the utility companies, to develop a mutually agreed upon schedule, prior to the start of construction.

D. UTILITY DELAYS

The Contractor shall notify the Engineer upon becoming aware that a Utility owner is not advancing the work in accordance with the approved utility schedule. Such notice shall be provided to the Engineer no later than seven (7) calendar days after the occurrence of the event that the Contractor believes to be a utility delay. After such notice, the Engineer and the Contractor shall continue to diligently seek the Utility Owner's cooperation in performing their scope of Work.

In order to demonstrate that a critical path delay has been caused by a third-party Utility, the Contractor must demonstrate, through the requirements of the monthly Progress Schedule submissions and the supporting contract records associated with Subsection 8.02, 8.10 and 8.14, that the delays were beyond the control of the Contractor.

SUBSECTION 8.14 (/Continued)

All documentation provided in this section is subject to the review and verification of the Engineer and, if required, the Utility Owner. In accordance with MassDOT Specifications, Division I, Subsection 8.10, a Time Extension will be granted for a delay caused by a Utility, only if the actual duration of the utility work is in excess of that shown on the Project Utility Coordination Form, and only if;

1) proper Notification of Delay was provided to MassDOT in accordance with the time requirements that are specified in this Section
2) the utility delay is a critical path impact to the Baseline Schedule (or most recently approved Progress Schedule)

E. LOCATION OF UTILITIES

The locations of existing utilities are shown on the Contract drawings as an approximation only. The Contractor shall perform a pre-construction utility survey, including any required test pits, to determine the location of all known utilities no later than thirty (30) calendar days before commencing physical site work in the affected area.

F. POST UTILITY SURVEY – NOTIFICATION

Following completion of a utility survey of existing locations, the Contractor will be responsible to notify the Engineer of any known conflicts associated with the actual location of utilities prior to the start of the work. The Engineer and the Contractor will coordinate with any utility whose assets are to be affected by the Work of this Contract. A partial list of utility contact information is provided in the Project Utility Coordination Form.

G. MEETINGS AND COOPERATION WITH UTILITY OWNERS

The Contractor shall notify the Engineer in advance of any meeting they initiate with a Utility Owner's representative to allow MassDOT to participate in the meeting if needed.

Prior to the Pre-Construction Meeting, the Contractor should meet with all Utility Owners who will be required to perform utility relocations within the first 6 months of the project, to update the affected utilities of the Project Utility Coordination Form and all other applicable Contract requirements that impact the Utilities. The Contractor shall copy the Engineer on any correspondence between the Utility Owner and the Contractor.

H. FORCE ACCOUNT / UTILITY MONITORING REQUIREMENTS

The Engineer will be responsible for recording daily Utility work force reports. The start, suspension, re-start, and completion dates of each of the Utilities, within each phase of the utility relocation work, will be monitored and agreed to by the Engineer and the Contractor as the work progresses.

I. ACCESS AND INSPECTION

The Contractor shall be responsible for allowing Utility owners access to their own utilities to perform the relocations and/or inspections. The Contractor shall schedule their work accordingly so as not to delay or prevent each utility from maintaining their relocation schedule.

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.

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.

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 in progress 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 102.3 HERBICIDE TREATMENT OF INVASIVE PLANTS HOUR

This work must be performed by persons who meet the qualifications below and are approved by the Landscape Design Section.

Work under this item consists of herbicide treatment of invasive plants currently existing within the project limits and as directed. An Invasive Plant Management Strategy (IPMS) shall be submitted to the Engineer for review and approval and the IPMS shall be implemented on-site. The IPMS shall be written and submitted per Item 102.33 Invasive Plant Management Strategy and shall be measured and paid for under that Item.

Work under this item shall be coordinated with work and schedule for Selective Clearing, Clearing and Grubbing, Mowing, Tree Removal, Planting, and Wetland Mitigation items.

Payment is per hour on-site and shall be compensation for a minimum crew of 2 licensed applicators, 2 back-pack sprayers and mist-blowers, a properly equipped spray truck with spray hoses, and a tank with sufficient capacity for a full day of work. If there is only one applicator, hourly payment shall be adjusted to 50 percent of the unit price.

Date and time stamped photos indicating start and stop time of work must be submitted if requested.

This item is not intended for manual removal of plants.

Management of plants determined to have been introduced to the site via imported loam, compost, mulch, plants, equipment, or other construction activities will be the Contractor's responsibility and at the Contractor's expense.

Herbicide shall be applied during daytime hours only.

Measures to prevent the introduction of invasive plant species to the site and to address introduction due to construction-related activities shall be covered under the Standard Specifications, Division I - Subsections 7.01(D) Plant Pest Control and 7.13 Protection and Restoration of Property as amended in these Special Provisions.

Plant species targeted for management under this item shall be as determined in the field per the site walk and as specified in the IPMS.

The definition of invasive plant species shall be as described by Massachusetts Invasive Plant Advisory Group (MIPAG): "non-native species that have spread into native or minimally managed plant systems in Massachusetts, causing economic or environmental harm by developing self-sustaining populations and becoming dominant and/or disruptive to those systems."

ITEM 102.3 (Continued)

Control of invasive plants shall begin immediately with the initiation of construction activities and prior to any clearing or site disturbance. Treatment areas shall include stockpile locations and may, upon approval of the Engineer, extend outside the project limit. Treatment shall be done each consecutive year for the duration of the contract unless specified otherwise in the IMPS or unless directed otherwise by the MassDOT invasive species contact. Work shall be done during the growing season from May – October unless otherwise specified in the IPMS.

Areas identified for vegetation control measures shall be as shown on the plans and as determined in the field by the Engineer and a MassDOT Landscape Architect. Contact at MassDOT Landscape Design Section may be contacted at: robbin.bergfors@dot.state.ma.us.

QUALIFICATIONS

The applicators shall submit and meet the qualifications outlined below. A list of contractors specializing in invasive management and approved by MassDOT Landscape Design Section is available on the following website: https://www.mass.gov/lists/landscape-design-and-roadside-maintenance under Invasive Plant Management.

Requirements

1. Company must provide proof of qualifications by providing the following:
   a. Narrative describing company, its expertise and experience with invasive plant control.
   b. Demonstrate experience with herbicide treatment as part of restorations and in sensitive areas.
   c. Describe company's technical qualifications and past performance.

2. Company must meet licensing requirements:
   a. All crew applicators must have a Massachusetts Commercial Applicator License (CORE).
   b. At least one or more applicator must have a ROW certification, if required for work.
   c. Company must provide name(s) of applicator(s) and Applicator License/Certification number for all contractor crew leaders working on the project.
   d. Company must provide documentation of any warnings, penalties or fines received in the last three (3) years.

3. Company must provide proof of experience with invasive plant control and include following:
   a. At least five (5) references from prior invasive plant control work completed in last five (5) years. Provide contact information including address, phone number and email.
   b. Provide a summary of each of these projects including nature of the problem, specific invasive vegetation treated, dates and period of treatment, methodologies used, and summary of success or not in terms of meeting performance objectives. Include summary of equipment used.
   c. Photo documentation of these projects.
   d. GPS coordinates of project locations, if available.

ITEM 102.3 (Continued)

4. Crew leader must have expertise with invasive plant control and provide the following:
   a. Have held Core license for at least five (5) years.
   b. Resume listing five (5) or more years of experience applying pesticides with the company or with another company specializing in vegetation management.

SUBMITTALS

No work shall begin without approval of the submittals.

Submittals include the following items:

Invasive Plant Management Strategy (IPMS)

At least thirty (30) days prior to proposed treatment the IPMS shall be submitted for approval by the Engineer and MassDOT Landscape Architect. All chemicals, methods and work done under this item shall be consistent with the IPMS. The IPMS shall be as described under Item 102.33.

Herbicide Use Report

Within two (2) weeks after each application, the Contractor shall provide to the Engineer and the MassDOT Landscape Architect a completed and signed MassDOT Herbicide Use Report.

Photo Documentation

Digital photos with date and time of herbicide application work, showing start time and completion time, are required and must be submitted for measurement of payment upon request.

MATERIALS

All proposed herbicides shall be as approved in the IPMS. Herbicides shall be labeled for the method of treatment and shall meet all federal, state and local regulation requirements. Application rates will depend on herbicide proposed and shall be per the manufacturer's label for specific application.

METHODS

All methods used shall be as approved in the IPMS which shall be determined during the Initial Site Walk as described under Item 102.33 Invasive Plant Management Strategy.

The Contractor shall be responsible for marking delineated areas and plants to be preserved, removed, or otherwise treated. Fencing or other materials needed for marking and delineating protected areas shall be incidental to this item.

The Contractor shall notify the Engineer a minimum of 3 days prior to date of expected herbicide application. Applicators shall notify the Engineer upon arriving on-site and upon leaving the site.

ITEM 102.3 (Continued)

Herbicide Applications

All herbicide application shall conform to Massachusetts Pesticide Laws and Regulations per the Massachusetts Department of Agricultural Resources (MDAR) Pesticide Bureau.

Mixing, applying and/or disposing of herbicides shall always be in accordance with instructions on their labels and all applicable federal, state, and local regulations. Mixing shall not occur within sensitive areas, wetlands, or buffer zones.

Contractor shall not spray 2 hours prior to precipitation, during rain, or during windy conditions. The Contractor shall be responsible for monitoring weather conditions and adjusting the work schedule as appropriate for the herbicide and application method to be used.

Targeted vegetation shall be identified and marked prior to treatment. Plants treated by foliar spray, injection or glove application or other methods that leave standing vegetation, as opposed to cut-stump application, shall remain clearly marked for identification through the contract period.

Desirable vegetation shall be protected from both spray and other physical damage.

Contractor is responsible for any damage to vegetation not designated for removal or treatment. Vegetation damaged shall be restored. Cost of replacement plants and/or restoration shall be borne by the Contractor.

Contractor shall ensure that the public does not enter a work area while herbicide application or spraying is underway.

Disposal Of Invasive Plant Material

All material to be cleared shall become the property of the Contractor. The satisfactory disposal of all cleared plant material (seeds, roots, woody vegetation, associated soils, etc.) shall be the Contractor's responsibility.

The Contractor shall take measures to prevent viable plant material from leading to further infestations (seeds, roots, woody material, etc.) while stockpiled, in transit, or at final disposal locations. All precautions shall be taken to avoid contamination of natural landscapes with invasive plants or invasive plant material.

Chipping, shredding, or on-site burning of plant material must be approved by the Engineer and included in the IMPS.

For plant material taken to an incinerating facility per the IPMS, a receipt from that facility shall be submitted to the Engineer as proof of disposal.

ITEM 102.3 (Continued)

Where feasible, it is preferable to dispose of plants on-site or to bury them on-site with on-going monitoring for re-sprouting. Disposal locations and methods must be approved and included in the IPMS. Site work such as grading and seeding to stabilize and restore disposal area shall be incidental to this item.

The Contractor shall be responsible for treating or otherwise managing areas of re-growth due to improper disposal. Treatment shall be at the Contractor's expense.

Follow-Up Treatment

Plants and areas shall be re-treated as necessary and as appropriate to the time of year. Treatment shall be for the duration of the contract and per the IPMS.

MEASURE OF SUCCESS

The expectation is a minimum of 85-95 percent control achieved after the first treatment, depending on plants targeted and extent of population, and based on the expectations laid out in the IPMS. The expectation for the contract duration is 95-100% eradication by the end of the treatment period, unless otherwise specified in the IPMS.

METHOD OF MEASUREMENT

Item 102.3 will be measured for payment by the Hour of verified crew time spent on the project doing herbicide application as and where specified herein and in the IPMS. A crew shall be defined as a minimum of two licensed applicators each equipped with (at minimum) back-pack sprayer and mist blower. The crew shall also have a properly equipped spray truck with hoses and a tank with sufficient capacity for a full day of work.

BASIS OF PAYMENT

Item 102.3 will be paid at the contract unit price per Hour, which price shall include all labor, materials, equipment, tools, and all incidentals required to complete the work.

Payment will be based upon verified time spent on the project doing herbicide application as and where specified in the IPMS and upon receipt and approval of submittals. Payment will not include travel time to and from the Contractor's place of business and nor time for investigative field trips.

If there is only one applicator, hourly payment shall be adjusted to 50 percent of the unit price.

The Invasive Plant Management Strategy will be paid for under Item 102.33.

ITEM 102.33 INVASIVE PLANT MANAGEMENT STRATEGY HOUR

This item consists of providing an Invasive Plant Management Strategy (IPMS) for the control of invasive plants currently existing on the project site and/or as directed and shall be coordinated with Item 102.3 Herbicide Treatment of Invasive Plants. Unless otherwise approved, the IPMS shall be submitted in the form of the MassDOT Invasive Plant Management Strategy Report Form.

The IPMS shall be submitted for review and approval by the MassDOT Landscape Design Section or their representative, and the IPMS shall be implemented on-site.

The Invasive Plant Management Strategy Report Form is available online at https://www.mass.gov/lists/landscape-design-and-roadside-maintenance under Invasive Plant Management.

Herbicide treatment for invasive plants shall be as described under Item 102.3 Herbicide Treatment of Invasive Plants and shall be compensated per that Item.

Work under this item shall be coordinated with work and schedule for Selective Clearing, Clearing and Grubbing, Mowing, Tree Removal, Planting, and Wetland Mitigation as relevant to the project.

Individual attending the site walk and determining the Invasive Plant Management Strategy must demonstrate expertise with vegetation management and invasive plant control and submit qualifications as described below.

QUALIFICATIONS

Individual shall be from the same company as that providing services for Item 102.3 Herbicide Treatment of Invasive Plants and shall submit the following, if not submitted under Item 102.3:

- Submit copy of current Core license.
- Submit a resume listing five (5) or more years of experience managing invasive plants with a company specializing in vegetation management.
- References shall be submitted if requested.

SUBMITTALS

Task Summary & Reports

For measurement of payment, the contractor shall submit the total sum and a breakdown of hours for the tasks performed. At a minimum, the tasks shall include the Initial Site Walk, submittal of an approved IPMS, and if requested to accommodate project or site changes, a Follow-up Site Inspection and accompanying IPMS Amendment.

ITEM 102.33 (Continued)

Interim Site Monitoring Reports and/or a Final Report shall be submitted if requested by the MassDOT Landscape Design contact. The MassDOT Landscape Design contact must be notified to attend the site inspection walk when an Interim or Final Report has been requested.

Invasive Plant Management Strategy (IPMS)

At least thirty (30) days prior to construction activities and/or any proposed treatment, the contractor shall submit the IPMS for approval by the Engineer and MassDOT Landscape Architect. All chemicals and methods proposed shall be consistent with applicable Massachusetts Wetlands Protection Act Order of Conditions.

The IPMS shall be completed in coordination with the Prime Contractor and the Engineer and shall include the following as appropriate and applicable to the project and to the IPMS Report Form questions and Guidance:

I. Project Information
- a. Company writing the IPMS and performing the herbicide application.
- b. Date of site walk
- c. Attendees at site walk
- d. Expected end date of contract and expected last treatment (month/season)

II. Brief Description of Conditions
- a. Provide a free-hand sketch on construction plans or aerial image showing species, location, and as relevant, show or note extent of population as relevant to Strategy (i.e., population extends off ROW preventing eradication, small population and eradication deemed feasible within contract schedule, etc.).

III. Coordination with Roadway Contractor regarding other work
- a. Tree Work: Note coordination to be implemented with tree removal, clearing, and clearing and grubbing as applicable to the project.
- b. Wetland Mitigation - Include management proposed for wetland mitigation areas in the IPMS, if and as required.
- c. Planting: If there will be planting in areas proposed for treatment, propose treatment and schedule to avoid herbicide damage to plants.
- d. Mowing: If coordination is required with state mowers, note need in IPMS.

IV. Soil Management
- a. Provide specifics on how soil with invasive plant roots (in particular) or seeds will be handled (i.e., separate stockpiles, plant material will be buried on-site, re-used on-site, disposed off-site and if so, where?).
- b. Show stockpile locations on plan and include treatment schedule.
- c. Note measures that will be implemented to avoid spread through equipment, including how and where equipment will be cleaned.

V. Invasive Plant Treatment & Management
- a. Proposed chemical and methods of treatment for each species or area.
- b. Time of treatment based on target plant species.
- c. Submit product label including application methods and rates (entire MSDS information need not be submitted if available online).

ITEM 102.33 (Continued)

d. Proposed performance metrics or measure of treatment success if different from that specified under Item 102.3.
e. Method for disposing invasive plant material. This includes material that may result in spread (i.e., seeds, roots) and material that has been treated and/or is not viable (foliage, dead wood, etc.). Methods may include grinding in place, stockpiling and treating, and incinerating offsite.
f. Expected follow-up treatment for duration of contract.

VI. Monitoring Schedule if requested by MassDOT.

Note: The IPMS is critical for identifying pre-construction conditions as well as strategies for minimizing import or spread of invasive plants. Failure to provide an approved IPMS may jeopardize this item, in which case, the contractor will be responsible for management of invasive plants found on-site at no cost to the contract.

Photo Documentation

Digital photos of site conditions, typical species, and extent of infestation must be provided with the IPMS and with any follow-up monitoring or reporting. Photos of follow-up monitoring and reporting must be date and time stamped for acceptance.

METHODS

Initial Site Walk

Prior to any construction activities and soil disturbance, the Contractor shall walk the site with the Engineer and the MassDOT Landscape Architect to determine the IPMS. During the site walk the Contractor shall identify limits of work and, as necessary, mark locations of areas designated for treatment and individual plants targeted for treatment or removal. The Contractor shall be responsible for marking delineated areas and plants to be preserved, removed, or otherwise treated. Fencing or other materials needed for marking and delineating protected areas shall be incidental to this item.

IPMS Follow-up Amendment

The IPMS may be amended to address additional concerns or adjust to conditions if required by the MassDOT Landscape Architect. The amended IPMS shall be submitted to the Engineer and MassDOT Landscape Architect for approval at least fourteen (14) days prior to any proposed treatment.

Interim Site Monitoring Inspection Reports

If required by the MassDOT Landscape Architect and Engineer, Interim Site Monitoring and an accompanying report shall be conducted. Interim Reports must include time and date stamped photos showing treated locations and species.

ITEM 102.33 (Continued)

Final Inspection

A final inspection and report documenting the status of the invasive control may be required for regulatory purposes or for instances where control will be continued by others. The report shall include photo documentation of pre-construction (existing) and post-treatment conditions, notations on a plan or aerial image of area treated, summary of treatment performed, and control achieved. Final reports submittal must include time and date stamped photos.

METHOD OF MEASUREMENT

Item 102.33 will be measured for payment by the Hour. The basis for measurement shall be per the completion of tasks as approved under the Task Summary submittal and acceptance of submittals and photos described above.

BASIS OF PAYMENT

Item 102.33 will be paid at the contract unit price per Hour, which price shall include all labor, materials, equipment, tools, and all incidentals required to complete the work. Payment shall not include travel time to and from the

ITEM 102.523 TREE AND PLANT PROTECTION FENCE - VISIBILITY STAKES FOOT

The work under this item shall conform to the relevant provisions of Subsections 644 and 771 of the Standard Specifications and the following:

Work under this item consists of furnishing, installing, removing, replacing, resetting visibility stakes, and final removal of stakes.

The purpose of the visibility stakes is to delineate a Tree and Plant Protection Zone (TPPZ), signifying a construction work-free zone, thereby preventing damage to tree roots, tree trunks, soil, and all other vegetation; as shown on the Drawings, or 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

Stakes shall be wood stakes or metal U-Channel stakes or similar as approved by the Engineer. Stakes shall be a minimum of 48 inches tall, measured from the ground, with a minimum of 12 inches embedment (total stake length of 60 inches), and painted orange for visibility. Stakes shall be set at the distance necessary to remain highly visible, but no farther than four (4) feet apart. The Engineer shall determine if closer spacing is required.

If required to establish a more effective protection zone, the Contractor shall supply and install signage to notify workers of the intended purpose of the visibility stakes and the TPPZ.

ESTABLISHMENT OF THE TPPZ

Visibility stakes 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.

The line of stakes shall be located as close to the work zone limit and as far from tree trunk(s) as possible to maximize the area to be protected. Stakes shall run parallel and adjacent to construction activity to create a visual barrier between the work zone and the root zone or designated limit of plants and soils to be protected.

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 as shown on the Drawings. The Drip Line is defined as the limit of tree canopy.

The Contractor shall not engage in any construction activity within the TPPZ without the approval of the Engineer, including: operating, moving or storing equipment; storing supplies or materials; locating temporary facilities including trailers or portable toilets. Accessing or traversing the TPPZ shall not be permitted.

ITEM 102.523 (Continued)

METHOD OF WORK

Stakes shall be installed prior to any construction work or staging activities and be maintained in a vertical position. Stakes shall be repositioned or replaced where and as necessary for optimum effectiveness. Repositioning, replacement and adding additional stakes shall be incidental to this item. Delineation line shall not be moved without prior approval by the Engineer.

Stakes that are broken, no longer visible, or otherwise no longer function for the intended purpose shall be immediately replaced.

The TPPZ shall be protected 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, stakes shall be removed and disposed off-site by the Contractor.

REQUIRED WORK WITHIN THE TPPZ

If 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-inch depth of wood chips or approved matting for root protection, pruning of branches, and/or trunk protection. These protection measures will be paid under applicable 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 DAMAGES 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) 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 damage will be assumed. Action shall be taken as specified below.

In the event that 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 under Item 102.55. The Arborist shall be approved by MassDOT.

ITEM 102.523 (Continued)

In the event of spills, compaction or damage, 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 damages can be remedied by corrective measures, such as repairing trunk or limb injury, soil compaction remediation, pruning, 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 the recommendation 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 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

Item 102.523 Visibility Stakes will be measured and paid for payment by the linear FOOT, complete in place.

This will include all labor, materials, equipment, maintenance, resetting, final removal/disposal of the stakes, damage repaired, and all incidental cost required to complete 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 visibility stakes.

- Sixty (60) percent of the value payment will be made when stakes have been maintained to function as specified for the intended duration and removed and disposed off-site at the completion of protective measure requirement.

ITEM 102.523 (Continued)

Signage and replacement stakes shall be incidental to the item. No separate payment will be made for costs of remedial actions, including addition of more durable barriers, or arborist services, but all costs in connection therewith shall be included in the Contract unit price bid.

In the event of irreparable damage due to lack of or improper protective measures being taken, no compensation shall be given, in addition to the assessed damages deducted from the contract price of the work..

ITEM 102.55 ARBORIST HOUR

DESCRIPTION

The work under this Item is for the services of a Certified Arborist. Arborist shall be an International Society of Arboriculture (ISA) Certified Arborist or a Massachusetts Certified Arborist. The Arborist shall have at least 10 years of experience in tree care, including tree protection during construction, and shall demonstrate a familiarity with the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance Part 1Pruning, Part 5 Construction Management Standards, and Part 9 Tree Risk Assessment.

The Arborist's general responsibilities include protecting high priority trees within and adjacent to the project limits, stating areas, and access routes; recommending removal of diseased, damaged or otherwise unhealthy trees that pose a potential safety hazard; evaluating effects of construction on future health of trees close to proposed work; and recommending and/or overseeing tree work amd care.

The Arborist for this item shall not be from the same company as the company responsible for selective clearing or tree removal work.

For projects with multiple phases, projects where construction activities (work or stockpiling) shifts, or when otherwise directed by the Engineer, the Arborist shall re-evaluate conditions and provide follow-up recommendations.

SUBMITTALS

- Contractor shall submit to the Engineer for approval by MassDOT Landscape Design the qualifications and experience of the Arborist. Submittal shall include copy of current certification and a resume summarizing specific construction experience (including relevant MassDOT projects) for a minimum of five projects.
- Arborist's Report documenting recommendations shall be submitted to the Engineer and an electronic copy forwarded to MassDOT Landscape Design Section. Report shall include the following:

SCOPE OF WORK

The Arborist shall be responsible for the following tasks:

- Initial Evaluation and Report
  - recommend and prioritize trees that require removal as appropriate to contract scope, project limits, and project intent;
  - review and mark limits of protective fencing for trees and groups of trees to be retained;
  - review and recommend protection measures for high priority trees;
  - submit a marked-up Construction Plan that briefly notes recommendations and decisions made in the field;
  - submit a corresponding report including photo documentation;

ITEM 102.33 (Continued)

- Oversight
  - direct or execute pruning of branches and/or roots, air spading, and/or other tree care operations
- Monitoring and Inspections
  - periodically inspect fencing and ensure root zones are properly protected and clear of equipment and materials as required by the Engineer
  - reevaluate tree protection measures for various phases of a project
  - submit inspection notes with relevant and dated photos to the Engineer.

METHODS

Prior to any work, the Arborist shall walk the site with the Contractor, the Engineer, and the Town Tree Wardento review trees, limits of construction activities, and other concerns. Where required for proper assessment of tree impacts, limits of work shall be staked or otherwise marked in the field prior to the site walk.

Trees to be removed shall be painted or otherwise marked.

Trees to be retained shall be marked such that it does not mar or damage the tree and such that marker is not easily removed. As applicable to the work and scope of the project, trees designated for removal or to be retained shall be noted on the plan and/or in the arborist's report and photographed.

Trees designated to remain that are damaged or removed by construction activities shall be noted and photographed for inclusion in inspection reports submitted to the Engineer.

MEASUREMENT AND BASIS OF PAYMENT

Item 102.55 will be measured for payment by the Hour of time spent onsite.

Item 102.55 will be paid at the contract unit price per hour upon submittal and acceptance of Reports described above.

ITEM 115.1 DEMOLITION OF BRIDGE NO. L-05-004 LUMP SUM

The work under this Item shall conform to the relevant provisions of Subsections 112, 120, and 140 of the Standard Specifications, and the following:

The work under this Item shall consist of the following:

- Removal and transporting of the existing temporary bridge superstructure consisting of a steel truss as shown on the plans. The superstructure shall be transported to the MassDOT Pittsfield Depot located at 77 Central Berkshire Boulevard (Route 41) in Pittsfield, MA 01201. The area where the superstructure is to be placed at the MassDOT depot shall be prepared with a layer of 6”-8” of milling mulch. All fasteners for the superstructure shall be packed in substantial weatherproof containers with covers.
- Demolition and satisfactory removal of the temporary concrete foundation of the temporary bridge and the existing steel bridge with concrete abutments including wing walls to limits shown in the plans. Shielding the stream from falling debris shall be included in this work.
- Per Specification Section 5.07 Coordinate with MassDOT District 1 survey engineer for removal of USGS Benchmark Disk TT 15 TDA on the existing northeast wingwall and locate the disk on the new northeast wingwall.

Within 10 working days of the notice to proceed, the Contractor shall submit a plan indicating his proposed demolition procedures and methods to be used including equipment, tools, devices, crane or excavator capacity and location, schedule of operations, methods of utility protection, etc., to the Engineer for approval. No work shall commence until approval of the engineer. The requirements for equipment and all procedures utilized shall be in conformance with the intent of Subsection 960.61 Erection of the Standard Specifications.

The removal/demolition procedures and any necessary calculations and drawings shall be stamped by a Professional Engineer registered in Massachusetts certifying that all existing structural members are suitably supported throughout the removal and demolition process. In determining the stresses to which the structure will be subjected, all loading combinations including traffic and the Contractor’s equipment shall be considered. The method of determining stresses shall conform to the latest AASHTO Standard Specifications for Highway Bridges. Work under this Item may not commence until the Engineer has given written approval.

Incidental to this item shall be the design and installation of a shielding system, which may be netting with sufficient covering to become impermeable or timber shielding, to protect the waterway from falling debris. The design for the shielding system shall be submitted as part of the Demolition Procedure. The shielding system shall extend outward beyond the edges of the bridge deck a sufficient distance to ensure no debris falls past the edge of the shielding.

Demolition of the bridge shall not commence until such time that the shielding system is in place.

ITEM 115.1 (Continued)

No debris, tools or incidental equipment of any kind will be permitted to fall into areas within the vicinity of the waterway under. Any material that accidentally falls into such areas shall be removed immediately.

Prior to the start of work, the Contractor shall locate all utilities and shall submit to the Engineer and the utility companies his proposed method of protecting them during the demolition operations as part of the Demolition Procedure. Procedure approval shall not serve to relieve the Contractor of his responsibility to protect all utilities from damage at all times. Any damage resulting from Contractor Operations shall be repaired at his expense.

All materials other than the temporary bridge superstructure that is removed under Item 115.1 shall become the property of the Contractor and shall be removed from the job site and disposed of properly.

BASIS OF PAYMENT

Item 115.1 will be paid for at the Contract Bid Price per LUMP SUM, which price shall include full compensation for the following:

- Design of the shielding scheme, all equipment, materials, tools and labor necessary for the installation, maintenance, operation, removal, disposal of the protective shielding.
- Removal and transporting the temporary bridge superstructure to the MassDOT District 1 yard. Removal shall include materials, labor, and incidental costs associated with placement of the temporary bridge at the MassDOT depot and hardware placement into packages per request of MassDOT.
- Removal and disposal of the existing temporary bridge foundation including the southwest wingwall, existing steel superstructure and the concrete abutments including the southwest concrete retaining wall.

ITEM 127.42 REINFORCED CONCRETE DECK EXCAVATION CUBIC YARD
BRIDGE L-05-002 (057)

Work under this Item shall conform to the relevant provisions of Subsection 120 of the Standard Specifications and the following:

The work shall consist of removal and proper disposal of concrete in the bridge deck and safety curb to the limits shown on the drawings of Bridge L-05-002 (057) or as directed by the Engineer.

In addition, the work shall include design, installation and removal of a temporary protective shield, removal and stacking the existing bridge rail to the limit of work, the removal and proper disposal of hot mix asphalt pavement and membrane waterproofing, and the removal and proper disposal of granite curb within the limits of work.

Temporary Shielding:
Prior to the start of demolition operations, temporary protective shielding shall be placed under the area of deck demolition. The shielding shall conform to the following:

1. The Contractor shall submit drawings and calculations, bearing the stamp of a Professional Engineer registered in the Commonwealth of Massachusetts, for the proposed shielding to the Engineer for approval prior to installation.
2. Shielding shall be designed to safely withstand all the loads that it will be subjected to. Member capacities shall be in accordance with any of the most recent editions of the AASHTO Standard Specifications for Highway Bridges, the AASHTO LRFD Bridge Design Specifications, or the AASHTO Guide Design Specification for Bridge Temporary Works.
3. The shielding shall extend a minimum of 5 feet longitudinally beyond the limits of deck removal and a sufficient distance above the edge of deck as required to protect the areas below.
4. Shielding shall have all spaces along the perimeter and at the seams sealed to prevent dust and debris from escaping and falling onto water surfaces below.
5. Shielding shall be installed or removed only upon the approval of the Engineer. The shielding shall remain the property of the Contractor and shall be removed from the site when no longer needed.

Construction Methods:
Prior to the start of any excavation operations, the Contractor shall cover all drainage structures that may be affected by the work. The hot mix asphalt pavement shall be sawcut along a perimeter 1 foot beyond the limits of concrete excavation, removed along with membrane waterproofing, and properly disposed of. The existing bridge railing shall be carefully removed and stacked. The Contractor may opt to maintain the existing bridge rail in place, in which case the Contractor shall implement a means to support the rail in position until all deck and safety curb demolition and construction operations are complete. Whether the rail is removed and stacked, or maintained in place, the existing anchor bolts shall be discarded for replacement in the final condition.

For concrete deck demolition, the perimeter of concrete deck removal shall be sawcut along neat lines to a depth of 3/4 inch with an approved power-saw capable of making straight cuts. Where over-breakage occurs resulting in a featheredge, the featheredge shall be squared up to a square edge in an approved manner. Where sawing is impractical, the area shall be outlined by chisel or other approved means.

ITEM 127.42 (Continued)

The Contractor shall take all precautions necessary to prevent damage to the steel reinforcement that is to remain. Any existing steel reinforcement damaged because of the Contractor's operations shall be repaired at the Contractor's expense as directed by the Engineer. Any steel reinforcement that is found to be missing or unsuitable for further use shall be strengthened or replaced under Item 910.11.

During the prosecution of the Work, the Engineer may reject the use of any method or equipment, which causes undue vibration or possible damage to the structure that is to remain. Pneumatic hammers heavier than the nominal weight of 25 pounds (Chicago Pneumatic No. 111 or equal class) shall not be used, unless approved by the Engineer.

Concrete surfaces in the existing structure that will receive newly placed concrete shall be clean, sound, and free of contaminants. After concrete removal and edge conditioning are complete, bond inhibiting materials such as dirt, grease, and loosely bonded aggregate shall be removed by abrasion blasting or high pressure washing with water that does not contain detergents or any bond inhibiting chemicals. Concrete surfaces shall be inspected after cleaning to ensure that the surface is free from additional loose aggregate or that additional delaminations are not present. If any are found the cleaning process shall be repeated as required by the Engineer.

Exposed reinforcing steel shall be cleaned by mechanical means and high pressure washing with water that does not contain detergents or any bond inhibiting chemicals. Where active corrosion has occurred that would inhibit bonding, steel shall be blast cleaned to white metal finish.

No debris shall be allowed to fall into the waterway or on riverbanks. The Contractor shall be responsible for immediately removing any such debris.

All excavated materials shall become the property of the Contractor and shall be removed from the job site and properly disposed of.

In the event the Contractor damages materials to remain, the Contractor shall replace, repair, or reinforce the damaged area as may be required to restore the area to an equal or better condition.

METHOD OF MEASUREMENT

Item 127.42 will be measured for payment by the Cubic Yard, of reinforced concrete excavated and disposed.

BASIS OF PAYMENT

Item 127.42 will be paid for at the contract unit price per Cubic Yard, which price shall include and be full compensation for all labor, materials, equipment, professional engineering services, submittals, and any incidental costs required to complete the work as described herein and shown on the plans. Incidental costs shall include, but are not limited to, sawcutting, removing and disposing HMA pavement and membrane waterproofing, removing and stacking the bridge rail or providing a support system to hold it in place, installing temporary shielding and final removal and blast cleaning reinforcement.

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, soils, sediments and/or groundwater may be contaminated. A Licensed Site Professional (LSP) shall be required to provide the services necessary to comply with the requirements of the MCP. These services may include sampling, analysis and characterization of potentially contaminated media, preparation of Immediate Response Action (IRA) Plans, Utility-Related Abatement Measure (URAM) and Release Abatement Measure (RAM) Plans, Imminent Hazard Evaluations, status reports, transmittal forms, release notification forms, risk assessments, completion statements, and related documents required pursuant to the Massachusetts Contingency Plan (MCP). LSP hours related to the characterization and disposal of contaminated soil and/or sediment are incidental to the disposal items. An estimate of LSP services to be provided shall be submitted to the Engineer for approval before any LSP activity begins.

The name and qualifications of the LSP and all environmental technicians to be assigned to the project shall be submitted to the Engineer for approval at least four weeks prior to initial site activities. The LSP shall have a current, valid license issued by the Massachusetts Board of Registration of Hazardous Waste Site Cleanup Professionals. The LSP shall have significant experience in the oversight of MCP activities at active construction sites. Qualification packages for the LSP and each technician shall include a resume, all recent work assignments with responsibilities identified (previous 5 years), and applicable training and certifications. A list of all Notices of Noncompliance, Notice of Audit Findings and Enforcement Orders issued by the DEP shall be submitted for all work assignments listed for the LSP and environmental technicians.

The LSP shall evaluate soil and/or sediment with discoloration, odor, and presence of petroleum liquid or sheening on the groundwater surface, or any abnormal gas or materials in the ground which are known or suspected to be oil or hazardous materials. Excavated soil and sediment which is suspected of petroleum contamination shall be field screened using the jar headspace procedures according to established DEP Guidance. All field screening equipment 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 soil and/or sediment. Any enhanced management of contaminated soil to ensure proper stockpiling and storage is incidental to the LSP Services item. The LSP shall adequately characterize subsurface conditions prior to backfill in areas where contaminated material has been excavated. The Engineer shall approve the locations of the testing sites prior to the sampling.

Contaminated soil, sediment and/or groundwater shall be handled in accordance with all applicable state and federal statutes, regulations, and policies. The LSP shall adequately characterize contaminated media for comparison to the requirements of the MCP. The Contractor and the LSP shall be aware of the reporting requirements for releases of oil and/or 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. The LSP shall maintain written records in a clear and concise format which tracks the excavation, stockpiling, analysis and reuse/disposal of all suspect contaminated soils, sediments and groundwater. These records shall be up-to-date and available to the Engineer on a bi-weekly basis. The LSP shall review and summarize the laboratory data from any analyses performed on contaminated media.

ITEM 180.03 (Continued)

A report shall be delivered to the Engineer outlining the material sampling methods, laboratory analysis results and proposed course of action. The laboratory report together with Chain of Custody forms for all analytical results shall be submitted to the Engineer within 14 days after completion of such analyses.

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, penalties and enforcement requirements imposed by applicable regulatory agencies for failure to meet regulatory and contract timeframes. No compensation will be provided for such fines, penalties and enforcement actions.

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 Department before submittal to the DEP, except if an imminent hazard condition exists as defined in 309 CMR 4.03(4)(b).

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.

In order to maintain compliance with the MCP or other regulatory requirements, the LSP shall request approval from the Engineer to obtain samples from various locations and depths within the project area and to perform laboratory analyses on those samples. The samples shall be delivered to a DEP-certified laboratory using proper chain-of-custody documentation for analyses which, depending upon site conditions and suspected and/or identified contaminants of concern, may include, but are not limited to, metals, polychlorinated biphenyls (PCBs), volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), pesticides, polycyclic aromatic hydrocarbons (PAHs), extractable petroleum hydrocarbons (EPHs) and volatile petroleum hydrocarbons (VPHs). Subsequent testing, depending upon initial results, may be required for Toxicity Characteristic Leaching Procedure (TCLP) analyses (EPA Method 1311) for metals.

ITEM 180.03 (Continued)

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. LSP hours related to soil/sediment disposal (disposal characterization, landfill acceptance, disposal package preparation, etc.) shall be incidental to disposal items.

The quantity and type of laboratory tests must be approved by the Engineer beforehand. The contractor will be reimbursed upon written evidence of payment. The contractor may be required to obtain cost estimates from three DEP certified laboratories for the Engineer to choose the service provider. Laboratory testing related to soil/sediment disposal (disposal characterization, landfill acceptance, disposal package preparation, etc.) shall be incidental to disposal items.

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.

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 cost of such additional sampling and analysis shall be included in the bid cost for the applicable disposal items. The Contractor shall obtain sufficient information to demonstrate that the contaminated soil meets the disposal criteria set by the receiving facility that will accept the material.

ITEMS 181.11 through 181.14 (Continued)

No excavated material will be permanently placed on-site or removed for off-site disposal until the results of chemical analyses have been received and the materials have been properly classified. The Contractor shall submit to the Engineer results of field and laboratory chemical analyses tests within seven days after their completion, accompanied by the classification of the material determined by the Contractor, and the intended disposition of the material. The Contractor shall submit to the Engineer for review all plans and documents relevant to LSP services, including but not limited to, all documents that must be submitted to the DEP.

WASTE TRACKING:

Copies of the fully executed Weight Slips/Bills of Lading/ Manifests/Material Shipping Records or other material tracking form received by the Contractor from each disposal facility and for each load disposed of at that facility, shall be submitted to Engineer and the Contractor's LSP within three days of receipt by the Contractor. The Contractor is responsible for preparing and submitting such documents for review and signature by the LSP or other appropriate person with signatory authority, three days in advance of transporting soil off-site. The Contractor shall furnish a form attached to each manifest or other material tracking form for all material removed off-site, certifying that the material was delivered to the site approved for the class of material. If the proposed disposition of the material is for reuse within the project construction corridor, the Contractor shall cooperate with MassDOT to obtain a suitable representative sample(s) of the material to establish its structural characteristics in order to meet the applicable structural requirements as fill for the project.

All material transported off-site shall be loaded by the Contractor into properly licensed and permitted vehicles and transported directly to the selected disposal or recycling facility and be accompanied by the applicable shipping paper. At a minimum, truck bodies must be structurally sound with sealed tail gates, and trucks shall be lined and loads covered with a liner, which shall be placed to form a continuous waterproof tarpaulin to protect the load from wind and rain.

DECONTAMINATION OF EQUIPMENT

Tools and equipment which are to be taken from and reused off site shall be decontaminated in accordance with applicable local, state and federal regulations. This requirement shall include, but not be limited to, all tools, heavy machinery and excavating and hauling equipment used during excavation, stockpiling and handling of contaminated material. Decontamination of equipment is considered incidental to the applicable excavation item.

ITEMS 181.11 through 181.14 (Continued)

REGULATORY REQUIREMENTS

The Contractor shall be responsible for adhering to regulations, specifications and recognized standard practices related to contaminated material handling during excavation and disposal activities. MassDOT shall not be responsible at any time for the Contractor's violation of pertinent State or Federal regulations or endangerment of laborers and others. The Contractor shall comply with all rules, regulations, laws, permits and ordinances of all authorities having jurisdiction including, but not limited to, Massachusetts DEP, the U.S. Environmental Protection Agency (EPA), Federal Department of Transportation (DOT), Massachusetts Water Resources Authority (MWRA), the Commonwealth of Massachusetts and other applicable local, state and federal agencies governing the disposal of contaminated soils.

All labor, materials, equipment and services necessary to make the work comply with such regulations shall be provided by the Contractor without additional cost to MassDOT. Whenever there is a conflict or overlap within the regulations, the most stringent provisions shall apply. The Contractor shall reimburse MassDOT for all costs it incurs, including damages and/or fines, as a result of the Contractor's failure to adhere to the regulations, specifications, recognized standard practices, etc., that relate to contaminated material handling, transportation and disposal.

SUBMITTALS

I. Summary of Sampling Results, Classification of Material and Proposed Disposal Option.

The following information, presented in tabular format, must be submitted to the Engineer for review and approval prior to any reuse on-site or disposal off-site. This requirement is on-going throughout the project duration. At least two weeks prior to the start of any excavation activity, the Contractor shall submit a tracking template to be used to present the information as stipulated below. Excavation will not begin until the format is acceptable to MassDOT.

Characterization Reports will be submitted for all soil, sediment, debris and groundwater characterized through the sampling and analysis program. Each report will include a site plan which identifies the sampling locations represented in the Report. The Construction Plan sheets may be used as a baseplan to record this information.

The Sampling Results will be presented in tabular format. Each sample will be identified by appropriate identification matching the sample identification shown on the Chain of Custody Record. The sample must also be identified by location (e.g. grid number or stockpile number). For each sample, the following information must be listed: the classification (unregulated, regulated, etc.), proposed disposal option for the stockpile or unit of material represented, and, all analytical results.

ITEMS 181.11 through 181.14 (Continued)

Each Characterization Report will include the laboratory analytical report and Chain of Custody Record for the samples included in the Report.

II. Stockpiling, Transport, and Disposal.

At least two weeks prior to the start of any excavation activity, the Contractor shall submit, in writing, the following for review and shall not begin excavation activity until the entire submittal is acceptable to MassDOT.

Excavation and Stockpiling Protocol:
Provide a written description of the management protocols for performing excavation and stockpiling and/or direct loading for transport, referencing the locations and methods of excavating and stockpiling excavated material.

Disposal and Recycling Facilities:

1. Provide the name, address, applicable licenses and approved waste profile for disposal and/or recycling location(s) where contaminated soil will be disposed. Present information substantiating the suitability of proposed sites to receive classifications of materials intended to be disposed there, including the ability of the facility to accept anticipated volumes of material.

2. Provide a summary of the history of compliance actions for each disposal/recycling facility proposed to be used by the Contractor. The compliance history shall include a comprehensive list of any state or federal citations, notices of non-compliance, consent decrees or violations relative to the management of waste (including remediation waste) at the facility. Material should not be sent to facilities which are actively considered by the DEP, USEPA or other responsible agency to be in violation of federal, state or local hazardous waste or hazardous material regulations. MassDOT reserves the right to reject any facility on the basis of poor compliance history.

Transportation:
The name, address, applicable license and insurance certificates of the licensed hauler(s) and equipment and handling methods to be used in excavation, segregation, transport, disposal or recycling.

III. Material Tracking and Analytical Documentation for Reuse/Disposal.

The following documents are required for all excavation, reuse and disposal operations and shall be in the format described. At least two weeks prior to the start of any excavation or demolition activity, the Contractor shall submit the tracking templates required to present the information as stipulated below. Excavation or demolition will not begin until the format is acceptable to MassDOT.

ITEMS 181.11 through 181.14 (Continued)

All soils, sediments and demolition debris must be tracked from the point of excavation to stockpiling to onsite treatment/processing operations to off-site disposal or onsite reuse as applicable.

Demolition Debris:
Demolition debris must be tracked if the debris is stockpiled at a location other than the point of origin or if treatment or material processing is conducted. Identification of locations will be based on the station-offset of the location. The tracking table will identify date and point of generation, any field screening such as PID or dust monitoring, visual observations/comments, quantity, and stockpile ID/processing operation location. For each unit of material tracked, the table will also track reuse of the material on-site, providing reuse date, location of reuse as defined by start and end station, width of reuse location by offset, the fill elevation range, quantity, and finish grade for said location. For demolition debris which is not reused on site, the table will also track disposal of the material as defined by disposal date, quantity and disposal facility. The table must provide a reference to any analytical data generated for the material.

Soil/Sediment:
Soil excavation will be identified based on the station-offset of the excavation location limits. The tracking table will identify date and point of generation, any field screening such as PID or dust monitoring, visual observations, quantity, and stockpile number/location. For each unit of material tracked, the table will also track reuse of the material on-site and disposal of the material off-site using the same categories identified for demolition debris above.

Method Of Measurement And Basis Of Payment

Disposal of contaminated soil shall be measured for payment by the Ton of actual and verified weight of contaminated materials removed and disposed of. The quantities will be determined only by weight slips issued by and signed by the disposal facility. The most cost-effective, legal disposal method shall be used. The work of the LSP for disposal under all of these items shall be incidental to the work with no additional compensation.

ITEM 181.11 Measurement for Disposal of Unregulated Soil shall be under the Contract Unit Price by the weight, in tons, of contaminated materials removed from the site and transported to and disposed of at an approved location or licensed facility, and includes any and all costs for approvals, permits, fees and taxes, additional testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEM 181.12 Measurement for Disposal of Regulated Soil – In-State Facility shall be under the Contract Unit Price by the weight in tons of contaminated materials removed from the site and transported to and disposed of at an approved in-state facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEMS 181.11 through 181.14 (Continued)

ITEM 181.13 Measurement for Disposal of Regulated Soil - Out-of-State Facility shall be under the Contract Unit Price by the weight in tons of contaminated materials removed from the site and transported to and disposed of at an approved out-of-state facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEM 181.14 Measurement for Disposal of Hazardous Waste shall be under the Contract Unit Price by the weight in tons of hazardous waste removed from the site and transported to and disposed of at the licensed hazardous waste facility, and includes any and all costs for approvals, permits, fees and taxes, testing/characterization required by the facility beyond the standard disposal test set, decontamination procedures, transportation and disposal.

ITEM 402.13 PAVEMENT MILLING MULCH FOR SHOULDERS FOOT

Work to be done shall conform to the relevant provisions of Subsection 769 of the Standard Specifications and the following:

The work consists of earthworks to install pavement millings mulch for shoulders at the edge of pavement. The existing shoulder shall be prepared for pavement milling mulch as necessary and directed by the Engineer. The work shall consist of excavation and leveling shoulder area to be mulched. The excavation and leveling of shoulder shall be pushed back down slope on embankment and/or excavated and disposed of on-site level and compacted as directed by the Engineer. Milling mulch shall be graded and compacted to a width of 3 feet and a depth of 4 inches level with the edge of the pavement, top of edging or curb or as directed by the Engineer. No geotextile fabric under the pavement millings shall be installed.

Materials

Pavement milling mulch shall be smaller than the Standard 1-1/2 inch sieve.

The on-site recycling of pavement millings sourced from the project is encouraged. All pavement milling mulch for shoulders will be accepted based on visual inspection by the Engineer. Mulch material greater than 1 ½ inch shall be removed off-site by the Contractor.

Method of Measurement

Item 402.13 will be measured per FOOT in the longitudinal direction parallel to the edge of road, complete in place.

Basis of Payment

Item 402.13 will be paid per FOOT of material installed which price includes materials, excavation, grading and leveling and disposing on site, compacting and all incidental costs required to complete the work to the satisfaction of the Engineer.

ITEM 657. TEMPORARY FENCE FOOT

The work under this Item shall conform to the relevant provisions of Subsection 644 of the Standard Specifications and the following:

The work shall include furnishing, installing, adjusting, and resetting, and subsequently removing a temporary chain link fence across the access to the work area as necessary for safety and security, and as required by the Engineer.

All posts, including end, corner and intermediate brace posts and all access/egress gates and gate posts shall be included in the unit price of this item. The fencing height shall be 72 inches minimum. Material need not be new but shall not be deteriorated nor in any way jeopardize the security purposes intended. All fencing materials shall meet the approval of the Engineer.

Fence fabric shall be placed on the face of the post away from the work area. The top edge of the fabric shall be finished with a "Knuckled" selvage.

A 48" x 30" sign, conforming to the relevant provisions of Subsection 852, shall be mounted on each gate. The sign legend shall be 8"-high, bold-red font, printed on white background, and shall read as follows:

DANGER

AREA CLOSED TO VEHICLE, BICYCLE, AND PEDESTRIAN TRAFFIC

It may be necessary to remove and reset sections of temporary fence at times during construction to accommodate construction operations. This shall be considered incidental to the work.

The Contractor shall be responsible for maintenance of the temporary fence; be responsible and cognizant that it remains secure, and that the area is always sealed off to the public. Fence gates shall always be secured closed with a padlock and chain while the Contractor is not on site.

METHOD OF MEASUREMENT

Item 657. will be measured for payment by Foot, of temporary fence installed, complete in place.

BASIS OF PAYMENT

Item 657. will be paid for at the Contract unit price per Foot, which price shall include all labor, tools, materials, equipment, repair, restoration, or replacement of any damaged fencing, removal and disposal of the fence upon the completion of the project, and all incidental costs required to complete the work.

ITEM 698.2 GEOTEXTILE FABRIC FOR SUBSURFACE DRAINAGE SQUARE YARD

The work under this item shall include furnishing and installing geotextile fabric in the construction of drainage swales.

Materials

The material to be supplied under this Item shall conform to the MassDOT Standard Specifications for materials M9.50.0: Geotextile Fabrics and be listed on the MassDOT Qualified Construction Materials List for Application Code 1: Subsurface Drainage.

Construction Methods

A. When sections of geotextile filter fabric need to be joined, the sections shall be overlapped a minimum of 18 inches in the direction of flow and installed per manufacturer's written literature.

B. The geotextiles shall be protected from exposure to sunlight during transport and storage. After placement, the geotextile shall not be left uncovered for more than two (2) weeks.

C. Any section of fabric that is damaged shall be repaired in accordance with the manufacturer's requirements and AASHTO M 288 and to the satisfaction of the Engineer, or it shall be replaced at the Contractor's expense.

METHOD OF MEASUREMENT

Item 698.2 will be measured for payment by Square Yard, of geotextile Fabrics installed, complete in place. Overlaps shall be measured as a single layer of cloth.

BASIS OF PAYMENT

Item 698.2 will be paid for at the Contract unit price per Square Yard, which price shall include all labor, tools, materials, equipment, and all incidental costs required to complete the work.

ITEM 698.4 GEOTEXTILE FABRIC FOR PERMANENT EROSION CONTROL SQUARE YARD

The work under this item includes furnishing and installing geotextile fabric in the construction of bridge elements, retaining walls, and stream restoration.

Materials

The material to be supplied under this Item shall conform to the MassDOT Standard Specifications for materials M9.50.0: Geotextile Fabrics and be listed on the MassDOT Qualified Construction Materials List for Application Code 4: Permanent Erosion Control.

Construction Methods

1. When sections of geotextile filter fabric need to be joined, the sections shall be overlapped a minimum 18 inches in the direction of flow and installed per manufacturer's written literature.

2. The geotextiles shall be protected from exposure to sunlight during transport and storage. After placement, the geotextile shall not be left uncovered for more than two (2) weeks.

3. Any section of fabric that is damaged shall be repaired in accordance with the manufacturer's requirements and AASHTO M 288 and to the satisfaction of the Engineer, or it shall be replaced at the Contractor's expense.

METHOD OF MEASUREMENT

Item 698.4 will be measured for payment by Square, of geotextile Fabrics installed, complete in place. Overlaps shall be measured as a single layer of cloth.

BASIS OF PAYMENT

Item 698.4 will be paid for at the Contract unit price per Square, which price shall include all labor, tools, materials, equipment, and all incidental costs required to complete the work.

ITEM 740. ENGINEER'S FIELD OFFICE AND EQUIPMENT (TYPE A) MONTH

The work under this Item shall conform to the relevant provisions of Subsection 740 of the Standard Specifications and the following:

Two computer systems and printer system meeting minimum requirements set forth below including installation, maintenance, power, paper, disks, and other supplies shall be provided at the Resident Engineer's Office:

All equipment shall be UL approved and Energy Star compliant.

The Computer System shall meet the following minimum criteria or better:

Processor:	Intel, 3.5 GHz
System Memory (RAM):	12 GB
Hard Drive:	500 GB
Optical Drive:	DVD-RW/DVD+RW/CD-RW/CD+RW
Graphics Card:	8 GB
Network Adapter:	10/100 Mbit/s
USB Ports:	6 USB 3.0 ports
Keyboard:	Generic
Mouse:	Optical mouse with scroll, MS-Mouse compliant
Video/Audio	the computer system shall be capable of allow video calling and recording:
Video camera	shall be High Definition 1080p widescreen capable video calling and recording with built in microphone. The microphone system shall capture natural audio while filtering out background noise.
Audio	shall be stereo multimedia speaker system delivering premium sound.
OS:	Latest Windows Professional with all security updates
Web Browser:	Latest Internet Explorer with all security updates
Applications:	Latest MS Office Professional with all security updates Latest Adobe Acrobat Professional with all security updates Latest Autodesk AutoCAD LT Antivirus software with all current security updates maintained through the life of the contract.
Monitors:	Two 27" LED with Full HD resolution. Max. resolution 1920 x 1080
Flash drives:	2 (two) - 128GB USB 3.0
Internet access:	High Speed (min. 24 mbps) internet access with wireless router.

ITEM 740. (Continued)

The Multifunction Printer System shall meet the following minimum criteria or better:

Color laser printer, fax, scanner, email and copier all in one with the following minimum capabilities:

- Estimated volume 8,000 pages per month
- LCD touch panel display
- 50 page reversing automatic document feeder (RADF) (not including the bypass tray)
- Reduction/enlargement capability
- Ability to copy and print 11” x 17” paper size
- email and network pc connectivity
- Microsoft and Apple compatibility
- ability to overwrite latent images on hard drive
- 600 x 600 dpi capability
- 30 pages per minute print speed (color),
- 4 Paper Trays Standard
- Automatic duplexing
- Finisher with staple functions
- Standard Ethernet. Print Controller
- Scan documents to PDF, PC and USB
- ability to print with authenticated access protection

The Contractor shall supply a maintenance contract for next day service, and all supplies (toner, staples, paper) necessary to meet estimated monthly usage.

The Engineer's Field Office and the equipment included herein including the computer system, and printer shall remain the property of the Contractor at the completion of the project. Disks, flash drives, and card readers with cards shall become the property of the Department.

Compensation for this work will be made at the contract unit price per month which price includes full compensation for all services and equipment, and incidentals necessary to provide equipment, maintenance, insurance as specified and as directed by the Engineer.

ITEM 751.7 COMPOST BLANKET CUBIC YARD

The work under this Item shall conform to the relevant provisions of Subsection 751 and M1.06.0 Compost of the Standard Specifications and the following:

Work shall consist of furnishing and pneumatically applying compost as a thin mulch blanket (1/2-1 inch depth) over prepared soil to provide temporary soil stabilization and organic matter for plant growth.

SUBMITTALS AND MATERIALS

No materials shall be delivered until the required submittals have been approved by the Engineer. Delivered materials shall match the approved samples. Approval of test results does not constitute final acceptance.

Contractor shall submit to the Engineer samples and certified test results no sooner than 60 days prior to application of compost. Vender certification that material delivered meets the test results shall be submitted if requested.

Compost shall meet the requirements for M1.06.0: Compost, Type 2, as referenced in the MassDOT– Highway Division Standard Specifications for Highways and Bridges, Division III: Materials Specifications, latest edition.

The Engineer shall approve the Contractor's equipment for application.

CONSTRUCTION METHODS

Application of compost material shall not begin until the Engineer has approved the site and soil conditions. Soil preparation shall be as specified under the applicable item for soil placement or for seeding. The Contractor shall notify the Engineer when areas are ready for inspection and application of compost.

Compost blanket shall be pneumatically applied (blown on) to a minimum depth of one half to one inch. Where shown on the plans or when directed by the Engineer depth may be increased to provide berms for sediment control or to otherwise prevent slope erosion.

When compost blanket is proposed with seeding, seed shall be broadcast and shall occur in conjunction with compost blanket, as specified under the relevant item for seeding.

When compost blanket is proposed for areas with planting, compost (and seed if applicable) shall be applied after planting. If compost and seed occur prior to planting, areas shall be regraded and compost and seed reapplied to the satisfaction of the Engineer and at the Contractor’s expense.

ITEM 751.7 (Continued)

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 751.7 will be measured and paid for at the Contract unit price per Cubic Yard which price shall include all labor, materials, equipment, and all incidental costs required to complete the work of pneumatically applying compost.

Surface preparation of substrate receiving compost blanket shall be compensated under the applicable item for placement of loam, sand, ordinary borrow, wetland soil, topsoil rehandled and spread, tilled existing soil, or other specified substrate.

Seeding, if utilized, will be compensated for under the appropriate seeding items.

ITEM 755.45 WETLAND RESTORATION SQUARE YARD

DESCRIPTION

The work under this item shall conform to the relevant provisions of Subsections 120, 751, 765, 767, and 771 of the Standard Specifications and the following:

The work under this item shall include all labor and furnishing of materials to complete the work specified herein to protect and restore existing inland wetland areas that will be temporarily impacted as shown on the drawings and as required by the Engineer.

Inland Wetland Replication work shall be as specified and compensated under that item. Tidal wetland mitigation shall be as specified under the appropriate item for tidal wetlands.

Restoration Area shall be constructed to meet the requirements of all associated permits and certifications, including relevant performance standards of the Massachusetts Wetlands Protection Act (MGL C. 131, s40), Section 401 Water Quality Certification, and Section 404, U.S. Army Corps of Engineers General Permit.

SUBMITTALS – DOCUMENTS

Request for Conditional Acceptance: As specified below, a letter requesting Conditional Acceptance of the work and the site conditions shall be submitted to the Engineer.

Request for Certificate of Compliance (Partial or Full): If applicable, request for a Certificate of Compliance shall be submitted to the Engineer for distribution to appropriate regulatory agencies as specified below.

ASSOCIATED ITEMS AND MATERIALS

Compost shall be in accordance with Subsection 751 and M1.06.0 Organic Soil Additives of the Standard Specifications. Compost shall not contain seeds, roots, stems, or other viable parts of invasive plants or other noxious plants. Off-site sources shall be identified and available for inspection prior to transport of material to the site to verify that they are likely to be free of invasive plant species, including all viable plant parts.

Compost Blanket shall be as specified under that item.

Seed Mix

Required submittals include:

- Certificate of Materials from the supplier shall be submitted and approved 30 days prior to ordering seed. Seed species listed on the certificate shall include ecotype region (i.e., *Asclepias incarnata*, PA Ecotype).

ITEM 755.45 (Continued)

- Seed tag from the bag of seed used shall be submitted to the Engineer at the time of seeding. Seed tag shall include ecotype region and species, guaranteed percentages of purity, weed content and germination of the seed, and the net weight. Seed tag shall match the Certificate of Materials, include the name of the supplier, and date material was sent.

- Bill of lading or a notarized Certificate of Compliance from the Supplier serving as proof of purchase shall be submitted if requested by the Engineer. Document shall include date of sale, quantity, lot number, and address of Supplier. This shall match the seed tag. Notary shall not work for either the contractor or seed supplier.

Seed mix shall be: ***765.555 Wetland Seed – Part Shade Mix: 20 lbs/acre PLS.***

Fertilizers shall not be used.

Straw mulch or hydromulch shall be per Section M6 of the Standard Specifications.

Water

The Contractor shall provide water and all equipment required at no extra cost. Water shall be suitable for irrigation and free from ingredients harmful to plants and wildlife. Water from the adjacent water bodies or waterways shall not be utilized. It is the Contractor's responsibility to correct injury or damage due to the lack of water, too much water, or use of contaminated water.

CONSTRUCTION METHODS & SEQUENCE

Site Protection Prior to Impacts

Where and as required vegetation shall be cut flush and area surveyed to establish pre-construction elevations.

Following the cutting and surveying, temporary separation fabric or timber matting shall be placed as required to protect soil and vegetation from compaction, contamination, and/or other damages. Fabric and timber mats shall be placed as specified under the respective items and the Engineer shall approve placement.

Restoration Upon Completion of Roadway Construction Work

Sediment Barriers

If required for sediment control during Restoration work (i.e, tilling is required to restore soil), sediment barriers shall be installed along the downslope perimeter of the Restoration Area beginning and ending in the surrounding upland so that no disturbed soil can enter adjacent wetlands or waters. Sediment barriers shall be in place and approved by the Engineer prior to any soil disturbance. No work shall take place outside the barriers.

ITEM 755.45 (Continued)

Removal of Fill and Grading

Fill and temporary separation fabric or mats shall be removed and disposed of as specified under the respective items.

If required, grades shall be restored to pre-construction elevations as shown in the baseline survey or as required by the Engineer and Wetland Specialist to restore hydrologic functions. Final elevations shall be approved by the Engineer prior to soil preparation and seeding. Grading shall be incidental to this item.

Following approval of grading to elevations required, soil shall be prepared and seeded as follows.

Soil Scarification

Compacted soil shall be scarified with equipment approved by the Engineer. Upon approval of soil scarification, the area shall be **seeded with Compost Blanket** as specified below. Seeding shall immediately follow soil preparation.

Seeding with Compost Blanket
Application of compost blanket and seed shall be done as one application and shall not begin until the Engineer has approved the site and soil conditions. The Contractor shall notify the Engineer when raked areas are ready for inspection and application of compost blanket and seed.

Compost shall be pneumatically applied (blown on) to a depth of one half to one inch at the same time that seed is broadcast such that seed is covered by a light application of compost.

When planting occurs on projects with compost blankets and seed application, planting shall occur prior to application of compost and seed. Otherwise, compost and seed shall be re-applied to the satisfaction of the Engineer and at not cost to the contract.

Seed tags shall be submitted at time of seeding.

PLANT AND SEED ESTABLISHMENT

Seeding that fails to establish according to the conditions of acceptance below shall be over-seeded as required by the Engineer. Washouts and channels shall be repaired and stabilized prior to overseeding. Excessive weed growth shall be pulled out by the roots or, with approval from the Engineer, cut prior to over-seeding. Soil repair and weed control are incidental to this item.

CONDITIONAL ACCEPTANCE OF WORK

Conditional Acceptance shall indicate approval of the wetland restoration work and agreement that work has been done according to plan or modified as approved. Upon completion of construction, the Contractor shall submit a Request for Conditional Acceptance that includes a brief narrative from the Wetland Specialist (if applicable to project) demonstrating that the wetland restoration work was done according to plans (or how modified) and meets required

ITEM 755.45 (Continued)

permit conditions (if applicable). The narrative shall include, photo-documentation of pre-construction conditions as well as soil work, planting, and seeding. Seed tags shall be submitted as part of the Request for Conditional Acceptance.

Upon receipt of a Request for Conditional Acceptance, the Engineer, the Wetland Specialist, and regulatory representative (if required) shall assess the Restoration Area and the surrounding areas. At a minimum, the following conditions shall be included in the narrative and reviewed as part of the on-site assessment of whether:

- The target elevations have been restored per the survey or adjusted per the Engineer. Areas that are too high or too low should be identified along with suggested corrective measures.
- Soil compaction has been mitigated.
- Soils are stabilized and there is no sediment in the wetland and no channeling of slopes.
- Hydrology meets performance standards and has been adequately restored.
- Specified seed mix has been seeded and seeded species in the wetland and adjacent upland show signs of good germination and healthy growth.
- Planted woody and herbaceous species (if included) meet specifications and are establishing well.
- There are no invasive plants visible in the restored wetland area.
- Silt fence and non-biodegradable sediment barrier materials have been removed.

Upon approval that the work meets the above conditions, MassDOT will issue a letter of Conditional Acceptance. If the Wetland Restoration work is not approved, MassDOT will issue a rejection letter requiring corrective actions. Work not approved shall be addressed by the Contractor at no extra cost.

Erosion of adjacent slopes or the flow of sediments into the wetland between Conditional and Final Acceptance shall be immediately addressed by the Contractor.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 755.45 will be paid for at the Contract unit price per Square Yard, which price shall include all labor, materials, compost and amendments, seed, mulch, equipment, submittals, maintenance, grading, and incidental costs necessary to complete the work as required.

Payment shall be as follows:

- 50% upon completion of soil preparation and seeding
- 50% upon Conditional Acceptance

Sediment Control Barrier will be paid under Item 767.121
Compost Blanket will be paid under Item 751.7
Seeding will be paid for under the respective items.

ITEM 756.1 CONSTRUCTION PERIOD POLLUTION PREVENTION AND EROSION AND SEDIMENT CONTROL PLAN — LUMP SUM

The work under this item shall consist of the preparation and implementation of a Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan (CP/PP) as required by a regulatory agency.

This Item is applicable to projects that are not subject to the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) required by the National Pollutant Discharge Elimination System (NPDES) and applicable Construction General Permit (CGP) issued by the U.S. Environmental Protection Agency (EPA).

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 CP/PP.

The CP/PP, at a minimum, shall include the following:

- Project & Site Description
- Project Site Contact Information
    - This shall include the phone number for the Contractor Site Superintendent, Project Manager and CP/PP Inspector(s).
- Qualifications of the CP/PP Inspector and documentation of qualifications
    - At a minimum, relevant personnel responsible for erosion and sedimentation control inspections shall have completed the EPA's construction inspection training course and obtained a certificate confirming completion of the training module, or have completed a third-party stormwater course which covers the minimum topics listed in Part 6.3.b of the CGP.
- Reference to and information to address permit Special Conditions relevant to the CP/PP contents
    - These include but are not limited to, the Combined DEP Section 401 Water Quality Certification and Army Corps of Engineers 404 Dredging Permit attached to these Special Provisions.
- Construction Sequencing/Phasing
- Erosion Prevention, Sediment Control, and Best Management Practices (BMP s) to be implemented
- Maintenance measures and intended timeline to address maintenance and corrective actions for implemented Erosion Prevention Measures, Sediment Control Devices, and BMPs.
- Anticipated inspection schedule and sample inspection report form
    - Use the EPA's Site Inspection Report Template found on the EPA's website.

ITEM 756.1 (Continued)

- Site Plans
    - This shall depict, at minimum, the project limits, locations of construction phase erosion prevention measures, construction phase sedimentation control measures, limits of disturbance, staging and laydown areas, proposed dewatering locations and proposed stockpile locations. Depict existing jurisdictional wetland resource areas, drainage conveyances and stormwater treatment features.

The Contractor shall prepare the CP/PP, and update/revise as needed upon changes in site conditions, relevant project personnel, construction phase controls, schedule changes, revised work, regulations, and construction methodologies. The Contractor shall submit the CP/PP to the Engineer for approval at least thirty (30) days prior to prior to commencement of any project related activity that disturbs land, including clearing and grubbing. Submission of the CP/PP to a regulatory agency for review and approval may also be required by a Special Condition associated with a permit issued under the Wetlands Protection Act, or Section 401of the Clean Water Act and their implementing Regulations. It is the responsibility of the Contractor to ensure the CP/PP is submitted to reviewers in a timely manner to support the construction schedule. It is the responsibility of the Contractor to comply with the conditions of any state Water Quality Certification, Army Corps of Engineers Section 404 Permit and other environmental permits applicable to the project, and to include in the CP/PP the methods and means necessary to comply with applicable conditions of said permits.

Inspection frequency shall be weekly. The inspections shall be performed by an individual that meets the qualifications specified in the permits and proof of the inspector's qualifications shall be included as an Appendix in the CP/PP. CP/PP inspection reports shall be completed and distributed to the Resident Engineer within 24-hours of each inspection. Special conditions associated with permits may also require submittal of reports to regulators at a certain frequency. Reports shall be maintained throughout the duration of the project. In addition, if the Engineer determines at any time that the inspector's performance is inadequate, the Contractor shall provide an alternate inspector.

The Contractor is responsible for preparation of the CP/PP, inspections, and associated reports. The Standard Specifications require adequate erosion and sedimentation control for the duration of the Contract. All control measures must be properly selected, installed, and maintained in accordance with manufacturer specifications, good engineering practices, and MassDOT standard specifications and special provisions. Contractor must maintain all control measures and other protective measures in effective operating conditions in accordance with the additional Special Provisions herein. 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.

ITEM 756.1 (Continued)

BASIS OF PAYMENT

Item 756.1 will be paid for at the contract unit price, lump sum, which price shall include all work detailed above, including CP/PP and Flood Contingency Plan preparation, required revisions, revisions/addenda during construction, inspections and reports.

Work under this item shall include acceptable completion of the CP/PP, Flood Contingency Plan, site inspections, and revisions/amendments required during construction. In addition, any erosion prevention or sediment control measures beyond those specified in bid items that are selected by the Contractor to facilitate and/or address the Contractor's schedule, methods and execution of the work shall be considered incidental to this item.

Payment of thirty (30) % of the contract price shall be made upon acceptance of the CP/PP and Flood Contingency Plan. Payment of forty (40) % of the contract price shall be made in equal installments over the expected duration of stormwater pollution prevention measures. Payment of the final thirty (30) % of the contract price shall be paid when final stabilization has been achieved (minimum of 75% total cover of disturbed vegetated areas with perennial ground cover).

ITEM 765.21 ANNUAL COVER CROP FOR NATIVE SEEDING POUND

The work under this item shall conform to the relevant provision of Subsection 765 of the Standard Specifications and the following.

Description

Work consists of furnishing and applying the appropriate annual grass to be seeded as a cover crop in conjunction with upland native seeding and at the rate specified herein.

A cover crop shall be used for following conditions:

- when specified under Application Rate for the permanent native upland seed mix
- for slopes 2:1 or steeper and an annual is not already specified as part of the permanent mix
- when seeding out of season and the native seed mix does not already specify an annual
- as required to prevent erosion until the permanent seed establishes.

A cover crop is not necessary for wetland seeding and is not typically necessary for soil stabilization when seeding in conjunction with a compost blanket application.

Annual rye (*Lolium multiflorum*) will not be accepted as an annual cover crop.

Using annual rye or exceeding the application rate such that a dense stand of annual grasses prevents germination of the native grasses will require mowing of annual grasses. In this instance, mowing of cover crop will be incidental to this item.

Seed and Application Rate

Add 30 pounds/acre of the following seed based on seeding season:

Avena sativa (Grain Oats):	1 January to 31 July
Cecale cereale (Grain Rye):	1 August to 31 December

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Annual Cover Crop will be measured for payment per pound of seed, complete in place.

Annual Cover Crop will be paid at the contract unit price per pound upon approval of seed bag tags or other documentation of correct application rate and species, and upon acceptance of a satisfactory stand of annual grasses three weeks following seeding.

Application and care of cover crop will be paid for separately under Item 765.635 Native Seeding and Establishment.

ITEM 765.451 PART SHADE ROADSIDE MIX POUND
ITEM 765.555 WETLAND SEED – PART SHADE MIX POUND

Work under these items shall consist of furnishing the mix(es) specified below in the required quantity.

SUBMITTALS

1) Pre-Verification of Seed Availability. Within 30 days after the Notice to Proceed, the Contractor shall submit to the Engineer the supplier's verification of availability of seed species in the required quantities and for the anticipated date of seeding. Verification shall be on the supplier's letterhead and notarized by the supplier's notary. Species not expected to be available should be noted and substitutions recommended.

2) Final Verification of Seed Availability. No earlier than 21 days prior to ordering, the Contractor shall submit to the Engineer the supplier's verification of availability of seed species and in the required quantities. Verification shall be on the supplier's letterhead and notarized by the supplier's notary. A copy of this submittal shall be forwarded to the MassDOT Landscape Design Section. Substitutions or changes in the mix at this time must be approved by MassDOT Landscape Design Section.

3) Seed Worksheet provided herein shall be submitted to the Engineer prior to ordering seed to determine the number of pounds of Pure Live Seed required.

4) Seed Tags. The contractor shall submit original seed tags from each bag of seed used on the project or ensure that each tag is photo documented by the Engineer while on the unopened bag.

   Number of tags submitted must correspond to number of bags delivered.

   Species listed on the seed tag shall match the Final Verification of Seed Availability (Submittal #2) unless approved otherwise. Tag must include: variety and species name; lot number; purity; percentage of inert matter; percentage of weeds, noxious seeds, and other crop seeds; germination, dormant or hard seed; total viability; origin of seed; germination test date, net weight, and name and address of seller. The origin of seed must be listed on the seed tag for all species in the mix to provide verification of original (generation 0) seed source. The smallest known geographic area (township, county, ecotype region, etc.) shall be listed. Ecotypes and cultivars shall be as close to Massachusetts as possible and appropriate to the site conditions.

   A copy of this submittal shall be forwarded to the MassDOT Landscape Design Section.

ITEMS 765.451 & 765.555 (Continued)

5) Verification of Seed Delivery. Prior to payment, contractor shall submit the Seed Delivery Verification form contained within the contract or the Supplier's Verification on company letterhead or a bill of lading. Supplier verification must include all information requested on the Verification form within this contract. The bill of lading must include variety and species name, lot number, net weight shipped, date of sale, invoice, project or seeding location, and name and address of Supplier. All information must be filled in and complete for acceptance. Information must match the seed tags and quantity of seed used on the job. A copy of this submittal shall be forwarded to the MassDOT Landscape Design Section

6) Seed Sample. If requested or if seed is from a previously opened bag, the contractor may be asked to submit to the Engineer a sample of seed from the seed bag (1-2 cups) at the time of seeding.

Seeding Season

The appropriate seeding seasons are:

Spring: April 1 - May 15
Fall: October 1 - December 1 for dormant seeding

Permanent Seed Mix(es)

Calculating Pure Live Seed (PLS)

Quantities specified are PURE LIVE SEED. Greater quantities of ordered seed may be required to achieve actual specified seeding rates.

Pure Live Seed (PLS) is defined as a percentage calculated by multiplying the percent of pure seed by the percent of viable seed (total germination, hard seed, and dormant seed). For example:

If a seed label indicates 90% purity, 78% germination, 10% hard seed, and 2% dormancy, it is calculated to be 90% x [78 + 10 + 2]% = 81% PLS.

Therefore, each pound of PLS would need 1 pound / 0.81 = 1.2 pounds of seed with a 90% purity and 90% total germination

Seed Mix(es) shall be as specified below. Ecotypes and cultivars shall be as close to Massachusetts as possible and appropriate to the site conditions.

ITEMS 765.451 & 765.555 (Continued)

765.451 Part Shade Roadside Mix

	Botanical Name	Common Name	% PLS by Weight
Grass			
	Festuca rubra	Creeping Red Fescue	25.70%
	Elymus virginicus	Virginia Wild Rye	24.00%
	Schizachyrium scoparium	Little Blue Stem	22.50%
	Panicum virgatum	Switch Grass	10.00%
	Panicum clandestinum 'Tioga'	Deer Tongue 'Tioga'	7.00%
	Carex vulpinoidea	Fox Sedge	2.00%
	Agrostis perennans	Upland Bentgrass	2.00%
	Juncus effusus	Soft Rush	0.20%
			93.40%
Herb/Forb			
	Chamaecrista fasciculata	Partridge Pea	3.00%
	Penstemon digitalis	Beard-tongue	1.00%
	Zizia aurea	Golden Alexanders	0.30%
	Desmodium canadense	Showy Tick Trefoil	0.30%
	Solidago bicolor	White Goldenrod	0.20%
	Solidago caesia	Woodland Goldenrod	0.20%
	Rudbeckia hirta-VT ecotype	Black-eyed Susan-VT ecotype	0.20%
	Aster novae-angliae	New England Aster	0.20%
	Solidago odora	Licorice Scented Goldenrod	0.20%
	Aster divaricatus	White Wood Aster	0.20%
	Heliopsis helianthoides	Ox-Eye Sunflower	0.20%
	Pycnanthemum tenuifolium	Slender Mountain Mint	0.20%
	Monarda fistulosa	Wild Bergamot	0.10%
	Eupatorium perfoliatum	Boneset	0.10%
	Aster lateriflorus	Calico Aster	0.10%
	Oenothera fruticosa var. fruticosa	Sundrops	0.10%
			6.60%
			100.00%

Seeding Rate: 15.0 lbs PLS/Acre

ITEMS 765.451 & 765.555 (Continued)

765.555 Wetland Seed – Part Shade Mix

Grass	Botanical Name	Common Name	% PLS By Weight
	Poa palustris	Fowl Bluegrass	25.00%
	Elymus riparius	Riverbank Wild Rye	19.00%
	Carex lurida	Shallow Sedge	17.00%
	Carex vulpinoidea	Fox Sedge	10.00%
	Cinna arundinacea	Sweet Woodreed	5.00%
	Sparganium eurycarpum	Giant Bur Reed Eco PA	4.00%
	Carex scoparia	Broom sedge	4.00%
	Carex lupulina	Hop Sedge	4.00%
	Scirpus polyphyllus	Many Leaved Bulrush	3.00%
	Juncus effusus	Soft Rush	2.50%
	Carex intumescens	Bladder Sedge	2.00%
	Sparganium americanum	Burrweed	2.00%
	Scirpus cyperinus	Woolgrass	1.00%
	Carex crinita	Fringed Sedge	1.00%
	Juncus tenuis	Path Rush	0.50%
			100.00%
Seeding Rate: Species ecotype shall be as native to New England region as possible. Apply this mix at 20 lbs PLS/acre.			

Application Rate

Part Shade Roadside Mix: 15 lbs/acre PLS. In addition, apply 30 pounds of cover crop (grain oats or grain rye) as appropriate to the season.

Wetland Seed – Part Shade Mix: 20 lbs/acre PLS. In addition, apply 30 pounds of cover crop (grain oats or grain rye) as appropriate to the season.

Any species substitution shall be with a species having similar characteristics and function. Substitutions must be approved by MassDOT Landscape Design Section per the documentation submittal process.

ITEMS 765.451 & 765.555 (Continued)

50% Increase Adjustment for Field Conditions

Seeding under the following conditions requires a 50% increase in the permanent mix at the time of construction:

- Seeding out of season
  OR
- Seeding after Compost Blanket has been applied (unless already increased for out of season).

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

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Part Shade Roadside Mix and Wetland Mix – Part Shade Mix will be measured for payment by the pound of Pure Live Seed delivered and complete in place.

Part Shade Roadside Mix and Wetland Mix – Part Shade Mix will be paid at the contract unit price per pound of Pure Live Seed delivered upon approval of all Seed Submittal Documentation. Overseeding required to correct poor germination or establishment shall be incidental to the item.

Cover crop not included as part of the permanent mix composition will be paid for under Item 765.21, Annual Cover Crop.

Application and care of native seed mix will be paid for separately under Item 765.635 Native Seeding and Establishment

ITEM 765.635 NATIVE SEEDING AND ESTABLISHMENT SQUARE YARD

Work shall conform to the relevant provisions of Subsections 765 and 767 of the Standard Specifications and the following:

The work under this item shall consist of seeding, mowing, and other care to establish a stand of grass in the areas shown on the plans or as required by the Engineer. For the purposes of these specifications, the term "grass" shall apply to all the forbs, grasses, sedges, and rushes included in the materials.

Qualifications

Seeding shall be done by a company having a minimum of five years of experience with native seed establishment. Prior to beginning work, the seeding Contractor shall furnish proof of qualifications to the Engineer for approval. Proof of qualifications shall include providing documentation (photos and contacts) to demonstrate knowledge and expertise with native seeding and establishment and proof of having completed successful native seeding projects.

Seeding Season

Seeding seasons for native mixes is April 1 - May 15 and October 1 - December 1 for dormant seeding. Written approval must be obtained for seeding outside the seeding season and, if approved, the permanent seed rate shall be increased by 50%.

Seeding season for cover crops shall be grain oats January 1 – July 31 and grain rye August 1 – December 1.

Material and Submittals

Seed Mixes and Submittals shall be per the item(s) for permanent and annual (cover crop) seed mixes.

Compost Blanket, if used, shall meet the material and submittal requirements for that item.

Hydromulch shall be wood fiber or straw applied per the Standard Specifications and at the rates specified below and per the manufacturer.

A certified statement shall be furnished, prior to start of work, to the Engineer by the Contractor as to the number of pounds of hydromulch, tackifier, and seed, per 100 gallons of water and as applicable to products used. This statement should also specify the number of square yards of seeding that can be covered with the solution specified above.

Fertilizer

No fertilizers shall be applied.

ITEM 765.635 (Continued)

Water
Water, including hose and all other watering equipment required for the work, shall be furnished by the Contractor to the site at no additional cost. Water shall be suitable for irrigation and free from ingredients harmful to plant life. All plants injured or work damaged due to the lack of water or the use of too much water shall be the Contractor's responsibility to correct.

Seeding
Hand broadcast method shall be used for all areas smaller than half an acre and when specified on the plans for areas over half an acre.

Seeding shall occur within 72 hours of placement of loam and final grading or the Contractor shall propose a reasonable, alternative schedule that shall be approved by the Engineer.

Surface Preparation
No seeding or soil preparation shall be done if soils are muddy or dry and compacted. Bare soils shall be raked to remove large stiff clods, lumps, brush, roots, stumps, litter and other foreign matter. Ruts and depressions shall be filled with additional loam or compost and the soil shall be re-graded to a relatively smooth finish corresponding to the required grades.

When seeding over existing or compacted soil or soil that has sat bare for more than 30 days, surface will be prepared by tilling or raking to a minimum depth of 2 inches prior to seeding and prior to Compost Blanket application (when applied).

Surface preparation shall be compensated for under for loam placement or topsoil rehandled and spread as appropriate to the project.

Jute or coir mesh, when specified in the contract, shall be placed after seeding and per the Standard Specifications and the manufacturer’s instruction.

Surface preparation shall be approved by the Engineer prior to seeding.

Seeding over Various Substrates

Loam: Seeding shall occur within 72 hours of loam placement to prevent loss of topsoil. Seed shall be manually broadcast for areas less than half an acre (each area, not cumulative area) and when specified on the plans. Broadcasting shall be immediately followed by hydromulching as specified below. When not specified on the plans, larger areas may be hydroseeded as specified below.

Compost Blanket: Compost Blanket shall be applied as specified under that item. Seed should be hand broadcast at the same time as compost application to ensure a thin cover of compost over seed.

When seeding is done after application of Compost Blanket the rate shall be increased by 50%. If the Compost Blanket is applied after December 1, seed shall be broadcast or hydroseeding over the compost in the Spring and the rate increased by 50% specified under Seed Application.

ITEM 765.635 (Continued)

Compost Mulch over Modified Rock: Compost Mulch and seed shall be applied as specified under that item. No hydromulch is required.

Cover Crop

Cover crop shall be used when seeding out of season, when specified with the permanent native seed mix under that item, and as required to prevent erosion until the permanent seed establishes.
A cover crop should not be used with a steep slope mix or other permanent mix which already contains either cereal rye or oats in the composition of the mix. A cover crop is not necessary for wetland seeding and is not typically necessary for soil stabilization when seeding in conjunction with a compost blanket application.

Seed Application

All seed shall be mulched as specified herein.

Seed application shall be by broadcast seeding or by hydroseeding as described below.

Broadcast Seeding

Seed shall be broadcast spread using a cyclone or whirlwind seeder or hand broadcast. Small or light-seeded species such as bluestem may be mixed with approved filler to achieve an even distribution. Seed shall not be broadcast when wind velocities are greater than 15 mph.

Broadcast seeding shall be undertaken in two separate passes at ninety degrees to each other. One-half the seeding rate shall be applied in each direction (horizontally and vertically). To ensure seed to soil contact with broadcasting of seed, seeding shall be followed by rolling or tracking with equipment approved by the Engineer.

Broadcast seed shall be mulched with weed-free straw mulch unless seeding is done as part of Compost Blanket in which case it shall be as specified above under seeding with Compost Blanket application. Hydromulching shall be as specified under Hydromulching.

Hydroseeding and Hydromulching

Hydroseed and mulching shall be per the manufacturer's directions and as follows.

Hydroseeding shall only be used for sites over half an acre in size or with permission of the Engineer.

Tank and hoses shall be cleaned from all previous hydroseeding and hydromulching projects. Seed shall be mixed into the slurry immediately before application and slurry applied within 30 minutes after seeds have been placed in the tank. Once seed has been placed in the tank, tank shall be agitated only enough to mix the seeds and keep slurry from separating.

A 2-step process shall be used for seeding in conjunction with hydromulch. Seed shall be applied with 500 lbs/acre of hydromulch in the first pass. A second pass with 1,000 lbs/ acre of hydromulch shall be applied in a second pass. Each pass shall be applied in a different direction.

ITEM 765.635 (Continued)

Once the seed has been added to the tank mixture a one-hour time limit is set for spreading the mixture on the soil. Once the one hour has passed the excess mixture must be discarded.

For broadcast seeding, hydromulch shall be applied immediately following seeding at a rate of 1,000 lbs/acre. Tank shall be cleaned from any previous hydroseeding.

Care During Germination and Establishment

Contractor shall care for seeded areas as necessary for successful germination. Care will include watering and weed control as necessary to achieve establishment of the specified seeded species after one growing season as specified below.

The contractor shall maintain the stand of grasses to ensure healthy growth of the seeded species. Work shall include mowing or weed-whacking for weed control, watering if necessary, and removal of invasive plants.

Watering shall be sufficient to achieve soil moisture to a depth of 2 inches or more and such moisture is uniform. Method of watering shall not erode or damage soil or grassed surfaces.

General Weed Control: Unless otherwise directed, mowing shall be as specified under Mowing for Weed Control for seed establishment. Weeds shall be mowed prior to weeds setting seed (by the end of July unless otherwise approved).

Control of Invasive and Aggressive Weeds: Invasive and aggressive weeds, including but not limited to mugwort, ragweed, knapweed, foxtail, crabgrass, and chicory must be cut or treated prior to going to seed. Herbicide treatment must be coordinated with MassDOT. Undesired species (such as chicory) introduced due to use of incorrect seed mix shall be removed at the Contractor's expense.

Mowing for Weed Control

Mowing for weed control shall be completed after weeds have sprouted and show leaf and bud growth, but prior to setting seed, generally between July 7th and August 1st, unless directed otherwise by the MassDOT Landscape Architect and the Engineer.

Mowing height shall be as needed for weed control, generally to a height of 8 inches and not below 4 inches, unless directed otherwise. Mowing shall be with a brush hog mower or string trimmer other approved equipment. Conventional lawn mowers which cannot achieve the appropriate cut shall not be used.

Contractor shall give 48-hour notice prior to mowing work. Mowing shall only occur in dry sunny weather. Litter pickup should occur prior to mowing in all areas. If required, cut grass shall be raked and removed. Litter pickup and raking and removal of grass shall be incidental to the work.

Mowing equipment shall be approved by the Engineer prior to work.

ITEM 765.635 (Continued)

Over-Seeding

Areas of bare ground greater than 2-3 feet in diameter shall be over-seeded with the specified mix during the appropriate season for seeding. Where required for overseeding mowing shall be as close to the soil as possible. Soil that is compacted shall be raked or otherwise roughened prior to over-seeding.

Over-seeding rates and methods shall those specified above under Materials and Methods. Following over-seeding, soil shall be lightly tamped to ensure seed to soil contact and areas shall be mulched with straw mulch and watered with a fine mist to moisten soil to a depth of at least 2 inches.

Over-seeding, mulch, watering, and all work for over-seeding shall be incidental.

Determining Satisfactory Grass Establishment

A well-established stand of the specified seeded species as determined by the Engineer and the MassDOT Landscape Architect will be required for Final Acceptance. The expectation is that an acceptable number and variety of the desired permanent seeded species (not the cover crop) will be visible. Generally:

- A minimum of 75% coverage by the specified permanent seeded species after one growing season. Of that percentage, generally, depending on the mix species:
  - At least 3 types of the permanent seeded grass species shall be visible.
  - At least 3 species of wildflowers shall be visible.
- There will be no significant gaps or bare soil (generally 2-3 feet in diameter or greater).
- There will be no more than 25% coverage by weed species.
- All soil shall be stabilized and there shall be no channeling or erosion.
- There will be no invasive or aggressive species within the stand at the time of acceptance.
- There shall be no evidence of seed from non-native mixes (i.e., clover) due to failure to clean the hydroseeding tank or using incorrect mix.

Invasive and aggressive weeds (such as mugwort, ragweed, knapweed, and chicory) must be cut or treated prior to going to seed for Interim Acceptance. Herbicide treatment must be coordinated with MassDOT.

A warm-season grass mix with perennials will not have uniform growth. A uniform stand of grass may indicate use of an incorrect mix.

ITEM 765.635 (Continued)

Acceptance of Seeding and Establishment Work

Conditional Acceptance shall be based on proper application of seed as specified herein.

Interim Acceptance of Care. Seeding will be inspected by mid-July to assess germination and Establishment conditions as described above. When necessary for Interim Acceptance, areas shall be mowed prior to weed species producing seed and as specified above under Weed Control. ***Areas requiring weed control that are not mowed prior to weed seed dispersal will not be approved for Interim Acceptance.*** Seeding that shows good germination and is determined by the Engineer and Landscape Architect to not require weed control at time of inspection shall be accepted for Interim Acceptance payment.

Final Acceptance of Establishment shall be given upon satisfactory Establishment as described above.

If the seeded area fails to meet the requirements of Establishment by the end of the growing season, contractor shall propose and implement remediations and site shall be inspected during the following growing season after July 1st. All remediation shall be at the contractor's expense.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Native Seeding and Establishment will be measured for payment by the square yard, complete in place.

Native Seeding and Establishment will be paid at the Contract unit price by the square yard upon Conditional, Interim, and Final Acceptances as described above. This price shall include all submittals, seeding, rolling to ensure seed-to-soil contact, weed control other than mowing, water, over-seeding, labor, materials, equipment, and all incidental costs required to complete the work of establishing a satisfactory stand of grass.

Native seed and cover crop mixes shall be compensated under the respective items.

Site preparation, including raking, tilling, removal of debris and stones, and other work to the prepare site for seeding shall be compensated under loam placement or topsoil rehandled and spread as relevant to the project. If used, Compost Blanket shall be compensated under the respective item.

Mowing for weed control will be incidental to this item.

Schedule of payment shall be as follows:

30% upon Conditional Acceptance

20% upon Interim Acceptance of Care, except this amount will be reduced to zero and final payment will be reduced accordingly when areas requiring weed control are not mowed as specified in the Interim Acceptance criteria.

50% upon Final Acceptance of Establishment

ITEM 765.664 MOWING FOR NATIVE SEED ESTABLISHMENT SQUARE YARD

DESCRIPTION

Item 765.664 Mowing for Native Seed Establishment shall be used solely for the purpose of weed management for upland native seed establishment, only when required by the Landscape Architect and the Engineer, and only during the period prior to weed seed dispersal as specified herein unless otherwise directed.

METHODS

Mowing shall be completed after weeds have sprouted and show leaf and bud growth, but prior to setting seed, generally between July 7th and August 1st, unless directed otherwise by the MassDOT Landscape Architect and the Engineer.

Mowing height shall be as needed for weed control, generally to a height of 8 inches and not below 4 inches, unless directed otherwise. Mowing shall be with a brush hog mower or string trimmer other approved equipment. Conventional lawn mowers which cannot achieve the appropriate cut shall not be used.

Contractor shall give 48-hour notice prior to mowing work. Mowing shall not occur when ground or grasses are wet. Litter pickup should occur prior to mowing in all areas. If required, cut grass shall be raked and removed. Litter pickup and raking and removal of grass shall be incidental to the work.

Mowing equipment shall be approved by the Engineer prior to work.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Mowing for Native Seed Establishment will be measured for payment per Square Yard of area mowed.

Mowing for Native Seed Establishment will be paid at the contract unit price per Square Yard of area mowed and upon completion during the approved period for mowing as described under Methods. Payment shall include all labor, materials, equipment, traffic controls, and all incidental work required for satisfactory completion of mowing.

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 minimum depth of 4 inches. The trench must be deep enough to remove all grass and other material which might allow underflow. After the bales are staked and chinked (filled by wedging), the excavated soil should be backfilled against the barrier. Backfill soil should conform to the ground level on the downhill side and should be built up to 4 inches against the uphill side of the barrier.

Each bale should be securely anchored by at least 2 stakes or re-bars driven through the bale. The first stake in each bale should be driven toward the previously laid bale to force the bales together. Stakes or re-bars should be driven deep enough into the ground to securely anchor the bales. For safety reasons, stakes should not extend above the bales but should be driven in flush with the top of the bale.

The gaps between the bales should be chinked (filled by wedging) with straw to prevent water from escaping between the bales. Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency. Wedging must be done carefully in order not to separate the bales.

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.

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:

ITEM 767.121 (Continued)

- 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.
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METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 767.121 will be measured and paid for at the contract unit price per foot of sediment control barrier which price shall include all labor, equipment, materials, maintenance, dismantling, removal, restoration of soil, and all incidental costs required to complete the work.

Additional barrier, such as double or triple stacking of compost filter tubes, will be paid for per foot of tube installed.

Barriers that have been driven over or otherwise damage by construction activities shall be repaired or replaced as directed by the Engineer at the Contractors expense.

ITEM 767.9 **JUTE MESH** **SQUARE YARD**

The work under this item shall conform to the relevant provisions of Section 700 of the Standard Specifications and the following.

The work under this item shall consist of furnishing and installing jute mesh fabric to prevent soil erosion. Jute mesh shall be placed over all areas of exposed soil in locations shown on the plans or as required by the Engineer.

MATERIALS

Jute netting or similar material shall be new, unused, undyed, and unbleached 100% biodegradable yarn (no polypropylene) and of uniform plain weave. The materials should weigh approximately 1.0 (+/- 5%) pounds per linear yard (assuming a 4-foot width).

Shall meet the following minimum requirements:

Open Area:	70-75%
Mesh Size:	approximately 1/2 inch with an open area of 60-65%.
Roll Weight:	approximately 1.0 (+/- 5%) pounds per linear yard
Warp Ends:	78 per linear yard
Weft Ends:	41 per linear yard
Recommended flow:	6 fps (1.8 m/s)
Functional Longevity:	6-9 months

Anchoring devices shall be 11-gauge steel staples 6-inch minimum length. In loose soils the length of the staples shall be 9-inches.

For areas that will be routinely mowed anchoring devices shall consist of minimum 8” wooden stakes. Longer stakes shall be used where loose soils or other conditions obligate, as required by the Engineer.

CONSTRUCTION METHODS

Area shall be seeded prior to installation of jute netting.

Installation shall be such as to ensure continuous contact with soil without folds or wrinkles. Jute netting shall be laid such that upslope fabric is placed over lower slope fabric by a minimum of 3 feet. Adjoining rolls shall be overlapped a minimum 6 inches. The netting shall extend beyond at least 1 foot beyond the edge of the seeded area.

The Contractor shall bury the ends of the jute netting 6-8 inches in anchor trenches at top and bottom of slopes.

ITEM 767.9 (Continued)

Jute netting shall be anchored in place with vertically driven metal staples. The staples shall be driven in until their tops are flush with the soil. Staples shall be placed at 12-inch intervals along the top of a slope and in staggered courses along the face of the slope to achieve a minimum of 3 staples per square yard, or at manufacturer's recommendations for the given site conditions.

Contractor shall reseed all trenched and otherwise disturbed areas with specified seed mix. The Contractor shall maintain the jute netting and make satisfactory repairs of any areas damaged until acceptance of seed establishment.

METHOD OF MEASUREMENT

Jute Mesh will be measured by the number of Square Yards complete in place, including anchoring, as measured across the surface of grade and does not include buried or overlapped portions. The quantity measured for payment shall not exceed that shown on the plans or as directed by the Engineer.

Mesh that becomes loose or that is not otherwise functioning to stabilize soil shall be repaired and new or additional jute matting installed as required at the Contractor's expense. Soil erosion shall be repaired, and area shall be raked and reseeded with the original specified mix as required by the Engineer at the Contractors expense.

BASIS OF PAYMENT

Item 767.9 will be paid for at the contract unit price per Square Yard, which price shall include all labor, materials, equipment, trenching, placing, and stapling of jute fabric, reseeding of trenched and disturbed areas, and all incidental costs required to complete the work.

ITEM 859.1 REFLECTORIZED DRUMS WITH SEQUENTIAL FLASHING WARNING LIGHTS DAY

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.

ITEM 859.1 (Continued)

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

A group of ten (10) reflectorized drums with sequential flashing warning lights is considered one (1) unit and will be measured for payment at the unit price per 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.

Reflectorized Drums with Sequential Flashing Warning Lights shall 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 874.4 TRAFFIC SIGNS REMOVED AND STACKED EACH

Work under this Item shall include the dismantling, removal, transporting and stacking of the existing roadside traffic signs as indicated on plans or as directed by the Engineer including the removal and disposal of the sign supports and their foundations.

The work shall include removing the supports, excavating the existing foundation, the disposal of the concrete and supports, the backfilling with compacted gravel of the holes resulting from the excavation and the removal of the supports and the replacement, in kind, of any surface material disturbed outside of areas to be reconstructed under this project. If in the opinion of the Engineer, the existing foundation will not interfere with new construction, it may be removed to a depth of 6 inches below the existing ground, backfilled with compacted gravel and the existing surfaces restored or replaced in kind.

The signs and posts removed shall be delivered to the Town of Lee Highway Department.

The existing signs shall not be removed until the new signs and structures replacing them are ready for traffic or until the Engineer shall permit.

METHOD OF MEASUREMENT

Item 874.4 will be measured for payment by Each, traffic sign removed and stacked.

BASIS OF PAYMENT

Item 874.4 will be paid for at the Contract unit price per Each, which price shall include all labor, , materials, equipment, excavating and disposal of the existing foundation, supplying and placing of compacted gravel backfill where foundations and posts are removed, restoration of surface and all incidental costs required to complete the work.

ITEM 904.01 4000 PSI, 3/4 INCH, 610 CEMENT CONCRETE BRIDGE L-05-002 (057) CUBIC YARD

The work under this item shall conform to the relevant Provisions of Subsection 901 of the Standard Specifications and the following:

The work shall consist of furnishing and placing 4000 psi, 3/4 inch, 610 Cement Concrete to replace the bridge deck and safety curb as shown on the plans of Bridge L-05-002 (057) and as directed by the Engineer.

The bridge rail shall be reset with new 1" diameter anchor bolts 10 inches long with compatible nuts and washers conforming to the requirements of Subsection M8.01.5 of the Standard Specifications.

All concrete surfaces that will meet new concrete shall be roughened and cleaned of all laitance, dirt, grease, oil, other contaminants. All existing reinforcing steel within the repair shall be thoroughly cleaned by abrasive blasting before receiving new concrete.

Prior to concrete placement, the excavated surfaces shall receive a thorough application of water from a pressure washer capable of delivering 1500 psi at the nozzle for a minimum of 10 minutes. After pressure washing, any standing water should be blown out to produce a saturated surface dry (SSD) condition using oil free compressed air.

Membrane waterproofing conforming to the requirements of Subsection 966 of the Standard Specifications for Sheet Membrane shall be applied to the cured deck surface prior to the placement of hot mix asphalt.

METHOD OF MEASUREMENT

Item 904.01 will be measured for payment by the Cubic Yard of concrete complete in place.

BASIS OF PAYMENT

Item 904.01 will be paid for at the contract unit price per Cubic Yard, which price shall include and be full compensation for all labor, materials, equipment, resetting the bridge rail, new anchor bolts, nuts and washers, and sheet membrane waterproofing and all incidental costs required to complete the work as described herein and shown on the plans.

ITEM 910.11 STEEL REINFORCEMENT FOR STRUCTURES POUND
EPOXY COATED BRIDGE L-05-002 (057)

Work under this Item shall conform to the relevant provisions of Subsection 901 of the Standard Specifications and the following:

Work shall include the addition of supplemental steel reinforcement and/or replacement of any existing steel reinforcement for the work on Bridge L-05-002 (057) that is unsuitable by the Engineer.

New steel reinforcement shall be the same size, shape, and placed at the same spacing as the existing bars. New bars shall extend past the limits of deterioration of the lengths required for non-contact lap splices. Welding of steel reinforcement shall not be allowed.

METHOD OF MEASUREMENT

Item 910.11 will be measured for payment by the Pound, of reinforcement complete in place.

BASIS OF PAYMENT

Item 910.11 will be paid for at the contract unit price per Pound, which price shall all labor, materials, equipment, and all incidental costs required to complete the work. Any steel reinforcement damaged by the Contractor's operations will be replaced at the Contractor's expense.

ITEM 960.01 STRUCTURAL STEEL MODIFICATIONS POUND
BRIDGE L-05-002 (057)

The work under this Item shall conform to the relevant provisions of Subsection 960 of the Standard Specifications, and the following:

The work shall consist of fabrication and installation of structural steel plates, high strength bolts, shop and field grinding, removal of existing rivets, cutting, drilling, reaming, and any incidental work that may be necessary to complete the structural steel modifications shown on the plans and described herein.

The Contractor shall determine and establish all dimensions necessary for completion of the work by field measurement and/or survey to ensure the accurate detailing and fabrication of the new materials to be provided and fit-up in the field. The Contractor shall be responsible for the adequacy and accuracy thereof and shall not order any materials or commence any fabrication until the required measurements have been made on the actual structure and the details of the proposed work has been approved by the engineer. Where new steel elements must be drilled to match existing holes, the Contractor shall template and/or drill in place to obtain proper fit.

CONSTRUCTION

Material

All structural steel required to complete the work shall conform to the following:

1. All structural steel plate shall conform to AASHTO M 270, Grade 50
2. Steel plate to be used for gusset repair and splice plates shall be subject to the requirements for Fracture Critical Members (FCM). Fill plates shall be considered secondary components.
3. All bolts shall be high strength meeting the requirements of AASHTO M164 (ASTM F3125 GR A325) Type 1 mechanically galvanized, Standard Specification for High Strength Bolts for Structural Steel Joints. Nuts and washers shall be compatible.

All new structural steel shall be shipped to the job site with a prime coat of paint applied. In locations where new steel meets existing steel, the faying surface of the existing steel shall be thoroughly cleaned to SSPC-SP10 condition, and a prime coat of paint shall be applied. Faying surfaces shall be prepared for AASHTO Class B slip-critical contact surface connections. Two additional coats of paint shall be applied to the structural steel repairs once they are in place. All work associated with clening and painting structural steel shall be performed under Item 961.301.

The contractor shall exercise care to not damage any portions of the structure to remain in place. Any damaged elements shall be repaired or replaced using a procedure approved by the Engineer with no additional compensation.

Cutting Existing Steel

Cutting existing steel shall be performed with care to avoid damaging or notching any of the material to remain. Cutting may be performed by carbon air arc cutting, plasma cutting or by mechanical means. Flame cutting shall not be permitted. Thermal cuts shall be made inside the limits of the cuts and ground to the final profile. Thermal cutting shall be done in a manner not to create excessive heat in the steel to remain.

ITEM 960.01 (Continued)

The contractor shall use temp-stick indicating crayons for 275°F to 300°F or infrared thermometers to monitor the temperature in the steel. Temperatures shall be monitored on the steel to remain 3 inches away from the line being cut.

If the temperature of the base steel exceeds 275°F cutting shall be temporarily discontinued to allow the steel to cool. If the temperature exceeds 300°F in the base steel, then that cutting process shall be discontinued, and other methods shall be employed to cut within the same temperature restrictions.

The Contractor shall submit to the Engineer for review and approval detailed procedures demonstrating how the steel will be cut, removed, and prepared for installation of the new steel. All personnel involved with steel cutting shall be MassDOT certified welders.

In the event the Contractor damages materials to remain during cutting operations, the Contractor shall replace, repair, or reinforce the damaged area as may be required to restore the area to the original condition or better prior to damage.

Epoxy Repair Compound

At locations of gusset repairs epoxy repair compound shall be applied to existing steel surfaces as filler prior to placement of repair material to the limits shown on the plans. The Contractor shall be aware of the limited pot life of the material and shall ensure that plate connections can be completed prior to the material setting up.

Epoxy repair compound shall be a solvent free, moisture tolerant, epoxy paste adhesive system. The epoxy paste shall be developed specifically for filling, smoothing, sealing, or fairing applications on metals, and shall be compatible with the paint system being used on the bridge. The paste shall be applied in strict accordance with the manufacturer's latest written instructions. Materials shall be supplied in new unopened containers with the manufacturer's product information clearly labeled. Acceptable products are listed as follows, depending on paint system compatibility; others may be proposed by the Contractor provided they have the same general characteristics as those specified:

1. ITW Philadelphia Resins Repair Compound manufactured by ITW Philadelphia Resins, 130 Commerce Drive, Montgomeryville, PA 18936, Tel: (215) 855-8450
2. Sikadur 23, Lo-Mod Gel manufactured by Sika Corporation, 201 Polito Avenue, Lyndhurst, NJ 07071, Tel: 800-933-7452
3. Devcon Plastic Steel Putty manufactured by ITW Devcon, 30 Endicott Street Danvers, MA 01923, Tel: 800-933-8266
4. Carboline Splash Zone A-788 manufactured by Carboline, 2150 Schuetz Rd., St. Louis, MO 63146, Tel: 800-848-4645
5. Sherwin Williams Steel-Seam FT910 Epoxy Patching and Surfacing Compound manufactured by Sherwin Williams Company, 101 W. Prospect Ave, Cleveland, Ohio 44115, Tel: (617) 799-8415 and approved Equal.

The Contractor shall submit to the Engineer catalog cuts of the proposed epoxy repair compound and supporting documentation from the manufacturer that the material is compatible with the paint system being used.

ITEM 960.01 (Continued)

In severely deteriorated locations, epoxy repair compound shall be applied to fill and smooth deteriorated surfaces. The repair compound shall be applied to bare steel surfaces with surface profiles as recommended by the manufacturer or with primer paint only, abraded as recommended by the manufacturer. The wet compound shall be troweled and smoothed to conform to the general profiles indicated on the drawings for the location. In the locations where the repair compound is being used to provide a uniform surface for bolting, the compound shall be slightly overfilled and allowed to cure, then sanded flush and even with the surrounding steel surface. The connection plates shall be mounted on the new surface, and bolt holes field drilled through the compound and steel with field bolting to follow.

METHOD OF MEASUREMENT

Items 960.01 will be measured for payment by the Pound of new steel installed complete in place as indicated by the approved shop drawings.

BASIS OF PAYMENT

Items 960.01 will be paid for at the Contract unit price per Pound, which price shall include all materials, equipment, labor, removal of existing rivets; reaming existing rivet holes as required for installation of new high strength bolts; field drilling new holes for high strength bolts in structural steel; installation of high strength bolts; application of epoxy repair compound and all incidental costs required to complete the work as described herein and shown on the plans.

ITEM 961.301 CLEAN (FULL REMOVAL) AND PAINT SELECT STEEL ELEMENTS OF BRIDGE NO. L-05-002 (057) LUMP SUM

The work to be done under this Item shall conform to the relevant provisions of Subsection 961 of the Standard Specifications and the following:

The limits of steel cleaning and application of a new 3-coat paint system for Bridge No. L-05-002 (057) are shown on the plans and shall include the faying surfaces of the existing gusset plates to be repaired and connected material, a portion of floorbeam 9 adjacent to the west truss L16 gusset and connected bracing, and new structural steel. The finish coat shall be Federal Standard Color #14223 green.

BASIS OF PAYMENT

Item 961.301 will be paid for at the contract unit price, Lump Sum which price shall include all labor, materials, tools, equipment, and all incidental costs required to complete the work.

Note that the erection and dismantling of scaffolding, rigging and containment for bridge painting work is subject to the "Painter(Bridges/Tanks)" prevailing wage rate. This includes surface preparation, including removal of all types of paint on bridges, the application of paint and the clean-up of debris resulting from paint removal operation on bridges, pursuant to the determination by the Massachusetts Department of Labor Standards' 12/23/2009 "Notice Concerning the Removal and Application of Paint on Bridges and Tanks.

ITEM 984.1 **NATURAL STREAMBED RESTORATION MATERIAL** **CUBIC YARD**

This work shall consist of restoring the river bed where disturbance takes place in the project area. Streambed restoration will take place at the bridge where replacement is planned, in the necessary upstream and downstream structure approaches, along proposed retaining walls, and at proposed equipment access areas – all within the limits of work. Work will primarily include removing, stockpiling, and replacing river bed material. The streambed restoration shall replicate the existing natural channel bed outside the work area in terms of material, roughness, shape, profile, and appearance. The ultimate product will, to the extent possible, replicate the function and appearance of the natural stream channel.

The Contractor shall coordinate with his/her sub-contractors to ensure all required equipment is available on-site to complete the work in this manner. The streambed restoration is required to comply with environmental permits issued for the project. It is required that members of the Contractor team working on streambed restoration must have experience in relevant streambed and resource area reconstruction.

MassDOT Environmental Services will provide a Fluvial Geomorphologist (Geomorphologist) to provide review of the final design and on-site assistance during streambed restoration construction to ensure the restoration is constructed as required by these Special Provisions and in accordance with permit requirements.

At least 30 days prior to the commencement of construction, the Contractor shall coordinate with David Paulson (MassDOT Wildlife Unit Supervisor, (508) 389-6366 / david.j.paulson@state.ma.us) to set up an initial (virtual or inperson) meeting with MassDOT's Geomorphologist, Contractor, and Engineer. At this meeting, the Geomorphologist will provide an overview of the restoration work. The Contractor should be prepared to discuss the anticipated means, methods, and schedule.

Process Approval:

In lieu of a mockup, the Contractor shall schedule an additional onsite meeting to discuss the streambed restoration with the Geomorphologist and respective parties from MassDOT. The Geomorphologist shall be onsite during initial streambed restoration. The Contractor shall provide the Geomorphologist adequate access to observe, direct, and inspect the channel restoration work throughout the duration of the removal, stockpile, and reinstallation of the existing streambed material.

Material

The top 1.5 feet of streambed material excavated from the existing streambed shall be removed and stockpiled to facilitiate reinstallation and replication of the natural streambed. The excavated streambed material below the top 2 feet shall be stockpiled and reused to fill the voids in the proposed riprap placed below the top streambed restoration layer.

ITEM 984.1 (Continued)

In the event that the excavated material is not suitable or there is not enough available suitable material, additional streambed restoration material shall be locally sourced that matches the composition of the existing native river bed in the upstrean riffle (Figure A).

Approximate Stream Bed Surface Material Size Distribution

Particle*	Amount (%)
Boulder	20
Cobble	50
Gravel	20
Sand	10
Silt/Clay	0

The streambed material shall be approved by the Resident Engineer and Geomorphologist prior to use.

Related Items

Crushed Stone. Shall conform to the requirements of Item 156 Crushed Stone for Slope Treatment and shall be paid for under that item.

Riprap Stone shall conform to the requirements of Item 983.1 Riprap and shall be paid for under that item.

Construction

The streambed material shall be reinstalled over riprap (MassDOT Item 983.1), as depicted on the plans, to an average thickness of 12 inches, with variations in thickness as necessary to replicate existing channel conditions. The initial placement of streambed material shall fill / choke the voids in the underlying riprap. Fill voids by by shaking stone with the teeth of an excavator bucket, hand tamping with metal tamping rods, and by spraying water to settle fines between large stones. Plate compactors shall not be used. The purpose of filling the voids is to prevent subsurface flow where surface water disappears into large voids between the stone fill below the channel bed surface during low flow conditions. The final streambed shape and appearance shall be finalized in the field as directed by the Geomorphologist.

Reinstallation of the stockpiled streambed material shall be placed on top of the riprap to restore streambed habitat and fish passage. The streambed materials shall be installed during normal low water conditions behind cofferdams in accordance with the environmental permits.

Completion

Once all material has been placed in the stream channel and approved by the Geomorphologist and Resident Engineer for each structure, the Contractor shall remove the cofferdams in such a way as to slowly wet the stream to minimize the initial sediment pulse. Every attempt shall be made to minimize the downstream movement of sediment.

ITEM 984.1 (Continued)

The final streambed shall maintain the general configuration of the existing streambed bedform and there shall be minimal to no subsurface flow upon final inspection by the Resident Engineer and Geomorphologist. The project must be passable by fish and other aquatic organisms following construction.

The streambed restoration to be measured for payment will be the complete and accepted work for restoration of the streambed within the limits shown on the Plans as approved by the Resident Engineer and Geomorphologist.

METHOD OF MEASUREMENT

Items 984.1 will be measured for payment by the cubic yard of streambed material installed in place.

BASIS OF PAYMENT

Items 984.1 will be paid for at the Contract unit price per cubic yard, which price shall include all materials, equipment, labor, excavating, stockpiling, transporting, and placing the material specified, testing and all incidental costs required to complete the work.

The Geomorphologist will be provided by MassDOT at no cost to the Contractor.

ITEM 984.1 (Continued)

FIGURES



Figure A: Cobble streambed material upstream of bridge

ITEM 984.2 BOULDER BENDWAY WEIRS CUBIC YARD

This work shall consist of placement of large cobbles and boulders to create stream diversion weirs in the restored river bed upstream of the proposed bridge. Stone weirs will be installed within the limits of work. Work will primarily include removing, stockpiling, and replacing existing cobbles and boulders in the stream to construct the weirs. The stone weir construction shall be embedded a minimum of 5 feet into the existing channel bank and shall be constructed in conformance with the details shown in the plans.

The Contractor shall coordinate with his/her sub-contractors to ensure all required equipment is available on-site to complete the work in this manner. The boulder weirs are required to comply with environmental permits and hydraulic design issued for the project. It is required that members of the Contractor team working on the boulder weir installation have experience in streambed and resource area reconstruction.

MassDOT Environmental Services will provide a Fluvial Geomorphologist (Geomorphologist) to provide review of the final design and on-site assistance during boulder weir construction to ensure the restoration is constructed as required by these Special Provisions and in accordance with permit requirements.

At least 30 days prior to the commencement of construction, the Contractor shall coordinate with David Paulson (MassDOT Wildlife Unit Supervisor, (508) 389-6366 / david.j.paulson@state.ma.us) to set up an initial (virtual or inperson) meeting with MassDOT's Geomorphologist, Contractor, and Resident Engineer. At this meeting, the Geomorphologist will provide an overview of the restoration work. The Contractor should be prepared to discuss the anticipated means, methods, and schedule.

Process Approval:

In lieu of a mockup, the Contractor shall schedule an additional onsite meeting to discuss the boulder weirs with the Geomorphologist and respective parties from MassDOT. The Geomorphologist shall be onsite during initial installation. The Contractor shall provide the Geomorphologist adequate access to observe, direct, and inspect the boulder weir installation work throughout the duration of the removal, stockpile, and reinstallation of existing streambed materials.

Material

Cobbles and boulders for construction of the upper course of the weirs shall be sourced or salvaged from within the channel and adjacent floodplain areas during construction where possible. In the event that the excavated material is not suitable or there is not enough available suitable material, additional stone material shall be locally sourced that consists of weathered, naturally formed, boulders and cobbles that match the composition of the existing native river bed.

ITEM 984.2 (Continued)

Cobbles and boulders for construction of the lower courses of foundation stone of the weirs shall be angular boulders or broken ledge salvaged from within the limits of work and adjacent flood plain areas during construction where possible. In the event that the existing material is not suitable, or there is not enough material, riprap shall be used for lower courses of foundation stone.

The boulder weir materials shall be approved by the Resident Engineer and Geomorphologist prior to use.

Related Items

Crushed Stone. Shall conform to the requirements of Item 156 Crushed Stone for Slope Treatment and shall be paid for under that item.

Riprap Stone shall conform to the requirements of Item 983.1 Riprap and shall be paid for under that item.

Construction

The boulder weirs shall be installed as depicted on the plans, and extended into the channel bank a minimum of 5 feet, with variations as necessary to replicate existing stream bank. The final streambed shape and appearance shall be finalized in the field as directed by the Geomorphologist.

Reinstallation of the stockpiled boulder material shall be placed as shown on the plans to restore streambed habitat and fish passage. The streambed materials shall be installed during normal low water conditions behind cofferdams in accordance with the environmental permits.

Completion

Once all material has been placed in the stream bank and approved by the Geomorphologist and Resident Engineer for each structure, the Contractor shall remove the control of water in such a way as to slowly wet the stream to minimize the initial sediment pulse. Every attempt shall be made to minimize the downstream movement of sediment.

The final stream bank shall maintain the general configuration of the existing bank and there shall be minimal to no subsurface flow upon final inspection by the Resident Engineer and Geomorphologist. The project must be passable by fish and other aquatic organisms following construction.

The boulder bendway weirs to be measured for payment will be the complete and accepted work of constructed weirs within the limits shown on the Plans as approved by the Resident Engineer and Geomorphologist.

ITEM 984.2 (Continued)

METHOD OF MEASUREMENT

Items 984.2 will be measured for payment by the cubic yard of stockpiled existing boulders and cobbles installed in place.

BASIS OF PAYMENT

Items 984.2 will be paid for at the Contract unit price per cubic yard, which price shall include all materials, equipment, labor, excavating, stockpiling, transporting, and placing the material specified, testing and all incidental costs required to complete the work.

The Geomorphologist will be provided by MassDOT at no cost to the Contractor.

ITEM 991.1 CONTROL OF WATER - STRUCTURE NO. L-05-004 LUMP SUM

The work under this item shall conform to the relevant provisions of Subsections 140 and 950 of the Standard Specifications and the following:

The work shall include the furnishing, installation, operation, maintenance, and removal of a dewatering system and sedimentation treatment basins required for the construction of the proposed bridge and retaining wall. The dewatering system shall be capable of both preventing flow through the constructed works and the lowering of the water table to an elevation below the bottom of the proposed footings, as shown on the plans.

In addition to the support of excavation/cofferdam, sandbags or other type of diversion system shall be placed to prevent water flow into the construction area for flows up to the 2-year storm event water surface elevation shown on the Plans. The Contractor shall adjust the height of the water control dam structure if needed and use supplemental pumping in the event of an extreme rain event or unusually high flows. The Contractor shall comply with all conditions included with the MassDEP Water Quality Certification, attached hereto (see Appendices).

The use of earthen berms in the stream is prohibited.

All dewatering and related earthwork shall be conducted in such a manner as to prevent siltation or contamination of the waterway. The pumping discharge shall not be allowed to enter directly into the waterway. The water from the work areas shall be pumped to a settling basin. This basin shall be constructed so as to allow the pumped water to pass through the basin with sediments settling out before out-letting. At a minimum, the basin shall be constructed of an earthen or stone berm lined with geotextile fabric and surrounded by staked straw bales or compost filter tubes. The basin shall meet or exceed the following criteria:

A. The size and location of the basins shall be determined based on the size of the contractor's pump and the anticipated flows for the construction of the bridge and wingwalls in the dry.

B. The outlet/weir of the dewatering basins shall not cause erosion of the surrounding area. An approved method of controlling erosion, such as an erosion control blanket, stone, etc., shall be used at the outlet of the basin.

C. The Contractor shall maintain the dewatering operations in working condition, including periodic removal of accumulated sediment within the basins to permit its proper function. The water pump and hoses for dewatering shall be in good working condition and of adequate power and size for the operation.

D. The contractor shall inspect straw bales/compost filter tubes that surround the outlets daily and shall immediately replace any that are damaged.

E. The proposed location and design of the settling basins shall be subject to the approval of the Engineer and MassDEP prior to construction.

ITEM 991.1 (Continued)

Plans and calculations (if applicable) for all sandbagging, settling basins, pumps and other water control measures shall be developed by the Contractor for this item. These plans and calculations shall be prepared and stamped by a Professional Engineer registered in Massachusetts and shall be submitted for the approval of the Engineer prior to the start of construction. Furthermore, this submission shall be submitted to MassDEP as required for review and approval prior to construction.

The Contractor shall be responsible for the removal and proper disposal of all sediments and temporary structures or devices to an off-site location. At the completion of the work the contractor shall remove the sandbags from the abutments and all disturbed areas shall be restored.

BASIS OF PAYMENT

Items 991.1 will be paid for at the Contract unit price, Lump Sum, which price shall include all labor, materials, equipment, sandbags sedimentation basins, filter bags, pumping, removal of temporary water control devices, restoration of all disturbed areas and all incidental costs required to complete the work.

ITEM 995.01 BRIDGE STRUCTURE, BRIDGE NO. L-05-004 LUMP SUM

The work under this item shall conform to the relevant provisions of Subsection 995 of the Standard Specifications and the following:

For those component parts where no specific requirement is stipulated, the Standard Specifications shall apply except for payment.

Work shall include all materials, equipment and labor needed to construct the following:

- Precast Concrete NEXT F Beams
- Cast-in-place concrete deck slab and safety curbs.
- Membrane waterproofing
- Metal Bridge Railing (3 rail), Steel (Type S3-TL4)
- Cast-in-place concrete integral abutment pile caps, diaphragms and wingwalls
- Cast-in-place concrete approach slabs
- Steel reinforcement
- Precast concrete highway guardrail transitions and bases
- Sawcut Joint

The work does not include any items listed separately in the proposal. Payment for materials shown on the Plans as being part of this bridge structure or which may be incidental to its construction and are not specifically included for payment under another Item shall be considered incidental to the work performed under this Item and shall be included in the unit price of the component for which they are a part.

SAWING & SEALING JOINTS IN ASPHALT PAVEMENT AT BRIDGES

The work under this heading consists of making a sealed kerf across the full width of the finished asphalt pavement at bridge abutments where called for on the Plans. The shape, width, and depth of the kerf shall be as shown on the Plans.

Prior to the start of the asphalt paving operation, the Contractor shall place a mark on each curb or barrier on either side of the paved roadway. These marks shall be aligned with the actual end of the bridge deck and shall be placed so that they will not be covered or otherwise obscured by the asphalt pavement.

After the completion of the paving operation, the Contractor shall snap a straight chalk line on the pavement between these two marks. The Contractor shall then saw cut the pavement along this line to the depth, width and shape as shown on the Plans. The equipment shall be approved by the Engineer prior to commencing work.

After completing the saw cutting, the Contractor shall clean the saw groove of any dust and debris with an oil free air blast. If the groove was wet sawn, the groove shall be cleaned with a water blast to remove any remaining slurry and debris, vacuumed with a Wet-or-Dry vacuum to remove any standing water, and then dried with an air blast from a Hot-Air-Lance.

ITEM 995.01 (Continued)

Once the groove is clean and dry, the Contractor shall fill it completely with a hot-applied hot mix asphalt crack sealer meeting the requirements of M3.05.2 in accordance with the manufacturer's application instructions and restrictions regarding ambient and material temperatures. The crack sealer shall be thoroughly cured prior to opening the road to traffic. To reduce tackiness, only boiler slag aggregate (black beauty) shall be scattered over the sealer when required by the Engineer. Conventional sand shall not be used for this purpose.

5000 PSI, 3/4 INCH, 685 HP CEMENT CONCRETE

The work to be done under these headings shall conform to the relevant provisions of Section 901, supplemented and amended as follows:

All concrete shall be placed in the dry.

All cast-in-place shown in the plans shall use this concrete mix.

Included in the work are the furnishing and installing of preformed fillers and other items incidental to the furnishing and placing of concrete. All other work covered in the Schedule of Basis for Partial Payments or for which payment is not provided elsewhere in the contract shall be considered as included in the unit price per cubic yard of concrete, as stated by the Contractor and approved by the Engineer, in the respective "Basis for Partial Payment".

PRECAST HIGHWAY GUARDRAIL TRANSITION

General.

The work under this Heading consists of fabricating, transporting and installing *Precast Highway Guardrail Transition* and includes all necessary labor, materials, and equipment to complete the work as shown on the Plans. The Precast Concrete Bridge Elements shall meet the requirements of Section M4: Cement Concrete and Related Materials.

MATERIALS

Materials.

Materials shall conform to M4.09.1 and the following:

Non-Shrink Grout Products	M4.04.5
Controlled Low-Strength Material – Structural Non-Excavatable	M4.08.0
Welded Steel Wire Fabric	M8.01.2
Mechanical Reinforcing Bar Splicer	M8.01.9
Lifting Devices	PCI MNL-116
Corrugated Metal Pipe	AASHTO M 36

ITEM 995.01 (Continued)

1. Vertical Adjustment Assembly.

Vertical Adjustment Assembly details and material requirements shall be as shown on the plans. Alternate devices may be used provided that they are adjustable and can support the anticipated loads. The design of the leveling devices, with necessary calculations, shall be submitted to the Engineer of Record for approval.

2. Threaded Inserts.

Threaded inserts are permissible to facilitate forming the keyway pours. Threaded inserts shall be hot dip galvanized or made of stainless steel. The number of threaded inserts shall be minimized, and the inserts shall not come in contact with the reinforcing steel.

3. Corrugated Metal Pipe.

Corrugated Metal Pipe to be used for forming voids as specified on the plans shall be fabricated from steel and shall have a protective metallic coating of zinc (galvanizing).

CONSTRUCTION METHODS – PLANT FABRICATION

Pre-Production Meeting.

The Contractor shall notify the MassDOT Research and Materials Section to determine if a pre-production meeting will be required to review the specification, shop drawings, curing plan, schedule, and discuss any specific requirements. The meeting shall be held prior to scheduling a MassDOT Inspector (refer to M4.09.4 *Department Acceptance*), and at least seven (7) days prior to the scheduled casting of any Precast Concrete Bridge Element or control section. The Contractor shall schedule the meeting, which shall include representatives of the Fabricator and MassDOT.

Reinforcement.

The reinforcing bars shall be installed in accordance with Subsection 901.35, including tolerances for cover and horizontal spacing of bars. Components of mechanical reinforcing bar splicers shall be set with the tolerances shown on the plans. The reinforcing bars and mechanical reinforcing bar splicers shall be assembled into a rigid cage that will maintain its shape in the form and which will not allow individual reinforcing bars to move during the placement of concrete. This cage shall be secured in the form so that the clearances to all faces of the concrete, as shown on the plans, shall be maintained.

Where reinforcing bars are to protrude from one Precast Concrete Bridge Element in order to mate with reinforcing bar splicers in a second precast concrete element, the fabricator shall set the reinforcing bars and the reinforcing bar splicers with a template in order to ensure proper fit up within the tolerances specified on the plans.

Tolerances.

Fabrication shall comply with tolerances specified on the plans. Tolerances for steel reinforcement placement shall be in accordance with Subsection 901.35. In the absence of specifications on the plans, tolerances shall comply with the latest version of the PCI MNL 135, Precast Tolerance Manual.

ITEM 995.01 (Continued)

Forms.

Concrete shall be cast in rigidly constructed forms, which will maintain the Precast Concrete Bridge Elements within specified tolerances to the shapes, lines and dimensions shown on the approved fabrication drawings. Forms shall be constructed from flat, smooth, non-absorbent material and shall be sufficiently tight to prevent the leakage of the plastic concrete. When wood forms are used, all faces in contact with the concrete shall be laminated or coated with a non-absorbent material. All worn or damaged forms, which cause irregularities on the concrete surface or damage to the concrete during form removal, shall be repaired or replaced before being reused. If threaded inserts are cast into the elements for support of formwork, the inserts shall be recessed a minimum of 1 inch and shall be plugged after use with a grout of the same color as that of the precast cement concrete.

CONSTRUCTION METHODS – FIELD CONSTRUCTION

General.

All of the Contractor's field personnel involved in the erection and assembly of the Precast Concrete Bridge Elements shall have knowledge of and follow the approved Erection Procedure.

Prior to installation, the following documentation shall be reviewed and confirmed by the MassDOT Resident Engineer or designee:

(a)QC Compressive Strength Test Report Forms attaining Design Strength, f'c for the Precast Concrete Bridge Element's representative sublot.
(b) Certificate of Compliance generated by the Fabricator as described under the Fabricator Quality Control section.
(c)QC Inspection Reports signed by the Quality Control Manager.

Field construction staff shall verify that the Resident Engineer has accepted all Precast Concrete Bridge Elements prior to installation.

Erection Procedure Prior to the erection, the Contractor shall submit an Erection Procedure for approval by the Engineer. This submittal shall include computations and drawings for the transport, hoisting, erection and handling of the Precast Concrete Bridge Elements. The Erection Procedure shall be prepared and stamped by a Professional Engineer registered in the Commonwealth of Massachusetts with working knowledge of the Contractor's equipment, approved shop drawings, and materials to build the bridge. The Erection Procedure shall, at a minimum, include the following:

1. Erection Procedure

The Erection Procedure shall be prepared to conform to the requirements of 960.61, Design, Fabrication and Erection and the applicable sections in Chapter 8 of the PCI Design Handbook (eighth edition) for handling, erection, and bracing requirements. At a minimum, the Erection Procedure shall provide:

(a) Minimum concrete compressive strength for handling the Precast Concrete Bridge Elements.
(b) Concrete stresses during handling, transport, and erection.

ITEM 995.01 (Continued)

(c) Crane capacities, pick radii, sling geometry, and lifting hardware.
(d) Verification that the equipment can handle all pick loads and weights with the required factor of safety.
(e) Evaluation of construction sequence and evaluation of any geometric conflicts in the lifting of the Precast Concrete Bridge Elements and setting them as shown on the plans.
(f) Design of crane supports including verification of subgrade for support.
(g) Location and design of all temporary bracing that will be required during erection.

Non-shrink grout and concrete materials, approved by the Engineer, shall be placed as shown on the plans. Fill joints, keyways, and voids, in strict accordance with the specifications and manufacturer's recommendations and instructions.

For footings, approach slabs and highway guardrail transitions, once these Precast Concrete Bridge Elements have been set to the correct horizontal and vertical alignment, the void between them and the supporting soil shall be filled with Controlled Low-Strength Material – Structural Non-Excavatable to the limits as shown on the plans. Add additional grout ports in the footings to facilitate the bedding process if required.

Except in approach slabs, joints shall be filled flush to the top with non-shrink grout, and any vertical misalignment between adjacent elements shall be feathered out on a slope of 1 to 12.

Curing of grout or concrete shall be performed in strict accordance with the specifications and manufacturer's recommendations. Filling shall not be completed in cold weather when either the ambient temperature or the precast member's temperature is below the manufacturer's recommendation. No localized heating of either the precast members or of the air surrounding the element will be permitted in an attempt to reach application temperatures.

If the joints or voids are not filled within five days after the Precast Bridge Elements are erected, the Contractor shall cover and protect the openings from weather and debris until they are filled.

Survey and Layout.

Working points, working lines, and benchmark elevations shall be established prior to placement of all elements. The Contractor is responsible for field survey as necessary to complete the work. MassDOT reserves the right to perform additional independent survey. If discrepancies are found, the Contractor may be required to verify previous survey data.

Preparation of Closure Pours and Grouted Keyways.

Immediately prior to erecting the Precast Concrete Bridge Elements, the closure pours and grouted keyways shall be cleaned at the job site of all dust, dirt, carbonation, laitance, and other potentially detrimental materials which may interfere with the bonding of the closure pour concrete or grout and precast concrete using a high-pressure water blast. Any exposed reinforcing steel in the precast concrete shall be protected from damage during the cleaning of the keyways. Damaged epoxy coating of steel reinforcement shall be repaired, and the reinforcing steel shall be cleaned as directed by the Engineer. The surfaces of the closure pours and grouted keyways shall be wetted so that the surfaces shall have a Saturated Surface Dry (SSD) condition for at least 24 hours prior to the placement of the closure pour concrete.

ITEM 995.01 (Continued)

Erection.

The elements shall be placed in the sequence and according to the methods outlined in the Erection Procedure . As the erection proceeds, the Contractor shall constantly monitor the assembly to ensure that the precast concrete bridge element is within proper horizontal and vertical location and tolerances prior to releasing it from the crane and setting the next unit. The Contractor may use shims to maintain proper setting tolerances.

The concrete elements shall be lifted only by the lifting devices, and the utmost care shall be taken to prevent distortion of the elements during handling, transportation or storage.

This approval will be contingent on the Contractor demonstrating by calculations, prepared by a Professional Engineer registered in Massachusetts, that the elements will not be damaged by the non-vertical lifting force and by documentation that the capacity of the lifting devices is adequate for the non-vertical lifting force.

After all Precast Concrete Bridge Elements have been placed, the actual overall dimensions of the structure both horizontal and vertical, as laid out shall not deviate from the nominal dimensions shown on the plans beyond a tolerance of +0 inches and -1 inches. Once the layout of Precast Concrete Bridge Elements has been accepted by the Engineer, the Contractor shall cut all lifting devices off below the surfaces of the elements.

Filling of Blockouts for Lifting Devices and Threaded inserts.

If the blockouts in the Precast Concrete Bridge Elements where the lifting devices were located will be exposed and visible after assembly is complete, the Contractor shall fill these blockouts with Mortar (M4.04.5).

After the formwork has been removed, all threaded inserts that have been cast into the precast concrete bridge deck for support of the formwork shall be filled with a grout of the same color as that of the precast concrete.

ITEM 995.01 (Continued)

PRESTRESSED CONCRETE NEXT F BEAMS (NEXT 28F)

General.

The work under this Heading consists of fabricating, transporting and installing prestress concrete NEXT F Beams and includes all necessary labor, materials, and equipment to complete the work as shown on the Plans. The Precast, Prestressed, and Prefabricated Concrete Elements shall meet the requirements of Section M4: Cement Concrete and Related Materials.

MATERIALS

Materials.

Materials shall conform to M4.09.1 and the following:

Non-Shrink Grout Products	M4.04.5
Prestressing Strands	AASHTO M 203
Welded Steel Wire Fabric	M8.01.2
Mechanical Reinforcing Bar Splicer	M8.01.9
Strand Chuck	M8.15.0
Lifting Devices	PCI MNL-116

2. Reinforcement and Prestressing Strands.

The size and grade of steel reinforcement and prestressing strands shall be as indicated on the plans. All reinforcing steel shall be epoxy coated, Grade 60. All prestressing strands shall be uncoated.

3. Threaded Inserts

Threaded inserts are permissible in Prestressed Concrete Beams for installing formwork, utility supports, or deck drains. Threaded inserts shall be hot dip galvanized or made of stainless steel and shall not come in contact with the reinforcing steel. The number of threaded inserts installed for the Contractor's convenience shall be kept to a minimum.

CONSTRUCTION METHODS – PLANT FABRICATION

Pre-Production Meeting.

The Contractor shall notify the MassDOT Research and Materials Section to determine if a pre-production meeting will be required to review the specification, shop drawings, curing plan, schedule, and discuss any specific requirements. The meeting shall be held prior to scheduling a MassDOT Inspector (refer to M4.09.4 *Department Acceptance*), and at least seven (7) days prior to the scheduled casting of any Prestressed Concrete Beam or control section. The Contractor shall schedule the meeting, which shall include representatives of the Fabricator and MassDOT.

ITEM 995.01 (Continued)

Reinforcement.
The reinforcing bars shall be installed in accordance with Subsection 901.35 of the Standard Specifications, including tolerances for cover and horizontal spacing of bars. Components of mechanical reinforcing bar splicers shall be set with the tolerances shown on the plans. The reinforcing bars and mechanical reinforcing bar splicers shall be assembled into a rigid cage that will maintain its shape in the form and which will not allow individual reinforcing bars to move during the placement of concrete. This cage shall be secured in the form so that the clearances to all faces of the concrete, as shown on the plans, shall be maintained.

Placing and Tensioning Strands.
Placing and tensioning strands shall be in accordance with PCI MNL-116. The location of all prestressing strands shall be as indicated on the plans.

Tolerances.
Fabrication shall comply with tolerances specified on the plans. Tolerances for steel reinforcement placement shall be in accordance with Subsection 901.35. In the absence of specifications on the plans, tolerances shall comply with the latest version of the PCI MNL 135, Precast Tolerance Manual.

Forms.
Concrete shall be cast in rigidly constructed forms, which will maintain the Prestressed Concrete Beams within specified tolerances to the shapes, lines and dimensions shown on the approved fabrication drawings. Forms shall be constructed from flat, smooth, non-absorbent material and shall be sufficiently tight to prevent the leakage of the plastic concrete. When wood forms are used, all faces in contact with the concrete shall be laminated or coated with a non-absorbent material. All worn or damaged forms, which cause irregularities on the concrete surface or damage to the concrete during form removal, shall be repaired or replaced before being reused. If threaded inserts are cast into the elements for support of formwork, the inserts shall be recessed a minimum of 1 inch and shall be plugged after use with a grout of the same color as that of the precast cement concrete.

CONSTRUCTION METHODS – FIELD CONSTRUCTION

General.
All of the Contractor's field personnel involved in the erection and assembly of the Prestressed Concrete Beams shall have knowledge of and follow the approved Erection Procedure and Quality Control Plan for Prestressed Concrete Beam Assembly.
Prior to installation, the following documentation shall be reviewed and confirmed by the MassDOT Resident Engineer or designee:

(d) QC Compressive Strength Test Report Forms attaining Design Strength, f'_c for the Prestressed Concrete Beam's representative sublot.
(e) Certificate of Compliance generated by the Fabricator as described under the Fabricator Quality Control section.
(f) QC Inspection Reports signed by the Quality Control Manager.

ITEM 995.01 (Continued)

Field construction staff shall verify that the Resident Engineer has accepted all Prestressed Concrete Beams prior to installation.

Erection Procedure and Quality Control Plan for Prestressed Concrete Beam Assembly.

Prior to the erection, the Contractor shall submit an Erection Procedure and a Quality Control Plan for Prestressed Concrete Beam Assembly for approval by the Engineer. This submittal shall include computations and drawings for the transport, hoisting, erection and handling of the Prestressed Concrete Beams. The Erection Procedure and Quality Control Plan for Prestressed Concrete Beam Assembly shall be prepared and stamped by a Professional Engineer registered in the Commonwealth of Massachusetts with working knowledge of the Contractor's equipment, approved shop drawings, and materials to build the bridge. The Erection Procedure and Quality Control Plan for Prestressed Concrete Beam Assembly shall, at a minimum, include the following:

1. Erection Procedure

The Erection Procedure shall be prepared to conform to the requirements of 960.61, Design, Fabrication and Erection and the applicable sections in Chapter 8 of the PCI Design Handbook (eighth edition) for handling, erection, and bracing requirements. At a minimum, the Erection Procedure shall provide:

(h) Steel reinforcing details, and location and details of lifting devices
(i) Minimum concrete compressive strength for handling the Prestressed Concrete Beams.
(j) Concrete stresses during handling, transport, and erection.
(k) Crane capacities, pick radii, sling geometry, and lifting hardware.
(l) Verification that the equipment can handle all pick loads and weights with the required factor of safety.
(m) Evaluation of construction sequence and evaluation of any geometric conflicts in the lifting of the Prestressed Concrete Beams and setting them on the abutments and piers.
(n) Design of crane supports including verification of subgrade for support.
(o) Location and design of all temporary bracing that will be required during erection.

2. Quality Control Plan for Prestressed Concrete Beam Assembly

The Quality Control Plan for Prestressed Concrete Beam Assembly is a document prepared and submitted by the Contractor prior to the start of work which requires the Contractor to identify and detail the sequence of construction in accordance with the project schedule, and which clearly identifies all stages of field construction. The assembly procedures for the Prestressed Concrete Beams shall be submitted in PDF format on 24"x36" sheets. This document will be treated as a Construction Procedure and will be reviewed by both the Designer and the District Construction Office.

At a minimum, the Quality Control Plan for Prestressed Concrete Beam Assembly shall include the following:

ITEM 995.01 (Continued)

(a) Listing of the equipment, materials, and personnel including their assigned responsibilities that will be used to erect and assemble the Prestressed Concrete Beams on site.
(b) Documentation of all preparatory work necessary for moving personnel, equipment, supplies, and incidentals to the project site before beginning work.
(c) Detailed schedule showing the sequence of operations that the Contractor will follow to complete the field construction from setting working points and working lines to the casting of closure pours and the curing of the closure pour concrete, as described below and as called for on the plans.
(d) Contractor's means for ensuring that the Prestressed Concrete Beam shall align to the roadway profile and cross slope and means for adjusting the final deck slab elevation.
(e) Timeline and descriptions of Quality Control activities to be followed throughout the field construction operations including methods and procedures for controlling tolerance limits both horizontally and vertically.

Survey and Layout.
Working points, working lines, and benchmark elevations shall be established prior to placement of all elements. The Contractor is responsible for field survey as necessary to complete the work. MassDOT reserves the right to perform additional independent survey. If discrepancies are found, the Contractor may be required to verify previous survey data.

Beam Layout and Erection.
Prestressed concrete beams shall be installed to the line and grade shown on the plans in accordance with the Contractor's approved Erection Procedure and Assembly Plan.
As the beams are being erected, the Contractor shall monitor the width of the closure pours and the out-to-out width of the beams top flanges so that, after all beams are erected, the actual overall width of the bridge deck shall not deviate from the dimension shown on the plans beyond a tolerance of +0 inches and -1 inches. In order to achieve this, the Contractor may vary the width of the closure pours within the tolerances specified on the plans.

Concrete Deck Slab Placement.
Prior to casting the deck, the abutments and piers shall be prepared for the placement of the deck concrete as called for on the plans and the Contractor shall cut the lifting devices off below the top of the beam.
The top of the beam shall be clean and free of all laitance. Deck concrete shall be placed against the beam concrete without the use of any bonding agents.
After the formwork has been removed, all threaded inserts that have been cast into the beams for support of the formwork shall be plugged with a grout of the same color as that of the precast concrete.

ITEM 995.01 (Continued)

SCHEDULE OF BASIS FOR PARTIAL PAYMENT

10 days after notice to proceed, the Contractor shall submit on his/her proposal form a schedule of unit prices for the major component Sub-Items that make up Item 995.01 as well as his/her total bridge structure Lum Sum cost for Bridge Structure No. L-05-004. The bridge structure Lump Sum breakdown quantities provided in the proposal form are estimated and not guaranteed. The total of all partial payments to the Contractor shall equal the Lump Sum contract price regardless of the accuracy of the quantities furnished by the Engineer for the individual bridge components. The cost of labor and materials for any Item not listed but required to complete the work shall be considered incidental to Item 995.01 and no further compensation will be allowed.

The schedule on the proposal form applies only to Bridge Structure No. L-05-004. Payment for similar materials and construction at locations other than at this bridge structure shall be not included under this Item. Sub-Item numbering is presented for information only in coordination with MassDOT Standard Nomenclature.

BRIDGE STRUCTURE NO. L-05-004

Sub-Item	Description	Qty.	Unit	Unit Price	Amount
482.31	SAWING AND SEALING JOINTS IN ASPHALT PAVEMENT AT BRIDGES	55	FT		
904.3	5000 PSI, ¾ IN., 685 HP CEMENT CONCRETE	192	CY		
904.31	PRECAST HIGHWAY GUARDRAIL TRANSITIONS	4	EA		
910.1	STEEL REINFORCEMENT FOR STRUCTURES – EPOXY COATED	37,200	LB		
930.602	PRESTRESSED CONCRETE NEXT BEAM (NEXT 28F)	200	FT		
965.	MEMBRANE WATERPROOFING FOR BRIDGE DECKS	1,670	SF		
970.	DAMP-PROOFING	1570	SF		
975.1	METAL BRIDGE RAILING (3 RAIL), STEEL (TYPE S3-TL4)	169	FT		

ITEM 996.51 PREFABRICATED MODULAR GRAVITY RETAINING WALL SQUARE FOOT

The work under this Item shall conform to the relevant provisions of Subsections 120, 140, 170 and 901 of the Standard Specifications and the following:

The work shall consist of design, fabrication, furnishing, transportation, and erection of prefabricated modular (PM) retaining wall system of the required type, including foundation excavation, leveling pad, drainage, backfill, and miscellaneous items necessary for a complete installation.

All provided walls shall be from one single manufacturer. The same PM wall system shall be used for all prefabricated retaining walls on this project.

The PM wall system shall be a gravity wall system consisting of architectural precast concrete units supported on cast-in place concrete leveling pads unless specified otherwise by the manufacture and select backfill. The wall structures shall be dimensioned to achieve the design criteria shown on the Plans and specified herein. The PM wall design shall follow the general dimensions of the wall envelope shown in the contract plans.

The PM retaining walls shall be constructed in accordance with these specifications and in reasonably close conformance with the lines, grades, design criteria, and dimensions shown on the Plans or as established by the Engineer. The Contractor is responsible for coordination with installation of guardrail and sidewalks.

ACCEPTANCE

Prefabricated modular (PM) gravity retaining wall system shall be designed and constructed as specified herein. The design shall be subject to review and acceptance by the Engineer. Acceptability of the PM gravity wall design shall be at the sole discretion of the Engineer. Any additional design, construction or other costs arising as a result of rejection of a retaining wall design shall be borne by the Contractor.

All calculations and Shop Drawings shall be signed and stamped by a Professional Engineer registered in the Commonwealth of Massachusetts and experienced in prefabricated retaining wall design and construction. No work shall commence until the calculations and drawing have been submitted to MassDOT and approved by the engineer.

Acceptable PM retaining wall systems are:

Redi Rock Retaining Wall™ by Michie Corporation/Capital Concrete Products

Stone Strong Retaining Wall by MBO Precast

Versa-Lok Standard Retaining Wall

Unilock Sienna Stone Retaining Wall

Alternative PM gravity wall systems shall be an accepted equal upon approval of the Engineer.

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Value engineering is not applicable to the work of this Item.

Prefabricated modular gravity retaining walls shall be built in accordance with the Plans and accepted Shop Drawings for the proposed wall system.

The Contractor installing the PM retaining wall shall have a minimum of 5 years' experience constructing the chosen prefabricated wall system and shall use personnel having demonstrated experience in the installation procedures recommended by the manufacturer and as specified herein.

A qualified representative (minimum 2 years demonstrated experience) from the wall design-supplier shall be present during construction of the PM walls. The services of the qualified representative shall be at no additional cost to the project. The Contractor shall make the necessary arrangements with the wall supplier to have the technical representative on the project. The qualified experienced technical representative will advise the Contractor and Engineer concerning proper installation procedures. The services of a qualified technical representative shall be incidental to this item.

MATERIALS

The Contractor shall be responsible for the purchase or manufacture of the concrete modular wall units of the PM walls, plus all other necessary components, aggregate backfills, joint fillers, geotextile fabric, bearing pads, and membranes for a complete installation. The Contractor shall furnish to the Engineer the appropriate Certificates of Compliance certifying that the applicable wall materials meet the requirements of the project specifications. All materials used in the construction of the prefabricated retaining walls shall meet the relevant requirements as specified in Division III, Materials Specifications of the MassDOT Standard Specifications, and as specified herein.

Materials not conforming to requirements of the referenced specifications or from sources not listed in the Contract Documents shall not be used without written consent from the Engineer.

Prefabricated Concrete PM Wall Units

The PM wall units shall be fabricated in accordance with Section M4 and Section 901. with the following exceptions and additions:

The PM concrete wall units shall be manufactured to a minimum 28-day compressive strength of 4000 psi and shall be air-entrained, from a MassDOT approved precaster.

A. Inspection and Rejection: The quality of materials, process of manufacture, and finished units shall be subject to inspection by the Engineer prior to shipment. Precast units may be subject to rejection on account of failure to conform to these specifications. Individual units will be rejected because of any of the following:

ITEM 996.51 (Continued)

1. Variations in the exposed face that substantially deviate from the approved architectural model unit as to color, texture, and reveals in accordance with precast concrete industry standards.

2. Dimensions not conforming to the following tolerances:

   a) Position of modular wall unit connection devices within 1 inch, except for coils and loop imbeds, which shall be 3/16-inch. All other dimensions within 3/16-inch.

   b) Squareness of face of modular wall units, as determined by the difference between the two diagonals, shall not exceed 3/8-inch for precast units up to 10-feet wide and ½-inch for larger units.

   c) Surface defects on smooth-formed surfaces measured over a length of 10-feet shall not exceed ¼-inch. Surface defects on textured-finished surfaces measured over a length of 10-feet shall not exceed ½-inch.

   d) Length or height of modular wall units shall not exceed +/- 1/8-inch.

3. Defects indicating honeycombed or open texture.

4. Defects that would affect the structural integrity of the unit, including cracked or severely chipped panels.

B. The date of manufacture, production lot number, and the piece mark shall be clearly scribed on an unexposed face of each PM wall unit.

C. The precast units shall be fully supported until the concrete reaches a minimum compressive strength of 3,000 psi or as specified by the designer. The units may be shipped and installed after the concrete reaches a minimum compressive strength of 4,000 psi.

D. All precast units shall be handled, stored, and shipped in such a manner as to eliminate the dangers of chipping, discoloration, cracks, fractures, and excessive bending stresses. PM units in storage shall be supported in firm blocking to protect the panel connection devices and the exposed exterior finish.

E. Lifting sleeves and inserts shall be provided for the purpose of handling and placing. Care shall be taken during storage, transporting, hoisting, and handling to prevent cracking or damaging the precast units.

F. Reinforcing steel for PM wall units shall be epoxy coated reinforcing bars in accordance with Section M

ITEM 996.51 (Continued)

G. Quality assurance and testing will be modified by the following:

1. Compressive Strength - Acceptance of precast concrete PM wall units with respect to compressive strength shall be determined on the basis of production lots. A production lot is defined as a group of PM wall units that will be represented by a single compressive strength sample and will consist of either 40 modular wall units or a single day's production, whichever is less.

2. During the production of precast concrete modular wall units, the manufacturer shall randomly sample the concrete in accordance with AASHTO T 141 (ASTM C 172). A single compressive strength sample, consisting of a minimum of four cylinders, shall be randomly selected for every production lot.

3. Compressive tests shall be made on a standard 6-inch x 12-inch test specimen prepared in accordance with AASHTO R 100 (ASTM C 31). Compressive strength testing shall be conducted in accordance with AASHTO T 22 (ASTM C 39).

4. Air content shall be performed in accordance with AASHTO T 152 (ASTM C 231) or AASHTO T 196 (ASTM C 173). Air content samples shall be taken at the beginning of each day's production and at the same time as compressive samples are taken to insure compliance. Air content shall be per M4.02.00.

5. The slump test shall be performed in accordance with AASHTO T 119 (ASTM C 143). The slump shall be determined at the beginning of each day's production and at the same time as the compressive samples are taken.

6. For every compressive strength sample, a minimum of two cylinders shall be cured in accordance with AASHTO R 100 (ASTM C 31) and tested at 7 and 28 days. The average compressive strength of these cylinders, when tested in accordance with AASHTO T 22 (ASTM C 39), will provide a compressive strength test result, which will determine the compressive strength of the production lot.

7. No units shall be shipped until the accepted curing period is complete as specified in the method of curing.

8. Acceptance of a production lot will be made if the compressive strength test result is greater than or equal to 4,000 psi.

9. Methods of Curing

Unless otherwise indicated on the plans, the concrete surfaces shall be finished in accordance to relevant requirements of Section 901 of the Standard and Supplemental Specification and as modified herein. The panels shall be cast on a flat area. The coil embeds, tie strip guide, and other galvanized devices shall not contact or be attached to the face panel reinforcement steel. Each panel shall be cast as a unit. No horizontal joints are permitted in a panel or block.

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Joint Materials

Installed to the dimensions and thickness in accordance with the Plans or approved shop drawings.

A. Provide either preformed EPDM rubber pads conforming to ASTM D2000 for 4AA, 812 rubbers or neoprene elastomeric pads having a Durometer Hardness of 55 ±5.

B. Cover all joints between panels on the back side of the wall with a geotextile fabric. The geotextile fabric shall conform to the requirements of Section M9.50.0. Slit film and multifilament woven geotextile fabrics are not allowed for this application. The minimum width of the fabric shall be 12 inches. Lap fabric at least 4 inches where splices are required.

Shear Keys [where applicable]

Precast shear keys shall be made of the same concrete mix as the prefabricated modular units and cured in the same manner. The shear keys are to be designed and detailed by the prefabricated wall manufacturer.

Backfill

All backfill materials used for PM walls shall be gravel borrow and shall conform to Section 150 of the Standard Specifications. Backfill material used in PM walls shall also meet the quality of material and gradation requirements of the PM manufacturer. Additional backfill requirements:

A. Soundness: The material shall be substantially free of shale or other soft, poor durability particles. The materials shall have a magnesium sulfate soundness loss, as determined by AASHTO T104 (ASTM C88), of less than 30 percent after four cycles.

Limits of backfill included under this Item shall be from the wall panels to a vertical plane 12 inches beyond the rear most edge of the PM walls. See Plans for diagrammatic details of the payment limits.

Leveling Pad

The leveling pad shall be per manufacture recommendations which may consist of either crushed stone or concrete. A concrete leveling pad shall be constructed of a minimum 3000 psi *cement* concrete approved mix as specified in the 2025 Standard Specifications Classifications of Concrete Mixes, or other foundation material as approved by the Engineer. Leveling pad shall have minimum dimensions of 6 inches thickness and of the width of the lower block plus 12-inches and be placed at the design elevation shown on the plans within a 1/8-inch tolerance.

ITEM 996.51 (Continued)

ACCEPTANCE OF MATERIALS

The Contractor shall furnish to the Engineer a Certificate of Compliance certifying that the above materials comply with the applicable contract specifications. A copy of all test results performed by the Contractor necessary to assure contract compliance shall also be furnished to the Engineer. Acceptance will be based on the Certificate of Compliance, accompanying test reports, and visual inspection by the Engineer.

DESIGN REQUIREMENTS

The PM gravity wall system shall be designed to provide a prefabricated modular retaining wall system that acts as a gravity wall without the need for external reinforcing straps, grids, mesh, tiebacks, deadmen, etc. behind the wall system to provide external stability that would conflict with existing and proposed utilities and drainage structures, including future maintenance and repair of utilities. For this reason, MSE type wall systems will not be considered. Prefabricated modular gravity wall systems that provide stability within the wall envelope limits as shown on the Plans are permitted.

The PM retaining walls shall be designed to provide the grade separation shown on the Plans with a service life of not less than 75 years.

The PM gravity wall system shall be designed in accordance with:

1. The manufacturer's requirements.
2. The Contract Plans.
3. The requirements as specified herein.
4. AASHTO LRFD Bridge Design Specification, current edition. Herein referenced as AASHTO LRFD.
5. AASHTO LRFD Bridge Construction Specifications, current edition.

Where conflicting requirements occur, the more stringent shall govern.

The PM wall shall be dimensioned so that the bearing pressure does not exceed the factored bearing resistance of the foundation soils, as noted on the Plans. The factored bearing pressure stated assumes a uniform pressure distribution.

The PM walls shall be designed to account for drainage required for walls below established groundwater levels and seasonal levels.

The prefabricated retaining wall design shall follow the general dimensions of the wall envelopes shown on the Plans. Top of leveling pad or footing elevations shall be as shown on the Plans, or may be lower. All wall elements shall be within the right-of-way limits shown on the Plans. The PM wall units shall be placed so as not to interfere with guardrail posts, drainage or other utilities, or other potential obstructions.

PM wall units shall have tongue and groove, shiplap or similar approved connections along all joints, both vertical and horizontal.

ITEM 996.51 (Continued)

All appurtenances behind, in front of, over (such as moment slab and coping), under, mounted upon or passing through the wall (such as drainage structures), or other appurtenances shown on the Plans shall be accounted for in the stability design of the prefabricated retaining wall system.

The PM retaining wall system shall be supported on cast-in-place leveling pad, or other foundation materials as approved by the Engineer. The top of the leveling pad shall be located at or below the theoretical leveling pad elevation. The minimum wall embedment shall be 4.0 feet as measured to the top of the leveling pad, or as shown on the Plans, whichever is greater. The leveling pads are incidental to this item.

If steps at the bottom of the wall are required, they shall be kept at or below the footing elevation shown on the Contract Drawings. Steps in addition to those shown on the Contract Drawings will be permitted at no additional cost to the Department.

The top of the cap blocks shall be at or above the top of the wall elevations shown on the Plans. If additional soils information is required by the Contractor's designer, it must be obtained by the Contractor and will not be reimbursed by the Department.

PRE-CONSTRUCTION SUBMITTALS

Design computations demonstrating compliance with the criteria specified herein and shown on the Plans shall be prepared, signed, and stamped by a registered professional engineer licensed in the Commonwealth of Massachusetts and with a minimum of 5 years of experience in the design and construction of prefabricated retaining walls.

A. The design calculations shall include:

1. Statement of all assumptions made, and copies of all references used in the calculations. Calculations shall be performed in English units.

2. Analyses demonstrating compliance with all applicable earth, water, surcharges, seismic, or other applicable loads, as specified herein and required by the reference AASHTO LRFD. The design calculations shall include all applicable references to the LRFD code.

3. Analyses or studies demonstrating durability and corrosion resistance of the prefabricated retaining wall system for the proposed location and environment. The Contractor/Designers shall provide all corrosion protection devices necessary for the retaining wall to have a minimum service life of 75 years in the proposed location and environment.

4. Analyses demonstrating adequacy of design for external stability of the PM wall system. Sliding, overturning, and bearing pressures shall be evaluated for conformance with stipulated design requirements.

ITEM 996.51 (Continued)

B. A detailed resume of the wall designer shall be provided, listing similar projects and demonstrating necessary experience to perform the retaining wall designs, including a brief description of each project that is similar in scope shall be provided for acceptance. A reference shall be included for each project listed. As a minimum, the reference shall include an individual's name, address, and current phone number.

C. A detailed listing of the relevant type of PM retaining walls that the Contractor has constructed shall be provided, including a brief description of each project and a listing of personnel who will construct the walls demonstrating their experience in construction of PM retaining walls. A reference shall be included for each project listed. As a minimum, the reference shall include an individual's name, address, and current phone number.

D. Manufacturer's product data for the PM retaining wall system shall be provided, including material, manufacture and erection specifications, all specified erection equipment, details of buried wall elements, structures design properties, type of backfill, and details for connections between wall units.

E. Concrete mix design shall be in accordance with Section M4.

F. Provide Shop Drawings showing the configuration and all details, dimensions, quantities and cross-sections necessary to construct the prefabricated retaining walls, including but not limited to the following:

1. A plan view of the wall, which shall include contract limits, stations and offsets, and the face of wall line as shown on the Plans.

2. An elevation view of the wall, which shall include the elevation at the top of the wall at all horizontal and vertical break points and at least every 25-feet along the face of the wall, all steps in the wall footings, the designation as to the type of retaining wall system, and an indication of the final ground line and maximum calculated bearing pressures. The theoretical face of wall as shown on the Plans shall be indicated.

3. A typical cross section or cross sections showing the elevation relationship between existing ground conditions and proposed grades, and the proposed wall configuration. The sections shall also indicate the location of the theoretical face of wall as shown on the Plans.

4. General notes pertaining to design criteria and wall construction.

5. A listing of the summary of material quantities for each wall.

6. Details of sleeves and pipes and other embedded items to be installed through the walls, if applicable. Annular space around the pipe shall be filled and sealed with closed cell foam.

ITEM 996.51 (Continued)

7. Clearly indicate details for construction of walls or reinforcing elements around drainage, foundations, utilities or any other potential obstructions, where applicable.

8. Details of the finished surface treatment for the face of PM wall units.

9. Drainage design detail and design scheme, where applicable.

10. Location of utilities, where applicable.

11. Sequence and schedule of construction, including overall construction schedule.

12. Methods of excavation and backfill.

13. Method of maintaining stability of excavated trenches, where applicable.

14. Method of monitoring plumbness and deviation of wall.

15. Any acceptance testing and frequency.

16. Details and location of all necessary construction and expansion joints.

17. Details of impermeable membrane connection to PM wall units and to runoff collection system.

18. Details of maintaining the stability, rigidity and alignment of the wall during construction, prior to wall construction completion, and prior to backfilling behind the top of the wall and roadway/moment slab construction at the top of the wall.

19. Groundwater elevation.

CONSTRUCTION

Delivery, Storage, and Handing

The Contractor shall check the material upon delivery to assure that the proper material has been received. A product certification should be provided with each shipment.

All wall materials and PM wall units shall be stored elevated from the ground and protected to prevent all mud, wet cement, epoxy and like substances, which may affix themselves to the PM wall units. For storage exceeding 30 days in duration, all materials shall be stored in or beneath a trailer or covered with a colored tarpaulin to prevent long-term exposure.

ITEM 996.51 (Continued)

Wall Excavation

Earth excavations shall be in accordance with the requirements of Section 120 and in close conformity to the limits shown on the Plans. Sections 120.80, 120.81, and 120.82 do not apply to the work covered in this section. Excavation and incidentals to complete the excavation for prefabricated retaining walls shall be included in the Prefabricated Modular Gravity Retaining Wall Item.

As required and approved by the Engineer, excavation and replacement of any unsuitable materials beyond the retaining wall payment limits shown on the Plans will be measured and paid for as defined in Sections 120 and Items 151.1.

Foundation Preparation

The foundation for prefabricated retaining walls shall be graded level for a width equal to the width/depth of each course of wall unit plus 1-foot. Prior to wall construction, the foundation shall be compacted with at least 10 passes of an appropriate roller, weighing a minimum of 10,000 lbs. Compact the foundation area to provide a hard and level surface to support wall units. Any foundation soils found to be unsuitable shall be removed and replaced with Gravel Borrow for Bridge Foundation per Sections 120, 140, and 170. The foundation for the structure shall be approved by the Engineer before erection is started.

In areas below the existing groundwater level, backfill shall consist of crushed stone for bridge foundations as per Section 150.

Wall Erection

The precast modular wall units shall be installed in accordance with approved manufacturer's recommendations. Special care shall be taken in setting the bottom course of units to true line and grade. While erecting each subsequent course, line and grade shall be examined and deviations shall be corrected to prevent accumulative inaccuracies in alignment. Joint filler and rubber pads shall be installed. Joints at corners or angle points shall be closed.

All wall units above the first course shall interlock with the lower courses. Vertical joints shall be staggered with each successive course or as approved on the Shop Drawings. The vertical joint opening in the front face of the wall shall not exceed 3/8 inches. All vertical joints between units shall be covered on the back side of the front face of the wall by a filter fabric, 12 inches in width, unless approved otherwise on the Shop Drawings.

The overall vertical tolerance of the wall (top to bottom) shall not exceed ½ inch per 10 feet of wall height.

ITEM 996.51 (Continued)

Backfill Placement

Backfill placement for PM walls shall follow erection of each course of modular wall units. Backfill shall be placed in such a manner as to avoid any damage or disturbance to the wall materials or misalignment of the modular wall units. Any wall materials, which become damaged or disturbed during backfill placement, shall be removed and replaced at the Contractor's expense. Any misalignment or distortion of the modular units due to placement of backfill outside specified limits shall be corrected.

Compaction of backfill material shall adhere to the following criteria unless approved otherwise on the Shop Drawings:

A. Backfill material conforming to the requirements specified herein shall be placed and compacted simultaneously with the placement of the modular units.

B. Backfill lift shall be a maximum of 12 inches, uniform in thickness and compacted within the limits shown on the Plans. The Contractor shall decrease this lift thickness, if necessary, to obtain the specified density.

C. Placement and compaction shall be accomplished without distortion or displacement of the modular units.

D. At each panel level the backfill material shall be roughly leveled to an elevation approximately 2 inches above the level of the next course of modular units, but not more than 12 inches thick.

E. The compaction shall take place in a direction that is parallel to the wall.

F. The specified compaction of the backfill material shall be accomplished by use of large, smooth drum, vibratory rollers with the exception of the 5-foot zone directly behind the wall face of the modular units.

G. Backfill shall be compacted to 95 percent of the maximum density as determined by AASHTO T 99, Method C or D (with oversize corrections as outlined in Note 7 of that test).

H. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer. Backfill materials shall have a placement moisture content less than or equal to the optimum moisture content. Backfill material with a placement moisture content in excess of the optimum moisture content shall be removed and reworked until the moisture content is uniformly acceptable throughout the entire lift.

I. Within 5 feet of the wall face, small, single or double drum, hand operated, walk-behind vibratory rollers, or walk-behind vibrating plate compactors shall be used, and at least three passes shall be made.

ITEM 996.51 (Continued)

J. When there is evidence of wall displacement or disturbance, compaction shall be accomplished by use of a smooth drum static roller.

K. At the end of each day's operation, the Contractor shall slope the last placed level of backfill away from the wall face to rapidly direct runoff of rainwater from the wall face. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

METHOD OF MEASUREMENT

Prefabricated Retaining Walls shall be measured by the vertical unit of square foot of retaining wall structure, according to the dimensions shown on the Plans. The vertical area of retaining wall structure is defined as the area, measured at the wall face, bounded by the top of leveling pad or footing directly under the wall, ends of wall, and top of wall.

BASIS OF PAYMENT

Payment will be at the Contract Unit Bid Price per vertical square foot for design, fabrication, transportation, erection, and installation of prefabricated retaining wall, including backfill and miscellaneous items required for a complete installation, which price and payment will be full compensation for all labor, tools, equipment, materials and incidental expense necessary to complete this Item and accepted by the Engineer.

The unit price for Prefabricated Retaining Wall shall include costs for:

A. All design work, preparation of written submittals and detailed construction drawings, revision of submittals, sample submittals and any other necessary preliminary work prior to and after acceptance of the retaining wall system by the Engineer.

B. All materials, including transportation, for the PM retaining walls. For PM walls this includes concrete modular units, bearing blocks and shims, joint materials, cement concrete, reinforcing steel, geotextile fabric, aggregate backfill, and incidentals.

C. All labor and equipment required to prepare the wall foundation; erect the retaining walls to the lines and grades shown on the Plans; install the joint materials; install wall drainage; provide and install steel pipe sleeves for utility penetrations; provide, place, and compact backfill within wall units or backfill behind the wall units; procure and place geotextile fabric per manufacturer's recommendations, and design, detail and construct any other items necessary to complete the prefabricated retaining walls.

D. All temporary shoring needed for supporting the excavation.

E. PM Wall Representative shall be incidental to this line item.

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DETAIL SHEETS

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THE COMMONWEALTH OF MASSACHUSETTS
MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
10 PARK PLAZA, BOSTON MA

–PRELIMINARY ESTIMATE OF QUANTITIES – DETAIL SHEET

CITY/TOWN:	Lee	**YEAR** :	FY 2025
LIMITS:	STA 9+75 to 14+50	**ROAD** :	Meadow St
TYPE OF PROJECT:	Bridge – Construction	**DATE** :	July 1, 2025

Earth Excavation	660 CY	Dense Graded Crushed Stone for Sub-Base	105 CY
Bridge Excavation	766 CY	Special Borrow	75 CY
Gravel Borrow	310 CY	Class B Rock Excavation	5 CY
Gravel Borrow for Bridge Foundation	238 CY	Test Pit for Exploration	5 CY
Channel Excavation	630 CY	Muck Excavation	5 CY
Ordinary Borrow	95 CY		

PAVEMENT NOTES

Meadow Street:

PROPOSED FULL DEPTH CONSTRUCTION AT APPROACHES **AREA = 913 SY**

SURFACE COURSE:	1.75” SUPERPAVE SURFACE COURSE – 12.5 (SSC-12.5) OVER ASHPALT EMULSION FOR TACK COAT
INTERMEDIATE COURSE:	2” SUPERPAVE INTERMEDIATE COURSE – 12.5 (SIC-12.5) OVER ASHPALT EMULSION FOR TACK COAT
BASE COURSE:	4” SUPERPAVE BASE COURSE – 37.5 (SBC-37.5) OVER 4” DENSE GRADED CRUSHED STONE FOR SUB-BASE OVER
SUBBASE	8” GRAVEL BORROW – TYPE B
SUBGRADE	24” SPECAL BORROW (AS REQUIRED BY THE ENGINEER)

PROPOSED PAVEMENT MILL & OVERLAY **AREA = 117 SY**

SURFACE COURSE: 1.75" SUPERPAVE SURFACE COURSE – 12.5 (SSC-12.5) OVER
ASPHALT EMULSION FOR TACK COAT

MILLING: 1.75" PAVEMENT FINE MILLING

PROPOSED BRIDGE DECK **AREA = 185 SY**

SURFACE COURSE: 1.5" SUPERPAVE BRIDGE SURFACE COURSE – 9.5 (SSC-B-9.5) OVER
ASPHALT EMULSION FOR TACK COAT

PROTECTIVE COURSE: 1.5'' SUPERPAVE BRIDGE PROTECTIVE COURSE – 9.5 (SPC-B-9.5) OVER
MEMBRANE WATERPROOFING

PROPOSED GRAVEL DRIVEWAY **AREA = 35 SY**

SURFACE COURSE: 12" GRAVEL FOR SURFACING OVER EXISTING BASE MATERIAL

ALL ITEMS NOT COMPLETELY DESCRIBED AND LOCATED ON THE PLANS ARE TO BE DETAILED AS SHOWN BELOW.

ITEM 101. CLEARING AND GRUBBING

For use in the following locations from the edge of roadway to the grading limits as shown on the Plans and as required by the Engineer:

Sta. 9+22 LT to Sta. 12+14 LT
Sta. 10+48 RT to Sta. 11+56 RT
Sta. 12+66 LT to Sta. 14+00 LT
Sta. 12+15 RT to Sta. 15+22 RT

ITEM 102. SELECTIVE CLEARING AND THINNING

For use in the following locations from the grading limits to the clearing line as shown on the Plans and as required by the Engineer:

Sta. 9+22 LT to Sta. 12+14 LT
Sta. 10+48 RT to Sta. 11+56 RT
Sta. 12+66 LT to Sta. 14+00 LT
Sta. 12+15 RT to Sta. 15+22 RT

ITEM 102.1 TREE TRIMMING

For use in the following locations and as required by the Engineer:

Sta. 9+22 LT to Sta. 12+14 LT
Sta. 10+48 RT to Sta. 11+56 RT
Sta. 12+66 LT to Sta. 14+00 LT
Sta. 12+15 RT to Sta. 15+22 RT

ITEM 102.523 TREE AND PLANT PROTECTION FENCE - VISIBILTY STAKES

For use in the following locations for protection of trees during construction as shown on the Plans and as required by the Engineer:

Sta. 11+68 LT to Sta. 11+73 LT
Sta. 12+61 LT to Sta. 12+67 LT
Sta. 12+73 LT to Sta. 12+77 LT
Sta. 12+91 LT to Sta. 13+03 LT

ITEM 103. TREE REMOVED – DIAMETER UNDER 24 INCHES

For trees that will be removed outside of the selective clearing areas as shown on the Plans and as required by the Engineer:

Sta. 10+68 RT
Sta. 12+28 RT
Sta. 12+26 RT

ITEM 120. EARTH EXCAVATION

For all excavation for full depth road reconstruction, guardrail placement, driveway area, and removal of the east and west abutments on Meadow Street.

ITEM 123. MUCK EXCAVATION

For excavation of any unsuitable material encountered during excavation.

ITEM 140. BRIDGE EXCAVATION

For areas of Bridge Excavation for construction of modifications of the existing bridge and as shown on the Plans and as required by the Engineer.

ITEM 141.1 TEST PIT FOR EXPLORATION

For subsurface exploration as required by the Engineer.

ITEM 143. CHANNEL EXCAVATION

For removing material in the channel to restore the streambed as shown on the Plans and as required by the Engineer.

ITEM 144. CLASS B ROCK EXCAVATION

For removal of rock encountered during guardrail installation and as required by the Engineer.

ITEM 150. ORDINARY BORROW

For backfilling area behind concrete block retaining wall and behind streambed restoration area as shown on the Plans and as required by the Engineer.

ITEM 150.1 SPECIAL BORROW

For roadway subgrade where existing material is not satisfactory as required by the Engineer.

ITEM 151. GRAVEL BORROW

For use under granite curb, stone drain areas, gravel driveway, and full depth areas as shown on the Plans and as required by the Engineer.

ITEM 151.1 GRAVEL BORROW FOR BRIDGE FOUNDATION

For backfilling behind abutments as shown on the Plans and as required by the Engineer.

ITEM 156. CRUSHED STONE

To be used for channel restoration, under retaining wall, below abutments and wingwall subdrains as shown on the Plans and as required by the Engineer.

ITEM 170. FINE GRADING AND COMPACTING - SUBGRADE AREA

For roadway and driveway construction areas as shown on the Plans and as required by the Engineer.

ITEM 181.11 DISPOSAL OF UNREGULATED SOIL

For all unregulated soil that will be disposed of off-site as required by the Engineer.

ITEM 181.12 DISPOSAL OF REGULATED SOIL – IN-STATE FACILITY

For all regulated soil that will be disposed of off-site in-state as required by the Engineer.

ITEM 181.13 DISPOSAL OF REGULATED SOIL – OUT-OF-STATE FACILITY

For all regulated soil that will be disposed of off-site out-of-state as required by the Engineer.

ITEM 181.14 DISPOSAL OF HAZARDOUS WASTE

For all hazardous waste that will be disposed of off-site as required by the Engineer.

ITEM 402. DENSE GRADED CRUSHED STONE FOR SUB-BASE

For full depth areas as shown on the Plans and as required by the Engineer.

ITEM 402.13 PAVEMENT MILLING MULCH FOR SHOULDERS

For use in the following locations and as required by the Engineer:

Sta. 13+10 RT to Sta. 13+27 RT
Sta. 13+90 LT to Sta. 14+50 LT

ITEM 415.2 PAVEMENT FINE MILLING

For areas of Mill and Overlay as shown on the Plans and as required by the Engineer:

Sta. 9+75 to Sta. 10+00
Sta.14+25 to Sta. 14+50

ITEM 443. WATER FOR ROADWAY DUST CONTROL

For full depth areas as shown on the Plans and as required by the Engineer.

ITEM 450.23 SUPERPAVE SURFACE COURSE – 12.5 (SSC – 12.5)

For full depth and micromill and overlay areas as shown on the Plans and as required by the Engineer.

ITEM 451. HMA FOR PATCHING

As needed or as required by the Engineer for miscellaneous work.

ITEM 452. ASPHALT EMULSION FOR TACK COAT

For full depth, mill and overlay, and bridge deck areas as shown on the Plans and as required by the Engineer.

ITEM 453. HMA JOINT ADHESIVE

HMA joint adhesive to be applied to cold pavement joints, where new pavement meets existing, and as required by the Engineer.

Sta. 9+75 – Full Roadway Width
Sta. 10+00 – Full Roadway Width
Sta. 14+25 – Full Roadway Width
Sta. 14+50 – Full Roadway Width
Sta. 9+75 CL to Sta. 14+50 CL

ITEM 472. TEMPORARY ASPHALT PATCHING

As needed or as required by the Engineer for miscellaneous temporary work.

ITEM 504. GRANITE CURB TYPE VA4 - STRAIGHT

For use in the following locations and as required by the Engineer:

Sta. 11+70 LT to Sta. 11+83 LT
Sta. 11+59 RT to Sta. 11+71 RT
Sta. 12+77 LT to Sta. 12+90 LT
Sta. 12+65 RT to Sta. 12+77 RT

ITEM 509. GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - STRAIGHT

For use in the following locations and as required by the Engineer:

Sta. 11+64 LT to Sta. 11+70 LT
Sta. 11+53 RT to Sta. 11+59 RT
Sta. 12+90 LT to Sta. 12+96 LT
Sta. 12+77 RT to Sta. 12+83 RT

ITEM 620.12 GUARDRAIL, TL-2 (SINGLE FACED)

For use in the following locations and as required by the Engineer:

Sta. 9+38 LT to Sta. 11+53 LT
Sta. 13+08 LT to Sta. 13+30 LT
Sta. 13+48 RT to Sta. 15+06 RT

ITEM 620.131 GUARDRAIL, DEEP POST (SINGLE FACED)

For use in the following locations and as required by the Engineer:

Sta. 8+36 RT to Sta. 11+41 RT

ITEM 627.1 TRAILING ANCHORAGE

For use in the following locations and as required by the Engineer:

Sta. 8+26 RT to Sta. 8+36 RT
Sta. 9+28 LT to Sta. 9+38 LT
Sta. 12+95 RT to Sta. 13+05 RT
Sta. 13+39 RT to Sta. 13+48 RT
Sta. 15+06 RT to Sta. 15+16 RT

ITEM 627.82 GUARDRAIL TANGENT END TREATMENT, TL-2

For use in the following locations and as required by the Engineer:
Sta. 13+30 LT to Sta. 13+83 LT

ITEM 628.24 TRANSITION TO BRIDGE RAIL

For use in the following locations and as required by the Engineer:

Sta. 11+41 RT to Sta. 11+75 RT
Sta. 11+53 LT to Sta. 11+87 LT
Sta. 12+74 LT to Sta. 13+08 LT
Sta. 12+61 RT to Sta. 12+95 RT

ITEM 630.1 HIGHWAY GUARD REMOVED AND STACKED

For use in the following locations and as required by the Engineer:

Sta. 11+33 LT to Sta. 14+35 LT
Sta. 11+33 RT to Sta. 13+59 RT

ITEM 657. TEMPORARY FENCE

To be used for the road/bridge closure and to secure the work site as shown on the Plans and as required by the Engineer.

ITEM 698.2 GEOTEXTILE FABRIC FOR SUBSURFACE DRAINAGE

To be used below crushed stone bedding in vegetated swales, as shown on Plans and as required by the Engineer:

Sta. 12+96 LT
Sta. 12+83 RT

ITEM 698.4 GEOTEXTILE FABRIC FOR PERMANENT EROSION CONTROL

To be used for channel restoration under crushed stone and around the 4" PVC subdrain as shown on the Plans and as required by the Engineer.

ITEM 702. HOT MIX ASPHALT SIDEWALK OR DRIVEWAY

To be used for the HMA apron as shown on the Plans and as required by the Engineer.

ITEM 765.555 WETLAND SEED – PART SHADE MIX

To be used to restore disturbed bank areas as shown on the Plans and as required by the Engineer:

Sta. 11+84 LT to Sta. 12+09 LT
Sta. 12+55 LT to Sta. 12+76 LT

ITEM 765.635 NATIVE SEEDING & ESTABLISHMENT

To be used to restore disturbed areas as shown on the Plans and as required by the Engineer.

ITEM 765.664 MOWING FOR NATIVE SEED ESTABLISHMENT

To be used before seeding to restore disturbed areas as shown on the Plans and as required by the Engineer.

ITEM 767.121 SEDIMENT CONTROL BARRIER

To be used along the perimeter of areas of construction operations and as required by the Engineer:

Sta. 9+21 LT to Sta. 12+14 LT
Sta. 8+18 RT to Sta. 11+56 RT
Sta. 12+65 LT to Sta. 14+52 LT
Sta. 11+57 RT to Sta. 15+24 RT

ITEM 767.9 JUTE MESH

To be used in bank areas and vegetated swales as shown on the Plans and as required by the Engineer:

Sta. 11+84 LT to Sta. 12+09 LT
Sta. 12+55 LT to Sta. 12+76 LT

ITEM 769. PAVEMENT MILLING MULCH UNDER GUARD RAIL

To be used in the following locations and as required by the Engineer:

Sta. 8+20 RT to Sta. 8+92 RT
Sta. 9+23 LT to Sta. 11+81 LT
Sta. 11+41 RT to Sta. 11+69 RT
Sta. 12+67 RT to Sta. 13+10 RT
Sta. 12+80 LT to Sta. 13+90 LT
Sta. 13+27 RT to Sta. 15+21 RT

ITEM 776.836 MAPLE – SUGAR 2-2.5 INCHES CALIPER

To be used to replace the trees that will be removed as shown on the Plans and as required by the Engineer.

ITEM 777.138 OAK – PIN 2-2.5 INCH CALIPER

To be used to replace the trees that will be removed as shown on the Plans and as required by the Engineer.

ITEM 833.7 DELINEATION FOR GUARD RAIL TERMINI

To be used in the following locations and as required by the Engineer:

Sta. 8+26 RT
Sta. 9+28 LT
Sta. 13+05 RT
Sta. 13+83 LT
Sta. 13+48 RT
Sta. 15+16 RT

ITEM 853.1 PORTABLE BREAKAWAY BARRICADE TYPE III

To be used on each detour route and bridge approaches as shown on the Plans and as required by the Engineer.

ITEM 853.2 TEMPORARY BARRIER (TL-2)

As required to prevent public access to the work zone as shown on temporary traffic control plans, and as required by the Engineer.

ITEM 856.12 PORTABLE CHANGEABLE MESSAGE SIGN

To provide roadway users with information regarding future and ongoing detour routes as required by the Engineer.

ITEM 861.106 6 INCH REFLECTORIZED YELLOW LINE (PAINTED)

For use in the following locations as shown on the Plans and as required by the Engineer:

Sta. 9+75 CL to Sta. 14+50 CL (DOUBLE)

ITEM 874.4 TRAFFIC SIGN REMOVED AND STACKED

For use in the following locations as shown on the Plans and as required by the Engineer:

Sta. 8+83 RT
Sta. 9+75 RT
Sta. 10+63 RT
Sta. 14+25 LT
Sta. 15+19 LT

ITEM 984.2 BOULDER BENDWAY WEIRS

To be used as scour countermeasure in the streambed restoration as shown on the Plans and as required by the Engineer.

ITEM 986. MODIFIED ROCKFILL

For use in the stone check dams as shown on the Plans and as required by the Engineer.

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PROJECT UTILITY COORDINATION FORM

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Project Utilities Coordination (PUC) Form

CONTACTS AND GENERAL UTILITY INFORMATION

Printed: 4/19/2024

City/Town:	Project File #:	PUC Completed by:	Utility Pole Set:	
Lee	607597	Shane Burdick	Verizon	
Route/Street:	**Resident Engineer:**	**Mass DOT PM:**	**Scheduled Ad Date:**	**Total Poles Relocated:**
Meadow Street	*TBD*	Joshua Bartus	7/20/2024	9

Consultant:	Contact:	Cell #	Office #	Email
Gill Engineering Associates, Inc.				

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	Travis Walsh		(413) 441-9566	Travis.Walsh@Eversource.com	X		X				X		X		X
Charter Communication	John Leone	(518) 640-8864	(518) 469-3549	john.leone@charter.com	X		X				X		X		X
Verizon	Paul Davis		(413) 325-7764	PDavis@pike.com	X		X				X		X		X
Eversource	Nicholas Langone	(413)-787-9022	(413) 478-5808	nicholas.langone@eversource.com											
Verizon	Paul Styspeck	(413) 787-1845	(413) 575-7058	paul.m.styspeck@verizon.com											

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:

It should be noted that due to supply chain issues, Eversource has requested an advanced lead time of 90 days instead of the usual 30 days.

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 Town of Lee. The information provided is the best available information prior to project advertisement.

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

4/19/2024
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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 ?	
	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)
Phase 1			Enabling' work by the Contractor -**Note 90 day lead time due to supply shortages** Site clearing and pole locations surveyed. (DOT will stake pole locations within 5 days of being notified clearing has been completed. Verizon will need 5 days after the staking for the poles to clear their DIG-SAFE). All contractor enabling work can be concurrent with the required 90 day lead time. * Contractor to schedule a utility meeting to confirm all poles are staked correctly at least 30 days prior to first pole set / scheduled move.							
			UTILITY OPERATIONS - Pole Set / Overhead Relocation							
Task: 1			***Utility Co. - Verizon***							
		u	Verizon Line - Place New Poles, PA & PP Guywires, Anchors	10	X		X		Yes	
			Sub-Total	**10**						
Task: 2			***Utility Co. - Eversource***							
		u	Frame poles	2	X		X		Yes	
		u	Remove / install conductors	2	X		X		Yes	
		u	Cut pole tops from existing poles	1						
			Sub-Total	**5**						
Task: 3			***Utility Co. - Charter***							
		u	Attach temp plant to new poles	4	X		X		Yes	
		u	Splice new temp lines	4	X		X		Yes	
		u	Swing fiber over to new temp lines	4	X		X		Yes	
		u	Wreck out old plant	4	X		X		Yes	
			Sub-Total	**16**						
Task: 4			***Utility Co. - Verizon***							
		u	Verizon Line - Place New Aerial CU Stub & Cable, PMT / CU Wire Terms, and Load Coil Case	4	X		X		Yes	
		u	Verizon Splice - Splice in New Aerial CU Cable and Wire Term / Test	4	X		X		Yes	
		u	Verizon Line - Transfer Aerial CU Cable, CU Wire Drops	1	X		X		Yes	
		u	Verizon Splice - Trimout Aerial Copper Stubs / Cable	2	X		X		Yes	
		u	Verizon Line - Remove Aerial Cable, Service Wires, Load Coil Case	3	X		X		Yes	
		u	Verizon Line - Remove Poles, Guywires, and Anchors	4	X		X		Yes	
			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)
Phase 2			Enabling' work by the Contractor - Contractor to complete bridge construction, access to set final pole location for pole 86 should not be blocked off before utilities have relocated to the new pole.							
			UTILITY OPERATIONS - Pole Set / Overhead Relocation							
Task: 1			***Utility Co. - Verizon***							
		u	Verizon Line - Place New Poles, PA & PP Guywires, Anchors	5	X		X		Yes	
			Sub-Total	**5**						
Task: 2			***Utility Co. - Eversource***							
		u	Frame poles	2	X		X		Yes	
		u	Remove / install conductors	2	X		X		Yes	
		u	Cut pole tops from existing poles	1	X		X		Yes	
			Sub-Total	**5**						
Task: 3			***Utility Co. - Charter***							
		u	Attach perm plant to new poles	4	X		X		Yes	
		u	Splice new perm lines	4	X		X		Yes	
		u	Swing fiber over to new perm lines	4	X		X		Yes	
		u	Wreck out old plant	4	X		X		Yes	
			Sub-Total	**16**						
Task: 4			***Utility Co. - Verizon***							
		u	Verizon Line - Transfer / Relocate Aerial CU Cable	3	X		X		Yes	
		u	Verizon Line - Remove Poles, Guywires, and Anchors	5	X		X		Yes	
			Sub-Total	**8**						

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 and underground conduit installations however, typically have a seasonal restriction and can NOT be installed from 15-November to 15-March. Municipally Owned Electric and Gas Utilities are also restricted from proceeding from 15-November to 15-March. 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.

Proposal No. 607597 - 132402

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DOCUMENT A00810

MASS DOT HERBICIDE USE REPORT

Proposal No. 607597-132402

MassDOT Herbicide Use Report

Date Submitted:

Use multiple sheets for multiple application techniques or sites as needed.

Contractor Performing Work:

Project or Contract No:

Town/s:

Associated Route:

Project Description:

MDAR ALERT*:

Treatment Description:

Area Treated (as applicable)

Acres: **Sq Yds:** **Miles:**

Weeds Targeted:

Gallons Formula Used:

Application Method:

Date/Time Began:

Date/Time End:

Product Used:

Name: _____	Name: _____	Name: _____
EPA Reg. No: _____	EPA Reg. No: _____	EPA Reg. No: _____
% Active Ingredient	% Active Ingredient	% Active Ingredient
Dry: _____	Dry: _____	Dry: _____
Liquid: _____	Liquid: _____	Liquid: _____
Formulation (dilution rate): _____	Formulation (dilution rate): _____	Formulation (dilution rate): _____

Additional products used (surfactants, etc.) or other information:

Applicators: **License Numbers:**

* Please note:
EDRR Species (MAM, Hogweed, Pepperweed, Kudzu, etc.)
Tree of Heaven 1) stands of >20 trees; 2) >5 trees near nursery, landscape company, or highway rest area where trucks stop

Upon completion, please submit form to MassDOT District Engineer and Landscape Design Section in Boston office.

07/18/2018

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: LEE Project File Number: 607597

Contract Number: 132402

Project Description: Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook

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 A00831

ARMY CORPS OF ENGINEERS

GENERAL PERMIT

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Regulatory Division
Transportation & Utility Section
File No. NAE-2025-00930

Courtney Walker
MassDOT - Highway Division
10 Park Plaza
Boston, Massachusetts 02116
Via Email: courtney.l.walker@dot.state.ma.us

Dear Ms. Walker:

This letter is in response to the application you submitted to the U.S. Army Corps of Engineers (USACE), New England District, on April 7, 2025, for a Department of the Army general permit verification. We have assigned this project file number NAE-2025-00930, which you should reference in all correspondence with this office. This letter follows a provisional notification letter from this office, dated August 8, 2025.

A review of the information provided indicates the work includes the permanent discharge of fill material within 3,441 square feet below the Ordinary High Water (OHW) mark of Powder Mill Brook (aka Beartown Brook) associated with the replacement of the bridge conveying Meadow Street over Powder Mill Brook, at Latitude 42.273240º and Longitude -73.269440º, in Lee, Berkshire County, Massachusetts. The existing single-span bridge will be replaced with a new single-span bridge. The new abutments/ wingwalls will be installed landward of the existing abutments/wingwalls, which will be removed. The streambed will be reconstructed below the bridge with rip-rap overtopped with 12" of natural material to address scour. The natural thalweg will be restored, and two boulder weirs installed upstream from the bridge to divert flow from the bend in the river and toward the thalweg. The project also includes temporary impacts within 125 square feet of wetlands due temporary construction access to construct the northwest bridge abutment. The work is shown on the enclosed plans titled “TOWN OF LEE MEADOW STREET OVER POWDER MILL BROOK (A.K.A. BEARTOWN BROOK) BRIDGE L-05-004 IN THE TOWN OF LEE, MA BERKSHIRE COUNTY ENVIRONMENTAL PERMIT PLANS,” on 11 sheets dated 6/13/2025.

Based on the information you have provided, we verify that the activity is authorized under General Permit 23 of the June 2, 2023, federal permit known as the Massachusetts General Permits (GPs). If the extent of the project area and/or nature of the authorized impacts to waters are modified, a revised application must be submitted to this office for written approval before work is initiated. You can find a copy of these

permits at: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/.

Any deviation from the terms and conditions of the permit, or your submitted plans, may subject the permittee to the enforcement provisions of our regulations. Therefore, in the event changes to this project are contemplated, it is recommended you coordinate with this office prior to proceeding with the work. This office must approve any changes before you undertake them. You must perform this work in compliance with the terms and conditions of the GPs listed above and the following special conditions:

Project Specific Special Conditions:

1. The permittee shall complete and return the enclosed Work-Start Notification Form to this office at least two weeks prior to the anticipated construction start date.

2. The permittee shall complete and return the enclosed Completion Certification Form to this office at least one month following the completion of the authorized work.

3. All construction shall be completed in accordance with the limits of construction and construction sequences detailed on the enclosed plan drawings, titled "TOWN OF LEE MEADOW STREET OVER POWDER MILL BROOK (A.K.A. BEARTOWN BROOK) BRIDGE L-05-004 IN THE TOWN OF LEE, MA BERKSHIRE COUNTY ENVIRONMENTAL PERMIT PLANS," on 11 sheets dated 6/13/2025. If you change the plans or construction methods for work within or adjacent to Powder Mill Brook, please contact us immediately to discuss modification of this authorization. USACE must approve any changes before you undertake them.

4. A conditioned Water Quality Certification (WQC) has been issued by the Massachusetts Department of Environmental Protection for your project and is attached. You must comply with the conditions specified in the WQC.

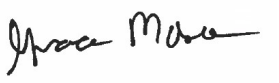
This verification is valid until June 1, 2028. You must commence or be under contract to commence the work authorized herein by June 1, 2028, and complete the work by June 1, 2029. If not, you must contact this office to determine the need for further authorization before beginning or continuing the activity. It is recommended that you contact this office before this authorization expires to discuss if permit reissuance is a possibility.

This GP verification and any associated authorizations does not preclude the necessity to obtain any other federal, state, or local permits, licenses, and/or certifications, which may be required.

If you have any questions related to this verification or have issues accessing documents referenced in this letter, please contact Dan Vasconcelos, Project Manager at 978-318-8653, or by email at daniel.b.vasconcelos@usace.army.mil. This agency continually strives to improve our customer service.

To better serve you, please complete the Customer Service Survey located at: https://regulatory.ops.usace.army.mil/customer-service-survey/.

Sincerely,



Grace Moses
Chief, Technical Support Branch
Regulatory Division

Enclosures

cc (w/enclosures):
Michael Joa, MassDOT – Highway Division (via michael.a.joa@dot.state.ma.us)
Heidi Davis, MassDEP (via heidi.davis@mass.gov)
Jaime Iannelli, MassDEP (via jaime.iannelli@mass.gov)
Lee Conservation Commission (via concom@town.lee.ma.us)
Melissa Lenker, MassDOT (via melissa.lenker@dot.state.ma.us)

Work-Start Notification Form

File Number: NAE-2025-00930 **State: Massachusetts** **County: Berkshire**

Permittee: MassDOT - Highway Division, Courtney Walker
Date Verification Issued: 9/2/2025
Project Manager: Dan Vasconcelos

At least two weeks prior to commencing the activity authorized by this permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS
New England District
Attn: Dan Vasconcelos
696 Virginia Road
Concord, MA 01742
or
daniel.b.vasconcelos@usace.army.mil
978-318-8653

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers (USACE) representative. Failure to comply with any terms or conditions of this authorization may result in the USACE suspending, modifying or revoking the authorization and/or issuing a Class I administrative penalty, or initiating other appropriate legal action.

The people (e.g. contractor) listed below will do the work, and they understand the permit's conditions and limitations.

Contractor Name/Contractor Firm: _____
Business Address: _____
_____
Contractor Phone and Email: _____

Proposed Construction Dates: Start: _____ Finish: _____

_____ **_____**
Signature of Permittee **Date**

U.S. Army Corps of Engineers (USACE)

CERTIFICATION OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT

For use of this form, see Section 404 of the Clean Water Act, Section 10 of the Rivers and Harbors Act of 1899, and Section 103 of the Marine Protection, Research, and Sanctuaries Act; the proponent agency is CECW-COR.

Form Approved - OMB No. 0710-0003 Expires 2027-10-31

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0003, is estimated to average 10 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

PURPOSE: This form is used by recipients of U.S. Army Corps of Engineer Regulatory permits to certify compliance with the permit terms and conditions.

Your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with this permit, you are subject to permit suspension, modification, or revocation.

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the U.S. Army Corps of Engineers, New England District, Regulatory Office.

The certification can be submitted by email at daniel.b.vasconcelos@usace.army.mil or by mail at the below address:

U.S. Army Corps of Engineers
New England District Office
Street Address: 696 Virginia Road
City: Concord State: MA Zip Code: 01742

COMPLETED BY THE CORPS

Corps Action Number: NAE-2025-00930

Permit Type: General Permit

General Permit Number and Name (*if applicable*): 23

Name of Permittee: Courtney Walker

Project Name: Meadow Street over Powder Mill Brook

Project Location (*physical address*): Meadow Street
Lee, Massachusetts

PERMITTEE'S CERTIFICATION

Date Work Started: _____

Date Work Completed: _____

Enclose photographs showing the completed project (*if available*).

I _____ hereby certify that the work authorized by the above referenced permit has been completed in accordance with all of the permit terms and conditions, and that any required compensatory mitigation has been completed in accordance with the permit conditions.

Name	Date	Signature

TOWN OF LEE

MEADOW STREET OVER
POWDER MILL BROOK (a.k.a. BEARTOWN BROOK)
BRIDGE L–05–004

IN THE TOWN OF

LEE, MA
BERKSHIRE COUNTY

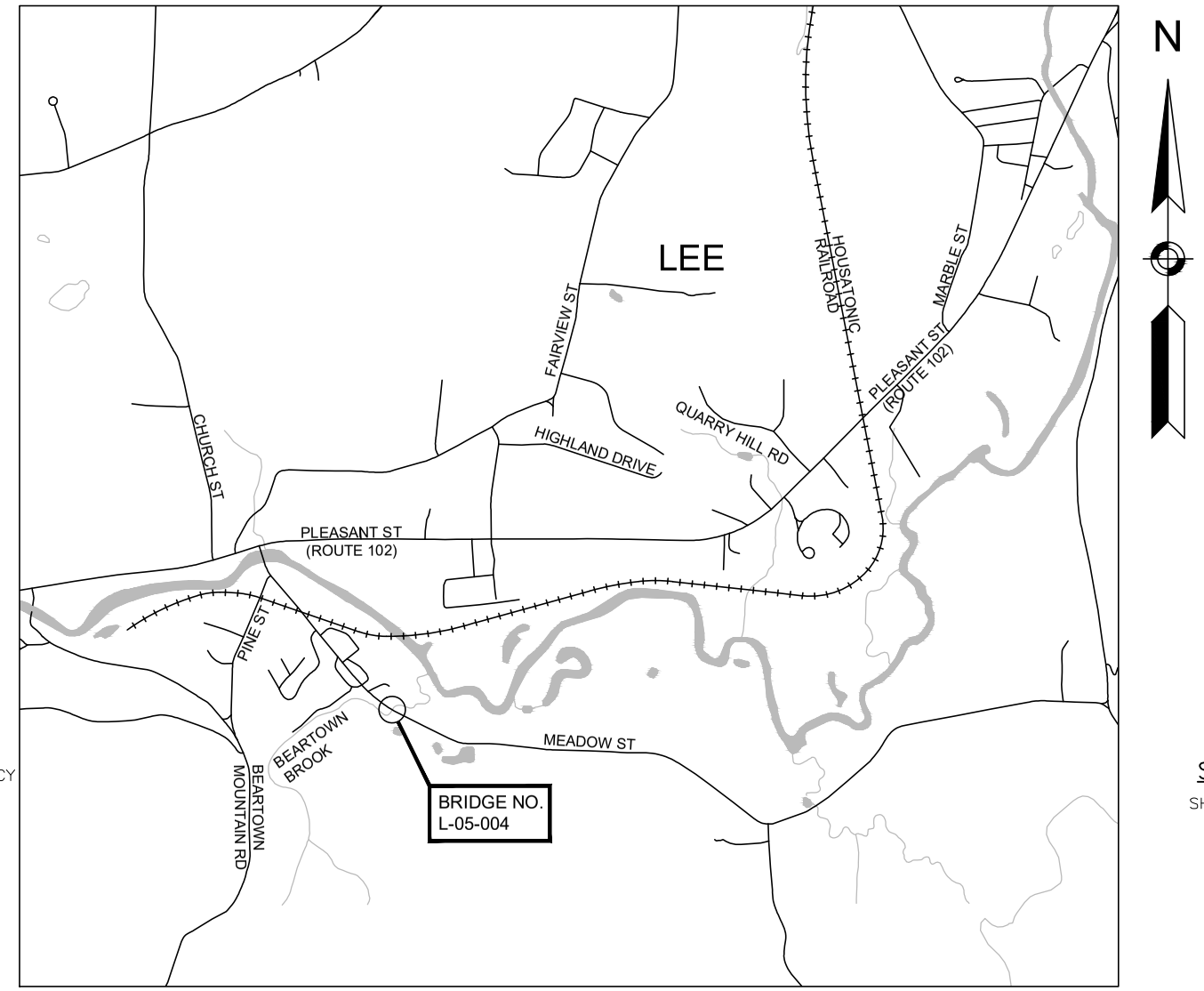
ENVIRONMENTAL PERMIT PLANS

SURVEY NOTES:

1. COORDINATES IN U.S. SURVEY FEET, ARE REFERENCED TO THE MASSACHUSETTS COORDINATE SYSTEM, MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983

2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988

3. BENCHMARK:
   DISK
   N: 2929556.362
   E: 177348.962
   EL. 850.04



SCALE: 1" = 2000'

LIST OF RESOURCE ABBREVIATIONS

VW = VEGETATED WETLAND
WOTUS = WATERWAYS OF THE UNITED STATES
OHW = ORDINARY HIGH WATER

RESOURCE IMPACTS:

LAND UNDER WATERWAYS/WOTUS EXISTING AREA DREDGED (PERMANENT) = 3,441 SF, 630 CY
LAND UNDER WATERWAYS/WOTUS PROPOSED AREA (PERMANENT) = 4,988 SF
MATERIAL DISCHARGED (FILL) TO WOTUS (PERMANENT) = 3,441 SF, 508 CY
VEGETATED WETLAND (TEMPORARY) = 340 SF
BANKS (PERMANENT) = 208 LF
BANKS (TEMPORARY) = 100 LF

SHEET LIST TABLE

SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	EXISTING CONDITIONS PLAN 1
3	EXISTING CONDITIONS PLAN 2
4	PROPOSED CONDITIONS PLAN 1
5	PROPOSED CONDITIONS PLAN 2
6	EXISTING AND PROPOSED LONGITUDINAL SECTIONS
7	ENVIRONMENTAL IMPACT PLAN 1
8	ENVIRONMENTAL IMPACT PLAN 2
9	ENVIRONMENTAL DETAILS
10	DEMOLITION PLAN
11	CONTROL OF WATER PLAN

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

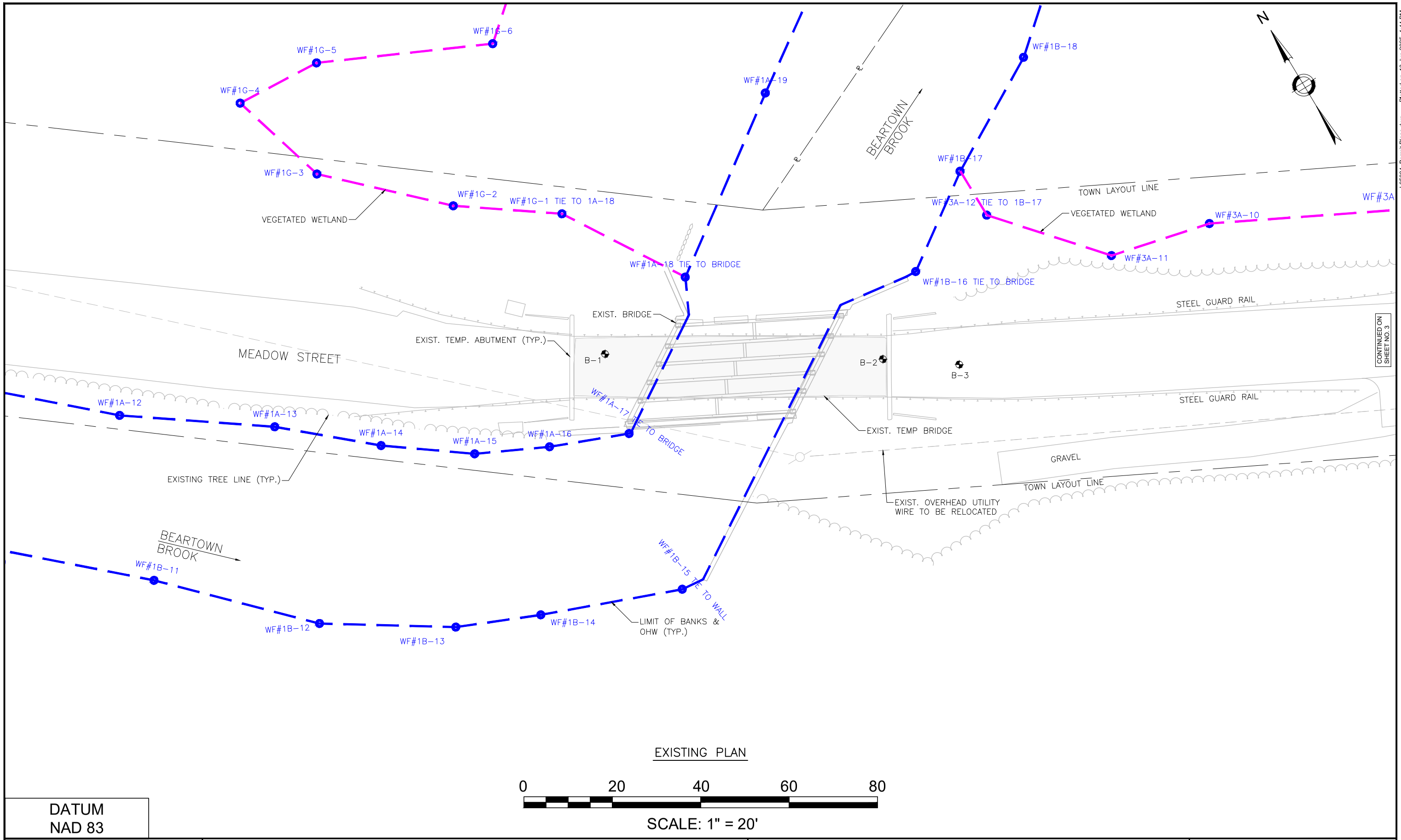
BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

TITLE SHEET

SHEET 1 OF 11

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

L05004_Permit Plans (Title Sheet).dwg Plotted on 13-Jun-2025 4:44 PM
Proposal No. 607597 - 132402
A00831 - 8



EXISTING PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

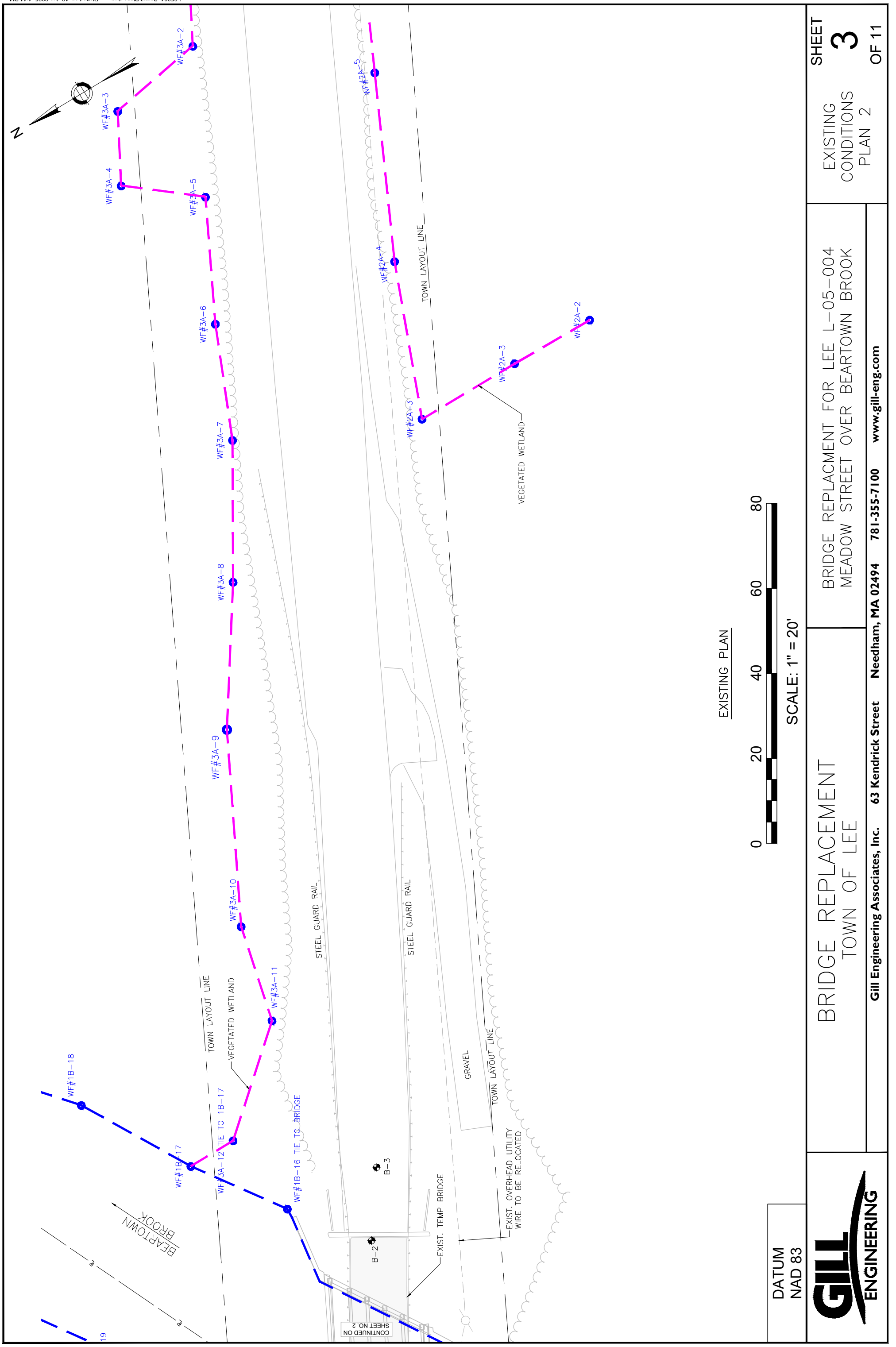
EXISTING CONDITIONS PLAN 1

SHEET 2 OF 11

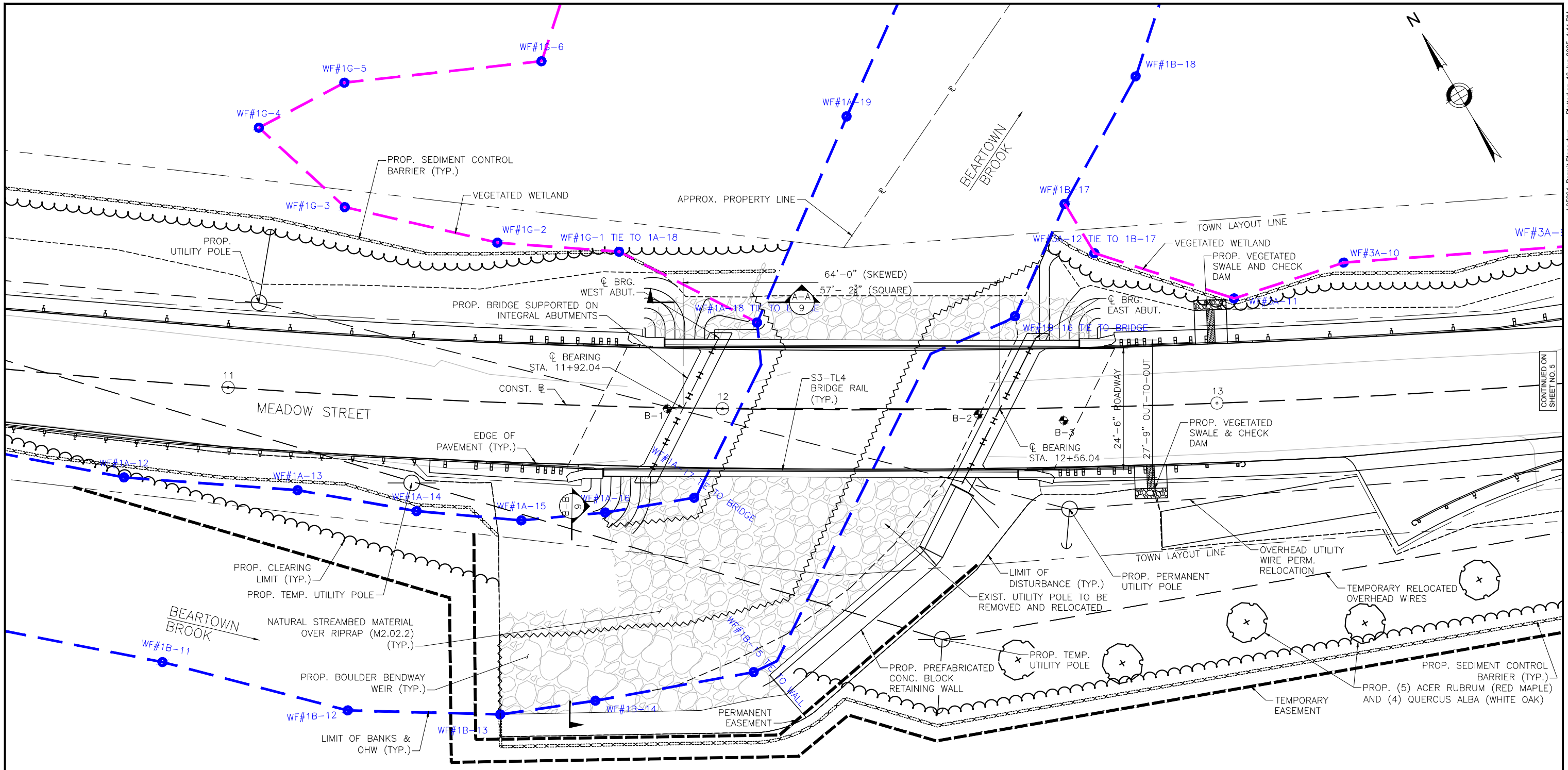
Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

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L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:44 PM



L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:44 PM



PROPOSED PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

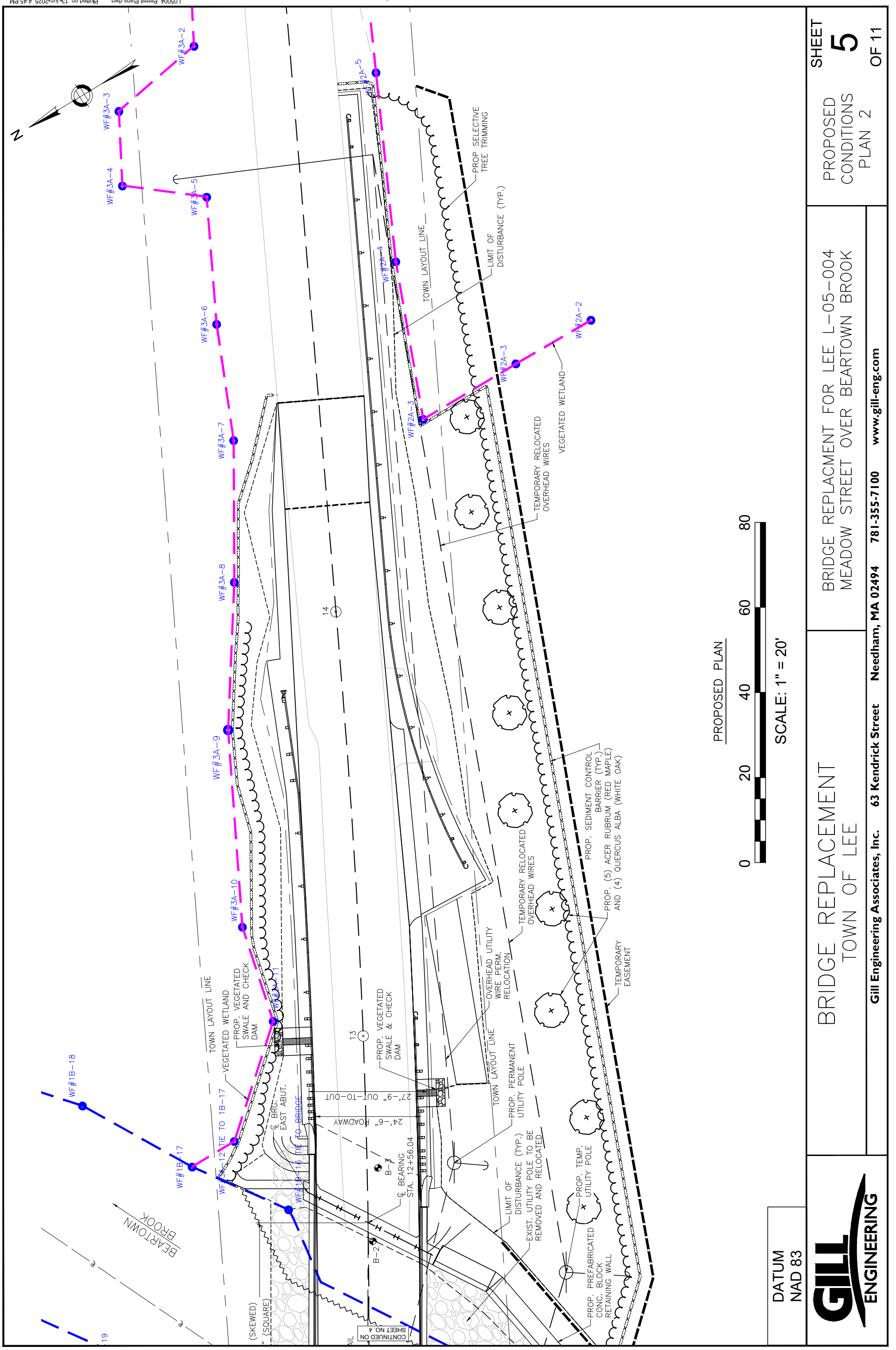
BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

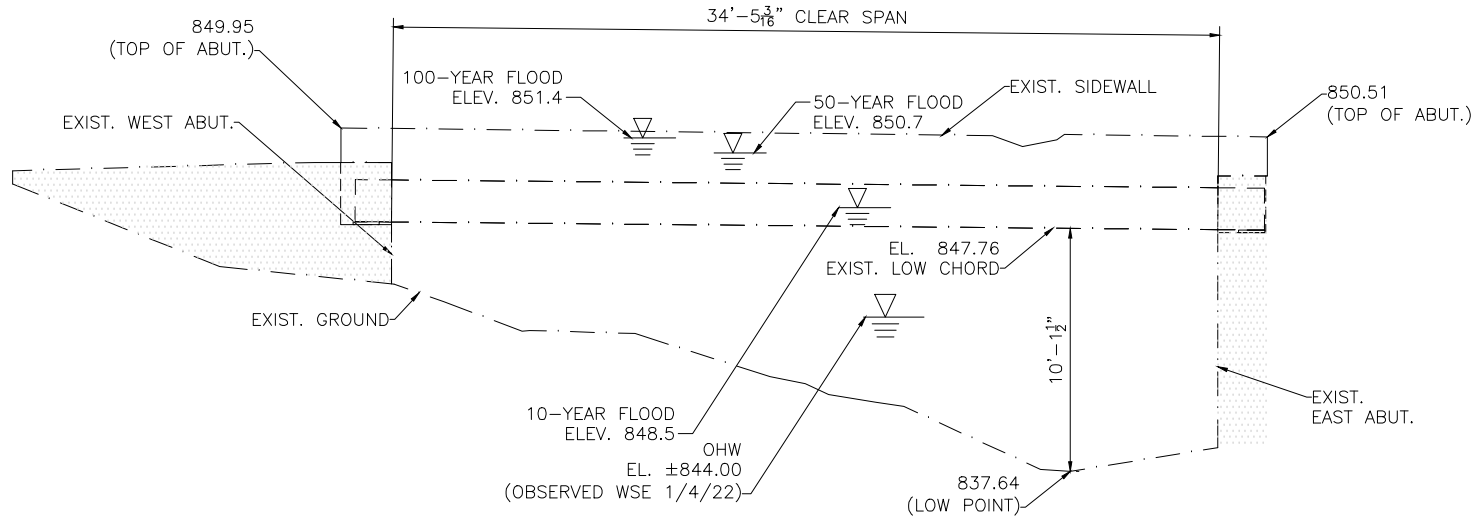
PROPOSED CONDITIONS PLAN 1

SHEET 4 OF 11

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:45 PM

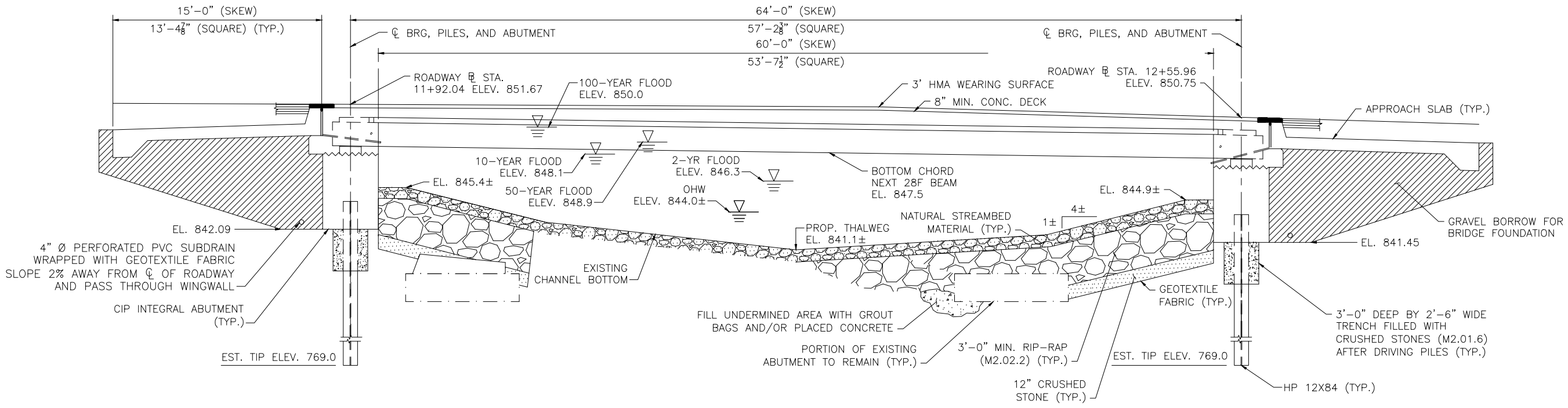




EXISTING LONGITUDINAL SECTION

0 8 16 24 32

SCALE: 1" = 8'



PROPOSED LONGITUDINAL SECTION

0 8 16 24 32

SCALE: 1" = 8'

DATUM
NAVD 88

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

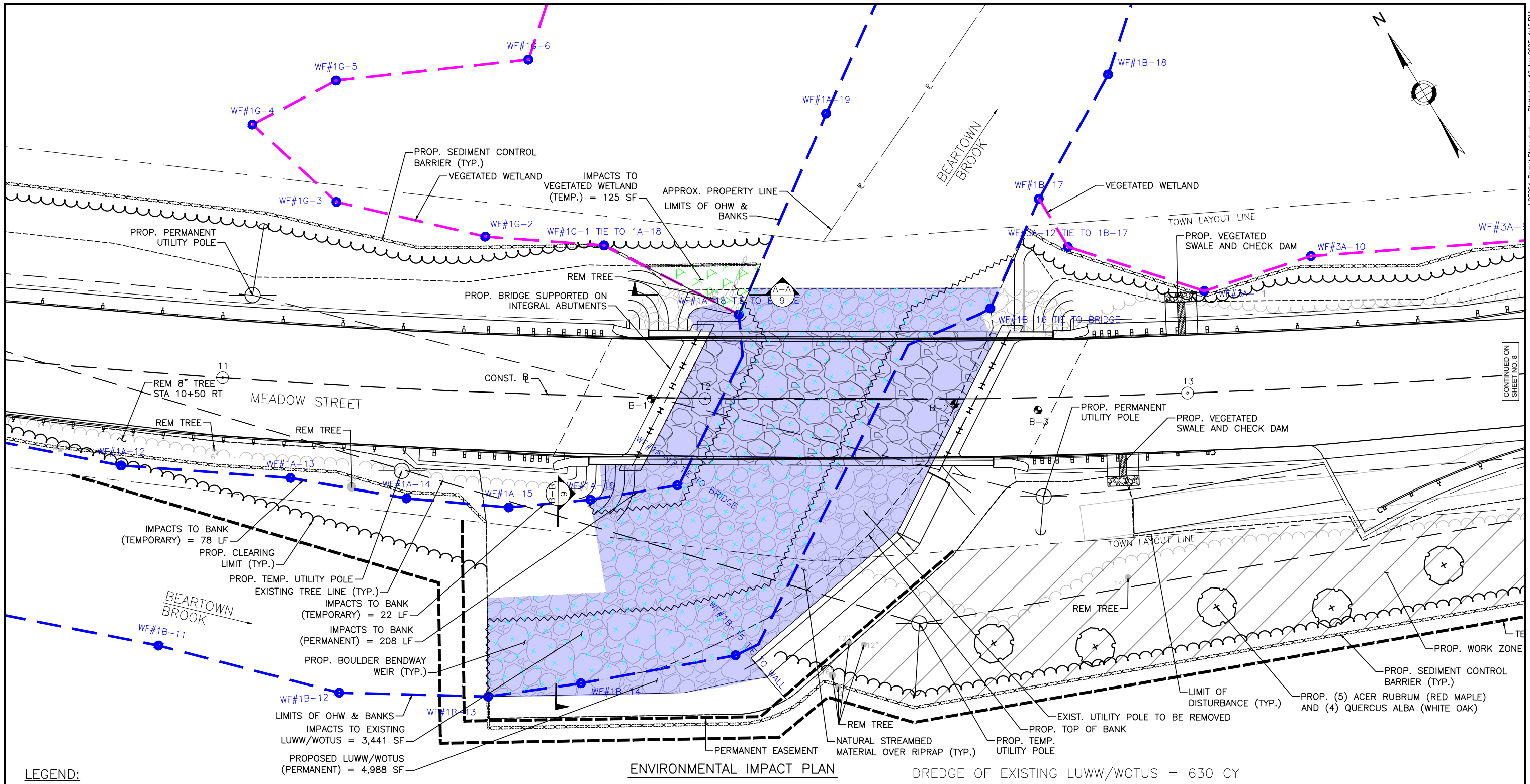
EXISTING AND PROPOSED LONGITUDINAL SECTIONS

SHEET 6 OF 11

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

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Proposal No. 607597 - 132402
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L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:45 PM



ENVIRONMENTAL IMPACT PLAN

LEGEND:

IMPACT TO EXISTING LAND UNDER WATERWAYS/WOTUS (PERMANENT) = 3,441 SF

PROPOSED LAND UNDER WATERWAYS/WOTUS CONSTRUCTED (PERMANENT) = 4,988 SF

IMPACT TO VEGETATED WETLAND (TEMPORARY) = 125 SF

DREDGE OF EXISTING LUWW/WOTUS = 630 CY

DISCHARGE TO EXISTING LUWW/WOTUS = 508 CY

IMPACTS TO BANK (PERMANENT) = 208 LF

IMPACTS TO BANK (TEMPORARY) = 100 LF

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

ENVIRONMENTAL IMPACT PLAN 1

SHEET 7 OF 11

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

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WF#3A-3
WF#3A-4
WF#3A-5
WF#3A-6
WF#3A-7
WF#3A-8
WF#3A-9
WF#3A-10
WF#3A-11
WF#3A-12 TIE TO 1B-17
WF#1B-16 TIE TO BRIDGE
WF#1B-17
WF#1B-18
WF#2A-5
WF#2A-4
WF#2A-3
WF#2A-2

TEMPORARY EASEMENT
PROP. SELECTIVE TREE TRIMMING
TOWN LAYOUT LINE
LIMIT OF DISTURBANCE (TYP.)
PROP. (5) ACER RUBRUM (RED MAPLE) AND (4) QUERCUS ALBA (WHITE OAK)
VEGETATED WETLAND
PROP. SEDIMENT CONTROL BARRIER (TYP.)
PROP. WORK ZONE
PROP. VEGETATED SWALE AND CHECK DAM
PROP. PERMANENT UTILITY POLE
REM TREE
EXIST. UTILITY POLE TO BE REMOVED
PROP. TOP OF BANK
PROP. TEMP. UTILITY POLE
NATURAL STREAMBED MATERIAL OVER RIPRAP (TYP.)
B-1
B-2
B-3
BEARTOWN BROOK
CONTINUED ON SHEET NO. 7

ENVIRONMENTAL IMPACT PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

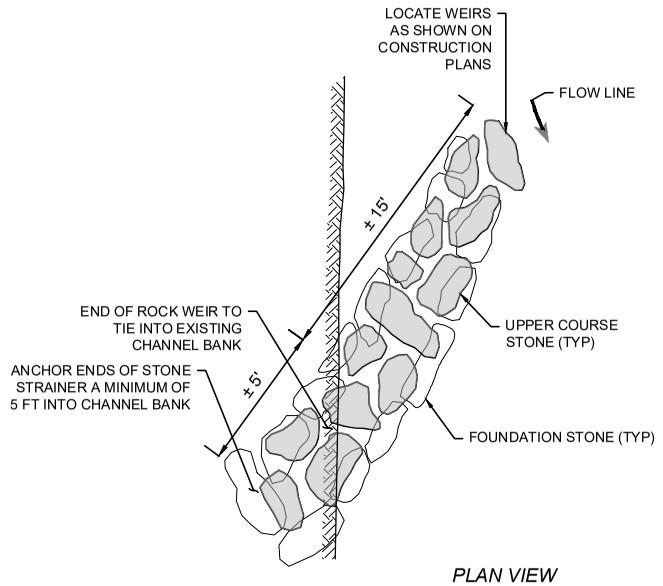
BRIDGE REPLACEMENT
TOWN OF LEE

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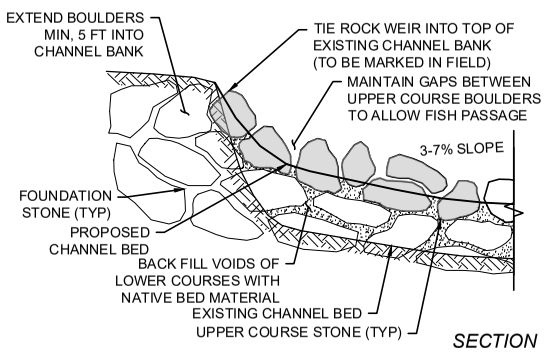
ENVIRONMENTAL IMPACT PLAN 2

SHEET 8 OF 11

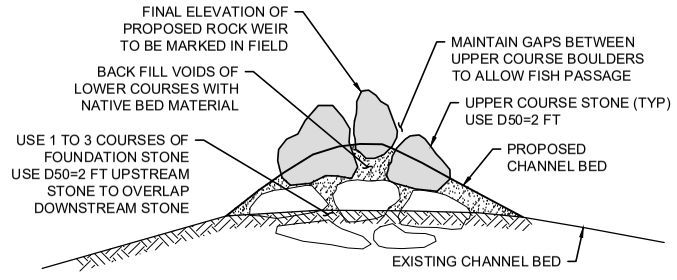
BRIDGE REPLACEMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK



PLAN VIEW



SECTION

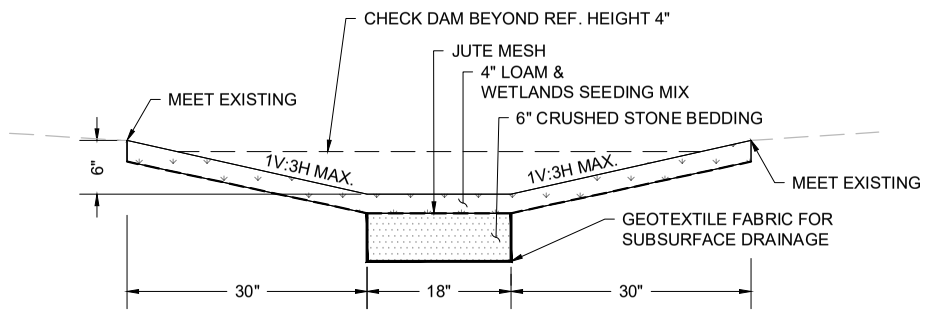


PROFILE VIEW

NOTES:
1. SOURCE OR SALVAGE UPPER COURSE BOULDERS FROM WITHIN THE CHANNEL AND ADJACENT FLOODPLAIN AREAS DURING CONSTRUCTION IF POSSIBLE. IF IMPORTED, USE WEATHERED NATURALLY-FORMED BOULDERS FOR UPPER COURSE.
2. USE FOUNDATION STONES SALVAGED FROM WITHIN THE CHANNEL AND ADJACENT FLOOD PLAIN AREAS TO INTERLOCK TOGETHER. IF EXISTING MATERIAL IS NOT SUITABLE, USE RIPRAP FOR LOWER COURSES OF FOUNDATION STONES.
3. OVERLAP UPSTREAM STONES OVER DOWNSTREAM STONES.
4. PLACE UPPER COURSE STONES SUCH THAT THEY INTERLOCK WITH FOUNDATION STONES.
5. FINISHED ELEVATION AND PLACEMENT OF BOULDERS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
6. ADJUSTMENT OF FINAL LOCATION AND PLACEMENT OF UPPER COURSE STONES MAY BE REQUIRED AT THE DIRECTION OF THE ENGINEER.
7. SEE SPECIAL PROVISION FOR ITEM 984.2 BOULDER BENDWAY WEIR FOR ADDITIONAL INFORMATION.
8. STONE BOULDERS SHOWN IN DETAILS ARE NOT DRAWN TO SCALE AND ARE FOR ILLUSTRATION PURPOSES ONLY.

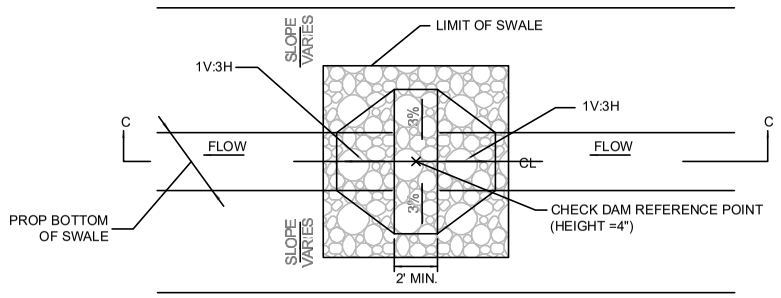
BOULDER BENDWAY WEIR

NOT TO SCALE



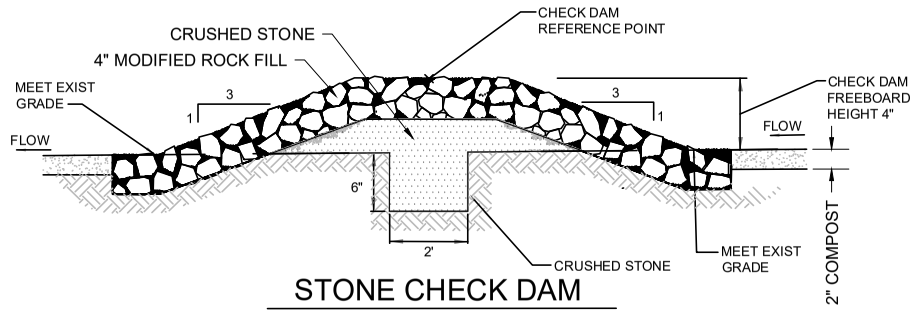
VEGETATED SWALE

NOT TO SCALE



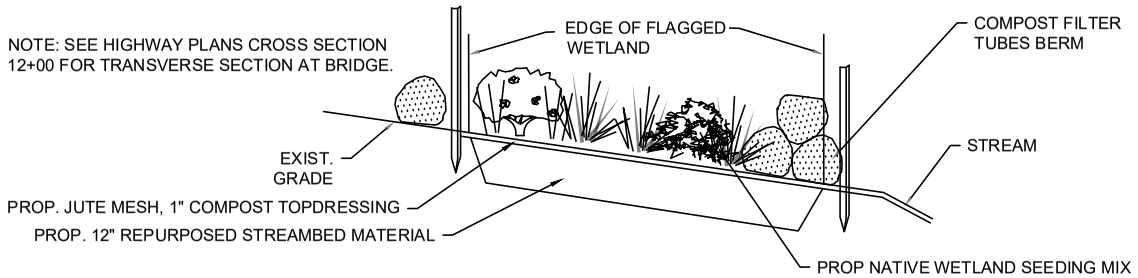
STONE CHECK DAM

NOT TO SCALE



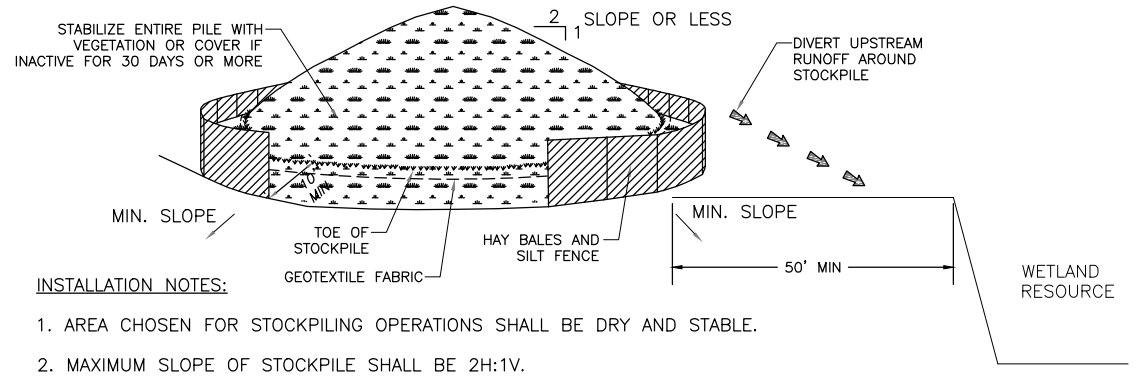
STONE CHECK DAM
SECTION C-C

NOT TO SCALE



TYPICAL WETLAND RESTORATION
SECTION A–A

SCALE: N.T.S. 7

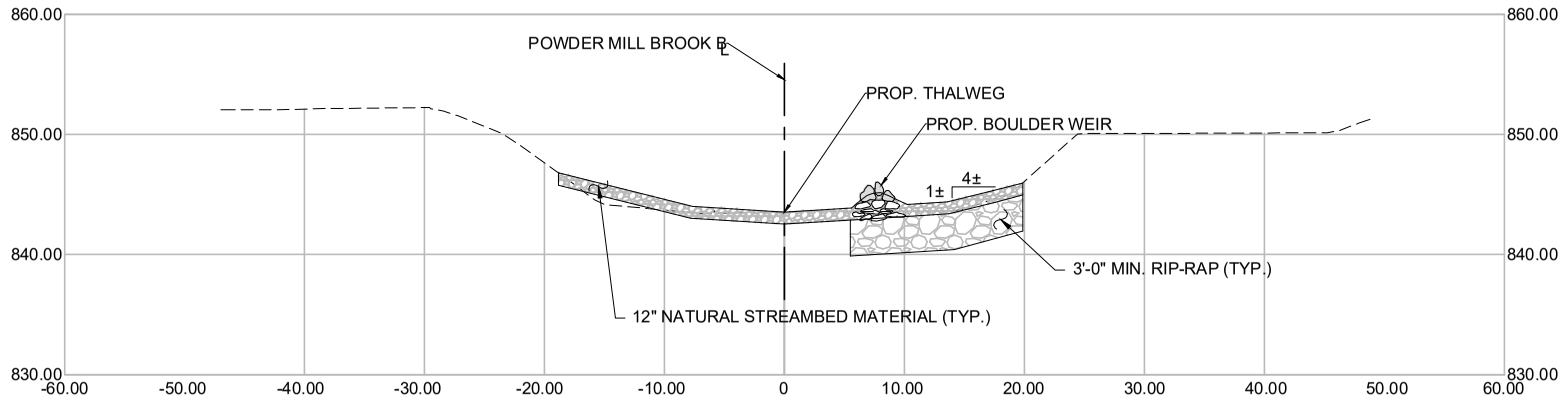


INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING AND HAYBALES, THEN STABILIZED WITH VEGETATION OR COVERED.

SOIL STOCKPILING

NOT TO SCALE



SECTION B–B

SCALE: 1" = 8' 7

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

ENVIRONMENTAL DETAILS

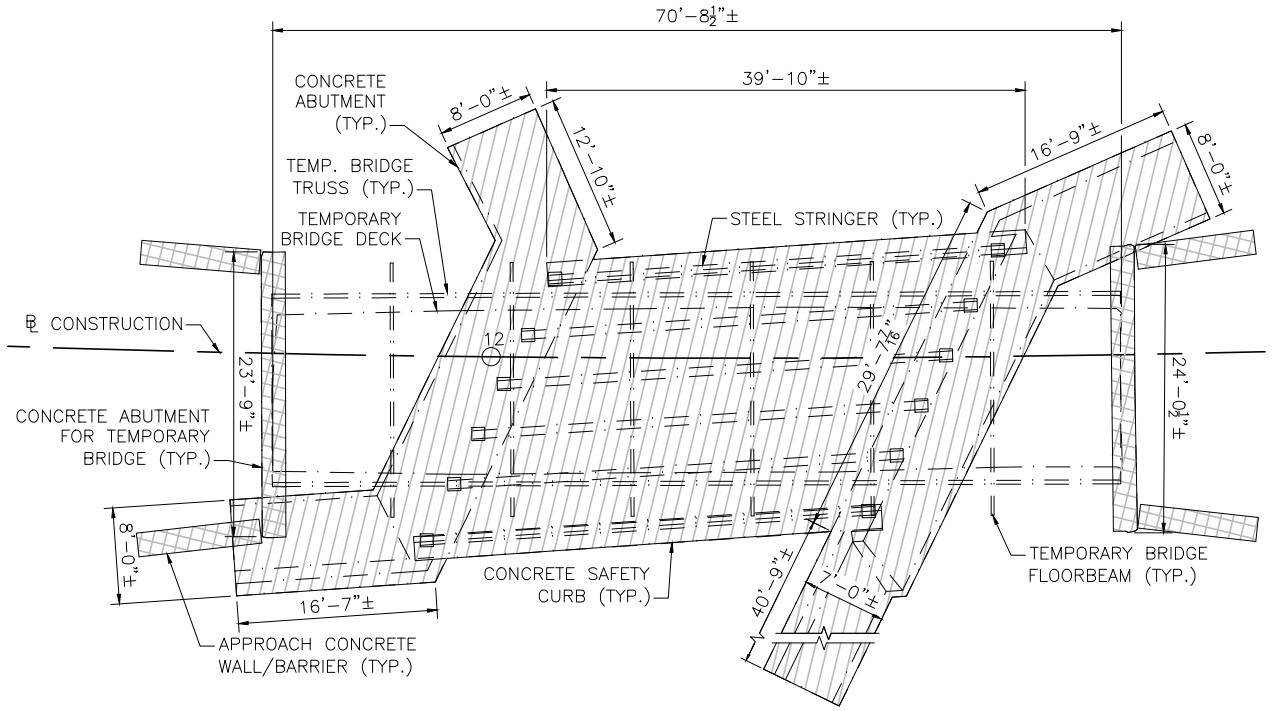
SHEET 9 OF 11

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L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:45 PM

Proposal No. 607597 - 132402

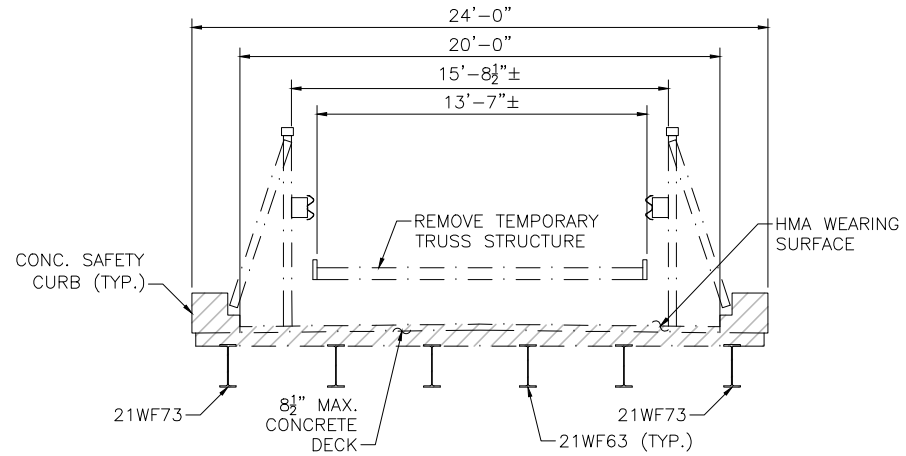
A00831 - 16



DEMOLITION PLAN

0 16 32 48

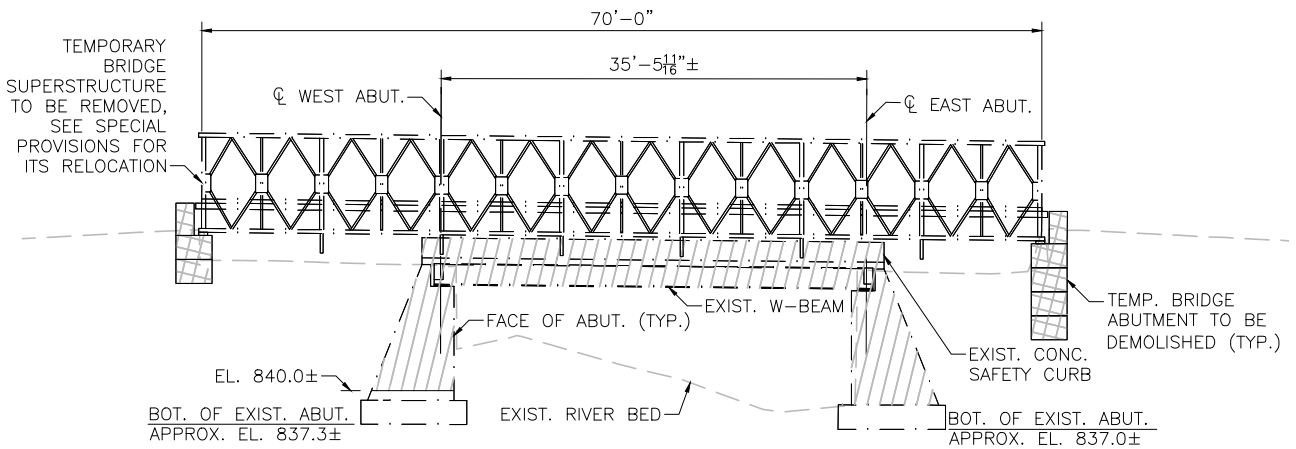
SCALE: 1" = 16'



DEMOLITION – EXISTING BRIDGE TRANSVERSE SECTION

0 8 16 24

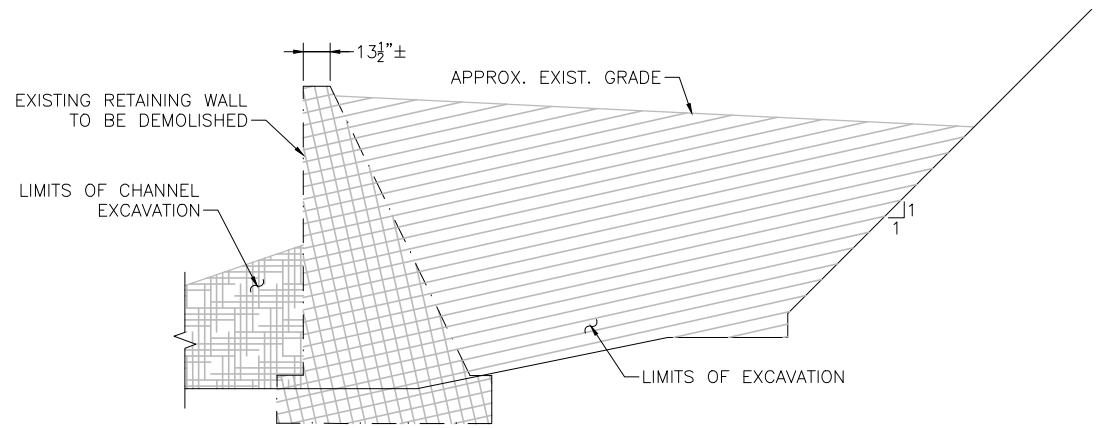
SCALE: 1" = 8'



DEMOLITION – EXISTING BRIDGE SECTION

0 16 32 48

SCALE: 1" = 16'



WALL DEMOLITION AND EXCAVATION SECTION

0 8 16 24

SCALE: 1" = 8'

DEMOLITION NOTES

1. EXISTING BRIDGE STRUCTURES SHOWN ARE PER RECORD PLANS AND SURVEY.
2. TEMPORARY TRUSS STRUCTURE TO BE REMOVED CAREFULLY WITHOUT DAMAGE.
3. SEE SHEET 6 FOR STAGE DEMOLITION DETAILS.

DEMOLITION LEGEND

- LIMITS OF DEMOLITION OF EXISTING BRIDGE
- LIMITS OF DEMOLITION OF TEMPORARY BRIDGE ABUTMENTS

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

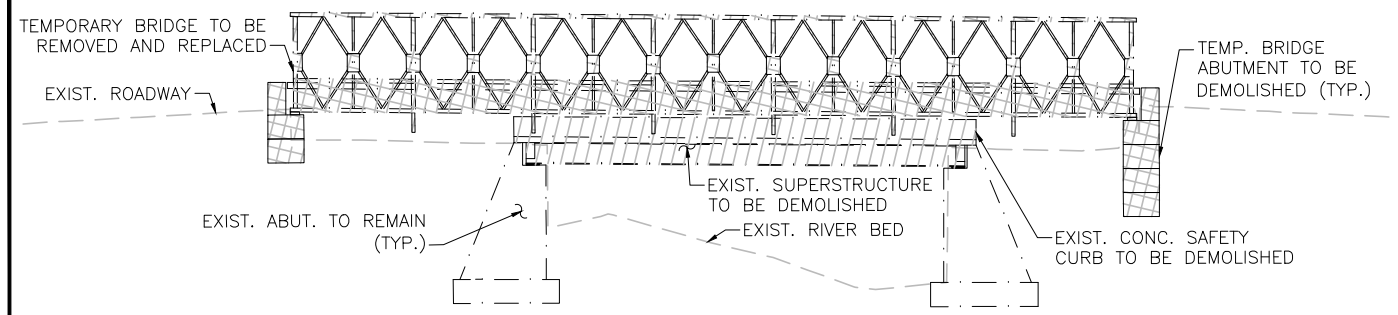
BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

DEMOLITION PLAN

SHEET 10 OF 11

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L05004_Permit Plans (Demo & Control of Water).dwg
Proposal No. 607597 - 132402
A00831 - 17

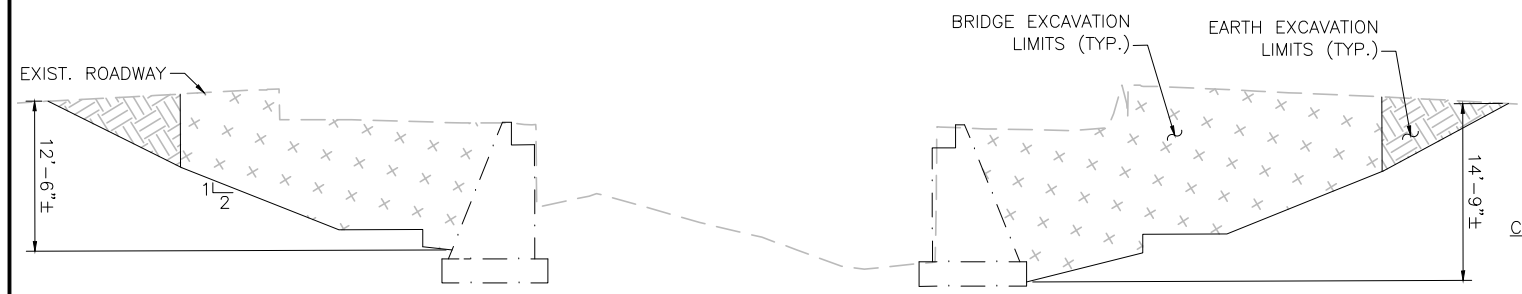


STAGE 1 – DEMOLITION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. REMOVE AND STACK TEMPORARY BRIDGE SUPERSTRUCTURE.
2. DEMOLISH TEMPORARY BRIDGE ABUTMENTS.
3. DEMOLISH EXISTING SUPERSTRUCTURE.

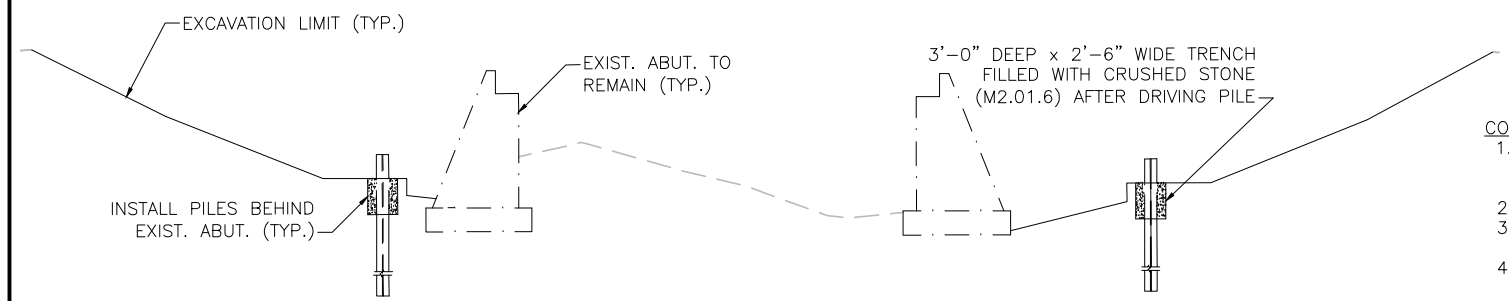


STAGE 2 – EXCAVATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. EXCAVATE TO LIMITS SHOWN. EXCAVATED MATERIAL MAY BE USED FOR BACKFILLING IF IT MEETS THE SPECIFICATIONS FOR M1.03.0, TYPE A.

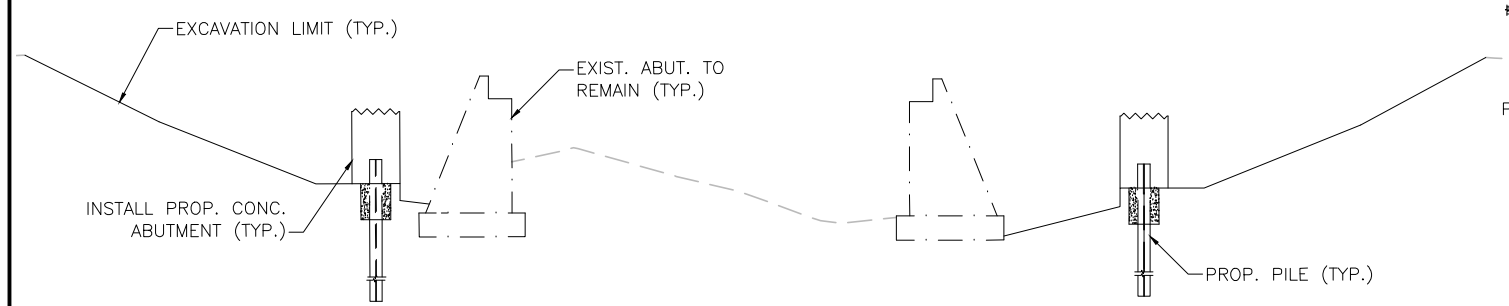


STAGE 3 – PILE INSTALLATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. DIG 3'–0" x 2'–6" TRENCH AS SHOWN.
2. INSTALL PILES.
3. FILL TRENCH WITH CRUSHED STONE.

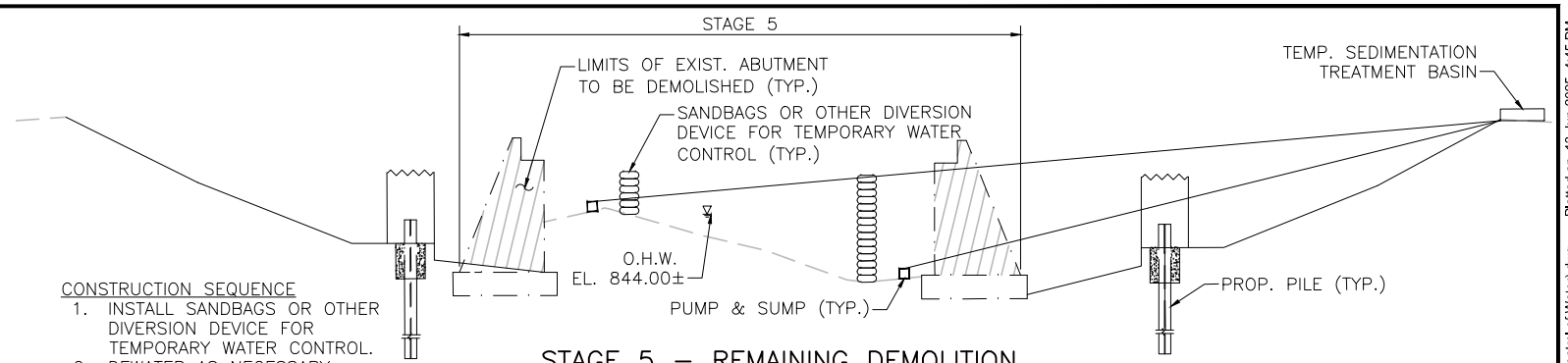


STAGE 4 – ABUTMENT INSTALLATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. INSTALL CONCRETE ABUTMENTS.



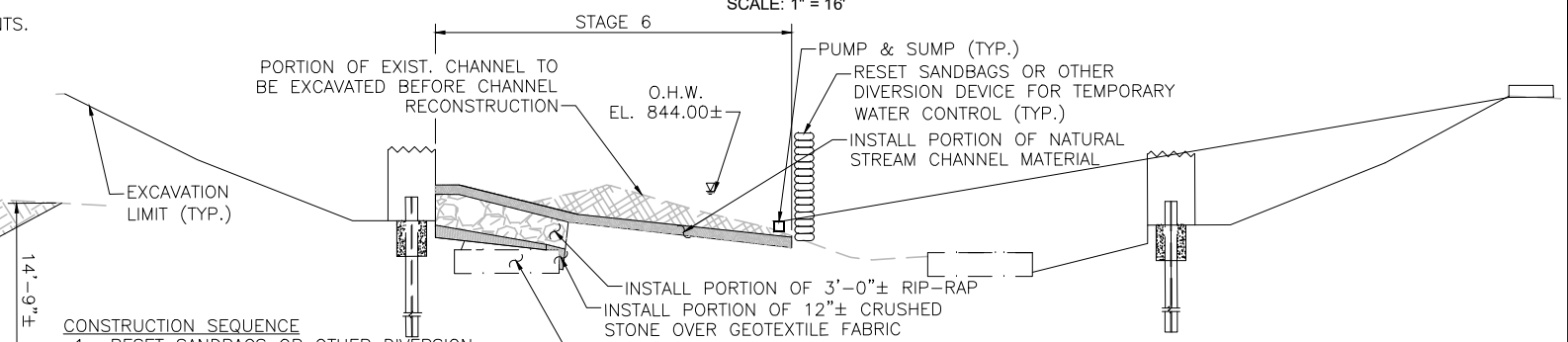
CONSTRUCTION SEQUENCE
1. INSTALL SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. DEMOLISH EXISTING ABUTMENTS TO LIMITS SHOWN.

STAGE 5 – REMAINING DEMOLITION

0 16 32 48

SCALE: 1" = 16'

NOTE: EACH REMAINING PORTION OF ABUTMENT DEMOLITION MAY BE DONE WITH EACH PHASE OF CHANNEL RECONSTRUCTION.

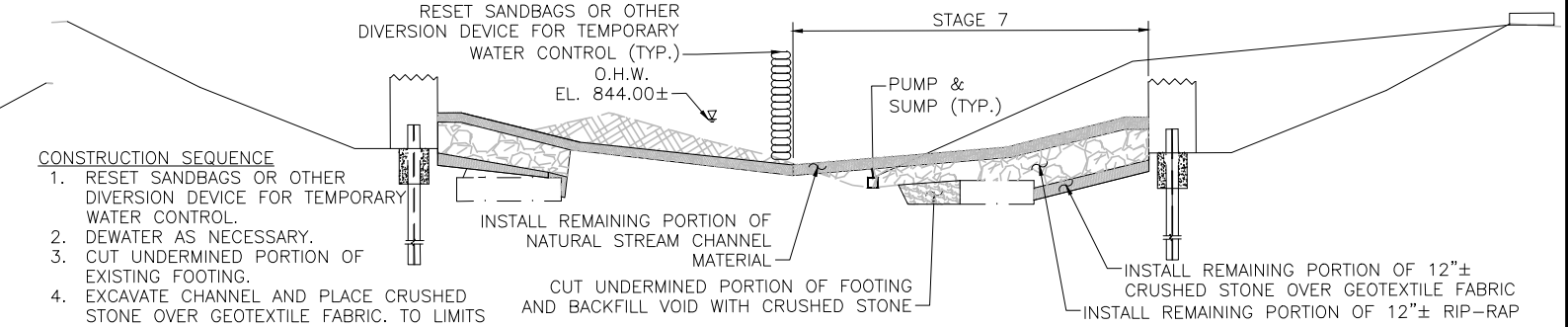


CONSTRUCTION SEQUENCE
1. RESET SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. EXCAVATE CHANNEL AND PLACE CRUSHED STONE OVER GEOTEXTILE FABRIC TO LIMITS SHOWN.
4. PLACE RIP–RAP.
5. PLACE STREAM CHANNEL MATERIAL.

STAGE 6 – CHANNEL RECONSTRUCTION PHASE 1

0 16 32 48

SCALE: 1" = 16'

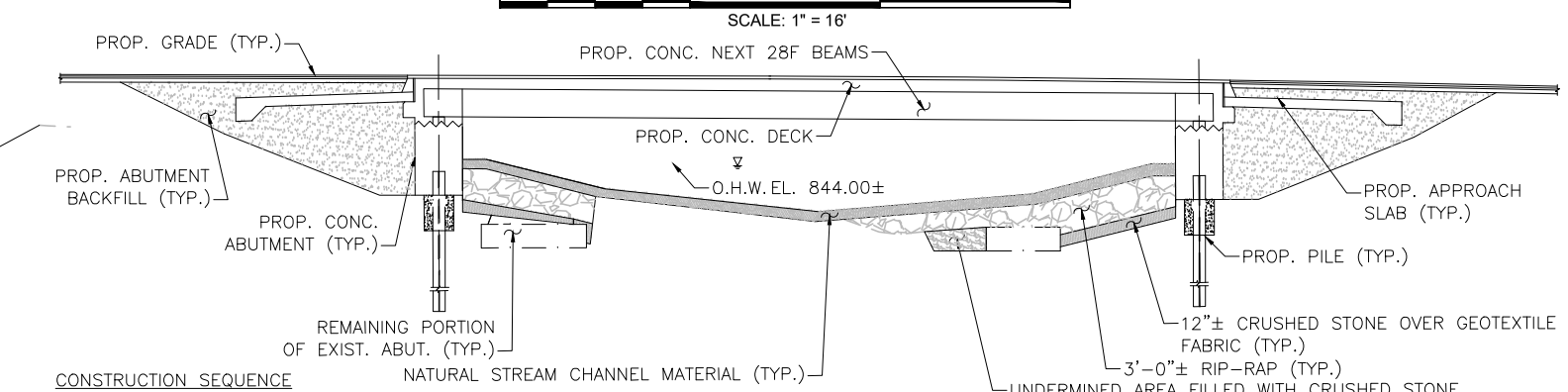


CONSTRUCTION SEQUENCE
1. RESET SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. CUT UNDERMINED PORTION OF EXISTING FOOTING.
4. EXCAVATE CHANNEL AND PLACE CRUSHED STONE OVER GEOTEXTILE FABRIC. TO LIMITS SHOWN.
5. PLACE RIP–RAP.
6. PLACE STREAM CHANNEL MATERIAL.

STAGE 7 – CHANNEL RECONSTRUCTION PHASE 2

0 16 32 48

SCALE: 1" = 16'



CONSTRUCTION SEQUENCE
1. INSTALL REMAINING PROPOSED COMPONENTS OF SUBSTRUCTURE.
2. INSTALL PROPOSED SUPERSTRUCTURE.
3. BACKFILL ABUTMENTS.
4. PLACE HMA PAVEMENT.

PROPOSED LONGITUDINAL SECTION

0 16 32 48

SCALE: 1" = 16'

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

CONTROL OF WATER PLAN

SHEET 11 OF 11

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Proposal No. 607597 - 132402

A00831 - 18

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
100 Cambridge Street Suite 900 Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

August 8, 2025

Massachusetts Department of Transportation, Highway Division
10 Park Plaza, Suite 7360
Boston, Massachusetts 02116
Attn: Courtney Walker

RE: 401 WATER QUALITY CERTIFICATION
BRP WW 11, Minor Fill Project
BRP WW 08, Minor Dredge Project
Bridge (L-05-004) Replacement, Meadow Street over Beartown Brook
Lee, Massachusetts

401 WQC Filing Number: 25-WW26-0008-APP
USACE Application No. NAE-2025-00930
MassDOT File Number: 607597

Dear Ms. Walker:

The Massachusetts Department of Environmental Protection (MassDEP) has reviewed your application for a Water Quality Certification (WQC), as referenced above. This application was deemed complete on July 22, 2025. In accordance with the provisions of MGL Ch. 21, §§26-53 and Section 401 of the Federal Clean Water Act as amended (33 U.S.C. §1251 et seq.), it has been determined there is reasonable assurance the proposed project will be conducted in a manner which will not violate applicable water quality standards (314 CMR 4.00) and other applicable requirements of state law.

The proposed project will replace a structurally deficient bridge, Bridge No. L-05-004, that carries Meadow Street in a northwest/southeast orientation over Beartown Brook in Lee (the Project). The Project will also include stormwater improvements, scour protection installation, full-depth reconstruction of the approaches, vegetation removal, and streambed and wetland restoration.

The existing steel stringer bridge was built in 1939 and a temporary bridge was placed over the existing bridge deck in 2013. The bridge has a span of 34.5 feet and an average width of approximately 26.5 feet with no sidewalks. Stormwater currently sheet flows from the roadway via country drainage, eventually entering Beartown Brook. There are no existing drainage structures.

Beartown Brook flows from south to north to its confluence with the Housatonic River approximately 0.25 miles downstream. Bordering Vegetated Wetlands (BVWs) are present in the northeast, northwest,

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TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

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and far southeast quadrants of the Project area. The bridge is located within a mapped 1% annual chance of flooding. Beartown Brook is designated as a Coldwater Fishery, with evidence of wild trout in the Project area per the Division of Fisheries and Wildlife (DFW). In addition, the Project is located within Natural Heritage and Endangered Species Program (NHESP) Priority Habitat for Wood Turtle (*Glyptemys insculpta*).

A new precast concrete bridge with two 12-foot travel lanes will replace the existing bridge. The position of the bridge will be slightly realigned, and the span will increase from 34.5 feet to 64 feet to allow for a wider stream channel with defined banks. The existing abutments and wingwalls, including a deteriorating 40-foot-long section to the southeast, will be replaced. Access to the proposed northwest bridge abutment will require 125 square feet (sf) of temporary impact to BVW, which will be restored upon construction completion.

Following construction of the new substructure, the existing abutments will be demolished with the footings left in place below the stream bed to provide scour protection. Portions of the channel will then be dredged to restore the natural channel and install additional scour protection measures including a layer of geotextile fabric, 12-inches of crushed stone, 3-feet of riprap, and 12-inches of natural streambed material. In addition, two boulder weirs will be installed upstream of the bridge to direct flows away from the new concrete block retaining wall. These activities will result in a total of 3,441 sf of permanent fill and 630 cubic yards (cy) of dredging to existing Land Under Water (LUW). An additional 1,577 sf of permanent fill will be discharged for the creation of LUW due to the increased hydraulic opening.

The Project meets or exceeds all MA Stream Crossing Standards. The increased bridge span will allow for the 1.2 times bankfull width of 52.8 feet required under Stream Crossing Standard 3, as well as the establishment of terrestrial bank habitat. Regarding Stream Crossing Standards 4 through 7, natural streambed materials will be reused throughout LUW restoration area and water depth and velocity of the proposed channel will be comparable to the native channel upstream and downstream of the bridge. In addition, the height from the riverbed to the bottom of the proposed superstructure will be approximately 7 feet, creating an openness ratio of 11.58 feet.

The Project meets the MA Stormwater Management Standards to the maximum extent practicable per 314 CMR 9.06(6). The proposed road widening and realignment will increase impervious surfaces in the Project area by 2,188 sf. Structural Stormwater Control Measures (SCMs) were determined to be infeasible due to the proximity of adjacent resource areas and bordering conservation land at all four corners of the bridge. Country drainage will be maintained along the approaches to avoid creating point source discharges. During the course of project review, two vegetated swales with check dams were added to the proposed project. The profile of the roadway will be graded to direct run-off from the proposed bridge towards curbing and the vegetated swales. The swales, along with planting and seeding in adjacent upland areas, will slow flow velocities and promote infiltration prior to discharging overland toward Beartown Brook. As such, Stormwater Management Standards 2, 3, and 4 will be met to the maximum extent practicable.

Sediment sampling, analysis, and due diligence were completed in accordance with 314 CMR 9.07(2). The sediment sieve analysis found the proposed dredged sediment to contain less than 10% of fines, passing the No. 200 U.S. Standard Series Testing Sieve. The due diligence demonstrated the low

potential for contamination in the Project area given the primary land use within the Beartown Brook Watershed as conservation land and absence of Activity and Use Limitation sites. Given the sediment sampling analysis and due diligence results, the Department has determined chemical analysis is not required per 314 CMR 9.07(2)(a) and dredged sediment may be reused onsite.

In an email dated February 6, 2025, the DFW stated a time of year (TOY) restriction between October 1st to April 30th, as well as standard Best Management Practices (BMPs) for sedimentation control, are required to protect Coldwater Fisheries. In addition, NHESP issued a Conditional No-Take Determination for the Project on May 21, 2025. The Project is required to incorporate a NHESP-approved construction-period Wood Turtle Protection Plan (TPP) to avoid a prohibited Take, as conditioned herein.

Based on a review of information provided by the applicant, MassDEP finds that this project complies with the standards described under 314 CMR 9.06 and 9.07. Public notice was provided in the Berkshire Eagle on April 3, 2025. No comment letters were received during the public comment period.

Therefore, based on information currently in the record, MassDEP grants a WQC for this project subject to the following conditions to maintain water quality, to minimize impact on waters and wetlands, and to ensure compliance with appropriate state law. The Department further certifies in accordance with 314 CMR 9.00 that there is reasonable assurance the project or activity will be conducted in a manner which will not violate applicable water quality standards (314 CMR 4.00) and other applicable requirements of state law. Finally, the Department has determined that upon satisfying the conditions and mitigation requirements of this approval, the project provides a level of water quality necessary to protect existing uses and accordingly finds that the project to be implemented satisfies the Surface Water Quality Standards at 314 CMR 4.00. The WQC is for all federal permits and licenses pursuant to 40 CFR Part 121.

Pursuant to 314 CMR 9.09(1)(d); 314 CMR 9.06(6)(a); 310 CMR 9.06(2); 314 CMR 9.07; 314 CMR 9.07(1); 314 CMR 9.09(7)(5)(c); 314 CMR 9.11; and 314 CMR 9.09(1)(e), the following Special Conditions are necessary to ensure that construction practices and stormwater controls are implemented in such a manner as to prevent degradation to wetlands and waters; ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters; minimize turbidity and sediment caused by construction activities; ensure that water quality is not degraded, and that biology of the waters are not negatively impacted by potential discharges; and/or maintain a record of the dredged material for reference and to ensure accountability in its transportation.

Those Special Conditions that require direct submittals to MassDEP for either review, or review and approval, are denoted by the following notation (Submittal) at the end of the condition and are summarized in Attachment A. In addition, those conditions with the (Submittal) designation shall be included in the Special Provisions and, as applicable, reviewed at the Pre-Construction Meeting.

1. All work shall be performed in accordance with the following documents and plans:

    - Application for Water Quality Certification. Prepared by Gill Engineering on behalf of MassDOT, dated March 31, 2025, with cover letter and attachments. 401 WQC Filing Number: 25-WW26-008-APP.

- Plans entitled: “Town of Lee Meadow Street over Powder Mill Brook (aka Beartown Brook) Bridge L-05-004, Environmental Permit Plans”. Sheets 1 through 11. Prepared by Gill Engineering. Dated March 28, 2005, last revised June 13, 2025.
- MassDEP Administrative Completeness and Technical Deficiency Review. 401 Water Quality Certification Transmittal No: 25-WW26-0008-APP (Minor Fill and Minor Dredging). Bridge Replacement Project (L-05-004), Meadow Street over Powder Mill Brook (Beartown Brook), Lee, Massachusetts. Dated April 24, 2025.
- MassDOT Responses to MassDEP Technical Deficiency Review. Prepared by Gill Engineering on behalf of MassDOT. Memorandum, Lee - Meadow Street over Beartown Brook - Responses to Comments, 401 Water Quality Certification Transmittal No: 25-WW26-0008-APP (Minor Fill and Minor Dredging). Dated June 20, 2025.
- NHESP Conditional No-Take Determination. NHESP File No. 25-19537. Dated March 28, 2025.
- NHESP Approval of the TPP via email. NHESP File No. 25-19537. Dated May 28, 2025.
- DFW Comments via email. RE: 607597 Lee Powder Mill Brook. Dated February 6, 2025.

Pre-Construction

2. A qualified **Fluvial Geomorphologist** (FGM) with a minimum of five years of relevant professional experience in stream replacement and restoration projects shall be employed to oversee all LUW replacement and restoration activities as proposed in the application. The name, contact information, and qualifications of the FGM shall be provided to MassDEP for approval with a copy to the Lee Conservation Commission prior to the Pre-Construction Meeting required in Condition 4. **(Submittal)**

3. Prior to the Pre-Construction Meeting required in Condition 4, the applicant shall provide MassDEP with the name and contact information of the Resident Engineer (RE) responsible for ensuring that all work complies with the conditions of this WQC. **(Submittal)**

4. A minimum of 21 days prior to the start of vegetation clearing, MassDOT shall contact MassDEP to schedule an onsite Pre-Construction Meeting to review the approved plans and terms and conditions of this WQC. The RE, the construction contractor, a representative from the MassDOT Environmental Section and/or the District Environmental Engineer shall attend the Pre-Construction Meeting. **No work shall commence prior to the Pre-Construction Meeting.**

5. MassDEP shall be copied on applicable submittals to the U.S. Army Corps of Engineers (USACE). These include but are not limited to: Self-Verification Notification Form (SVNF); Pre-Construction Notification (PCN); Work-Start Notification Form; Mitigation Work-Start Notification Form; and Compliance Certification Form. The Work-Start Notification Form shall be submitted at least 14 days before the anticipated start of work and the Compliance Certification Form shall be submitted within 30 days following the completion of the authorized work. **(Submittal)**

6. A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan (CP/PP) shall be developed and implemented as required by 314 CMR 9.06(6)(a)8. A minimum of 14 days prior to the start of work, MassDOT shall submit the CP/PP for review and approval. If the

U.S. Environmental Protection Agency (EPA) Construction General Permit (CGP) applies, the Stormwater Pollution Prevention Plan (SWPPP) may serve as the CP/PP, providing it includes the measures required to be in the CP/PP per these Special Conditions, in addition to the measures specifically required by the CGP. Any subsequent changes to the Final CP/PP (defined herein as including the construction period SWPPP if applicable) must be approved by MassDEP. **(Submittal)**

7. Training regarding erosion and sedimentation controls is required. The CP/PP Inspector and any other relevant personnel responsible for erosion and sedimentation controls shall complete the EPA CGP Inspector Training, or other training that meets the CGP requirements, as well as a comprehensive review of the Final CP/PP. Proof of completion of the training shall be submitted to MassDEP prior to the start of work. **(Submittal)**

8. The CP/PP shall identify, but shall not be limited to, staging and laydown areas in relation to BVWs and LUW, proposed dewatering methods and locations, proposed stockpile locations and their proximity to catch basins or other drainage conveyances that discharge to wetland resource areas, and the location of construction-period erosion and sedimentation controls. Stockpiles shall be located no less than 50 feet from BVWs, IVWs, LUW, catch basins, or other drainage conveyances that discharge to BVWs, IVWs, or LUW.

9. A minimum of 14 days prior to the start of work, MassDOT shall submit a Control of Water Plan for review and approval. The Plan shall include a description of proposed methods to isolate and dewater work areas within streams while maintaining stream flow, including but not limited to the method of isolation (e.g., steel sheeting or sandbag cofferdam), dewatering methods and locations and specifications for stream bypass systems as applicable. The Control of Water Plan shall include a plan depicting BVW and LUW boundaries, and the location of all relevant methods and materials which shall be located within the BVW and LUW impact areas approved herein. The plan shall meet requirements of the CP/PP and be specific to the Project. Dewatering and stream bypasses shall be conducted under the supervision of the RE or other project staff with knowledge of these practices and comply with the applicable conditions identified herein. **(Submittal)**

10. Prior to the start of work, approved erosion and sedimentation control measures shall be installed per the approved CP/PP and as applicable, the manufacturer specifications. Erosion and sedimentation control measures may consist of, but are not limited to, silt fence, staked straw bales, silt/turbidity curtains, compost filter tubes, etc.

11. Prior to the Pre-Construction Meeting, the boundaries of BVWs and LUW shall be re-flagged where they are within 50 feet of the limits of work. In the event BVWs and LUW boundaries overlap, the outermost boundary (i.e., closest to the proposed work) shall be flagged. All boundary markers, once in place, shall remain in place throughout construction until all disturbed surfaces have been permanently stabilized. Boundary markers shall be fully evaluated annually and refreshed where needed. Implementation of and compliance with this requirement shall be documented by the RE. All construction personnel shall be made aware of these markers.

12. Prior to any work within the 1% annual chance of flooding zone within Project limits, including mobilization or storage of equipment and materials, a Flood Contingency Plan shall be submitted to MassDEP for review and approval that includes at a minimum the following information and provisions: **(Submittal)**

    a. The RE and/or Contractor shall monitor the National Weather Service forecast daily, and upon issuance of a flood watch or flood warning for the Project area, the Flood Contingency Plan shall be implemented.

    b. Upon implementation of the Flood Contingency Plan, all construction equipment and materials located below the Base Flood Elevation (BFE) shall be removed and placed in an upland location above the BFE and outside of BVW and/or LUW.

    c. Anchored stationary equipment may remain below the BFE if demonstrated to be required and upon written approval from MassDEP. In the event semi-stationary equipment cannot be feasibly removed before the arrival of the storm, they shall be adequately secured and MassDEP shall be notified prior to the storm.

    d. A requirement to inspect and maintain all erosion and sedimentation controls, and stabilize all exposed soils as needed below the BFE prior to the storm shall be included.

    e. A plan depicting at a minimum, but not limited to, BVW and/or LUW boundaries, the Project limits, and the BFE boundary based on ground elevations shall be included.

    f. Staff and materials must be available 24 hours per day, seven days per week to implement the Flood Contingency Plan. The name, affiliation, title, email address, and phone number of each person responsible for implementing the Flood Contingency Plan shall be included.

    g. No work shall commence until the flood watch or flood warning has ended, all areas below the BFE have been inspected, and erosion and sedimentation controls are maintained as needed.

Construction Period

13. No more than **0 sf** of permanent and **125 sf** of temporary impacts to BVW shall occur. No more than **3,441 sf** of permanent and **0 sf** of temporary impacts to LUW shall occur. No more than **630 cy** of dredging in LUW shall occur. All work shall avoid unapproved impacts to BVW and LUW.

14. The Project shall identify one individual with at least three years of experience with construction period erosion and sedimentation control to be responsible for erosion and sedimentation control inspections (CP/PP Inspector). Under the direction of the CP/PP Inspector, inspection and maintenance of erosion and sediment controls in active work areas may be performed by both the Contractor and RE or other MassDOT project staff. Maintenance is the responsibility of the Contractor; however, the permittee shall be ultimately responsible for erosion and

sedimentation control failure. The RE and/or contractor shall immediately notify MassDEP and the Lee Conservation Commission if any unauthorized discharges to BVWs or LUW occur.

15. CP/PP inspections shall occur at least once every seven calendar days and within 24 hours of a storm event that produces 0.5 inches or more of rain within a 24-hour period, or at a more stringent frequency if the CP/PP requires.

16. Copies of CP/PP Inspection and Maintenance Log Forms shall be submitted to MassDEP within 14 days upon request.

17. Disturbed areas shall be stabilized immediately after activities have permanently ceased or will be temporarily inactive for 14 or more calendar days. The installation of stabilization measures shall be implemented as soon as practicable, but no later than 14 calendar days after stabilization has been initiated.

18. Work within LUW shall be conducted in low or no-flow conditions to the extent practicable. Notice shall be provided to MassDEP and the Lee Conservation Commission within 24 hours prior to the commencement of dewatering. Dewatering methods and location(s) shall be approved by the RE or other project staff with knowledge of these practices prior to use to ensure consistency with the approved Control of Water Plan, and shall be documented in the CP/PP. There shall be no discharge of untreated dewatered stormwater or groundwater to BVWs or LUW. Any discharges shall be visibly free of sediment.

19. Additional erosion and sedimentation control materials shall be stored on-site at all times for emergency and routine replacement. Materials shall be kept covered, dry, and accessible at all times. The CP/PP Inspector shall be responsible for anticipating the need for and installation of additional erosion and sedimentation controls and shall have the authority to require additional erosion control measures to protect wetland resource areas beyond what is shown on the plans if field conditions or professional judgment dictate that additional protection is necessary.

20. The Contractor shall monitor the National Weather Service forecast for updates, and upon issuance of a flood watch for the 1% annual chance of flooding zone, shall implement the flood contingency plan referenced in Condition 12.

21. Any storm drains with potential to receive discharge from stockpiled materials or construction operations shall be managed to inhibit the inflow of sediment while not increasing the likelihood of roadway flooding during periods of precipitation. The CP/PP shall specify measures to implement this. Filter fabric stretched under storm drain inlet grates are not acceptable for this purpose.

22. Stockpiles shall be located no less than 50 feet from BVWs, LUW, catch basins, or other drainage conveyances that discharge to BVWs or LUW.

23. The contractor shall have designated washout areas for concrete equipment that will be comprised of impermeable material and sized to contain project concrete wastes and wash water. Concrete wash out areas shall be located no less than 50 feet from BVWs, LUW, and

catch basins or other drainage conveyances that discharge directly or indirectly to BVWs or LUW.

24. Refueling, washing, and cleaning of vehicles and other construction equipment shall not take place within 50 feet of BVWs or LUW and any wash water shall be contained such that it does not drain toward BVWs or LUW. MassDEP shall explicitly approve in writing any deviation to this condition for oversized stationary vehicles.

25. The contractor shall have spill containment kits on site. In the event of a release of fuels and/or oils, the local fire department, MassDEP Emergency Response and MassDEP Wetlands Program Highway Unit shall be contacted, and in addition, the MassDEP Bureau of Waste Site Cleanup shall be notified per the requirements of the Massachusetts Contingency Plan, 310 CMR 40.0000.

26. The Turtle Protection Plan shall be implemented as approved by NHESP on May 28, 2025.

27. Construction vehicles and equipment shall not enter BVWs or LUW unless authorization is provided by way of this permit or amendment. The Contractor shall use equipment with boom reach capabilities and other measures to avoid inadvertent impacts to jurisdictional resource areas as a result of excavation, riprap placement, and/or bridge/pier demolition materials.

28. To protect Coldwater Fisheries, no in-water, silt-producing work shall occur during the Time of Year (TOY) restriction between the dates of October 1 to April 30. Work may proceed behind dewatered cofferdams at any time, provided they are installed and removed outside of the TOY restriction.

29. If applicable, sheet piles shall be fully removed from wetland resource areas upon stabilization of the area as required. No portion of sheet piles shall remain unless approved by MassDEP in writing prior to installation. A request to leave sheet piles shall include, but not be limited to, demonstration that full removal of the sheet piles is not feasible or practicable, and an alternatives analysis demonstrating alternative methods to isolate the work area(s) are not feasible or practicable. At no time shall sheet piles be allowed to remain in LUW of a waterway that provides aquatic organism passage.

30. A temporary shielding or containment system shall be in place beneath the bridge structure prior to removal and concrete excavation to prevent debris from falling into the water below. In the event that any debris accidentally enters Beartown Brook, it shall be immediately retrieved. Notice shall be provided to MassDEP if debris enters the river and that it has been removed with photo-documentation (if practicable) submitted by email.

Dredging

31. MassDEP shall be notified one week prior to the start of dredging so that staff may inspect the work for compliance throughout the project.

32. No later than 21 days prior to commencement of dredging activity, a Dredged Material Dewatering Plan shall be submitted to MassDEP for review and approval. At a minimum, the

Plan shall include but not be limited to the type of containment, method of dewatering (i.e. mechanical or by gravity), method of collecting the dewatered effluent and method of disposal. **(Submittal)**

33. Best Management Practices (BMPs) shall be employed by the contractor to protect resource areas located adjacent to the proposed staging/temporary dredged material stockpiling and dewatering areas. Sediment stockpiles shall be constructed in accordance with the MassDEP approved project plans, stabilized, bottom-lined if not placed on paved surfaces and securely covered with wind tear resistance tarpaulin, polyethylene sheeting or similar impermeable material at all times, and properly labeled. Stockpile covers shall be securely weighed down. Stockpiles shall also be secured to restrict access by the public and shall be set back at least 10 feet from temporary construction access roads or other areas and activities which could disturb the stockpiles and associated erosion controls; if the 10-foot setback cannot be met, then a MassDEP-approved barrier shall be provided. Inspection of the sediment containment and dewatering location and associated erosion controls shall be conducted daily and within 24 hours of a storm that produces 0.5 inches or more of rain. Any observed deficiency shall be corrected or repaired in a timely manner.

34. In the event of a precipitation or storm event, the site shall be secured beforehand in such a way as to protect resource areas and waters on site and downstream of the site, including covering of stockpiles of dredged material. Sediment stockpile areas shall be inspected in line with the frequency of the CP/PP required in Condition 15. Any observed deficiency shall be corrected or repaired in a timely manner to prevent discharge from the stockpiled material. If stormwater runoff and erosion is observed from stockpiled dredged material, additional erosion and/or damage prevention controls measures shall be implemented.

35. Measures shall be in place to prevent turbid waters, due to dredging, demolition, or debris removal activities, from extending past the limits of work into Beartown Brook. These measures can be items such as turbidity curtains and/or sheet piles.

36. If visual turbidity escapes the controls in place, as described in Condition 35, work shall stop immediately and MassDEP shall be notified within 24 hours. Work shall not resume until the issue is corrected and to the satisfaction of MassDEP.

37. All turbidity controls shall be inspected daily by the RE or a designated MassDOT Project Staff. If any damage is observed the controls in place will be replaced or repaired immediately.

38. If excavated sediment is disposed of off-site, MassDEP shall be notified in writing of the name and location of the upland licensed facilities accepting the dredged material for disposal or reuse for review and approval. If the licensed facility is located out of state, documentation shall be provided to MassDEP that the dredged material disposal/reuse has been approved and will be accepted by the receiving State. The dredged material shall not be transported to the facility without concurrence of MassDEP.

39. If excavated sediment is disposed of off-site, BMPs shall be implemented during transportation of the dredged material to the licensed receiving facility. At a minimum, when transported upon public roadways, all dredged material shall have no free liquid as determined by the Paint Filter

Test or other suitably analogous methodology acceptable to MassDEP, and a tarpaulin or other means shall be used to cover the dredged material during transport.

Stream Mitigation and Wetland Restoration

40. The FGM shall oversee all LUW restoration and replication. Placement of streambed materials shall take place in no- or low-flow conditions. The Control of Water Plan required in Condition 9 shall include measures to create no-flow conditions for this work such as a pump bypass system or other dewatering method, if needed. Placement of streambed materials during greater than low-flow conditions shall require a placement plan, with a narrative describing turbidity control measures, submitted to MassDEP for review and approval.

41. A minimum of 14 days prior to installation of the streambed materials, the FGM shall meet with the contractor to determine the suitability of stockpiled streambed material for reuse and whether there are sufficient stockpiled materials to complete streambed restoration.

42. Water shall be slowly introduced back into the restored and dewatered LUW work areas as to not cause erosion and sedimentation. The FGM will provide final approval of the streambed restoration upon re-wetting of banks and removal of water controls (photographs will suffice unless otherwise determined by the FGM).

43. Upon completion of the LUW restoration and replication, the FGM shall provide photographs and a summary of the completed work to MassDEP and the Lee Conservation Commission. **(Submittal)**

44. MassDEP reserves the right to determine the success or failure of the LUW restoration and replication areas and reserves the right to require additional measures deemed necessary to promote success.

45. The 125 square feet of temporarily impacted wetland shall be restored with a native wetland seed mix. MassDEP reserves the right to determine the success or failure of the BVW restoration area, and reserves the right to require additional seeding or other measures deemed necessary to promote success

Post-Construction

46. All temporary erosion controls shall be removed at the conclusion of work once the surrounding area has achieved final stabilization.

General Conditions

47. Any proposed alterations, minor plan changes, or amendment requests, as well as any required submittals shall be sent by email for review and approval to heidi.davis@mass.gov and jaime.iannelli@mass.gov. **(Submittal)**

48. This WQC remains in effect for the same duration as the Section 404 permit that requires it.

49. No Special Condition set forth herein shall be construed or operate to prohibit MassDEP from taking enforcement against MassDOT or its contractors for any failure to comply with the terms and requirements of this WQC.

50. No activity authorized by this WQC may begin prior to expiration of the 21-day appeal period, or until a final decision is issued by MassDEP in the event of an appeal.

Failure to comply with this Certification is grounds for enforcement, including civil and criminal penalties, under MGL Ch. 21 §42, MGL Ch. 21A §16, or other possible actions/penalties as authorized by the General Laws of the Commonwealth.

This Certification does not relieve the applicant of the obligation to comply with other appropriate state or federal statutes or regulations.

NOTICE OF APPEAL RIGHTS

a.) Appeal Rights and Time Limits

Certain persons shall have a right to request an adjudicatory hearing concerning certifications by MassDEP when an application is required: (a) the applicant or property owner; (b) any person aggrieved by the decision who has submitted written comments during the public comment period; (c) any ten (10) persons of the Commonwealth pursuant to M.G.L. c.30A where a group member has submitted written comments during the public comment period; or (d) any governmental body or private organization with a mandate to protect the environment which has submitted written comments during the public comment period. Any person aggrieved, any ten (10) persons of the Commonwealth, or a governmental body or private organization with a mandate to protect the environment may appeal without having submitted written comments during the public comment period only when the claim is based on new substantive issues arising from material changes to the scope or impact of the activity and not apparent at the time of public notice. To request an adjudicatory hearing pursuant to M.G.L. c.30A, § 10, a Notice of Claim must be made in writing, provided that the request is made by certified mail or hand delivery to MassDEP, with the appropriate filing fee specified within 310 CMR 4.10 along with a DEP Fee Transmittal Form within twenty-one (21) days from the date of issuance of this Certificate, and addressed to:

Case Administrator
Department of Environmental Protection
100 Cambridge Street, 9th Floor
Boston, MA 02114

A copy of the request shall at the same time be sent by certified mail or hand delivery to the Department of Environmental Protection at:

Department of Environmental Protection
Commissioner's Office
100 Cambridge Street, Suite 900
Boston, MA 02114

b.) Contents of Hearing Request

A Notice of Claim for Adjudicatory Hearing shall comply with MassDEP's Rules for Adjudicatory Proceedings, 310 CMR 1.01(6), and shall contain the following information pursuant to 314 CMR 9.10(3):

1. the 401 Certification Transmittal Number;
2. the complete name of the applicant and address of the project;
3. the complete name, address, and fax and telephone numbers of the party filing the request, and, if represented by counsel or other representative, the name, fax and telephone numbers, and address of the attorney;
4. if claiming to be a party aggrieved, the specific facts that demonstrate that the party satisfies the definition of "aggrieved person" found at 314 CMR 9.02;
5. a clear and concise statement that an adjudicatory hearing is being requested;
6. a clear and concise statement of (1) the facts which are grounds for the proceedings, (2) the objections to this Certificate, including specifically the manner in which it is alleged to be inconsistent with the MassDEP's Water Quality Regulations, 314 CMR 9.00, and (3) the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written Certification; and
7. a statement that a copy of the request has been sent by certified mail or hand delivery to the applicant, the owner (if different from the applicant), the conservation commission of the city or town where the activity will occur, the Department of Conservation and Recreation (when the certificate concerns projects in Areas of Critical Environmental Concern), the public or private water supplier where the project is located (when the certificate concerns projects in Outstanding Resource Waters), and any other entity with responsibility for the resource where the project is located.

c.) Filing Fee and Address

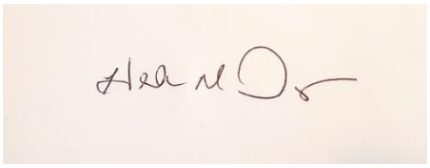
The hearing request along with a DEP Fee Transmittal Form and a valid check or money order payable to the Commonwealth of Massachusetts in the amount of one hundred dollars ($100) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
Commonwealth Master Lockbox
PO Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. MassDEP may waive the adjudicatory hearing filing fee pursuant to 310 CMR 4.06(2) for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file an affidavit setting forth the facts believed to support the claim of undue financial hardship together with the hearing request as provided above.

Should you have any questions relative to this permit, please contact myself or Jaime Iannelli at heidi.davis@mass.gov and jaime.iannelli@mass.gov.

Very truly yours,



Heidi M. Davis
Highway Unit Supervisor

Ecc: DEP WERO – Michael McHugh
USACE – Dan Vasconcelos
USACE – Kevin Newton
Lee Conservation Commission
MassDOT – Melissa Lenker
MassDOT – Michael Joa
MassDOT – Joshua Bartus
Gill Engineering Associates, Inc. – James Turnbull

ATTACHMENT A
PRE-CONSTRUCTION SUBMITTAL CHECKLIST

Bridge (L-05-004) Replacement, Meadow Street over Powder Mill Brook
Lee, Massachusetts

THIS CHECKLIST MUST BE COMPLETED PRIOR TO THE START OF WORK. NOTE THAT SOME CONDITIONS REQUIRE THAT INFORMATION BE SUBMITTED A SPECIFIC NUMBER OF DAYS PRIOR TO THE START OF WORK OR THE PRE-CONSTRUCTION MEETING.

Pre-Construction Meeting Date: _____

Condition	Required Submittal	Due Date	Date Submitted	Date Approved
PRE-CONSTRUCTION SUBMITTAL REQUIREMENTS				
2	Name, contact information, and qualifications of the FGM, including specific experience and years to meet requirement	Prior to Pre-Construction Meeting		
3	Name and contact information of the RE	Prior to Pre-Construction Meeting		
5	USACE Work-Start Notification Form	14 days prior to work start		
6	CP/PP	14 days prior to work start		
7	Verification of SWPPP Training	Prior to work start		
9	Control of Water Plan	14 days prior to work start		
12	Flood Contingency Plan	Prior to any work within 1% annual chance of flooding zone		

重要 महत्वपूर्ण σημαντικός
Important
կարեւոր quan trọng مهم

Communication for Non-English-Speaking Parties

This document is important and should be translated immediately.

If you need this document translated, please contact MassDEP's Director of Environmental Justice at the telephone number listed below.

Español Spanish

Este documento es importante y debe ser traducido inmediatamente. Si necesita traducir este documento, póngase en contacto con el Director de Justicia Ambiental de MassDEP (*MassDEP's Director of Environmental Justice*) en el número de teléfono que figura más abajo.

Português Portuguese

Este documento é importante e deve ser traduzido imediatamente. Se você precisar traduzir este documento, entre em contato com o Diretor de Justiça Ambiental do MassDEP no número de telefone listado abaixo.

繁體中文 Chinese Traditional

本文檔很重要，需要即刻進行翻譯。
如需對本文檔進行翻譯，請透過如下列示電話號碼與 MassDEP 的環境司法總監聯絡。

简体中文 Chinese Simplified

这份文件非常重要，需要立即翻译。
如果您需要翻译这份文件，请通过下方电话与 MassDEP 环境司法主任联系。

Ayisyen Kreyòl Haitian Creole

Dokiman sa a enpòtan epi yo ta dwe tradui l imedyatman. Si w bezwen tradui dokiman sa a, tanpri kontakte Direktè. Jistis Anviwònmantal MassDEP a nan nimewo telefòn ki endike anba a.

Việt Vietnamese

Tài liệu này và quan trọng và phải được dịch ngay. Nếu quý vị cần bản dịch của tài liệu này, vui lòng liên hệ với Giám Đốc Phòng Công Lý Môi Trường của MassDEP theo số điện thoại được liệt kê bên dưới.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះមានសារៈសំខាន់
ហើយគប្បីត្រូវបានបកប្រែភ្លាមៗ។
ប្រសិនបើអ្នកត្រូវការអោយឯកសារនេះបកប្រែ
សូមទាក់ទងនាយកផ្នែកយុត្តិធម៌បរិស្ថានរបស់
MassDEPតាមរយៈលេខទូរស័ព្ទដែលបានរាយដូចខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Es dokumentu sta important i tenki ser tradusidu immediatamenti. Se nho ta presisa ke es dokumentu sta tradisidu, por favor kontata O Diretor di Justisia di Environman di DEP ku es numero di telifoni menxionadu di baixo.

Contact Deneen Simpson 857-406-0738
Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114
TTY# MassRelay Service 1-800-439-2370 • https://www.mass.gov/environmental-justice
(Version revised 8.2.2023) 310 CMR 1.03(5)(a)

Русский Russian

Это чрезвычайно важный документ, и он должен быть немедленно переведен. Если вам нужен перевод этого документа, обратитесь к директору Департамента экологического правосудия MassDEP (MassDEP's Director of Environmental Justice) по телефону, указанному ниже.

العربية Arabic

هذه الوثيقة مهمة وتجب ترجمتها على الفور.

إذا كنت بحاجة إلى ترجمة هذه الوثيقة، فيرجى الاتصال بمدير العدالة البيئية في MassDEP على رقم الهاتف المذكور أدناه.

한국어 Korean

이 문서는 중대하므로 즉시 번역되어야 합니다.
본 문서 번역이 필요하신 경우, 매사추세츠 환경보호부의 "환경정의" 담당자 분께 문의하십시오. 전화번호는 아래와 같습니다.

հայերեն Armenian

Այս փաստաթուղթը կարևոր է, և պետք է անհապաղ թարգմանել այն:
Եթե Ձեզ անհրաժեշտ է թարգմանել այս փաստաթուղթը, դիմեք Մասաչուսեթսի շրջակա միջավայրի պահպանության նախարարության (MassDEP) Բնապահպանական հարցերով արդարադատության ղեկավարին (Director of Environmental Justice)՝ ստորև նշված հեռախոսահամարով

فارسی Farsi Persian

این نوشتار بسیار مهمی است و باید فوراً ترجمه شود.
اگر نیاز به ترجمه این نوشتار دارید لطفاً با مدیر عدالت محیط زیستی MassDEP در شماره تلفن ذکر شده زیر تماس بگیرید.

Français French

Ce document est important et doit être traduit immédiatement. Si vous avez besoin d'une traduction de ce document, veuillez contacter le directeur de la justice environnementale du MassDEP au numéro de téléphone indiqué ci-dessous.

Deutsch German

Dieses Dokument ist wichtig und muss sofort übersetzt werden. Wenn Sie eine Übersetzung dieses Dokuments benötigen, wenden Sie sich bitte an MassDEP's Director of Environmental Justice *(Direktor für Umweltgerechtigkeit in Massachusetts)* unter der unten angegebenen Telefonnummer.

Ελληνική Greek

Το έγγραφο αυτό είναι πολύ σημαντικό και πρέπει να μεταφραστεί αμέσως. Αν χρειάζεστε μετάφραση του εγγράφου αυτού, παρακαλώ επικοινωνήστε με τον Διευθυντή του Τμήματος Περιβαλλοντικής Δικαιοσύνης της Μασαχουσέτης στον αριθμό τηλεφώνου που αναγράφεται παρακάτω

Italiano Italian

Questo documento è importante e deve essere tradotto immediatamente. Se hai bisogno di tradurre questo documento, contatta il Direttore della Giustizia Ambientale di MassDEP al numero di telefono sotto indicato.

Język Polski Polish

Ten dokument jest ważny i powinien zostać niezwłocznie przetłumaczony. Jeśli potrzebne jest tłumaczenie tego dokumentu, należy skontaktować się z dyrektorem ds. sprawiedliwości środowiskowej MassDEP pod numerem telefonu podanym poniżej.

हिन्दी Hindi

यह दस्तावेज महत्वपूर्ण है और इसका अनुवाद तुरंत किया जाना चाहिए। यदि आपको इस दस्तावेज का अनुवाद कराने की जरूरत है, तो कृपया नीचे दिए गए टेलीफोन नंबर पर MassDEP के पर्यावरणीय न्याय निदेशक से संपर्क करें।

Contact Deneen Simpson 857-406-0738
Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114
TTY# MassRelay Service 1-800-439-2370 • https://www.mass.gov/environmental-justice
(Version revised 8.2.2023) 310 CMR 1.03(5)(a)

General Permit No.: NAE-2022-02649 Final Effective Date: June 2, 2023
Applicant: General Public, Commonwealth of Massachusetts Expiration Date: June 1, 2028

Department of the Army
General Permits for the Commonwealth of Massachusetts

The New England District of the U.S. Army Corps of Engineers (USACE) hereby issues twenty-five (25) regional general permits (GPs) for activities subject to USACE jurisdiction in waters of the U.S., including wetlands, navigable waters within the Commonwealth of Massachusetts and adjacent ocean waters to the seaward limit of the outer continental shelf. The Massachusetts GPs (hereafter referred to as the MA GP or GP) are issued in accordance with USACE regulations at 33 CFR 320 – 332 [see 33 CFR 325.5(c)(1)]. These GPs establish criteria and contain permit conditions to ensure that the authorized activities have no more than minimal individual and cumulative adverse impacts to the environment.

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In issuing these GPs, the Federal Government does not assume any liability for the following: (a) damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes; (b) damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the U.S. in the public interest; (c) damages to persons, property or to other permitted or unpermitted activities or structures caused by the activity authorized by any of the GPs; (d) design or construction deficiencies associated with the permitted work; or (e) damage claims associated with any future modification, suspension or revocation of these permits.

Tammy R. Turley 02 June 2023

Tammy R. Turley Date
Chief, Regulatory Division

SECTION I. STATUTORY AUTHORITES & REGULATED ACTIVITIES

1. Work Requiring USACE Authorization

a. Section 10: Work and structures that are located in, over, under or that affect navigable waters of the United States (U.S.) (see 33 CFR 329). The USACE regulates these activities under section 10 of the Rivers and Harbors Act of 1899 (see 33 CFR 322).

b. Section 404: The discharge of dredged or fill material into waters of the U.S (see 33 CFR 328). The USACE regulates these activities under Section 404 of the Clean Water Act (CWA). The term "discharge of dredged or fill material" also includes certain discharges resulting from excavation. Applicants should contact USACE to determine if a particular excavation discharge occurring within waters of the U.S., is a regulated activity. See 33 CFR 323.4 of the CWA for exempted activities.

For additional information on the limits of USACE jurisdiction, please see: https://www.nae.usace.army.mil/Portals/74/docs/regulatory/JurisdictionalLimits/Jurisdictional_Limits_Brochure.pdf

2. Authority to Issue General Permits

a. In accordance with 33 CFR 322.2(f), 325.2(e)(2), and 325.5(c), USACE may issue regional general permits authorizing activities under Section 10 of the RHA.

b. In accordance with Section 404(e) of the CWA, 33 USC 1344(e), and 33 CFR 323.2(h), 325.2(e)(2), and 325.5(c), after notice and opportunity for public hearing, USACE may issue regional general permits for any category of activities involving discharges of dredged or fill material if the activities in such category are similar in nature, will cause only minimal adverse environmental effects when performed separately, and will only have minimal cumulative adverse effect on the environment.

3. Related Laws

33 CFR 320.3 includes a list of related laws including, but not limited to, Section 408 of the Rivers and Harbors Act of 1899, Section 401 of the Clean Water Act, Section 402 of the Clean Water Act, Section 307(c) of the Coastal Zone Management Act of 1972, Section 106 of the National Historic Preservation Act of 1966, Section 7 of the Endangered Species Act, the Fish and Wildlife Coordination Act of 1956, the Magnuson-Stevens Fishery Conservation and Management Act, the Fish and Wildlife Coordination Act, Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972, Section 7(a) of the Wild and Scenic Rivers Act, the Golden Eagle Protection Act, and the Migratory Bird Treaty Act.

SECTION II. REVIEW CATEGORIES & APPLICATION PROCEDURES

To qualify under these GPs, the design, construction, and maintenance associated with each proposed activity must meet the terms and eligibility criteria listed in Section III, all applicable general conditions (GCs) in Section IV, and any specific mitigation requirements in Section V. Applicants should first review the GPs to see if a project is eligible for authorization under one or more of the GPs within this document. Any activity not specifically listed may still be eligible for authorization under these GPs; applicants are advised to contact USACE for specific eligibility determination.

Please note that these GPs allow for Self-Verification (SV) contingent upon meeting all criteria and with full adherence to all GCs. Projects that do not qualify for SV, may meet criteria for Pre-Constriction Notification (PCN). Tables are provided under each activity, which outline criteria for SV and PCN. Activities that do not meet criteria for SV or PCN may require review as an Individual Permit (IP). Activities may require a PCN or IP as noted in Sections III and/or IV of this GP. Notwithstanding compliance with the terms of these GPs, USACE retains discretionary authority to require either PCN review or IP review on a case-by-case basis for any project based on concerns for the environment or for any of the other public interest factors found in 33 CFR 320.4(a). These GPs also do not replace or change those activities identified as exempt from USACE regulation (33 CFR 323.4).

1. Pre-Application Assistance

Prospective applicants may request a pre-application meeting to address any questions they may have. USACE may also request a pre-application meeting or additional information to facilitate review of the request. Pre-application meetings and/or site visits help streamline the authorization process by alerting the prospective applicant to potentially time-consuming factors that may arise during the evaluation of their project (e.g., avoidance, minimization and compensatory mitigation requirements, historic properties, endangered species, essential fish habitat, impacts to federal projects, and/or dredging of contaminated sediments).

To schedule a pre-application meeting, present questions, or if you need further assistance, please contact USACE at:

Email: cenae-r-ma@usace.army.mil (strongly preferred) Phone: (978) 318-8338

Mail: U.S. Army Corps of Engineers
New England District
Regulatory Division, Massachusetts Section
696 Virginia Road
Concord, MA 01742

2. Submitting a Request

Please follow the procedures outlined in Sections II.2-5 when requesting an SV or applying for PCN authorization for activities covered by these GPs. The GPs are provided in Section III below. For SV-eligible projects, the Self-Verification Notification (SVN) must be submitted within 30 days of commencing work. Otherwise, a Pre-Construction Notification (PCN) must be submitted for work that is not SV-eligible. Please include appropriate drawings and attachments and submit your request using the mailbox identified in Section II.4 or II.5 below. USACE will promptly confirm receipt of your request and notify you in the event additional information is required. Guidance on

how to submit electronic correspondence is located on the NAE Regulatory website here: https://www.nae.usace.army.mil/Missions/Regulatory/Submitting-Electronic-Correspondence.

3. Local, State & Federal Approvals

Applicants are responsible for applying for and obtaining any required local, state, and federal permits or approvals. These must be obtained prior to the commencement of work in waters. Such authorizations may include a Water Quality Certification, a Coastal Zone Management Act consistency determination, and other approvals as noted below. Authorization under these GPs does not obviate the need for the permittee to obtain other Federal, State, or local permits, approvals, or authorizations required by law.

I. Water Quality Certification under Section 401 of the Federal Clean Water Act (33 USC 1341).
Applicants are responsible for determining the appropriate 401 Water quality Certification (WQC) requirements and submitting this information to the USACE at the time of their PCN application or when completing their SVN. Applicants that are unsure of whether their activity has been certified should contact MassDEP, or EPA Region 1 when the activity is located on tribal lands, for a determination. The 401 WQC requirement must be satisfied by acquiring one of the following WQCs from MassDEP (see GC 8):

General 401 WQC: The MassDEP issued a WQC on April 21, 2023 conditionally certifies all activities in GPs 1 – 24 eligible for SV and PCN so long as the activity is described in 314 CMR 9.03, and is not an activity described in 314 CMR 9.04, and so long as the activity meets all other requirements, terms and conditions of this WQC. The MassDEP WQC also conditionally certifies activities described in GP 25 so long as the activity meets all other conditions of the WQC. Emergency projects described in GP 25 must obtain an emergency certification or otherwise be authorized pursuant to 310 CMR 10.06, qualify under a Severe Weather Emergency Declaration pursuant to 310 CMR 10.06(8) issued by the MassDEP, or meet the requirements of 9.12(2) or (3) in order to be certified under the WQC

Applicants should refer to the following link to determine if their activity is eligible: *https://www.nae.usace.army.mil/Missions/Regulatory/ State-General-Permits/ Massachusetts-General-Permit/*. If eligible, you must comply with all applicable WQC conditions. Activities listed in 314 CMR 9.03 that are not exempt from the Wetland Protection Act must have a valid Final Order of Conditions (OOC) or Final Restoration Order of Conditions pursuant to 310 CMR 10.00 to be eligible under the General 401 WQC.

Individual 401 WQC: In the event the proposed activity is not covered by the general WQC, applicants shall contact MassDEP and apply for an individual 401 WQC if their activity does not qualify for a General 401 WQC as outlined above. MassDEP may issue, waive, or deny the individual 401 WQC on a case-by-case basis. All activities listed in 314 CMR 9.04 must obtain an individual 401 WQC from MassDEP to be eligible under these GPs. When an Individual 401 WQC is required for *PCN activities*, the applicant shall submit their Individual 401 WQC application concurrently to MassDEP and the USACE to comply with 40 CFR 121.

Activities Proposed on Tribal Lands: When an activity is proposed on Tribal lands, the applicant shall refer to the general 401 WQCs granted by the Environmental Protection Agency (EPA), Region 1 on May 15, 2023. These 401 WQCs are located on the USACE Regulatory website: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.

II. Coastal Zone Management Act Federal Consistency Concurrence pursuant to Section 307 of the CZMA of 1972, as amended. Federal consistency concurrence is required for all activities located within the coastal zone, unless determined otherwise by the Massachusetts Office of Coastal Zone Management (MA CZM) (see GC 9). As applicable, this requirement must be satisfied by acquiring one of the following from the MA CZM:

General CZM Federal Consistency Concurrence (General Concurrence): MA CZM has granted General Concurrence for all SV and PCN activities for GPs 1-25 and this can be found at: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/. The applicant must obtain all applicable permits and approvals prior to the commencement of work in USACE jurisdiction (i.e., construction begins on site). For SVs, General Concurrence is automatically granted and no further action is required from the applicant. For PCNs, the USACE will coordinate with MA CZM to acquire General Concurrence as part of the PCN application review. During review of the PCN application, USACE may request additional information from the applicant to support CZM's evaluation of the activity.

Individual CZM Federal Consistency Concurrence (Individual Concurrence): In certain cases, MA CZM may elevate any GP activity 1-25 to require Individual Concurrence. The applicant must contact MA CZM and follow the procedures to obtain Individual Concurrence as determined appropriate by MA CZM.

The MA CZM program includes five regional offices that serve 78 coastal municipalities. The following map provides more information about these offices: https://www.mass.gov/service-details/czm-regions-coastal-communities-and-coastal-zone-boundary

III. Other Approvals: Approvals typically required in Massachusetts include, but are not limited to, a Chapter 91 Permit/License, Massachusetts Environmental Protection Act (MEPA) review, Wetlands Protection Act Order of Conditions, and/or Aquaculture Certification. *Applicants should also be aware that USACE may not be able to render a permit decision in the event the proposed activity is denied by another local, state and/or federal agency.*

4. Procedures for Self-Verification (SV) Eligible Projects

If the activity is eligible for an SV, the Self-Verification Notification (SVN) must be completed prior to the start of project construction and submitted to USACE within 30 days of commencing work. The purpose of the SVN is to provide applicants with a tool to assist them when determining if the activity as proposed is SV-eligible. The following GPs do not require submission of the SVN: GP 1 (SV #1), GP 3 (SV #2-3), GP 4 (SV #2), GP 11, GP 12 (note #2), GP 14 (see note), GP 15 (see note), and GP 24 (SV #3). **For the activities not listed above, the SVN must be completed prior to the start of work and be kept on site at all times during project construction.** The applicant shall not begin work for SV-eligible activities until they have completely verified the bulleted items below.

Digital submittals by email are **strongly encouraged** to facilitate the most efficient processing of the SVN submittal. Please communicate with USACE staff if you are unable to provide a digital copy. Addresses are cenae-r-ma-sv@usace.army.mil (email) or Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, MA 01742-2751 (mail).

Eligible SV Activities:

- Are subject to USACE jurisdiction (see GC 2); and
- Qualify for one or more of the GPs within this document (Section III); and
- Meet the GCs within this document (Section IV); and

- When required, are supported by a complete SVN (Appendix C); and
- Receive all other required local, State, and/or Federal approvals.

5. Procedures for Pre-Construction Notification (PCN) Eligible Projects

For activities that require a PCN, an application to and written authorization from USACE is required. *No work requiring a PCN may proceed until the applicant receives written authorization from USACE verifying that the activity is authorized.* The verification letter may include special conditions that the applicant must comply with. When possible, it is *highly* recommended that PCN application materials are submitted at least 90 days before the target start date to allow for USACE evaluation and any necessary agency consultations. PCN applications shall demonstrate in writing how the proposed activity complies with all GCs, as applicable to their activity.

Digital submittals by email are **strongly encouraged** to facilitate the most efficient processing of the PCN application. Please communicate with USACE staff if you are unable to provide a digital copy. Addresses are cenae-r-ma@usace.army.mil or Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, MA 01742-2751 (mail).

Eligible PCN Activities:

- Are subject to USACE jurisdiction (see GC 2); and
- Qualify for one or more of the GPs within this document (Section III); and
- Meet the GCs within this document (Section IV); and
- Comply with the Mitigation Standards within this document (Section V); and
- Are supported by a complete PCN document (Appendix B); and
- When required, are supported by the submittal of project information to the appropriate parties identified in Appendix A; and
- Receive all other required local, State, and/or Federal approvals.

6. Interagency Review Procedures

The USACE reserves the opportunity to coordinate PCN activities with Federal and State agencies to ensure that the proposed activity results in no more than a minimal impact to the aquatic environment. In some cases, USACE may require project modifications involving avoidance, minimization, and/or compensatory mitigation for unavoidable impacts to ensure the net effects of a project are minimal. The USACE determines, after review and coordination with the agencies and/or the applicant, if PCN applications:

a. Meet the terms and conditions of the GP as proposed;
b. Require additional information;
c. Require avoidance, minimization, compensatory mitigation, construction sequencing, project modification, or other special conditions to avoid or minimize adverse impacts to the aquatic environment;
d. Require individual permit review regardless of whether the terms and GCs of these GPs are met, based on concerns for the aquatic environment or any other factor of the public interest (see Section 9 below).

For activities requiring a PCN, the applicant must wait for written authorization from USACE before commencing activities in waters of the U.S. Beginning work for PCN required activities without a USACE written authorization is a violation of these GPs, and the terms and conditions of this document. The applicant may be subjected to an enforcement action by USACE and/or the Environmental Protection Agency (EPA).

7. Construction of Solid Fill Structures and Fills Along the Coastline or Baseline from Which the Territorial Sea is Measured.

Projects involving the construction of solid fill structures or discharge of fill that may extend beyond the coastline or the baseline from which the territorial sea is measured (i.e., mean low water) will require a PCN. The USACE will submit a description of the proposed work and a copy of the plans to the Solicitor, Department of the Interior, Washington, DC 20240, and request comments concerning the effects of the proposed work on the outer continental rights of the United States. These comments will be included in the administrative record of the application. After completion of permit review, the record will be forwarded to the Chief of Engineers. The decision on the application will be made by the Secretary of the Army after coordination with the Attorney General.

8. Emergency Activities

Per 33 CFR 325.2(e)(4), an emergency is limited to a situation that would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process an application under standard procedures. Emergency work shall be limited to that which is necessary to stabilize and secure the situation. Additional work needed for final repairs shall not be completed until approval is obtained through the appropriate, non-emergency process. Emergency work is subject to the same terms and conditions of these GPs as non-emergency work, and similarly, must qualify for authorization under these GPs; otherwise, an IP is required. *See GP 25 Emergency Situations for additional information.*

9. Individual Permit

Projects that do not meet the terms and conditions of this GP may require review as an IP (33 CFR 325.5 (b)). Proposed work in this category will require a separate Federal application for an individual permit from USACE (33 CFR 325.1). In addition, USACE retains discretionary authority on a case-by-case basis to elevate GP-eligible activities to an IP based on concerns for the environment or any other factor of the public interest (33 CFR 320.4 (a)). Applicants are required to submit the appropriate application materials directly to USACE as early as possible to expedite the permit review process. General information and application forms can be obtained at our website or by contacting our office at cenae-r-ma@usace.army.mil or (978) 318-8338. Individual 401 WQC and/or CZMA Federal consistency concurrence from the appropriate MA agencies are required before USACE can issue an individual permit. Applying for an IP does not relieve the applicant from their obligation to obtain all required Federal, State and/or local approvals.

10. Compliance

Applicants shall ensure compliance with all applicable GPs in Section III, GCs in Section IV, and any special conditions included in USACE verification letters. Noncompliance with these GPs, GCs, and special conditions may subject the applicant to criminal, civil, or administrative penalties, and/or an ordered restoration, and/or the permit may be modified, suspended or revoked by USACE. The USACE will consider any activity requiring USACE authorization to be noncompliant if that activity does not comply with all GP terms and conditions at all times, including while the project is under construction and when work is completed.

SECTION III. MASSACHUSETTS GENERAL PERMITS

Applicants are encouraged to review Sections I & II prior to submitting an application to confirm that the activity as proposed complies with all terms and conditions of the 2023 MA GPs. Applicants are also encouraged to review the definitions in Section VII, Definitions & Acronyms, of this document. Several terms are frequently used throughout the GPs, and it is important for the reader to understand these terms. If seeking verification for an activity previously verified under the 2018 MA GPs, please contact the USACE to discuss permitting needs in advance of submitting an application.

General Permits

1. Aids to Navigation and Temporary Recreational Structures
2. Maintenance
3. Moorings
4. Structures in Navigable Waters of the U.S.
5. Boat Ramps and Marine Railways
6. Utility Lines, Oil or Natural Gas Pipelines, Outfall Or Intake Structures, and Appurtenant Features
7. Dredging, Disposal of Dredged Material, Beach Nourishment, Rock Removal and Rock Relocation
8. U.S. Coast Guard Approved Bridges
9. Bank and Shoreline Stabilization
10. Aquatic Habitat Restoration, Enhancement, and Establishment Activities
11. Fish and Wildlife Harvesting and Attraction Devices and Activities
12. Response Operations, Oil and Hazardous Substances
13. Cleanup of Hazardous and Toxic Waste
14. Scientific Measurement Devices
15. Survey Activities
16. Land and Water-Based Renewable Energy Generation Facilities and Hydropower Projects
17. Residential, Commercial and Institutional Developments, and Recreational Facilities
18. Aquaculture
19. Mining Activities
20. Living Shorelines
21. Agricultural Activities
22. Reshaping Existing Drainage Ditches, Construction of New Ditches, and Mosquito Management
23. Linear Transportation Projects and Wetland/Stream Crossings
24. Temporary Construction, Access, and Dewatering
25. Emergency Situations

GP 1. AIDS TO NAVIGATION AND TEMPORARY RECREATIONAL STRUCTURES (Authority: §10)	
(a) The placement of aids to navigation and regulatory markers that are approved by and installed in accordance with the requirements of the U.S. Coast Guard (USCG). See 33 CFR, Part 66; and (b) Temporary buoys, markers, and similar structures placed for recreational use during specific events such as water skiing competitions and boat races or seasonal use. See GC 16.	
Self-Verification Eligible	**Pre-Construction Notification Required**
1. Aids to navigation and regulatory markers approved by and installed in accordance with the requirements of the USCG. 2. Temporary buoys, markers and similar structures that are: (a) placed for recreational use during specific events and removed within 30 days after event; or (b) placed during winter events on ice and removed before spring thaw. These structures must be authorized by the local harbormaster, not located within an FNP or its buffer zone, and not located in saltmarsh or tidal vegetated shallows.	1. Impacts in saltmarsh or tidal vegetated shallows. 2. Activities that are not SV eligible.
Note: An SVN submittal to USACE is not required for work authorized under SV #1 above.	

GP 2. MAINTENANCE (Authorities: §10 and §404)

Repair, rehabilitation, or replacement of any previously authorized[1], currently serviceable structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3 (activities occurring before certain dates), provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction technique requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the activities above. Maintenance dredging and beach nourishment are not eligible under GP 2 (see GP 7). Stream crossing modifications (including sliplining), replacements or extensions are not eligible under GP 2 (see GPs 6, 17, 23). *See GP 25 Emergency Situations for expedited review of emergency activities.*

Not authorized under GP 2 (IP required): (a) Permanent impacts in >1 acre in non-tidal waters and/or wetlands; or (b) Permanent impacts >1/2 acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; or (c) Temporary impacts >1 acre in tidal waters; >5000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >1000 SF in vegetated shallows; (d) New stream channelization or stream relocation projects (e.g., those in response to storm or flood events).

Self-Verification Eligible

Maintenance activities that meet all of the following terms:

1. In non-tidal waters, the combined permanent and temporary impacts extending beyond the original footprint are ≤5,000 SF[2] and not located in vegetated shallows or riffle and pool complexes.

2. In tidal waters, the combined permanent and temporary impacts extending beyond the original footprint are ≤5,000 SF, ≤1,000 SF in mudflats and/or natural rocky habitat, and not located in saltmarsh and tidal vegetated shallows.

3. Minor deviations in the repair, rehabilitation, or replacement of previously authorized, currently serviceable structures or fills.

4. Bulkhead replacement in tidal and non-tidal waters via installation of new bulkhead within 18 inches of the existing bulkhead and associated backfill.

5. Drawdown of an impoundment for dam/levee repair provided it does not exceed 18 months and one growing season (April through September).

Pre-Construction Notification Required

1. Discharges associated with removal of accumulated sediments and debris in the vicinity of existing structures, including intake and outfall structures and associated canals.

2. The removal of sediment outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) that is ≥200 linear feet. This activity is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions existing when the structure was built.

3. Dam and flood control or levee repair, rehabilitation, or replacement involves:
   a. A change in the flood elevation or permanent water surface elevation of the impoundment; or
   b. Drawdown of impoundment for construction exceeding one growing season (see SV eligible #5);
   c. Any modification that changes the character, scope, or size of the original fill design; or
   d. Does not meet SV eligible 1-7.

4. Installation of steel piles, including steel sheet piles, that cannot be done in the dry and where NOAA-ESA listed species are mapped as present.

[1] Some maintenance activities may not be subject to regulation under Section 404 of the CWA in accordance with 33 CFR 323.4(a)(2). Per 33 CFR 330.3, Vested dates are: a) Work performed and structures installed before December 18, 1968 (Section 10); and b) Fill placed before July 25, 1975 (Section 404).
[2] This excludes dam projects that may require a temporary drawdown with impacts >5,000 SF in non-tidal waters. Instead, the drawdown shall comply with SV #5 to be eligible under Self-Verification.

6. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project or within the boundaries of the structure or fill. 7. Work to previously approved tide gates not affecting upstream tidal resource areas.	5. Activities located in the Connecticut River or Merrimack River, unless they are completed in the dry or when the tide is waterward of the work area. 6. Activities on USACE properties & USACE-controlled easements. 7. Activities that do not require an IP. Activities that do not require a PCN or an IP may be SV eligible.
Notes: 1. This authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the CWA §404(f) exemption for maintenance. See 33 CFR 323.4(a)(2). Prior USACE permits may have included authorization to maintain the activity, in which case authorization under this GP is not necessary. 2. See GC 22 for information on temporary construction mats.	

GP 3. MOORINGS (Authority: §10)

New moorings and mooring fields; the relocation of previously authorized moorings; expansions, boundary reconfigurations or modifications of previously authorized mooring fields; and maintenance and replacement of moorings.

Not authorized under GP 3 (IP required): (a) Moorings or mooring fields converted to or associated with a new boating facility[1]; or (b) Moorings in a USACE Federal Navigation Anchorage or USACE Federal Navigation Channel, except municipal-operated mooring fields.

Self-Verification Eligible	Pre-Construction Notification Required
1. New or relocated moorings that meet all the following terms: a. Authorized by a local harbormaster/ municipality under MGL Chapter 91 §10A; and b. No interference with navigation; and c. Single boat, single-point and non-commercial; and d. Not associated with a boating facility, and e. Neither placed within nor impact tidal vegetated shallows (e.g., eelgrass); and f. Not located within a USACE Federal navigation project (FNP) or the FNP buffer zone. 2. Existing, authorized moorings are converted from traditional moorings to low impact mooring technology (see note below) and/or helical anchors. 3. Maintenance and replacement of moorings authorized by the USACE.	1. New mooring fields; or expansions, boundary reconfigurations or modifications of existing, authorized mooring fields. 2. Moorings located such that they, and/or vessels docked or moored at them, are within the buffer zone of the horizontal limits of a Federal Anchorage. The buffer zone is equal to 3 times the authorized depth of that channel (see GC 15). 3. New individual moorings located in saltmarsh, mudflats, natural rocky habitat, and tidal vegetated shallows. Locating moorings these areas should be avoided to the maximum extent practicable. If these areas cannot be avoided, plans should show conservation mooring or low-impact mooring systems that prevent mooring chains from resting or dragging on the bottom substrate at all tides, where practicable. USACE may require a survey in areas previously mapped as containing eelgrass or within 100 ft. of existing eelgrass beds to document presence or absence of eelgrass and to determine the appropriate type and amount of compensatory mitigation for impacts to eelgrass. 4. Replacement moorings located in tidal vegetated shallows. 5. Moorings that are not SV eligible and do not require an IP.

Notes:

1. Low impact mooring systems, including conservation moorings, are encouraged to minimize impacts of chain scouring from conventional moorings during the tidal cycle.
2. An SVN submittal to USACE is not required for work authorized under SV #2-3 above.

[1] Boating facilities are marinas, yacht clubs, boat clubs, boat yards, dockominiums, town facilities, land/homeowner's associations, etc. that provide for a fee, rent or sell mooring or docking space. Not classified as boating facilities are municipal moorings or municipal mooring fields that charge an equitable user fee based only on the actual costs incurred.

GP 4. STRUCTURES IN NAVIGABLE WATERS OF THE U.S. (Authority: §10 & §404)

New, expansions, reconfigurations or modifications of structures for navigational access in waters of the U.S. including but not limited to temporary/seasonal or permanent pile and pole-supported piers, floats, stairs, shore outhauls, and boat and float lifts.

Not authorized under GP 4 (IP required): (a) Structures associated with a new boating facility; (b) Structures in a USACE Federal anchorage or channel; or (c) Artificial reefs.

Self-Verification Eligible

1. Private, non-commercial piers, floats and lifts that meet all the following terms:

a. Piers and floats in: (i) Tidal waters total ≤600 SF combined; and (ii) Non-tidal navigable waters of the U.S. total ≤600 SF combined; and

b. Piers are ≤4 feet wide and ≥6 feet above the marsh substrate (the height is measured from the marsh substrate to the bottom of the lowest longitudinal support); and

c. Floats and lifts in tidal waters and non-tidal navigable waters of the U.S. are ≥24 inches above the substrate during all tidal cycles. Float stops are preferred when site conditions warrant them (i.e., low tide exposes substrate), and skids can only be used in areas where piles are not feasible and on sandy or hard bottom substrates; and

d. Piers, floats and lifts: (i) Are ≥25 feet from previously mapped or existing vegetated shallows, or riparian property line extensions; (ii) Extend ≤25% of the waterway width in non-tidal navigable waters of the U.S. or MHW in tidal navigable waters of the U.S.

e. Installation of ≤12-inch diameter timber piles. Installation of ≥12-inch diameter piles of any material type when installed in the dry.

2. Fenders and similar structures.

Pre-Construction Notification Required

1. Shore outhauls.
2. Expansions, modifications, or new reconfiguration zones at any authorized boating facility.
3. New, expansions, reconfigurations, reconfiguration zones, or modifications of structures that provide public, community or government recreational uses such as boating, fishing, swimming, access, etc.
4. Installation of steel piles, including steel sheet piles, that cannot be done in the dry and where NOAA-ESA listed species are mapped as present.
5. Located within the buffer zone of the horizontal limits of an FNP (GC 15).
6. Miscellaneous structures.
7. Impacts in tidal vegetated shallows.
8. Structures that are not SV eligible and do not require an IP.

Notes:

1. See GC 19 regarding pile driving and pile removal in navigable waters and
2. See GC 20 regarding time of year restrictions in tidal waters.
3. Boating facilities are facilities that provide for a fee, rent, or sell mooring space, such as marinas, yacht clubs, boat clubs, boat yards, town facilities, dockominiums, etc. Pile supported structures with no discharges of dredged or fill material are not regulated by USACE in non-navigable waters.
4. A SVN submittal to USACE is not required for SV #2 above.

GP 5. BOAT RAMPS AND MARINE RAILWAYS (Authorities: §10 and §404)

Activities required for the construction of boat ramps and marine railways, including excavation and fill.

Not authorized under GP 5 (IP required): (a) Permanent impacts that are >1 acre in non-tidal waters of the U.S., >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows[1]; or (c) dredging in navigable waters of the U.S. (see GP 7).

Self-Verification Eligible	Pre-Construction Notification Required
1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows.	1. Boat ramps are located within 25 feet of property line extensions unless the properties are owned by the same owner. The USACE may require a letter of no objection from the abutter(s).
2. In tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) ≤1,000 SF in mudflats and/or natural rocky habitat, and (c), not located in saltmarsh and tidal vegetated shallows.	2. Activities that are not eligible for SV and do not require an IP.

GP 6. UTILITY LINES, OIL OR NATURAL GAS PIPELINES, OUTFALL OR INTAKE STRUCTURES, AND APPURTENANT FEATURES (Authorities: §10 & §404)

Activities required for: (a) The construction, maintenance, repair or removal of utility lines, oil or natural gas pipelines[1], outfall or intake structures[2], and appurtenant features including the associated excavation, backfill, or bedding for these structures. (b) The construction, maintenance, or expansion of substations and other appurtenant facilities associated with a utility line, oil or natural gas pipeline, and outfall or intake structure in non-tidal waters of the U.S.; and (c) The construction and maintenance of foundations for overhead utility line towers, poles, and anchors in tidal and non-tidal waters of the U.S., provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible. This GP authorizes the construction of access roads to facilitate construction of the above activities provided the activity, in combination with all other activities included in one single and complete project, does not exceed the thresholds identified below (IP required). Access roads used solely for construction of the utility line must be removed upon completion of the work. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the activities above.[3]

Not authorized under GP 6 (IP required): (a) Permanent impacts for any single and complete project that are >1 acre in non-tidal waters of the U.S.; >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows; (c) Stormwater treatment or detention systems, or subsurface sewage disposal systems in waters of the U.S.; or (d) New tide gates that do not meet SV criteria below.

Self-Verification Eligible	Pre-Construction Notification Required
1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows.	1. New outfall and/or intake structures.
2. In tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) ≤1,000 SF in mudflats and/or natural rocky habitat, and (c), not located in saltmarsh and tidal vegetated shallows.	2. Unconfined work or silt producing activities in streams with diadromous fish.
3. Intake structures that are dry hydrants used exclusively for firefighting activities with no stream impoundments.	3. Submarine cables, conduits, or pipelines that occur in, over or under navigable waters of the U.S.
4. New tide gates on outfall structures for pipes conveying stormwater and/or industrial NPDES-permitted discharges from waters that are not waters of the U.S.	4. Stream channelization, relocation, impoundment, or loss of streambed occurs.
	5. The activity is placed within and runs parallel to or along a streambed within waters of the U.S.
	6. There is a permanent change in preconstruction contours in waters of the U.S.
	7. Installation of utility lines or gas/oil pipelines using trench excavation where material is temporarily sidecast into waters of the U.S. for >3 months. Applicants must demonstrate how the material would not be dispersed by currents or other forces.
	8. Activities that are not SV eligible and do not require an IP.

[1] See the definitions of a “utility line” and “oil or natural gas pipeline” in Section VII.
[2] Outfall structures must be in compliance with regulations issued under the National Pollutant Discharge Elimination System Program (Section 402 of the Clean Water Act).
[3] Temporary impacts shall comply with all GCs, including GC 32 Utility Line Installation and Removal.

GP 7. DREDGING (Authority: §10), DISPOSAL OF DREDGED MATERIAL (Authorities: §10, §404), BEACH NOURISHMENT (Authorities: §10 & §404), ROCK REMOVAL (Authority: §10) AND ROCK RELOCATION (Authorities: §10 & §404)

New, improvement and maintenance dredging (see notes below) including: (a) Disposal of dredged material at a confined aquatic disposal cell, beach nourishment location, near shore site, or ocean disposal site selected under Section 404 of the Clean Water Act pursuant to the 404(b)(1) Guidelines, provided the dredged material meets the requirements for such disposal; (b) Beach nourishment not associated with dredging; and (c) Rock removal and relocation for navigation.

Not authorized under GP 7 (IP required): (a) Dredging where ocean disposal is required for the disposal of dredged material (Section 103); New dredging >½ acre; ≥10,000 CY; >1000 SF permanent impacts to intertidal areas, saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF permanent impacts to tidal vegetated shallows; (b) Maintenance or improvement dredging and/or disposal with >1 acre of impacts to intertidal areas, saltmarsh, mudflats, riffle and pool complexes, or non-tidal vegetated shallows; (c) New dredging where the primary purpose is sand mining for beach nourishment; (d) Beach scraping; (e) Boulder removal and relocation for navigation >½ acre; or (f) Blasting.

Self-Verification Eligible

1. Maintenance dredging of previously dredged areas, with upland disposal, that meet all of the following terms:
   a. Dredged area ≤1/2 acre; and
   b. Activities comply with GC 20, TOY Restrictions. The time-of-year restriction(s) stated in Appendix B of the MA Division of Marine Fisheries (DMF) Technical Report TR-47[1] can apply instead if the general TOY restriction if a TOY is provided for a specific waterbody and is less restrictive. This is to protect endangered species, EFH, and other species; and
   c. The dredge footprint is located >25' from salt marsh or >100' from vegetated shallows; and
   d. Combined permanent and temporary impacts that are (i) ≤1,000 SF in mudflats or natural rocky habitat, or (ii) ≤5,000 SF within intertidal habitat and areas containing shellfish (an area contains shellfish unless: it is verified that minimal shellfish are present per the local shellfish constable or a shellfish survey; or it is not mapped as a MassGIS shellfish suitability area).
   e. No return water from upland disposal areas.

2. Boulder relocation with ≤1,000 SF of impacts, relocated to a similar depth and substrate.

Pre-Construction Notification Required

1. Maintenance dredging where the primary purpose is sand mining for beach nourishment.

2. New dredging and associated disposal ≤1/2 acre or <10,000 cubic yards.

3. Improvement dredging.

4. Beach nourishment in waters of the U.S. not associated with dredging.

5. Activities that are located in saltmarsh and tidal vegetated shallows.

6. Dredging in a Federal Navigation Project or within the buffer zone (see GC 15).

7. Activities that are not eligible for SV and do not require an IP.

Notes:

1. See Section VII for definitions of improvement and maintenance dredging.
2. For PCN activities, the USACE may waive or adjust the time of year requirement on a case-by-case basis after consultation with resource agencies.
3. Disposal site of any dredged material must be identified prior to obtaining USACE authorization.
4. Contact the USACE if a ten-year authorization to maintain an area is desired.

[1] The MA DMF Technical Report TR-47: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/

GP 8. U.S. COAST GUARD APPROVED BRIDGES (Authorities: §404)

Discharges of dredged or fill material incidental to the construction and modification of bridges across navigable waters of the U.S., including cofferdams, abutments, foundation seals, piers, and temporary construction and access fills provided that the USCG authorizes the construction of the bridge structure under Section 9 of the Rivers and Harbors Act of 1899 or other applicable laws. A USCG Authorization Act Exemption or a Surface Transportation and Uniform Relocation Assistance Act (STURRA) (144h) exemption do not constitute USCG authorization.

Not authorized under GP 8 (IP Required): Causeways and approach fills (see GP 23).

Self-Verification Eligible	**Pre-Construction Notification Required**
1. Discharges of dredged or fill material that are incidental to the construction of bridges across navigable waters and meet all of the following: a. Combined permanent and temporary impacts that are ≤5,000 SF. b. Combined permanent and temporary impacts that are ≤1,000 SF in mudflats and natural rocky habitat. c. Not located in saltmarsh and tidal vegetated shallows.	1. Activities on USACE properties & USACE controlled easements.2. Installation of steel piles, including steel sheet piles, that cannot be done in the dry and where NOAA-ESA listed species are mapped as present. 3. Activities that are not eligible for SV and do not require an IP.

Notes:

1. GP 8 is not applicable to bridges over inland waters or wetlands that are not tidally influenced or regulated as navigable under Section 10.
2. See eligibility criteria for GPs 2 & 23 for projects that are not subject to USCG regulations.

GP 9. BANK AND SHORELINE STABILIZATION (Authorities: §10 & §404)

Bank stabilization activities necessary for erosion protection along the banks of lakes, ponds, streams, estuarine and ocean waters, and any other open waters. Includes bulkheads, seawalls, riprap, revetments, living seawalls, or slope protection & similar structures, specifically for the purpose of shoreline protection. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the activities above.

Activities must meet the following criteria: (a) No material is placed in excess of the minimum needed for erosion protection; (b) No material is of a type, or is placed in any location, or in any manner, that will impair surface water flow into or out of any waters of the U.S.; (c) No material is placed in a manner that will be eroded by normal or expected high flows (properly anchored native trees and treetops may be used in low energy areas); (d) Native plants appropriate for current site conditions, including salinity, must be used for bioengineering or vegetative bank stabilization; (e) The activity is not a stream channelization activity; and (f) The activity must be properly maintained, which may require repairing it after severe storms or erosion events. This GP authorizes those maintenance and repair activities if they require authorization. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to construct the bank stabilization activity. See GP 20 for living shoreline stabilization structures or fills.

Not authorized under GP 9 (IP required): (a) New bank stabilization >500 feet in total length (>1,000 linear feet in total length when necessary to protect transportation infrastructure) or permanent loss of saltmarsh >1,000 SF, unless the District Engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects (an exception is for bulkheads – the district engineer cannot issue a waiver for a new bulkhead that is >1,000 feet in length along the bank); (b) Stream channelization or relocation activities; or (c) Breakwaters, groins or jetties.

Self-Verification Eligible

1. Activities in tidal and non-tidal waters that are:
   a. <200 feet in length.
   b. <400 feet in length when necessary to protect transportation infrastructure.
   c. ≤1 cubic yard of fill per linear foot average along the bank waterward of the plane of OHW or HTL.
   d. Not located in non-tidal wetlands, saltmarsh, vegetated shallows.

Pre-Construction Notification Required

1. Activities in tidal and non-tidal waters that are:
   a. ≥200 feet to ≤500 feet in total length. Activities >500 feet in total length must have a written waiver from USACE.
   b. ≥400 feet to ≤1,000 feet in total length when necessary to protect transportation infrastructure. Activities >1,000 feet in total length must have a written waiver from USACE.
   c. >1 cubic yard of fill per linear foot average along the bank waterward of the plane of OHW or HTL.
   d. Located in non-tidal wetlands, saltmarsh, vegetated shallows.
2. Activities with permanent loss of tidal or non-tidal waters that is (a) ≥5,000 SF or (b) ≥1,000 SF in mudflats and natural rocky habitat.
3. Activities that are (a) located in the Connecticut River or Merrimack River and/or (b) require installation of steel piles/steel sheet piles that cannot be done in the dry where NOAA ESA-listed species are mapped as present.
4. Activities on USACE properties & USACE-controlled easements.
5. Activities that require grouted riprap and/or poured/unformed concrete.
6. Activities that are not eligible for SV and do not require an IP.

Note: The applicant shall comply with GC 24. This includes utilization of bioengineering techniques in lieu of hard armoring to the maximum extent practicable as site conditions allow.

GP 10. AQUATIC HABITAT RESTORATION, ENHANCEMENT, AND ESTABLISHMENT ACTIVITIES (Authorities: §10 and §404)

Activities for the restoration, enhancement and establishment of non-tidal and tidal wetlands and riparian areas, including invasive, non-native or nuisance species control; the restoration and enhancement of non-tidal streams and other non-tidal open waters; the relocation of non-tidal waters, including non-tidal streams & associated wetlands for reestablishment of a natural stream morphology and reconnection of the floodplain; the restoration and enhancement of shellfish, finfish and wildlife; and the rehabilitation or enhancement of tidal streams, tidal wetlands and tidal open waters; provided those activities result in net increases in aquatic resource functions and services. See GP 9 for bank and shoreline stabilization. See GP 20 for living shorelines.

Not authorized under GP 10 (IP required): Stream channelization activities and artificial reefs.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. In tidal and non-tidal waters excluding tidal vegetated shallows, the combined permanent and temporary impacts are ≤5,000 SF. 2. Eelgrass (vegetated shallows) planting and transplanting ≤100 SF in tidal waters.	1. In tidal and non-tidal waters excluding tidal vegetated shallows, the combined permanent and temporary impacts are >5,000 SF. 2. Eelgrass (vegetated shallows) planting and transplanting >100 SF in tidal waters. 3. Permanent water impoundments, dam removal, fish ladders, or tide gates. 4. Stream relocation, impoundment, or loss of streambed occurs. 5. Runneling projects with the purpose of restoring saltmarsh by removing excess water that ponds on the saltmarsh surface. 6. The conversion of: (a) a stream or natural wetlands to another aquatic habitat type (e.g., stream to wetland or vice versa, wetland to pond, etc.) or uplands, (b) one wetland type to another (e.g., forested wetland to an emergent wetland). 7. Activities in the Connecticut River from the Turners Falls Dam to the MA/CT border, or Merrimack River from the Essex Dam to the mouth, involving permanent or temporary impacts unless they are performed <5 feet waterward from OHW or HTL and in the dry. This is to protect endangered species. 8. Activities on USACE properties & USACE-controlled easements. 9. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Changes in wetland plant communities that occur when wetland hydrology is more fully restored during wetland rehabilitation activities are not considered a conversion to another aquatic habitat type.
2. See RGL 18-01 for guidance on removal of obsolete dams and other structures from rivers and streams. https://www.usace.army.mil/missions/civil-works/regulatory-program-and-permits/guidance-letters/
3. An ecological reference site may be used for a design basis of the restoration activity. The reference site should possess characteristics of an intact aquatic habitat or riparian area that exists in the region. The reference site shall represent the target habitat type of the proposed activity. A reference site may be required at the discretion of USACE.

GP 11. FISH AND WILDLIFE HARVESTING AND ATTRACTION DEVICES AND ACTIVITIES (Authorities: §10 and §404)

Fish and wildlife harvesting and attraction devices and activities in waters of the U.S. such as pound nets, crab traps, crab and shellfish dredging, eel pots, lobster traps, duck blinds, clam and oyster digging, fish aggregating devices, and small fish attraction devices such as open-water fish concentrators (sea kites, etc.).

Not authorized under GP 11 (IP required): Artificial reefs; or new, or expansions of, impoundments and semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster with an impounded area >½ acre.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤1/2 acre, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows. 2. Fish and wildlife harvesting and attraction devices and activities that do not require a PCN or IP.	1. Pound nets, impoundments or semi-impoundments of waters of the U.S. for the culture or holding of motile species such as lobster with an impounded area ≤½ acre, fish aggregating devices, or small fish attraction devices. 2. Devices and activities that are located in tidal vegetated shallows, mud flats, or saltmarsh. 3. Devices and activities that do not require an IP.

Note: An SVN submittal to USACE is not required for work authorized under GP 11.

GP 12. RESPONSE OPERATIONS, OIL AND HAZARDOUS SUBSTANCES (Authorities: §10 & §404)

(a) Activities conducted in response to a discharge or release of oil and hazardous substances that are subject to the National Oil and Hazardous Substances Pollution Contingency Plan (40 CFR 300) including containment, cleanup, and mitigation efforts, provided that the activities are done under either: (i) The Spill Prevention, Control and Countermeasure Plan required by 40 CFR 112.3; (ii) The direction or oversight of the Federal on-scene coordinator designated by 40 CFR 300; or (iii) Any approved existing State, regional or local contingency plan provided that the Regional Response Team concurs with the proposed response efforts or does not object to the response effort; (b) Activities required for the cleanup of oil releases in waters of the U.S. from electrical equipment that are governed by EPA's polychlorinated biphenyl (PCB) spill response regulations at 40 CFR 761; (c) Booms placed in navigable waters of the U.S. for oil and hazardous substance containment, absorption and prevention; and (d) The use of structures and fills for spill response training exercises. Wetlands, vegetated shallows, mudflats, and riffle and pool complexes should be restored in place at the same elevation.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. Activities are conducted in accordance with (a) or (b) above that are not planned or scheduled, but an emergency response (see Note 1). 2. Booms placed in navigable waters of the U.S. for oil and hazardous substance containment, absorption and prevention. 3. Temporary impacts for spill response training exercises ≤5000 SF in non-tidal waters and ≤1000 SF in tidal waters with no impacts to wetlands, saltmarsh, mudflats, or vegetated shallows. 4. Temporary structures in tidal waters with no impacts to wetlands, saltmarsh, mudflats, vegetated shallows, or riffle and pool complexes and in place ≤30 days.	1. Activities (a) or (b) above are planned or scheduled, not an emergency response; or 2. Activities that are not eligible for SV and do not require an IP.

Notes:

1. For emergency response activities in the Connecticut River from the Turners Falls Dam to the MA/CT border, Merrimack River from the Essex Dam to the mouth, and remaining tidal waters that are not rivers, the permittee must contact the USACE at (978) 318-8338 before or as soon as possible after the work authorized under GP 12(a) - (c) commences for the USACE to address effects under the Endangered Species Act.
2. An SVN submittal to USACE is not required for booms used for spill prevention, or properly contained and cleaned de minimus oil or hazardous substance discharges into navigable waters of the U.S.

GP 13. CLEANUP OF HAZARDOUS AND TOXIC WASTE (Authorities: §10 and §404)

Specific activities required to affect the containment, stabilization, or removal of hazardous or toxic waste materials, including court ordered remedial action plans or related settlements, which are performed, ordered or sponsored by a government agency with established legal or regulatory authority.

Not authorized under GP 13: (a) Establishment of new disposal sites; or (b) Expansion of existing sites used for the disposal of hazardous or toxic waste.

Self-Verification Eligible	Pre-Construction Notification Required
1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in vegetated shallows and riffle and pool complexes.	1. In non-tidal waters, the combined permanent and temporary impacts are (a) >5,000 SF, and (b) located in vegetated shallows and riffle and pool complexes. 2. Permanent and temporary impacts in tidal waters or navigable waters of the U.S. 3. Stream channelization, relocation, impoundment, or loss of streambed occurs. 4. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Wetlands, vegetated shallows, mudflats, and riffle and pool complexes should be restored in place at the same elevation to the maximum extent practicable.
2. Activities undertaken entirely on a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) site by authority of CERCLA, are not required to obtain permits under Section 404 of the CWA or Section 10 of the Rivers and Harbors Act.

GP 14. SCIENTIFIC MEASUREMENT DEVICES (Authorities: §10 and §404)

Scientific measurement devices for measuring and recording scientific data, such as staff gauges, tide and current gauges, meteorological stations, water recording and biological observation devices, water quality testing and improvement devices, and similar structures. Also eligible are small weirs and flumes constructed primarily to record water elevation, flow and/or velocity. Upon completion of the use of the device to measure and record scientific data, the measuring device and any other structures or fills associated with that device (e.g., foundations, anchors, buoys, lines, etc.) must be removed to the maximum extent practicable and the site restored to preconstruction elevations.

Not authorized under GP 14 (IP required): (a) Permanent impacts that are >5,000 SF in tidal and non-tidal waters of the U.S.; >1000 SF in tidal saltmarsh, mud flats, riffle and pool complexes; or >100 SF in tidal vegetated shallows; or (b) Temporary impacts in tidal waters that are >1 acre, unless the District Engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows.

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) not located in riffle and pool complexes and non-tidal vegetated shallows.

2. In tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) ≤1,000 SF in mudflats and/or natural rocky habitat, (c) not located in saltmarsh and tidal vegetated shallows.

3. Temporary, non-biological sampling devices in waters that do not restrict or concentrate movement of aquatic organisms and will not adversely affect the course, condition, or capacity of a waterway for navigation.

4. Scientific measurement devices, and small weirs and flumes constructed primarily to record water quantity and velocity provided the discharge of fill is limited to 25 cubic yards. These cannot obstruct or restrict the waterway course, condition, capacity, and location.

5. Temporary measuring devices and associated structures (e.g., anchors, buoys, etc.) in tidal and non-tidal waters that do not require a PCN or IP.

Pre-Construction Notification Required

1. Biological sampling devices, weirs or flumes, or the activity restricts or concentrates movement of aquatic organisms.

2. Permanent towers located in navigable waters that record and measure scientific data.

3. Devices that are not eligible for SV and do not require an IP.

Note: An SVN submittal to USACE is not required for temporary measuring devices with a footprint of <10 SF, with a profile of <3 feet high measured from the substrate and located in water deeper than -10 feet MLW.

GP 15. SURVEY ACTIVITIES (Authorities: §10 and §404)

Survey activities such as soil borings, core sampling, seismic exploratory operations, plugging of seismic shot holes and other exploratory-type bore holes, exploratory trenching, soil surveys, sampling, sample plots or transects for wetland delineations, and historic resources surveys.

Not authorized under GP 15 (IP required): (a) Permanent impacts that are >1 acre in tidal and non-tidal waters; >1000 SF in tidal saltmarsh, mud flats, or riffle and pool complexes; or >100 SF in tidal vegetated shallows; or (b) Temporary impacts in tidal waters that are >1 acre, unless the District Engineer waives this criterion by making a written determination concluding that the discharge of dredged or fill material will result in no more than minimal adverse environmental effects; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) not located in riffle and pool complexes and non-tidal vegetated shallows. 2. In tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, (b) ≤1,000 SF in mudflats and/or natural rocky habitat, (c) not located in saltmarsh and tidal vegetated shallows.	1. Exploratory trenching (see Note 2) occurs in waterways (e.g., streams, tidal waters). 2. Activities associated with the recovery of historic resources, and the drilling and discharge of excavated material from test wells for oil and gas exploration. 3. Seismic exploratory operations occur in tidal waters, the Connecticut River from the Turners Falls Dam to the MA/CT border, or the Merrimack River from the Essex Dam to the mouth. This is to protect endangered species. 4. Activities that are not eligible for SV and do not require an IP.

Notes:

1. An SVN submittal is not required for wetland delineations, and core sampling conducted for preliminary evaluation of dredge project analysis.
2. For the purposes of GP 15, the term “exploratory trenching” means mechanical land or underwater clearing of the upper soil profile to expose bedrock or substrate for the purpose of mapping or sampling the exposed material.
3. The discharge of drilling mud and cuttings may require a permit under §402 of the CWA.

GP 16. LAND AND WATER-BASED RENEWABLE ENERGY GENERATION FACILITIES (Authorities: §10 and §404), AND HYDROPOWER PROJECTS (Authority: §10 and §404)

Structures and work in tidal waters and discharges of dredged or fill material into tidal and non-tidal waters for the construction, expansion, modification or removal of: (a) Land-based renewable energy production facilities (e.g., solar, wind, biomass, geothermal) and their attendant features; (b) Water-based wind or hydrokinetic renewable energy generation projects and their attendant features; and (c) Discharges of dredged or fill material associated with hydropower projects. Attendant features may include, but are not limited to, land-based collection and distribution facilities, control facilities, and parking lots. For each single and complete project in (b) above, no more than 10 generation units (e.g., wind turbines or hydrokinetic devices) are authorized in navigable waters of the U.S. Upon completion of the pilot project (see note 2), the generation units, transmission lines, and other structures or fills associated with the pilot project must be removed to the maximum extent practicable.

Not authorized under GP 16 (IP required): (a) Permanent impacts that are >1 acre in non-tidal waters, >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in vegetated shallows; or (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows.

Self-Verification Eligible	**Pre-Construction Notification Required**
In non-tidal waters, the combined permanent and temporary impacts for land-based activities are (a) ≤5,000 SF, (b) not located in riffle and pool complexes and non-tidal vegetated shallows.	1. In non-tidal waters, the combined permanent and temporary impacts for land-based activities are (a) >5000 SF, or (b) located in vegetated shallows or riffle and pool complexes. 2. Permanent and temporary impacts in tidal waters. 3. Water-based wind or hydrokinetic renewable energy generation projects, and hydropower projects. 4. For all activities eligible for authorization under GP 16: a. The activity occurs in tidal waters or in, over or under navigable waters. b. Stream channelization, relocation, impoundment, or loss of streambed occurs. 5. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Utility lines constructed to transfer the energy from the land-based renewable generation or collection facility to a distribution system, regional grid, or other facility may be authorized by GP 6.
2. For the purposes of this GP, the term “pilot project” means an experimental project where the renewable energy generation units will be monitored to collect information on their performance and environmental effects at the project site.

GP 17. RESIDENTIAL, COMMERCIAL AND INSTITUTIONAL DEVELOPMENTS AND RECREATIONAL FACILITIES (AUTHORITIES: §404)

Discharges of dredged or fill material into non-tidal waters for the construction or expansion of: (a) Residences and residential subdivisions; (b) Residential, commercial and institutional building foundations and building pads; and (c) Recreational facilities such as playgrounds, playing fields, bikeways, trails, etc. This GP also authorizes attendant features that include, but are not limited to, roads, parking lots, garages, yards, and utility lines, and stormwater management facilities. This GP authorizes attendant features if they are necessary for the use of the project purpose.

Not authorized under GP 17 (IP required): (a) Permanent impacts that result in loss of non-tidal waters >1/2 acre; >1000 SF in riffle and pool complexes or vegetated shallows; or (b) Subsurface sewerage disposal systems in non-tidal waters.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. In non-tidal waters, the combined permanent and temporary impacts are (a) <5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows. 2. Stream channelization or relocation resulting in loss of streambed that is <200 LF.	1. In non-tidal waters, the combined permanent and temporary impacts are (a) ≥5,000 SF, or (b) located in riffle and pool complexes or non-tidal vegetated shallows. 2. Stream and wetland crossings that require a PCN per GCs 20 TOY Restrictions and GC 31 Stream Work and Crossings & Wetland Crossings. 3. Stream channelization or relocation resulting in loss of streambed that is ≥200 LF. Stream impoundment activities of any kind. 4. Activities on USACE properties & USACE-controlled easements. 5. Activities that are not SV eligible and do not require an IP.

Notes:

1. Stream and wetland crossings (permanent and temporary), including those built with construction mats; and modifications (including sliplining), replacements or extensions to existing crossings.
2. See GC 22 for information on temporary construction mats.
3. Subdivisions: For residential subdivisions, the aggregate total loss of waters of United States authorized by this GP cannot exceed 1/2-acre. This includes any loss of waters of the United States associated with development of individual subdivision lots.

GP 18. AQUACULTURE (Authorities: §10 and §404)

(a) The installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures into navigable waters of the U.S.; (b) Discharges of dredged or fill material into tidal and non-tidal waters necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities; and (c) Shellfish seeding or brushing the flats projects. Any fill material imported to the project from offsite (this is limited to mineral growth medium used in culture trays) shall be clean and of comparable grain size to the native substrate. Activities authorized under this GP must have (a) their MA DMF Aquaculture Certificate letter for licensed shellfish aquaculture sites, (b) documentation that the applicant has coordinated with the U.S. Coast Guard regarding USCG Private Aids to Navigation standards, (c) their MEPA Certificate (if required), and (d) documentation that the applicant has contacted their local authorities (ex. harbormaster, select board, shellfish constable) for authorization of their facility.

Not authorized under GP 18 (IP required): (a) New, or expansions of, impoundments and semi-impoundments of tidal and non-tidal waters for the culture or holding of motile species such as lobster with an impounded area >½ acre; (b) Cultivation of a nonindigenous species (see Note 1) unless that species has been previously cultivated in the waterbody; (c) Cultivation of an aquatic nuisance species (see Note 1); (d) Attendant features such as docks, piers, boat ramps (see GP 4); (e) stockpiles, staging areas, or the deposition of shell material back into tidal and non-tidal waters as waste.

Self-Verification Eligible

1. In tidal waters, a new lease site area is (a) ≤2-acre, (b) not located in salt marsh, natural rocky habitat, or tidal vegetated shallows.

2. In tidal waters, *expansions* of existing lease sites not to exceed 2 acres for the entire site (e.g. 1 acre lease site increasing to a 2 acre lease site may qualify as SV). A PCN is required for expansions in salt marsh, natural rocky habitat, and tidal vegetated shallows.

3. Cages, racks that are elevated ≥2 feet above the ocean floor with legs within a lease site with ≤4 buoys marking the corners.

4. Floating cage strings with a single connecting line, ≤2 anchors and ≤2 end marker buoys per string within a lease site with ≤4 buoys marking the corners.

5. No activities located within 25 feet of tidal vegetated shallows.

6. Culture only indigenous species.

7. Not located in FNP or within a distance of three times the authorized depth of an FNP (see GC 15).

8. Not located in or impinge upon the value of any National Lands or Federal Properties.

9. Floating upweller docks that total ≤600 SF in area.

Pre-Construction Notification Required

1. Discharges of fill material associated with aquaculture >5,000 SF.

2. Research, educational, commercial-viability or experimental aquaculture gear activities >1,000 SF.

3. Kelp or finfish aquaculture.

4. Land-based hatchery intakes >3 inches in diameter.

5. Activities in water depths >10 feet mean low lower water (MLLW).

6. Activities with in-water lines, ropes or chains that are not SV eligible (see #3-4).

7. Activities occur in the Connecticut River from the Turners Falls Dam to the MA/CT border or the Merrimack River from the Essex Dam to the mouth. This is to protect endangered species.

8. New, or expansions of, impoundments and semi-impoundments for the culture or holding of motile species such as lobster with an impounded area ≤1/2 acre.

9. Activities that do not require an IP. Activities that do not require a PCN or an IP may be SV eligible.

Note: The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 defines: (a) nonindigenous species as “any species or other viable biological material that enters an ecosystem beyond its historic range, including any such organism transferred from one country into another”; and (b) aquatic nuisance species as “a nonindigenous species that threatens the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agricultural, aquacultural, or recreational activities dependent on such waters.”

GP 19. MINING ACTIVITIES (Authorities: §10 and §404)

Discharges of dredged or fill material into non-tidal waters for mining activities, except for coal mining and metallic mineral mining activities.

Not authorized under GP 19 (IP required): (a) Permanent impacts >1 acre in non-tidal waters; or (b) Activities in tidal waters.

Self-Verification Eligible	Pre-Construction Notification Required
In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes, non-tidal vegetated shallows, and streams.	1. In non-tidal waters, the combined permanent and temporary impacts are (a) >5,000 SF, or (b) located in riffle and pool complexes, non-tidal vegetated shallows, and streams. 2. The activity occurs in non-tidal navigable waters of the U.S. 3. Stream channelization, relocation, impoundment, loss of streambed, or discharge of tailings into streams occurs. 4. Work on USACE properties & USACE-controlled easements. 5. Activities that are not eligible for SV and do not require an IP.

GP 20. LIVING SHORELINES[1] (Authorities: §10 and §404)

Construction and maintenance of living shorelines to stabilize banks and shores in tidal waters. In non-tidal waters that are not subject to the ebb and flow of the tide, nature-based bank stabilization techniques such as bioengineering and vegetative stabilization may be authorized by GP 9. This GP authorizes those maintenance and repair activities in-kind that are necessary to address changing environmental conditions.

The following terms must be met for both SVs and PCNs as applicable: (a) Coir logs, coir mats, stone, native oyster shell, native wood debris, and other structural materials must be adequately anchored, of sufficient weight, or installed in a manner that prevents relocation in most wave action or water flow conditions, except for extremely severe storms; (b) For living shorelines consisting of tidal fringe wetlands, native plants appropriate for current site conditions, including salinity and elevation, must be used if the site is planted by the permittee; (c) Discharges of dredged or fill material into waters of the U.S., and oyster or mussel reef structures in navigable waters, must be the minimum necessary for the establishment and maintenance of the living shoreline; (d) If sills or other structural materials per PCN #4 must be constructed to protect fringe wetlands for the living shoreline, those structures must be the minimum size necessary to protect those fringe wetlands; (e) The activity must be designed, constructed, and maintained so that it has no more than minimal adverse effects on water and sediment movement between the waterbody and the shore and the movement of aquatic organisms between the waterbody and the shore; and (f) The living shoreline must be properly maintained and monitored, which may require periodic repair of sills, bioengineered components, or replacing sand fills after severe storms or erosion events. Vegetation may be replanted to maintain the living shoreline.

Not authorized under GP 20 (IP required): (a) The activity is ≥1000 feet in length along the bank (≥2000 LF both banks) unless waived by the District Engineer; or (b) The activity is >30 feet channel ward of mean low water in tidal waters; or (c) Upland reclamation activities; or (d) Stream channelization or relocation activities; or (e) Breakwaters, groins, jetties, or artificial reefs; or (f) Permanent impacts >1,000 SF in existing saltmarsh; >100 SF in existing tidal vegetated shallows.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. Tidal and non-tidal living shorelines ≤100 LF for each bank (≤200 LF for both banks). 2. Combined permanent and temporary impacts ≤5,000 SF in tidal waters, excluding existing salt marsh, tidal vegetated shallows, natural rocky habitat, and mudflats.	1. Tidal and non-tidal living shorelines >100 LF to <1000 LF (>200 LF to <2000 LF for both banks). 2. Permanent and temporary impacts in existing salt marsh, tidal vegetated shallows, or mudflats. 3. Work on USACE properties & USACE-controlled easements. 4. Use of stone sills, native oyster shell, native wood debris, or other structural materials.

Notes:

1. PCNs require monitoring for a minimum of 5 years in accordance with an approved restoration plan, unless otherwise determined by the USACE. The first year of monitoring will be the first year that the site has been through a full growing period after completion of construction and planting.
2. Applicants are encouraged to obtain a MEPA certificate prior to submitting a USACE permit application.

[1] A living shoreline has a footprint that is made up mostly of native material. It incorporates vegetation or other living, natural “soft” elements alone or in combination with some type of harder shoreline structure (e.g., oyster or mussel reefs or rock sills) for added protection and stability. Living shorelines should maintain the natural continuity of the land-water interface and retain or enhance shoreline ecological processes. Living shorelines must have a substantial biological component, either tidal or lacustrine fringe wetlands or oyster or mussel reef structures.

GP 21. AGRICULTURAL ACTIVITIES (Authority: §404)

Discharges of dredged or fill material in non-tidal waters for agricultural activities, including the construction of building pads for farm buildings. Authorized activities include: (a) installation, placement, or construction of drainage tiles, ditches, or levees; mechanized land clearing; land leveling; the relocation of existing serviceable drainage ditches; and similar activities; (b) construction of farm ponds, excluding perennial streams, provided the farm pond is used solely for agricultural purposes; and (c) discharges of dredged or fill material to relocate existing serviceable drainage ditches constructed in non-tidal streams.

Not authorized under GP 21 (IP required): (a) Permanent impacts that are >1 acre in non-tidal waters; or >1000 SF in riffle and pool complexes, or non-tidal vegetated shallows; (b) Work in tidal waters; or (c) Construction of farm ponds in perennial streams.

Self-Verification Eligible	**Pre-Construction Notification Required**
In non-tidal waters, the combined permanent and temporary impacts are (a) ≤5,000 SF, and (b) not located in riffle and pool complexes and non-tidal vegetated shallows.	1. In non-tidal waters, the combined permanent and temporary impacts are (a) >5,000 SF, or (b) located in riffle and pool complexes and non-tidal vegetated shallows. 2. Activities occur in non-tidal navigable waters of the U.S. 3. Stream channelization, relocation, impoundment, loss of streambed, or farm ponds in non-perennial streams occurs. 4. Activities that are not eligible for SV and do not require an IP.

Note: Some discharges for agricultural activities may qualify for an exemption under Section 404(f) of the CWA (see 33 CFR 323.4). This GP authorizes the construction of farm ponds that do not qualify for the CWA §404(f)(1)(C) exemption because of the recapture provision at §404(f)(2).

GP 22. RESHAPING EXISTING DRAINAGE DITCHES, CONSTRUCTION OF NEW DITCHES, AND MOSQUITO MANAGEMENT (Authorities: §10 and §404)

Discharges to modify the cross-sectional configuration of currently serviceable drainage ditches constructed in tidal and non-tidal waters, for the purpose of improving water quality by regrading the drainage ditch with gentler slopes, which can reduce erosion, increase growth of vegetation, and increase uptake of nutrients and other substances by vegetation. Also authorized are mosquito reduction activities.

Not authorized under GP 22 (IP required): Stream channelization, relocation, impoundments, or loss of streambed.

Self-Verification Eligible	**Pre-Construction Notification Required**
≤500 linear feet of drainage ditch will be reshaped provided excavated material is deposited in an upland area.	1. >500 linear feet of drainage ditch will be reshaped, excavated material is deposited in a water of the U.S., or the reshaping of the ditch increases the drainage capacity beyond the original as-built capacity or expands the area drained by the ditch as originally constructed (i.e., the capacity of the ditch is not the same as originally constructed or drains additional wetlands or other waters of the U.S.). 2. Permanent and temporary impacts in tidal vegetated shallows. 3. New ditches or relocation of drainage ditches constructed in waters of the U.S. (i.e., the location of the centerline of the reshaped drainage ditch is not approximately the same as the location of the centerline of the original drainage ditch). 4. Activities that are not eligible for SV and do not require an IP.

Note: Some ditch activities are exempt under Section 404(f) of the CWA (see 33 CFR 323.4).

GP 23. LINEAR TRANSPORTATION PROJECTS AND WETLAND/STREAM CROSSINGS (Authorities: §10 & §404)

Activities[1] required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., driveways, roads, highways, railways, trails, airport runways, and taxiways) and attendant features. This GP also authorizes temporary structures, fills, and work, including the use of temporary mats (see Note 1), necessary to construct the linear transportation project.

Not authorized under GP 23 (IP required): (a) Permanent impacts for any single and complete project that are >1 acre in non-tidal waters; >½ acre in tidal waters; >1000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows; (c) Non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars (see GP 17); or (d) New tide gates.

Self-Verification Eligible

1. In non-tidal waters, the combined permanent and temporary impacts are a) ≤5,000 SF; b) not located in riffle and pool complexes and non-tidal vegetated shallows; and c) meet the Massachusetts River and Stream Crossing Standards

2. Existing crossings (e.g., culverts, elliptical or arch pipes, etc.) are not modified by (a) decreasing the diameter of the crossing or (b) changing the friction coefficient, such as through slip lining (retrofitting an existing culvert by inserting a smaller diameter pipe), culvert relining or invert lining.

3. Stream channelization or relocation resulting in loss of streambed that is <200 LF.

Pre-Construction Notification Required

1. In non-tidal waters, the combined permanent and temporary impacts are a) >5,000 SF; b) located in vegetated shallows or riffle and pool complexes; or c) do not meet the Massachusetts River and Stream Crossing Standards (see note 4).

2. The activity occurs in tidal waters, salt marsh, or in, over or under navigable waters of the U.S.

3. Stream and wetland crossings that require a PCN per GC 20 TOY Restrictions and GC 31 Stream Work and Crossings & Wetland Crossings.

4. Stream channelization or relocation resulting in loss of streambed that is ≥200 LF. Stream impoundment activities of any kind.

5. Work on USACE properties & USACE-controlled easements.

6. Activities that are not eligible for SV and do not require an IP.

Notes:

1. See GC 22 for information on temporary construction mats.
2. Discharges of dredged or fill material incidental to the construction of bridges across navigable waters of the U.S. may be authorized under GP 8.
3. Loss of streambed does not require a PCN when bridge piers or similar supports are used.
4. In their PCN application submission to the USACE, applicants must explain why they are unable to meet the Massachusetts River and Stream Crossing Standards.
5. For tidal crossings, modeling is encouraged as a method to verify the proposed crossing would not be undersized and resilient to the effects of sea level rise.

[1] Stream crossings must conform with the MA Stream Crossing Guidelines when practicable and comply with all applicable GCs of this document (Section IV).

GP 24. TEMPORARY CONSTRUCTION, ACCESS, AND DEWATERING (Authorities: §10 and §404)

Temporary structures, work, and discharges, including cofferdams, necessary for construction activities or access fills or dewatering of construction sites that are not authorized under another GP activity.

Not authorized under GP 24 (IP required): (a) Permanent structures or impacts; (b) Temporary impacts in tidal waters that are >1 acre; >5000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1000 SF in vegetated shallows; (c) Use of cofferdams to dewater wetlands or other aquatic areas to change their use; (d) Temporary stream crossings (see GPs 6, 17, 23); (e) Structures or fill left in place after construction is completed.

Self-Verification Eligible	**Pre-Construction Notification Required**
1. In non-tidal waters, temporary impacts are a) ≤5,000 SF; b) not located in riffle and pool complexes and non-tidal vegetated shallows.	1. In non-tidal waters, temporary impacts are a) >5,000 SF; b) located in riffle and pool complexes or non-tidal vegetated shallows.
2. In tidal waters, temporary impacts are a) ≤5,000 SF, b) ≤1,000 SF in mudflats and/or natural rocky habitat, and c) not located in saltmarsh and tidal vegetated shallows.	2. In tidal waters, temporary impacts are a) >5,000 SF; b) >1,000 SF in mudflats and/or natural rocky habitat, or (c) located in saltmarsh and tidal vegetated shallows.
3. Structures in navigable waters of the U.S. provided impacts do not require a PCN and they are left in place ≤30 days.	3. Activities in the Connecticut River from the Turners Falls Dam to the MA/CT border, or Merrimack River from the Essex Dam to the mouth, involving temporary impacts unless they are performed <5 feet waterward from OHW or HTL and in the dry. This is to protect endangered species; or
	4. Activities not eligible for SV and do not require an IP.

Notes:

1. Turbidity or sediment resuspension is generally not considered to occur when properly using management techniques to work in dry conditions. See GC 25.
2. Total impact areas under SV Eligible 1-2 exclude use of temporary construction mats. See GC 22 for information on temporary construction mats.
3. An SVN submittal to USACE is not required for SV #3 above.

GP 25. EMERGENCY SITUATIONS (Authorities: §10 and §404)

Structures or work in or affecting navigable waters of the U.S. and the discharge of dredged or fill material into waters of the U.S., including wetlands, necessary for repair or protection measures associated with an emergency situation[1], MassDEP Emergency Declaration/Certification, or FEMA Declared Disaster. The activity shall be the minimum necessary to alleviate the immediate emergency unless that additional work would result in no more than minimal effects to aquatic environment and is necessary to reduce the potential for future failure or loss of the structure or site. Typical activities authorized under this GP include, but are not limited to, restoration of damaged areas; bank stabilization; temporary fills for staging, access, and dewatering; and, repair, replacement, or rehabilitation of existing structures and/or fills (i.e., roads, bridges, utility pipelines and flood control structures, including attendant features, and other existing structures located in waters of the U.S.).

For the restoration of areas damaged by storms floods, or other discrete events: (a) The restored area must not extend waterward of the ordinary high-water mark or high tide line that existed prior to the damage. (b) The slope of the restored area below the ordinary high-water mark or high tide line must not exceed the slope that existed prior to the damage. (c) The bottom elevation of the restored area must not exceed the bottom elevation that existed prior to the damage (i.e., the restored area must not result in a reduction in the depth of the waterbody that existed prior to the damage). (d) Except in cases of FEMA reimbursement, the activity must be initiated, under contract to commence, or funds shall be allocated for the activity within 30 days of authorization under GP 25.

Not authorized under GP 25 (IP required): (a) Permanent impacts for a single and complete project >1/2 acre in tidal waters, unless the district engineer waives this criterion by making a written determination concluding that the activity will result in no more than minimal adverse environmental effects; >1,000 SF in saltmarsh, mud flats, riffle and pool complexes, or non-tidal vegetated shallows; or >100 SF in tidal vegetated shallows; (b) Temporary impacts in tidal waters that are >5,000 SF in saltmarsh, mud flats, or riffle and pool complexes; or >1,000 SF in vegetated shallows; (c) New structures or fills that did not previously exist before the storm event or other discrete event (see other GPs).

Self-Verification Eligible	**Pre-Construction Notification Required**
1. Activities that qualify under a Severe Weather Emergency Declaration pursuant to 310 CMR 10.06(8) and/or receive an Emergency Certification pursuant to 310 CMR 10.06 and/or meet the requirements of 314 CMR 9.12(2) or (3); and 2. Activities eligible under a FEMA Declared Disaster that also comply with #1 above.	1. Activities that are eligible under a FEMA Declared Disaster and do not qualify under SV #1. 2. Minor deviations in the structure or fill area, including those to existing structures or fills are authorized due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to alleviate the emergency. 3. Activities that are not eligible for SV and do not require an IP.

Notes:

1. Review the GCs (Section IV) to confirm if a PCN is not required elsewhere in this document.
2. If the activity is not a MassDEP Emergency Declaration/Certification, does not meet the requirements of 314 CMR 9.12(2) or (3), or is not a FEMA Declared Disaster, applicants must explain in writing why their activity qualifies as an emergency (see footnote) to be eligible under GP 25.
3. SV eligible activities qualify under the general 401 WQC MassDEP issued for the 2023 MA GPs (GC 9).

[1] An emergency, as determined by this office and 33 CFR 325.2(e)(4), is one which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a Department of the Army permit is not undertaken within a time period less than the normal time to process the request under standard processing procedures.

SECTION IV. GENERAL CONDITIONS:

To qualify for GP authorization, the applicant must comply with the following general conditions, as applicable, in addition to authorization-specific conditions imposed by the division or district engineer.

1. Other Permits
2. Federal Jurisdictional Boundaries
3. Single and Complete Projects
4. Use of Multiple General Permits
5. Suitable Material
6. Tribal Rights & Burial Sites
7. Avoidance, Minimization, and Compensatory Mitigation
8. Water Quality & Stormwater Management
9. Coastal Zone Management
10. Federal Threatened and Endangered Species
11. Essential Fish Habitat
12. National Lands
13. Wild and Scenic Rivers
14. Historic Properties
15. USACE Property and Federal Projects (§408)
16. Navigation
17. Permit/Authorization Letter On-Site
18. Storage of Seasonal Structures
19. Pile Driving and Pile Removal in Navigable Waters
20. Time of Year Restrictions
21. Heavy Equipment in Wetlands
22. Temporary Fill & Construction Mats
23. Restoration of Wetland Areas
24. Bank Stabilization
25. Soil Erosion and Sediment Controls
26. Aquatic Life Movements and Management of Water Flows
27. Spawning, Breeding, and Migratory Areas
28. Vernal Pools
29. Invasive Species
30. Fills Within 100-Year Floodplains
31. Stream Work and Crossings & Wetland Crossings
32. Utility Line Installation and Removal
33. Water Supply Intakes
34. Coral Reefs
35. Blasting
36. Inspections
37. Maintenance
38. Property Rights
39. Transfer of GP Verifications
40. Modification, Suspension, and Revocation
41. Special Conditions
42. False or Incomplete Information
43. Abandonment
44. Enforcement Cases
45. Previously Authorized Activities
46. Duration of Authorization

1. Other Permits. Authorization under these GPs does not obviate the need for the permittee to obtain other Federal, State, or local permits, approvals, or authorizations required by law. Permittees are responsible for obtaining all required permits, approvals, or authorizations. Activities that are not regulated by the State, but subject to USACE jurisdiction, may still be eligible for these GPs.

2. Federal Jurisdictional Boundaries.
a. Applicability of these GPs shall be evaluated with reference to Federal jurisdictional boundaries. Activities shall be evaluated with reference to "waters of the U.S." under the CWA (33 CFR 328) and "navigable waters of the U.S." under §10 of the Rivers and Harbors Act of 1899 (33 CFR 329). Permittees are responsible for ensuring that the boundaries used satisfy the Federal criteria defined at 33 CFR 328-329. These sections prescribe the policy, practice, and procedures to be used in determining the extent of the USACE jurisdiction. Note: Waters of the U.S. includes all waters pursuant to 33 CFR 328.3(a), and adjacent wetlands as the term is defined in 33 CFR 328.3(c).
b. Wetlands shall be delineated in accordance with the USACE Wetlands Delineation Manual and the most recent Northcentral/Northeast Regional Supplement. Wetland delineation and jurisdiction information is located at: www.nae.usace.army.mil/missions/regulatory/jurisdiction-and-wetlands and maps are located at www.nae.usace.army.mil/missions/regulatory/state-general-permits/massachusetts-general-permit.
c. Vegetated shallows shall be delineated when present on the project site. Vegetated shallow survey guidance and maps are located at: www.nae.usace.army.mil/missions/regulatory/state-general-permits/massachusetts-general-permit.
d. Natural rocky habitats shall be delineated when present on the project site. The definition of natural rocky habitats is in Section VII of the MA GP. Natural rocky habitat survey guidance and maps are located at: www.nae.usace.army.mil/ missions/regulatory/state-general-permits/massachusetts-general-permit.

3. Single and Complete Projects. The MA GP shall not be used for piecemeal work and shall be applied to single and complete projects. The term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers.
a. For non-linear projects, a single and complete project must have independent utility. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed, even if the other phases were not built, can be considered as separate single and complete projects with independent utility.
b. Unless USACE determines the activity has independent utility, all components of a single project and/or all planned phases of a multi-phased project (e.g., subdivisions should include all work such as roads, utilities, and lot development) shall be evaluated as one single and complete project.
c. For linear projects such as power lines or pipelines with multiple crossings, a "single and complete project" is all crossings of a single water of the U.S. (i.e., single waterbody) at a specific location. For linear projects crossing a single waterbody several times at separate and distant locations, each crossing is considered a single and complete project. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately. If any crossing requires a PCN review or an individual permit review, then the entire linear project shall be reviewed as one project under PCN or the individual permit procedures.

4. Use of Multiple General Permits. The use of more than one GP for a single and complete project is prohibited, except when the acreage loss of waters of the U.S. authorized by the GPs does not exceed the acreage limit of the GPs with the highest specified acreage limit. For example, if a road crossing over waters is constructed under GP 23, with an associated utility line

crossing authorized by GP 6, if the maximum acreage loss of waters of the U.S. for the total project is ≥1 acre it shall be evaluated as an IP.

5. Suitable Material & Discharge of Pollutants. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). All activities involving any discharge into waters of the U.S. authorized under these GPs shall be consistent with applicable water quality standards, effluent limitations, standards of performance, prohibitions, and pretreatment standards and management practices established pursuant to the CWA (33 U.S.C. 1251), and applicable state and local laws. If applicable water quality standards, limitations, etc., are revised or modified during the term of this GP, the authorized work shall be modified to conform with these standards within six months from the effective date of such revision or modification, or within a longer period of time deemed reasonable by the District Engineer in consultation with the Regional Administrator of the EPA. Unless monitoring data indicates otherwise, applicants may presume that their activity complies with state water quality standards provided they are in compliance with the Section 401 WQC (Applicable only to the Section 404 activity).

6. Tribal Rights & Burial Sites

a. For all SV and PCN applications, prospective permittees shall follow the guidance set forth in Appendix A, Guidance for NHPA Section 106 Compliance in Massachusetts.

b. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

c. Many tribal resources are not listed on the National Register of Historic Places (NRHP) and may require identification and evaluation in collaboration with the identifying tribe and by qualified professionals. The Tribal Historic Preservation Officer (THPO) and State Historic Preservation Officer (SHPO) may be able to assist with locating information on:

i. Previously identified tribal resources; and
ii. Areas with potential for the presence of tribal resources.

d. Discovery of Previously Unknown Remains and Artifacts: If any previously unidentified human remains, cultural deposits, or artifacts are discovered while accomplishing the activity authorized by this permit, you must immediately notify the USACE of what you have found, and to the maximum extent practicable, cease work and avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The USACE will initiate the appropriate the Federal, Tribal, and state coordination required to determine if the items or remains are eligible for listing in the NRHP and warrant a recovery effort or can be avoided.

e. Burial Sites: Burial sites, marked or unmarked, are subject to state law (Massachusetts Unmarked Burial Law). Native American burial sites on federal or tribal land are subject to the provisions of Native American Graves Protection and Repatriation Act (NAGPRA). Regulated activities may not result in disturbance or removal of human remains until disposition of the remains has been determined by the appropriate authority under these laws, and the work is authorized by the USACE. Regulated activities which result in an inadvertent discovery of human remains must stop immediately, and the USACE, as well as the appropriate state and tribal authority, must be notified. Regulated work at inadvertent discovery sites requires compliance with state law or NAGPRA, as appropriate, prior to re-starting work.

7. Avoidance, Minimization, and Compensatory Mitigation. To qualify under the MA GP, activities must comply with Section V Mitigation Standards and the following as applicable:

a. Avoid and Minimize: Activities must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the U.S. to the maximum extent practicable at the project site. Avoidance and minimization are required to the extent necessary to ensure that the adverse effects to the aquatic environment (both area and function) are no more than minimal.

b. Compensatory mitigation for unavoidable impacts to waters of the U.S., including direct, indirect, secondary, and temporal loss, will generally be required for permanent impacts that exceed the thresholds identified in Section V, and may be required for temporary impacts, to offset unavoidable impacts which remain after all appropriate and practicable avoidance and minimization has been achieved and to ensure that the adverse effects to the aquatic environment are no more than minimal. Proactive restoration projects or temporary impact work with no secondary effects may generally be excluded from this requirement.
c. Mitigation proposals shall follow the guidelines found in the Compensatory Mitigation for Losses of Aquatic Resources; Final Rule April 10, 2008; 33 CFR 332. Prospective permittees may purchase mitigation credits in-lieu of permittee-responsible mitigation as compensation for unavoidable impacts to waters of the U.S. in the Commonwealth of Massachusetts.

8. Water Quality & Stormwater Management. The 401 WQC requirement applies to all activities listed under GPs 1-25, unless determined otherwise by MassDEP. Permittees shall also satisfy stormwater management requirements in Massachusetts.

a. General 401 WQC: MassDEP issued a WQC on April 21, 2023 which conditionally certifies all activities in GPs 1 – 24 eligible for SV and PCN so long as the activity is described in 314 CMR 9.03, and is not an activity described in 314 CMR 9.04, and so long as the activity meets all other requirements, terms and conditions of the WQC. The MassDEP WQC also conditionally certifies activities described in GP 25 so long as the activity meets all other conditions of the WQC. Emergency projects described in GP 25 must obtain an emergency certification or otherwise be authorized pursuant to 310 CMR 10.06, qualify under a Severe Weather Emergency Declaration pursuant to 310 CMR 10.06(8) issued by the MassDEP, or meet the requirements of 9.12(2) or (3) in order to be certified under the WQC. Prospective permittees may refer to the following link to determine if their activity is eligible: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/ Massachusetts-General-Permit/. The General 401 WQC is located here, and it provides detailed information regarding what activities are certified and the conditions for certification. Activities listed in 314 CMR 9.03 that are not exempt from the Wetland Protection Act must have a valid Final Order of Conditions (OOC) or Final Restoration Order of Conditions pursuant to 310 CMR 10.00 to be eligible under the General 401 WQC.
b. Individual 401 WQC: Prospective permittees shall contact MassDEP and apply for an individual 401 WQC if their activity does not qualify for a General 401 WQC as outlined above. MassDEP may issue, waive, or deny the individual 401 WQC on a case-by-case basis. All activities listed in 314 CMR 9.04 must obtain an individual 401 WQC from MassDEP to be eligible under these GPs. When an Individual 401 WQC is required for *PCN activities*, the prospective permittee shall submit their Individual 401 WQC application concurrently to MassDEP and USACE to comply with 40 CFR 121.
c. The prospective permittee is responsible for determining the appropriate 401 WQC requirement and submitting this information to the USACE at the time of their PCN application or when completing their SVN. Prospective permittees that are unsure of whether their activity has been certified should contact MassDEP for a determination.
d. As applicable, all activities shall be compliant with the Massachusetts Stormwater Handbook. The Stormwater Handbook can be accessed on the NAE Regulatory website here: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.
e. No work requiring authorization under Section 404 of the CWA may be performed unless (1) the prospective permittee qualifies for coverage under the April 21, 2023 General 401 WQC, (2) the prospective permittee receives an individual Section 401 WQC from the MassDEP, or (3) the MassDEP waives individual Section 401 WQC.

9. Coastal Zone Management. The permittee must obtain CZM consistency concurrence when an activity is located in the coastal zone in order to be eligible under the MA GP. This requirement

shall be satisfied by acquiring one of the following from the Massachusetts Office of Coastal Zone Management (MA CZM):

a. General CZM Federal Consistency Concurrence (General Concurrence): MA CZM has granted General Concurrence for all SV and PCN activities for GPs 1-25. The prospective permittee must obtain all applicable permits and approvals before construction of the authorized activity begins (e.g., before work begins on site). For SVs, General Concurrence is automatically granted and no further action is required from the prospective permittee. For PCNs, the USACE will coordinate with MA CZM to acquire General Concurrence as part of the PCN application review.
b. Individual CZM Federal Consistency Concurrence (Individual Concurrence): In certain cases, MA CZM may elevate any GP activity 1-25 and require Individual Concurrence. The prospective permittee must contact MA CZM and follow the procedures to obtain Individual Concurrence as determined appropriate by MA CZM.
c. Permittees must obtain CZM consistency concurrence as outlined above before commencing work authorized under these GPs.

10. Federal Threatened and Endangered Species

a. No activity is authorized under any GP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any GP which “may affect” a listed species or critical habitat, unless ESA section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of “effects of the action” for the purposes of ESA section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA section 7 regarding “activities that are reasonably certain to occur” and “consequences caused by the proposed action.”
b. Other Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If a PCN is required for the proposed activity, the Federal permittee must provide USACE with the appropriate documentation to demonstrate compliance with those requirements. The USACE will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under section 7 of the ESA.
c. USFWS ESA-Listed Species: Non-federal applicants shall use the USFWS website, Information for Planning and Consultation (IPAC), to determine if their activity is located within the ESA-listed species range. The IPAC website can be accessed on the NAE Regulatory website: https://www. nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/. Applicants shall ensure they have an updated, valid species list before construction begins. This may require applicants to update their species list in IPAC before the start of construction. Note: Applicants should refer to the NAE Regulatory Website at the link above to determine if they have been designated as a non-federal representative. Applicants shall complete Section 7 consultation according to the guidance document located on the NAE Regulatory Website. After completing the Rangewide Determination Key and reaching the outcome “may affect, not likely to adversely affect”, you may be required to wait up to 15 days before that outcome is final and compliance under Section 7 of the ESA is fulfilled.

i. *Self-Verification Criteria*: The activity is SV-eligible if:
   1) The activity is not located within the ESA-listed species range;
   2) Another (lead) Federal agency has completed Section 7 consultation; or
   3) The activity is located within the ESA-listed species range ***and*** USACE has designated the applicant as a non-federal representative under 50 CFR 402.08 of the ESA for all

species within the project's action area. As the non-federal representative, the applicant shall complete consultation through IPAC and reach the outcome of "no effect" or "not likely to adversely affect".

ii. *Pre-Construction Notification Criteria*: The activity requires a PCN if:

1) The activity is located within the ESA-listed species range ***and*** USACE has NOT designated the applicant as a non-federal representative under 50 CFR 402.08 of the ESA for all species within the project's action area;

2) The activity is located in designated or proposed critical habitat; or

3) The activity is located within the ESA-listed species range and completion of the IPAC determination key has resulted in the outcome of "may affect" or "may affect, likely to adversely affect"; or

4) A PCN is required elsewhere in this document.

d. NOAA-Listed Species: Non-federal applicants shall refer to the Section 7 Mapper for federally listed species to determine if any species are mapped as present. When NOAA-listed species are present, the applicant shall generate a species report through the mapper and submit this document as part of their PCN or SVN submission. The NOAA Fisheries' Section 7 Mapper can be accessed here on the NAE Regulatory website here: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.

e. Authorization of an activity by an GP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

11. Essential Fish Habitat (EFH).

a. SV eligible activities have been determined to result in no more than minimal adverse effects, provided the permittee complies with all terms and conditions of the MA GP as appliable to the activity. NMFS has granted General Concurrence [50 CFR 600.920(g)] for all SV eligible activities. These activities do not require project specific EFH consultation.

b. For PCN required activities, the applicant is required to describe and identify potential adverse effects to EFH and should refer to NOAA Fisheries' EFH Mapper (http://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper) and Omnibus Essential Fish Habitat Amendment 2 Volume 2: EFH and HAPC Designation Alternatives and Environmental Impacts (https://www.habitat.noaa.gov/application/efhmapper/oa2_efh_hapc.pdf). If an activity is located within EFH, the PCN application must contain:

1. A description of the action located in EFH.
2. An analysis of the potential adverse effects of the action on EFH and the managed Species.
3. Conclusions regarding the effects of the action on EFH.
4. Proposed mitigation, if applicable (refer to the mitigation thresholds located in Section V).

c. Federal agencies shall follow their own procedures for complying with the EFH requirements of the Magnuson-Stevens Fishery Conservation and Management Act. For activities requiring a PCN, the applicant is responsible for furnishing documentation that demonstrates consultation for EFH has been completed.

d. For PCN activities, no work may commence until EFH consultation as required by the Magnuson-Stevens Act has been completed.

12. National Lands. Activities that impinge upon the value of any National Wildlife Refuge, National Forest, National Marine Sanctuary, National Historic Landmarks or any other area administered by the National Park Service, U. S. Fish and Wildlife Service (USFWS) or U.S. Forest Service (USFS) require a PCN or Individual Permit. Federal land managers seeking authorization for activities located in the above listed National Lands may proceed under SV, unless a PCN is required elsewhere in this document.

13. Wild and Scenic Rivers. The following activities in designated river or study river segments in the National Wild and Scenic River (WSR) System require a PCN unless the Federal agency with direct management responsibility for such river, in Massachusetts this is generally the National Park Service, has determined in writing to the proponent that the proposed work will not adversely affect the WSR designation or study status:

a. Activities that occur in WSR segments, in and 0.25 miles up or downstream of WSR segments, or in tributaries within 0.25 miles of WSR segments;
b. Activities that occur in wetlands within 0.25 miles of WSR segments;
c. Activities that have the potential to alter free-flowing characteristics in WSR segments.

No GP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a “study river” for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

As of May 10, 2023, affected rivers in Massachusetts include: the Taunton River (40 miles), Sudbury River (16.6 miles), Assabet River (4.4 miles), Concord River (8 miles), Nashua River (27 miles), Squannacook River (16.3 miles), Nissitissit River (4.7 miles), and the Westfield River, including West Branch, Middle Branch, Gendale Brook, East Branch, Drowned Land Brook, Center Brook, Windsor Jambs Brook, Shaker Mill Brook, Depot Brook, Savery Brook, Watson Brook, Center Pond Brook (78.1 miles). The most up to date list of designated and study rivers and their descriptions may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

14. Historic Properties

a. For all SV and PCN applications, permittees shall follow the guidance set forth in Appendix A, Guidance for NHPA Section 106 Compliance in Massachusetts.

b. No undertaking authorized by these GPs shall cause effects[1] (defined in 36 CFR Part 800 and 33 CFR Part 325, Appendix C, and its Interim Guidance) on properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places (NRHP)[2], including previously unknown historic properties within the permit area, unless the USACE or another Federal action agency has satisfied the consultation requirements of Section 106 of the National Historic Preservation Act (Section 106). If another Federal agency is determined the lead federal agency for compliance with Section 106, applicant must obtain the appropriate documentation and provide this information to the USACE to demonstrate compliance with Section 106. The applicant shall not begin the activity until the USACE notifies them in writing that the documentation provided satisfies Section 106 requirements.

[1] Effect means the alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register of Historic Properties.
[2] See the NAE Regulatory website, National Register of Historic Places link here: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.

c. Many historic properties are not listed on the NRHP and may require identification and evaluation by qualified historic preservation and/or archaeological consultants. The State Historic Preservation Officer (SHPO), Massachusetts Board of Underwater Archaeological Resources (BUAR), local historical societies, certified local governments, general public, and NRHP may also be able to assist with locating information on:

i. Previously identified historic properties; and
ii. Areas with potential for the presence of historic properties.

d. Discovery of Previously Unknown Remains and Artifacts: If any previously unidentified human remains, cultural deposits, or artifacts are discovered while accomplishing the activity authorized by this permit, you must immediately notify the USACE of what you have found, and to the maximum extent practicable, cease work and avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The USACE will initiate the Federal, State and tribal coordination required to determine if the items or remains warrant a recovery effort and/or if the site is eligible for listing in the National Register of Historic Places.

e. Section 110k: Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. § 306113) prevents the USACE from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106, has intentionally significantly adversely effected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the USACE, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the USACE is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties effected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or effects historic properties on tribal lands or effects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

f. Underwater Archaeological Resources: Under Massachusetts General Law Ch. 6, s.'s 179-180, and Ch. 91, s. 63, the BUAR has statutory jurisdiction within state waters and is the sole trustee of the Commonwealth's underwater heritage, charged with the responsibility of encouraging the discovery and reporting, as well as the preservation and protection, of underwater archaeological resources. Underwater archaeological resources located within the waters of the Commonwealth of Massachusetts are property of the Commonwealth, which holds title to these resources and retains regulatory authority over their use. Under Massachusetts General Law, no person, organization or corporation may "remove, displace, damage, or destroy" any underwater archaeological resources located within the Commonwealth's submerged lands except through consultation with the BUAR and in conformity with the permits it issues. https://www.mass.gov/orgs/board-of-underwater-archaeological-resources.

15. USACE Property and Federal Projects. (33 USC §408)

a. USACE projects and property can be found at: https://www.nae.usace.army.mil/Missions/Civil-Works/.

b. In addition to any authorization under these GPs, prospective permittee shall contact the USACE Real Estate Division (https://www.nae.usace.army.mil/Missions/Real-Estate-Division/) at (978) 318-8585 for work occurring on or potentially affecting USACE properties and/or USACE-controlled easements. Work may not commence on USACE properties and/or USACE-controlled easements until they have received any required USACE real estate documents evidencing site-specific permission to work.

c. Any proposed temporary or permanent occupation or alteration of a Federal project (including, but not limited to, a levee, dike, floodwall, channel, anchorage, breakwater, seawall, bulkhead, jetty, wharf, pier, or other work built or maintained but not necessarily owned by the United States),

is not eligible for SV and requires a PCN. This includes all proposed structures and work in, over, or under a USACE federal navigation project (FNP) or in the FNP's buffer zone. The buffer zone is an area that extends from the horizontal limits of the FNP to a distance of three times the FNP's authorized depth. The activity also requires review and approval by the USACE pursuant to 33 USC 408 (Section 408 Permission). The prospective permittee may reach out to the POCs located here: https://www.nae.usace.army.mil/ Missions/Section-408/.
d. Any structure or work constructed in a FNP or its buffer zone shall be subject to removal at the owner's expense prior to any future USACE dredging or the performance of periodic hydrographic surveys.
e. Where a Section 408 permission is required, written verification for the PCN will not be issued prior to the decision on the Section 408 permission request.

16. Navigation
a. No activity may cause more than a minimal adverse effect on navigation.
b. Any safety lights and signals prescribed by the U.S. Coast Guard, must be installed, and maintained at the permittee's expense on authorized facilities in navigable waters of the U.S.
c. There shall be no unreasonable interference with navigation by the existence or use of the activity authorized herein, and no attempt shall be made by the permittee to prevent the full and free use by the public of all navigable waters at or adjacent to the activity authorized herein.
d. The permittee understands and agrees that if future U.S. operations require the removal, relocation, or other alteration of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from USACE, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the U.S. No claim shall be made against the U.S. on account of any such removal or alteration.

17. Permit/Authorization Letter On-Site. For PCNs, the permittee shall ensure that a copy of these GPs and the accompanying authorization letter are at the work site (and the project office) whenever work is being performed, and that all personnel with operational control of the site ensure that all appropriate personnel performing work are fully aware of its terms and conditions. The entire permit authorization shall be made a part of any and all contracts and sub-contracts for work that affects areas of USACE jurisdiction at the site of the work authorized by these GPs. This shall be achieved by including the entire permit authorization in the specifications for work. The term "entire permit authorization" means these GPs, including GCs and the authorization letter (including its drawings, plans, appendices, special conditions, and other attachments), and any permit modifications. If the authorization letter is issued after the construction specifications, but before receipt of bids or quotes, the entire permit authorization shall be included as an addendum to the specifications. If the authorization letter is issued after receipt of bids or quotes, the entire permit authorization shall be included in the contract or sub-contract as a change order. Although the permittee may assign various aspects of the work to different contractors or sub-contractors, all contractors and sub-contractors shall be obligated by contract to comply with all environmental protection provisions contained within the entire authorization letter, and no contract or sub-contract shall require or allow unauthorized work in areas of USACE jurisdiction. For SVs, the permittee shall ensure that a complete and signed copy of the SVN is present on site during construction and is made available for review at any time by USACE and other Federal, State, & Local regulatory agencies. A complete and signed copy of the SVN must be submitted to USACE Regulatory within 30 days of initiating construction of the authorized activity, unless stated otherwise in the applicable GP.

18. Storage of Seasonal Structures. Coastal structures such as pier sections, floats, etc., that

are removed from the waterway for a portion of the year (often referred to as seasonal structures) shall be stored in an upland location, located above MHW and not in tidal wetlands. These seasonal structures may be stored on the fixed, pile-supported portion of the structure that is seaward of MHW. This is intended to prevent structures from being stored on the marsh substrate and the substrate seaward of MHW.

19. Pile Driving and Pile Removal in Navigable Waters.
a. Derelict, degraded or abandoned piles and sheet piles in navigable waters of the U.S., except for those inside existing work footprints for piers, must be completely removed, cut and/or driven to 3 feet below the substrate to prevent interference with navigation, and existing creosote piles that are affected by project activities shall be completely removed if practicable. In areas of fine-grained substrates, piles must be removed by the direct, vibratory or clamshell pull method[1] to minimize sedimentation and turbidity impacts and prevent interference with navigation from cut piles. Removed piles shall be disposed of in an upland location landward of MHW or OHW and not in wetlands, tidal wetlands or mudflats.
b. A PCN is required for the installation or removal of structures with jetting techniques.
c. A PCN is required for the installation of >12 inch-diameter piles of any material type or steel piles of any size in tidal waters, unless they are installed in the dry. If piles are not installed in the dry:
i. Impact pile driving shall commence with an initial set of three strikes by the hammer at 40% energy, followed by a one-minute wait period, then two subsequent 3-strike sets at 40% energy, with one minute waiting periods, before initiating continuous impact driving.
ii. Vibratory pile driving shall be initiated for 15 seconds at reduced energy followed by a one-minute waiting period. This sequence of 15 seconds of reduced energy driving, one-minute waiting period shall be repeated two more times, followed immediately by pile-driving at full rate and energy.
iii. In addition to using a soft start at the beginning of the workday for pile driving as described in 19c(i-ii), a soft start must also be used at any time following a cessation of pile driving for a period of 30 minutes or longer.
d. Bubble curtains may be used to reduce sound pressure levels during vibratory or impact hammer pile driving.

20. Time-of-Year (TOY) Restrictions. Activities that include in-water work must comply with the TOY Restrictions below to be SV eligible, otherwise a PCN is required. PCN submittals shall contain written justification for deviation from the TOY Restrictions. The term “in-water work” does not include conditions where the work site is “in-the-dry” (e.g., intertidal areas exposed at low tide). The term “in-the-dry” includes work contained within a cofferdam so long as the cofferdam is installed and subsequently removed outside the TOY Restriction. The TOY restrictions stated in Appendix B of the MA DMF Technical Report TR-47[2] can apply instead for activities in tidal waters if (1) TOYs are provided for a specific waterbody where the activity is proposed and (2) the TOYs are less restrictive than below. The activity must also not require a PCN elsewhere in this document to be SV eligible.

[1] Direct Pull: Each piling is wrapped with a choker cable or chain that is attached at the top to a crane. The crane then pulls the piling directly upward, removing the piling from the sediment. Vibratory Pull: The vibratory hammer is a large mechanical device (5-16 tons) that is suspended from a crane by a cable. The vibrating hammer loosens the piling while the crane pulls up. Clamshell Pull: This can remove intact, broken or damaged pilings. The clamshell bucket is a hinged steel apparatus that operates like a set of steel jaws. The bucket is lowered from a crane and the jaws grasp the piling stub as the crane pulls up. The size of the clamshell bucket is minimized to reduce turbidity during piling removal.
[2] The MA DMF Technical Report TR-47: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/

	TOY Restriction (No work)
Non-tidal Waters	Defer to TR-47
Tidal Waters	January 15 – November 15

Alternate work windows proposed under a PCN will generally be coordinated with the USFWS and NMFS. Resulting written verifications may include species-specific work allowed windows.

21. Heavy Equipment in Wetlands. Operating heavy equipment (drill rigs, fixed cranes, etc.) within wetlands shall be minimized, and such equipment shall not be stored, maintained, or repaired in wetlands, to the maximum extent practicable. Where construction requires heavy equipment operation in wetlands, the equipment shall:

i. Have low ground pressure (typically ≤3 psi);

ii. Be placed on swamp/construction/timber mats (herein referred to as "construction mats" or "mats") that are adequate to support the equipment in such a way as to minimize disturbance of wetland soil and vegetation. See GC 22 for information on the placement of construction mats; or

iii. Be operated on adequately dry or frozen wetlands such that shear pressure does not cause subsidence of the wetlands immediately beneath the equipment and upheaval of adjacent wetlands. Construction mats are to be placed in the wetland from the upland or from equipment positioned on mats if working within a wetland. Dragging construction mats into position is prohibited. Other support structures that are capable of safely supporting equipment may be used with written USACE authorization.

22. Temporary Fill, Work & Construction Mats.

a. *Construction mats in non-tidal waters*: Temporary construction mats shall be in place ≤1 year *and* for one growing season or less to be SV eligible. A PCN is required if construction mats are in place >1 year *or* for more than one growing season. Construction mats can be placed in an area of any size in non-tidal waters. The activity may occur in segments to ensure the requirements for SV above are met, otherwise a PCN is required.

b. *Construction mats in tidal waters*: Temporary construction mats placed in an area <5,000 SF in tidal waters are SV eligible, provided those mats are in place ≤6 months. Temporary construction mats placed in an area ≥5,000 SF or in place >6 months in tidal waters require a PCN.

c. *Management of construction mats:* At a minimum, construction mats shall be managed in accordance with the following construction mat best management practices (BMPs):

1. Mats shall be in good condition to ensure proper installation, use, and removal.
2. As feasible, mats shall be placed in a location that will minimize the amount of mats needed for the wetland crossing(s).
3. Inspect mats prior to their re-use and remove any plant debris. Mats are to be thoroughly cleaned before re-use to prevent the spread of invasive plant species.
4. Impacts to wetland areas shall be minimized during installation, use, and removal of the mats.
5. Adequate erosion & sediment controls shall be installed at approaches to mats to promote a smooth transition to, and minimize sediment tracking onto, the mats.
6. In most cases, mats should be placed along the travel area so that the individual boards are resting perpendicular to the direction of traffic. No gaps should exist between mats. Place mats far enough on either side of the resource area to rest on firm ground.

d. A PCN is required for temporary fills in place >2 years. All temporary fills and disturbed soils shall be stabilized to prevent the material from eroding into waters of the U.S. where it is not authorized. Work shall include phased or staged development to ensure only areas under active development are exposed and to allow for stabilization practices as soon as practicable. Temporary fill must be placed in a manner that will prevent it from being eroded by expected high flows.

e. Activities that require unconfined temporary fill and are authorized for discharge into waters of the U.S. shall consist of material that minimizes effects to water quality.
f. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Materials shall be placed in a location and manner that does not adversely impact surface or subsurface water flow into or out of the wetland. Temporary fill authorized for discharge into wetlands shall be placed on geotextile fabric or other appropriate material laid on the pre-construction wetland grade where practicable to minimize impacts and to facilitate restoration to the original grade. Construction mats are excluded from this requirement.
g. Construction debris and deteriorated materials shall not be located in waters of the U.S.
h. Temporary fills, construction mats, and corduroy roads shall be entirely removed as soon as they are no longer needed to construct the authorized activity and the disturbed areas be restored to pre-construction contours and conditions.
i. Construction equipment, such as temporary barges in tidal waters, shall provide clearance above the substrate to avoid grounding onto the substrate during all tides.

23. Restoration of Wetland Areas.
a. Upon completion of construction, all disturbed wetland areas shall be stabilized with a wetland seed mix or plant plugs containing only plant species native to New England, and be appropriate for site conditions, including salinity and frequency of inundation, and shall not contain any species listed in the “Invasive and Other Unacceptable Plant Species” Appendix K of the New England District “Compensatory Mitigation Standard Operating Procedures” found at https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation.aspx.
b. The introduction or spread of invasive plant species in disturbed areas shall be prevented and controlled. Equipment shall be thoroughly cleaned before and after project construction to prevent the spread of invasive species. This includes, but is not limited to, tire treads and construction mats.
c. In areas of authorized temporary disturbance, if trees are cut in USACE jurisdiction, they shall be cut at or above ground level and not uprooted in order to prevent disruption of any kind to the wetland soil structure and to allow stump sprouts to revegetate the work area, unless otherwise authorized.
d. Wetland areas where permanent disturbance is not authorized shall be restored to their original condition and elevation, which under no circumstances shall be higher than the pre-construction elevation. Original condition means careful protection and/or removal of existing soil and vegetation, and replacement back to the original location such that the original soil layering and vegetation schemes are approximately the same, unless otherwise authorized.

24. Bank Stabilization.
a. Projects involving construction or reconstruction/maintenance of bank stabilization within USACE jurisdiction shall be designed to minimize environmental effects, effects to neighboring properties, scour, conversion of natural shoreline to hard armoring, etc. to the maximum extent practicable.
b. Projects involving the construction of new bank stabilization within USACE jurisdiction shall use bioengineering techniques and natural materials in the project design to the maximum extent practicable. Use of hard structures shall be eliminated or minimized unless the prospective permittee can demonstrate that use of bioengineering techniques is not practicable due to site conditions.
c. Where possible, bank stabilization projects shall optimize the natural function of the shoreline, including self-sustaining stability to attenuate flood flows, fishery, wildlife habitat and water quality protection, while protecting upland infrastructure from storm events that can cause erosion as well as impacts to public and private property.
d. No material shall be placed in excess of the minimum needed for erosion protection.
e. No material shall be placed in a manner that will be eroded by normal or expected high flows (properly anchored native trees and treetops may be used in low energy areas).

f. Native plants appropriate for current site conditions, including salinity, must be used for bioengineering or vegetative bank stabilization.
g. The activity must be properly maintained, which may require repairing it after severe storms or erosion events.

25. Soil Erosion and Sediment Controls.
a. Appropriate soil erosion and sediment controls[1] (hereinafter referred to as "controls") must installed prior to earth disturbance and maintained in effective operating condition during construction. Biodegradable wildlife friendly erosion controls should be used whenever practicable to minimize effects to water quality.
b. Activities in streams (rivers, streams, brooks, etc.) and tidal waters that are capable of producing sedimentation or turbidity should be done during periods of low-flow or no-flow, when the stream or tide is waterward of the work area. Controls may also be used to obtain dry work conditions (e.g., coffer dam, turbidity curtain). The prospective permittee must demonstrate in the project plans where the controls are proposed and how these controls would avoid and/or minimize turbidity or sedimentation.
c. A PCN is required for controls that encroach: i) >25% of the stream width measured from OHW in non-tidal diadromous streams from March 15 to June 30; or ii) >25% of the waterway width measured from MHW in tidal waters from Feb. 1 to June 30, or >50% of the waterway width measured from MHW in tidal waters from July 1 to Jan. 14. This is to protect upstream fish passage. Proponents must also maintain downstream fish passage throughout the project.
d. No dewatering shall occur with direct discharge to waters or wetlands. Excess water in isolated work areas shall be pumped or directed to a sedimentation basin, tank or other dewatering structures in an upland area adequately separated from waters or wetlands. Suspended solids shall be removed prior to discharge back into waters or wetlands from these dewatering structures. All discharge points back into waters and wetlands shall use appropriate energy dissipaters and erosion and sedimentation control BMPs.
e. Temporary controls shall be removed upon completion of work, but not until all exposed soil and other fills, as well as any work waterward of OHW or the HTL, are permanently stabilized at the earliest practicable date. Sediment and debris collected by these devices shall be removed and placed at an upland location in a manner that will prevent its later erosion into a waterway or wetland. Controls may be left in place if they are biodegradable and flows and aquatic life movements are not disrupted.

26. Aquatic Life Movements and Management of Water Flows.
a. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies and wetlands shall be:

i. Suitably spanned, bridged, culverted, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species; and
ii. Properly aligned and constructed to prevent bank erosion or streambed scour both adjacent to and inside the crossing.

[1] Appropriate soil erosion, sediment and turbidity controls include cofferdams, bypass pumping around barriers immediately up and downstream of the work footprint (i.e., dam and pump), installation of sediment control barriers (i.e., silt fence, vegetated filter strips, geotextile silt fences, filter tubes, erosion control mixes, hay bales or other devices) downhill of all exposed areas, stream fords, retention of existing vegetated buffers, application of temporary mulching during construction, phased construction, and permanent seeding and stabilization, etc.

b. To avoid adverse impacts on aquatic organisms, the low flow channel/thalweg shall remain unobstructed during periods of low flow, except when necessary to perform the authorized work.
c. For work in tidal waters, in-stream controls (e.g., cofferdams) should be installed in such a way as to not obstruct fish passage.
d. Riprap and other stream bed materials shall be installed in a manner that avoids organism entrapment in rock voids or water displaced to subterranean flow with crushed stone and riprap.
e. To the maximum extent practicable, the preconstruction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity shall not restrict or impede the passage of normal or high flows unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

27. Spawning, Breeding, and Migratory Areas.
a. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized under these GPs.
b. Activities in waters of the U.S. that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.
c. The applicant is responsible for obtaining any "take" permits required under the USFWS's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The applicant should contact the appropriate local office of the USFWS to determine if such "take" permits are required for a particular activity.
d. Information on spawning habitat for species managed under the Magnuson-Stevens Fishery Conservation and Management Act (i.e., EFH for spawning adults) can be obtained from NAE Regulatory website, Essential Fish Habitat section, at: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.
e. Information regarding diadromous fish habitat can be obtained from the following DMF website at: https://www.mass.gov/info-details/massgis-data-diadromous-fish.

28. Vernal Pools.
a. A PCN is required if a discharge of dredged or fill material is proposed within a vernal pool depression that is also a water of the U.S.
b. Vernal pools must be identified on the plans that show aquatic resource delineations.
c. Adverse impacts to vernal pools shall be avoided & minimized to the maximum extent practicable.

29. Invasive Species.
a. The introduction, spread or the increased risk of invasion of invasive plant or animal species on the project site, into new or disturbed areas, or areas adjacent to the project site caused by the site work shall be avoided. Construction mats shall be thoroughly cleaned before reuse to avoid spread of invasive species.
b. Unless otherwise directed by USACE, all applications for PCN non-tidal projects proposing fill in USACE jurisdiction shall include an Invasive Species Control Plan. Additional information can be found at: https://www.nae.usace.army.mil/Missions/Regulatory/Invasive-Species/, https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation/.

30. Fills Within 100-Year Floodplains. The activity shall comply with applicable Federal Emergency Management Agency (FEMA) approved, Massachusetts Emergency Management

Agency (MEMA) approved and/or local floodplain management requirements. Applicants should contact FEMA and/or MEMA regarding floodplain management requirements.

31. Stream Work and Crossings & Wetland Crossings.
a. When feasible, all temporary and permanent crossings of waterbodies and wetlands (hereinafter referred to as "crossings") shall conform to the "Massachusetts River and Stream Crossing Standards" located at: https://www.mass.gov/doc/massachusetts-river-and-stream-crossing-standards/download or https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/. Projects that do not conform to these guidelines shall be reviewed under PCN or IP procedures.
b. Crossings shall be suitably culverted, bridged, or otherwise designed to withstand and to prevent the restriction of high flows, to maintain existing low flows, maintain water quality, and not obstruct the movement of aquatic life indigenous to the waterbody beyond the duration of construction.
c. Crossings shall be installed in such a manner as to preserve hydraulic capacity and flow, sediment transport, and organism passage at its present level, between the wetlands on either side of the road. The applicant shall take necessary measures to correct any wetland damage resulting from deficiencies in hydraulic capacity, sediment transport and organism passage.
d. Stream crossings shall utilize a natural mixed grain-size streambed material composition that matches upstream and downstream substrates to create a stable streambed. Substrate should function appropriately during normal and high flows without washing out. If natural streambed material is not utilized, a PCN is required.
e. Activities involving open trench excavation in flowing waters require a PCN. Work should not occur in flowing waters (requires using management techniques such as temporary flume pipes, culverts, cofferdams, etc.). Normal flows should be maintained within the stream boundary's confines when practicable. Projects utilizing these management techniques must meet all applicable terms and conditions of the GP, including the GCs in Section IV.

32. Utility Line Installation and Removal
a. Subsurface utility lines must be installed at a sufficient depth to avoid damage from anchors, dredging, etc., and to prevent exposure from erosion and stream adjustment.
b. When utility lines are installed via horizontal directional drilling, a frac-out contingency plan shall be present on site for the duration of construction. As necessary, the applicant shall immediately contain, control, recover, and remove drilling fluids released into the environment.
c. Abandoned or inactive utility lines must be removed and faulty lines (e.g., leaking hazardous substances, petroleum products, etc.) must be removed or repaired. A written verification from the USACE is required if they are to remain in place, e.g., to protect sensitive areas or ensure safety.
d. Utility lines shall not adversely alter existing hydrology, and trenches cannot be constructed or backfilled in such a manner as to drain waters of the U.S. (e.g., backfilling with extensive gravel layers, creating a French drain effect). In wetland areas, structures such as ditch plugs, cut-off walls, clay blocks, bentonite, or other suitable material shall be used within utility trenches to ensure that the trench through which the utility line is installed does not drain waters of the U.S. including wetlands.
e. Stockpiling of tree debris, to the extent where it has the effect of fill material, shall not occur in waters of the U.S. Tree debris shall be removed from waters of the U.S. and placed in uplands without causing additional disturbance to aquatic resources. Failure to meet this condition could change the bottom elevation of the wetland and be considered a discharge of fill material, and depending on the area of alteration, may require a PCN or IP.

33. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

34. Coral Reefs. Impacts to coral reefs are not authorized under these GPs. Coral reefs consist of the skeletal deposit, usually of calcareous or silicaceous materials, produced by the vital activities of anthozoan polyps or other invertebrate organisms present in growing portions of the reef.

35. Blasting. Blasting in waters of the U.S. associated with work such as dredging, trenching, pile installation, etc. is not authorized under these GPs.

36. Inspections. The permittee shall allow USACE to make periodic inspections at any time deemed necessary to ensure that the work is being or has been performed in accordance with the terms and conditions of this permit. To facilitate these inspections, for activities requiring a PCN, the permittee shall complete and return the Certificate of Compliance when it is provided with a PCN verification letter. For SV-eligible activities, the permittee shall complete and submit the SVN to USACE within 30 days of initiating project construction, at which point, USACE may opt to inspect the activity to verify compliance with the terms and conditions of the GP. Post-construction engineering drawings may be required by USACE for completed work. This includes post-dredging survey drawings for any dredging work.

37. Maintenance. The permittee shall maintain the activity authorized by these GPs in good condition and in conformance with the terms and conditions of this permit. Some maintenance activities may not be subject to federal regulation under Section 404 in accordance with 33 CFR 323.4(a)(2). This condition is not applicable to maintenance of dredging projects. Prospective permittees should contact USACE to inquire about maintenance of dredging projects, and its eligibility under these GPs. Maintenance dredging is subject to the review thresholds in GP #7 as well as any conditions included in a written USACE authorization. Maintenance dredging includes only those areas and depths previously authorized and dredged.

38. Property Rights. Per 33 CFR 320.4(g)(6), these GPs do not convey any property rights, either in real estate or material, or any exclusive privileges, nor do they authorize any injury to property or invasion of rights or any infringement of Federal, State, or local laws or regulations.

39. Transfer of GP Verifications. When the work authorized by these GPs is still in existence at the time the property is transferred, the terms and conditions of these GPs, including any special conditions, will continue to be binding on the entity or individual who received the GP authorizations, as well as the new owner(s) of the property. If the permittee sells the property associated with a GP authorization, the applicant may transfer the GP authorization to the new owner by submitting a letter to USACE to validate the transfer. A copy of the GP authorization letter must be attached to the letter, and the letter must include the following statement: “The terms and conditions of these general permits, including any special conditions, will continue to be binding on the new owner(s) of the property.” This letter shall be signed by both the seller and new property owner(s).

40. Modification, Suspension, and Revocation. These GPs and any individual authorization issued thereof may be either modified, suspended, or revoked in whole or in part pursuant to the policies and procedures of 33 CFR 325.7; and any such action shall not be the basis for any claim for damages against the U.S.

41. Special Conditions. The USACE may impose other special conditions on a project authorized pursuant to these GPs that are determined necessary to minimize adverse navigational and/or environmental effects or based on any other factor of the public interest. Failure to comply with all conditions of the authorization, including special conditions, constitutes a permit violation and may subject the applicant to criminal, civil, or administrative penalties or restoration.

42. False or Incomplete Information. If USACE makes a determination regarding the eligibility of a project under these GPs, and subsequently discovers that it has relied on false, incomplete, or inaccurate information provided by the applicant, the authorization will not be valid, and the U.S. Government may institute appropriate legal proceedings.

43. Abandonment. If the permittee decides to abandon the activity authorized under these GPs, unless such abandonment is merely the transfer of property to a third party, he/she/they may be required to restore the area to the satisfaction of USACE.

44. Enforcement cases. These GPs do not apply to any existing or proposed activity in USACE jurisdiction associated with an on-going USACE or EPA enforcement action, until such time as the enforcement action is resolved or USACE or EPA determines that the activity may proceed independently without compromising the enforcement action.

45. Previously Authorized Activities.

a. Completed projects that received prior authorization from USACE (SV or PCN), shall remain authorized in accordance with the original terms and conditions of those authorizations, including their terms, GCs, and any special conditions provided in a written verification.

b. Activities authorized pursuant to 33 CFR 330.3 (activities occurring before certain dates) are not affected by these GPs.

46. Duration of Authorization.

These GPs expire on June 1, 2028. Activities authorized under these GPs will remain authorized until the GPs expire, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend, or revoke the authorization in accordance with 33 CFR 325.2(e)(2). Activities authorized under GPs 1-25 that have either commenced (i.e., are under construction) or are under contract to commence in reliance upon this authorization will have until June 1, 2029 to complete the work. If requested by USACE, the permittee shall furnish documentation that demonstrates the project was under construction or under contract to commence by June 1, 2028. If work is not completed before June 1, 2029, the permittee must contact USACE. The USACE may issue a new authorization provided the project meets the terms and conditions of the MA GPs in effect at the time. Activities completed under the SV or PCN authorizations of these GPs will continue to be authorized after their expiration date.

SECTION V: MITIGATION STANDARDS

1. Mitigation Types

For all activities, applicants must (a) demonstrate how the project has been designed to avoid or minimize impacts to aquatic resources; and (b) describe measures taken to avoid or minimize impacts to aquatic resources through construction techniques and/or site access. Please see https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation/ for assistance with preparing mitigation in accordance with the 2008 Compensatory Mitigation for Losses of Aquatic Resources; Final Rule (33 CFR 332.3), hereafter referred to as "2008 Mitigation Rule."

Avoidance - Avoidance of impacts (direct and indirect) to aquatic resources means that project activities would not result in the placement of fill material or installation of a structure that could impact the resource area. Avoidance can include, but is not limited to, designing the project to avoid impacts to all or a portion of the aquatic resource areas.

Minimization - Minimization of impacts (direct and indirect) to aquatic resources means that measures are taken to ensure the amount and duration of impacts are limited to the maximum extent practicable. There are many minimization measures that could be implemented, prior to, during, or after the proposed activity, to ensure impacts are minimized. Examples include, but are not limited to:

- Permanent preservation of avoided aquatic features and buffer zone, in perpetuity. In these cases, the preserved area would be under a conservation easement and managed by conservation oriented third-party manager.
- Utilization of best management practices (BMPs) to ensure impacts are limited, and do not result in adverse impacts to the integrity and long-term functions of preserved/avoided features.

Compensatory Mitigation - Compensatory mitigation is generally required for PCN activities in which the impacts to the aquatic resources have been avoided and minimized to the maximum extent practicable but would still result in unavoidable adverse effects to the environment that are considered more than minimal or are contrary to the public interest. *Whatever the case may be, compensatory mitigation is no substitute for avoidance and minimization.*

2. Thresholds for Compensatory Mitigation

The basic objective of compensatory mitigation in the USACE Regulatory Program is to offset environmental losses resulting from unavoidable impacts to waters of the U.S. authorized by Department of the Army permits. **The following compensatory mitigation thresholds apply to all PCN activities that result in loss[1] of the resource area types listed below. Activities[2] in waters of the U.S. associated with the restoration, enhancement, and establishment of tidal and non-tidal aquatic resources are not considered loss and are not subject to the thresholds below.** Thresholds for different resource areas may not be combined to exceed 5,000 SF of total loss of all waters. The USACE will continue to evaluate projects on a case-by-case basis, and may in some cases require compensatory mitigation below these thresholds (e.g. minor impacts that add to a cumulative loss).

[1] See definition of loss in Section VII.
[2] These activities must result in net increases in aquatic resource functions and services to be exempted from the thresholds above.

Compensatory Mitigation Thresholds in Massachusetts		
Resource Area	**Non-Tidal Threshold**	**Tidal Threshold**
Stream	200 LF	200 LF
Bank Stabilization	500 LF	500 LF
Open Water	Project Dependent	Project Dependent
Wetland	5,000 SF	500 SF
Vernal Pool	All	N/A
SAV	Project dependent	25 SF
Mudflat	N/A	1,000 SF
Intertidal	N/A	1,000 SF

These thresholds can be utilized to determine at what point compensatory mitigation is required but are not used to determine how much mitigation may be needed to offset impacts to resources. Per the 2008 Mitigation Rule (33 CFR 332.3(f)(1)) "the amount of required compensatory mitigation must be, to the extent practicable, sufficient to replace lost aquatic resource functions. In cases where appropriate functional or condition assessment methods or other suitable metrics are available, these methods should be used where practicable to determine how much compensatory mitigation is required. If a functional or condition assessment or other suitable metric is not used, a minimum one-to-one acreage or linear foot compensation ratios must be used."

3. Compensatory Mitigation Hierarchy

Compensatory mitigation should follow the hierarchy as outlined in 33 CFR 332.3(b)(2-6) or current regulation. This hierarchy in order of preference includes: (1) Mitigation Bank credits, (2) In-Lieu Fee program credits, (3) permittee-responsible mitigation under a watershed approach, (4) permittee-responsible mitigation through on-site and in-kind mitigation, and (5) permittee-responsible mitigation through off-site and/or out-of-kind mitigation. If the proposed mitigation deviates from this mitigation hierarchy, the applicant **must** justify in writing why the proposed mitigation is environmentally preferable to the preferred method of compensatory mitigation (See 2008 Mitigation Rule). **In order for your application to be considered complete, you must provide a statement that discusses how your project will compensate for the loss or impact to aquatic resources.** If you are proposing permittee responsible mitigation, the 12 components of a mitigation plan (33 CFR 332.4(c)(2-14) must be addressed for your application to be considered complete. Prospective applicants are encouraged to contact USACE with questions at any time. Addressing the 12 components of a mitigation plan is commensurate with the amount of compensatory mitigation required, and USACE can assist prospective applicants with the level of information needed to satisfy each component.

For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee.

4. In-Lieu Fee (ILF)

The purchase of credits from the Massachusetts In-Lieu Fee Program (MA ILFP) is the ***preferred*** method of compensatory mitigation in Massachusetts since, as of the issuance date of this GP, there are no mitigation banks available in Massachusetts. The applicant shall develop a mitigation plan that addresses the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

The MA ILFP is administered by the Massachusetts Department of Fish & Game (DFG) in accordance with the 2008 Mitigation Rule at 33 CFR 332. The Mitigation Rule governs in-lieu fee compensatory mitigation associated with USACE permits under §404 of the Clean Water Act and/or §9 or §10 of the Rivers and Harbors Act of 1899.

MA ILFP Website: https://www.mass.gov/in-lieu-fee-program

Acceptance of an ILF payment into the ILFP established by the 2014 MA ILFP Instrument (link below) is an acknowledgement by DFG that it assumes all legal responsibility for satisfying the mitigation requirements of the USACE (i.e., the implementation, performance, and long-term management and monitoring of the compensatory mitigation project(s) approved under this Instrument and subsequent Compensatory Mitigation Plans). This transfer of legal responsibility is established by: 1) the approval of this In-Lieu Fee Instrument; 2) receipt by the district engineer of a Notice of Credit Sale and Transfer of Legal Responsibility to DFG that is signed by the DFG and the permittee and dated; and 3) the transfer of fees from the permittee to DFG.

MA ILFP Fact Sheet: https://www.mass.gov/files/documents/2017/01/sj/ilfp-fact-sheet-ma-ilfp-fees.pdf

MA ILFP Instrument: https://www.mass.gov/files/documents/2016/08/nd/ilfp-final-instrument-dfg.pdf

5. Permittee-Responsible

The USACE may determine that the proposed permittee-responsible compensatory mitigation is appropriate on a case-by-case basis. As described in the Compensatory Mitigation Hierarchy section above, applicants must justify in writing why the proposed mitigation is environmentally preferable to the purchase of ILF credits. Applicants are encouraged to contact the USACE prior to submission of a permit application to seek further guidance regarding USACE mitigation requirements.

Applicants will demonstrate their proposed compensatory mitigation in writing by addressing the 12 components of a mitigation plan (33 CFR 332.4(c)(2-14). *Please note that all elements must be addressed, or the permit application will be deemed incomplete.* In certain circumstances, the district engineer may determine that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). Guidance on how to address these components can be found on the New England District Mitigation webpage: https://www.nae.usace.army.mil/Missions/Regulatory/Mitigation/

Performance standards will be used to measure the successfulness of the mitigation project. A successful mitigation project is one that is self-sustaining. For a mitigation project that will restore, enhance, or create wetlands, proper performance standards must address hydrology, hydric soils, and hydrophytic vegetation. The mitigation proposal must include an explanation of quantitative methods used to measure the success of performance standards (i.e., percent cover may be measured using vegetation plots, hydrology may be measured using data loggers, soil cores may be taken and evaluated for hydric soil indicators).

Monitoring methods should include quantitative sampling methods following established, scientific protocols. Sampling documentation, as part of monitoring reports, should include maps and coordinates (also shapefiles, if available) showing locations of sampling points, transects, quadrats, etc. In addition, permanent photo stations should be established coincident with sampling locations.

SECTION VI: FEDERAL & STATE AGENCY CONTACT INFORMATION & ORGANIZATIONAL WEBSITES

Federal Agencies

U.S. Army Corps of Engineers
Regulatory Division
696 Virginia Road
Concord, Massachusetts 01742-2751
(978) 318-8338 (phone); (978) 318-8303 (fax)
www.nae.usace.army.mil/missions/regulatory

U.S. Army Corps of Engineers
Navigation Division – Section 408
696 Virginia Road
Concord, Massachusetts 01742-2751
See link below for contact information:
https://www.nae.usace.army.mil/Missions/Section-408/

National Marine Fisheries Service
55 Great Republic Drive
Gloucester, Massachusetts 01930
(978) 281-9300 (phone)
(*Federal endangered species & EFH)*

U.S. Fish & Wildlife Service
70 Commercial Street, Suite 300
Concord, New Hampshire 03301
(603) 223-2541 (phone)
(Federal endangered species)

National Park Service
15 State Street
Boston, Massachusetts 02109
(617) 223-5191 (phone)
(*Wild and Scenic Rivers*)

Bureau of Ocean and Energy Management
1849 C Street, NW
Washington D.C. 20240
202-208-6474 (phone)
(*Offshore Wind Facilities)*

Chief, Risk Analysis Branch
FEMA Region 1
99 High Street, 6th Floor
U.S. Department of Homeland Security
Boston, Massachusetts 02110
(617) 956-7576 (phone)

Commander (dpb)
First Coast Guard District
Battery Building
One South Street
New York, New York 10004-1466
(212) 514-4331 (phone); (212) 514-4337 (fax)
(*Bridge permits*)

U.S. Environmental Protection Agency
5 Post Office Square
Suite 100 (OEP06–3)
Boston, Massachusetts 02109-3912
(617) 918-1692 (phone)

State Agencies in Massachusetts

Massachusetts Department of Environmental Protection (MassDEP)	
DEP Division of Wetlands & Waterways	100 Cambridge Street, Suite 900 Boston, Massachusetts 02114 (617) 292-5695
Northeast Region	150 Presidential Way, Suite 300 Woburn, Massachusetts 01801 (978) 694-3200
Southeast Region	20 Riverside Drive, Route 105 Lakeville, Massachusetts 02347 (508) 946-2800
Central Region	8 New Bond Street Worcester, Massachusetts 01606 (508) 792-7650
Western Region	436 Dwight Street Springfield, Massachusetts 01103 (413) 784-1100

Massachusetts Office of Coastal Zone Management (CZM) Emails may be sent to: czm@mass.gov	
MA Office of Coastal Zone Management	100 Cambridge Street, Suite 900 Boston, Massachusetts 02114 (617) 626-1200
North Shore Region	2 State Fish Pier Gloucester, Massachusetts 01930 (978) 281-3972
South Shore Region	175 Edward Foster Road Scituate, Massachusetts 02066
Cape Cod and Islands Region	3195 Main Street, P.O. Box 220 Barnstable, MA 02630
South Coastal Region	81-B County Road, Suite E Mattapoisett, MA 02739

Massachusetts Historical Commission (MHC)	
Office Location:	220 Morrisey Boulevard Boston, Massachusetts 02125 (617) 727-8470

Massachusetts Board of Underwater Archaeological Resources (BUAR) Emails may be sent to: david.s.robinson@mass.gov	
Office Location:	100 Cambridge Street, Suite 900 Boston, Massachusetts 02114 (617) 626-1014

SECTION VII: Definitions & Acronyms

Artificial or Living Reef: A structure which is constructed or placed in waters for the purpose of enhancing fishery resources and commercial and recreational fishing opportunities.
Attendant Features: Occurring with or as a result of; accompanying.
Biodegradable: A material that decomposes into elements found in nature within a reasonably short period of time and will not leave a residue of plastic or a petroleum derivative in the environment after degradation. In contrast, degradable plastics break down into plastic fragments that remain in the environment after degradation. Examples of biodegradable materials include jute, sisal, cotton, straw, burlap, coconut husk fiber (coir) or excelsior. In contrast, degradable plastics break down into plastic fragments that remain in the environment after degradation. Photodegradable, UV degradable or Oxo-(bio)degradable plastics are not considered biodegradable under this GP.
Boating facilities: These provide, rent or sell mooring space, such as marinas, yacht clubs, boat yards, dockominiums, municipal facilities, land/home owners, etc. Not classified as boating facilities are piers shared between two abutting properties or municipal mooring fields that charge an equitable user fee based on the actual costs incurred.
Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. Must comply with the applicable provisions of 33 CFR 332. See also the New England District Compensatory Mitigation Guidance at http://www.nae.usace.army.mil/Missions/Regulatory/Mitigation.aspx.
Construction mats: Constructions, swamp and timber mats (herein referred to as “construction mats”) are generic terms used to describe structures that distribute equipment weight to prevent wetland damage while facilitating passage and providing work platforms for workers and equipment. They are comprised of sheets or mats made from a variety of materials in various sizes. A timber mat consists of large timbers bolted or cabled together. Corduroy roads, which are not considered to be construction mats, are cut trees and/or saplings with the crowns and branches removed, and the trunks lined up next to one another. Corduroy roads are typically installed as permanent structures. Like construction mats, they are considered as fill whether they are installed temporarily or permanently.
Cumulative Impacts: The impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.1). Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems. See 40 CFR 230.11(g).
Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.
Dredging:
Improvement Dredging: For the purposes of these GPs, this is dredging deeper than previously authorized by the USACE and dredged under that authorization.
Maintenance Dredging: For the purposes of these GPs, this is dredging from an area previously authorized by the USACE and dredged under that authorization. The USACE may require proof of authorization and dredging. Maintenance dredging typically refers to the routine removal of accumulated sediment to maintain the design depths of serviceable navigation channels, harbors, marinas, boat launches and port facilities. Maintenance dredging is conducted for navigational purposes and does not include any expansion of the previously dredged area. The USACE may

review a maintenance dredging activity as new dredging if sufficient time has elapsed to allow for the colonization of SAS, shellfish, etc.

New Dredging: For the purposes of these GPs, this is a) first time the USACE authorizes dredging of a particular location or b) dredging has not occurred for an extended period of time, and this has allowed for aquatic resources (i.e., eelgrass, shellfish, etc.) to redevelop in the area.

Dredged material & discharge of dredged material: These are defined at 33 CFR 323.2(c) and (d). The term dredged material means material that is excavated or dredged from waters of the U.S.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s) but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: A stream with flowing water only during, and for a short duration, after precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Erosion Controls: Appropriate soil erosion, sediment and turbidity controls include cofferdams, bypass pumping around barriers immediately up and downstream of the work footprint (i.e., dam and pump), installation of sediment control barriers (i.e., silt fence, vegetated filter strips, geotextile silt fences, filter tubes, erosion control mixes, hay bales or other devices) downhill of all exposed areas, stream fords, retention of existing vegetated buffers, application of temporary mulching during construction, phased construction, and permanent seeding and stabilization, etc.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area (33 CFR 332.2).

Expansions: Work that increases the footprint of fill, structures, depth of basin or drainage features, or floats, or slip capacity.

Essential Fish Habitat (EFH): The Federal Magnuson-Stevens Fishery Management and Conservation Act broadly defines EFH to include those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. See www.greateratlantic.fisheries.noaa.gov/habitat for more information.

Fill material & discharge of fill material: Material placed in waters of the U.S. where the material has the effect of either replacing any portion of a water of the U.S. with dry land or changing the bottom elevation of any portion of a water of the U.S. Fill material does not include any pollutant discharged into the water primarily to dispose of waste. These are defined at 33 CFR 323.2 (e) & (f).

Federal navigation projects (FNPs): These areas are maintained by the USACE; authorized, constructed and maintained on the premise that they will be accessible and available to all on equal terms; and comprised of USACE Federal anchorages, Federal channels and Federal turning basins. The buffer zone is equal to three times the authorized depth of a FNP. The following are FNPs in MA and more information, including the limits, is provided at www.nae.usace.army.mil/missions/navigation >> Navigation Projects:

- Andrews River, Harwich, MA
- Aunt Lydia's Cove
- Beverly Harbor
- Boston Harbor
- Buttermilk Bay Channel
- Canapitsit Channel
- Cape Cod Canal
- Chatham Harbor
- Cohasset Harbor
- Cross Rip Shoals, Nantucket Sound
- Cuttyhunk Harbor
- Dorchester Bay and Neponset River
- Duxbury Harbor
- Edgartown Harbor
- Essex River
- Fall River Harbor
- Falmouth Harbor
- Gloucester Harbor and Annisquam River
- Green Harbor
- Hingham Harbor
- Hyannis Harbor
- Ipswich River
- Island End River (Chelsea, MA)
- Kingston Harbor
- Lagoon Pond
- Little Harbor Woods Hole

Lynn Harbor
Malden River
Menemsha Creek
Merrimack River
Mystic River
Nantucket Harbor of Refuge
New Bedford and Fairhaven Harbor
Newburyport Harbor
Oak Bluffs Harbor
Pigeon Cove Harbor
Plymouth Harbor
Pollock Rip Shoals, Nantucket Sound
Provincetown Harbor
Red Brook Harbor
Rockport Harbor
Salem Harbor
Sandy Bay Harbor of Refuge
Saugus River
Scituate Harbor
Sesuit Harbor
Taunton River
Vineyard Haven Harbor
Wareham Harbor
Wellfleet Harbor
Westport River and Harbor
Weymouth Back River
Weymouth Fore and Town Rivers
Winthrop Harbor
Woods Hole Channel

Flume: An open artificial water channel, in the form of a gravity chute, which leads water from a diversion dam or weir alongside a natural flow. A flume can be used to measure the rate of flow.
FNP buffer zone: The buffer zone of a USACE Federal Navigation Project (FNP) is equal to three times the authorized depth of the FNP.
Frac out: During horizontal directional drilling (HDD) operations, drilling fluid travels up the borehole into a pit. When the borehole becomes obstructed or the pressure becomes too great inside the borehole, the ground fractures and fluid escapes to the surface and may affect surface waters.
Ground disturbance: Any activity that compacts, relocates, overturns, removes, mixes, or otherwise disturbs the ground, including under water. Ground disturbance can be caused by the use of hand tools (shovels, pick axe, posthole digger, etc.), heavy equipment (excavators, backhoes, bulldozers, dredgers, trenching and earthmoving equipment, etc.), and heavy trucks (large four wheel drive trucks, dump trucks and tractor trailers, etc.). Trenching, bulldozing, dredging, excavating, scraping, and plowing are typical examples of ground disturbance activities.
Height:width ratio: The height of structures shall at all points be equal to or exceed the width of the deck. For the purpose of this definition, height shall be measured from the marsh substrate to the bottom of the longitudinal support beam.
High Tide Line (HTL): The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides 58 that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds. (33 CFR 328). Refer to the highest predicted tide for the current year at the nearest NOAA tide gage. https://tidesandcurrents.noaa.gov/map/index.html
Historic Property: Any prehistoric or historic site (including archaeological sites), district, building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).
Impacts:
Direct Impacts: Effects that are caused by the activity and occur at the same time and place (40 CFR 1508.7).
Indirect impacts: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.
Secondary impacts: Effects on an aquatic ecosystem that are associated with a discharge of dredged or fill materials, but do not result from the actual placement of the dredged or fill material.

Information about secondary effects on aquatic ecosystems shall be considered prior to the time final section 404 action is taken by permitting authorities. Some examples of secondary effects on an aquatic ecosystem are: aquatic areas drained, flooded, fragmented; fluctuating water levels in an impoundment and downstream associated with the operation of a dam; septic tank leaching and surface runoff from residential or commercial developments on fill; and leachate and runoff from a sanitary landfill located in waters of the U.S. See 40 CFR 230.11(h).

Incidental Fallback: Incidental fallback is the redeposit of small volumes of dredged material that is incidental to excavation activity in waters of the U.S. when such material falls back to substantially the same place as the initial removal (33 CFR 323.2(d)(2)(iii)).

In the dry: Work that is done under dry conditions, e.g., work behind cofferdams or when the stream or tide is waterward of the work.

Independent utility: A test to determine what constitutes a single and complete non-linear project in the USACE Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Individual permit: A Department of the Army authorization that is issued following a case-by-case evaluation of a specific structure or work in accordance with the procedures of 33 CFR 322, or a specific project involving the proposed discharge(s) in accordance with the procedures of 33 CFR 323, and in accordance with the procedures of 33 CFR 325 and a determination that the proposed discharge is in the public interest pursuant to 33 CFR 320.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Intertidal: The area in between mean low water and the high tide line.

Living reef: See the definition of “artificial or living reef.”

Living shoreline: A term used to describe a low-impact approach with a substantial biological component to shoreline protection and restoration along coastal shores, riparian zones, lacustrine fringe wetlands, or oyster or mussel reef structures. This approach integrates natural features to restore, enhance, maintain, or create habitat, functions, and processes while also functioning to mitigate flooding or shoreline erosion. Living shorelines may stabilize banks and shores with small fetch and gentle slopes that are subject to low-to mid-energy waves. A living shoreline has a footprint that is made up mostly of native material. It incorporates vegetation or other living, natural “soft” elements alone or in combination with some type of harder shoreline structure (e.g., oyster or mussel reefs or rock sills) for added protection and stability. Living shorelines should maintain the natural continuity of the land-water interface and retain or enhance shoreline ecological processes.

Loss of waters of the United States: Waters of the U.S. that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. The loss of stream bed includes the acres of stream bed that are permanently adversely affected by filling or excavation because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the U.S. is a threshold measurement of the impact to jurisdictional waters or wetlands for determining whether a project may qualify for a GP; it is not a net threshold that is calculated after considering compensatory mitigation that maybe used to offset losses of aquatic functions and services. Waters of the U.S. temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the U.S. Impacts resulting from activities that do not require Department of the Army authorization, such as activities eligible for exemptions under section 404(f) of the Clean Water Act, are not considered when calculating the loss of waters of the U.S.

Maintenance: The repair, rehabilitation, or in-kind replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3 – "Activities occurring before certain dates," provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Maintenance includes minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards that are necessary to make repair, rehabilitation, or replacement are authorized. Currently serviceable means useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.
Maintenance Exemption: In accordance with 33 CFR 323.4(a)(2), any discharge of dredged or fill material that may result from any of the following activities is not prohibited by or otherwise subject to regulation under Section 404 of the CWA: "Maintenance, including emergency reconstruction of recently damaged parts, of currently serviceable structures such as dikes, dams, levees, groins, riprap, breakwaters, causeways, bridge abutments or approaches, and transportation structures. Maintenance does not include any modification that changes the character, scope, or size of the original fill design."
Mean high water: Line on the shore reached by the plane of the average high water. Where precise determination of the actual location of the line becomes necessary, it must be established by survey with reference to the available tidal datum, preferably averaged over a period of 18.6 years. Less precise methods, such as observation of the "apparent shoreline" which is determined by reference to physical markings, lines of vegetation, or changes in type of vegetation, may be used only where an estimate is needed of the line reached by the mean high water.
Mechanized land clearing: Land clearing activities using mechanized equipment such as backhoes or bulldozers with sheer blades, rakes or discs constitute point source discharges and are subject to section 404 jurisdiction when they take place in wetlands or waters of the U.S (Regulatory Guidance Letter 90-05).
Metallic mineral: Any ore or material to be excavated from the natural deposits on or in the earth for its metallic mineral content to be used for commercial or industrial purposes. "Metallic mineral" does not include thorium or uranium.
Minor deviations: Deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, or current construction codes or safety standards, which are necessary to make repair, rehabilitation, or replacement are permitted, provided the adverse environmental effects resulting from such repair, rehabilitation, or replacement are minimal.
Natural Rocky Habitats: Intertidal and subtidal substrates of pebble-gravel, cobble, boulder, or rock ledge and outcrops. Manufactured stone (e.g., cur or engineered riprap) is not considered a natural rocky habitat. Natural rocky habitats are either found as pavement (consolidated pebble-gravel, cobble, or boulder areas) or as a mixture with fines (i.e., clay and sand) and other substrates. Rocky habitats as EFH are defined as follows: (1) All pebble-gravel, cobble, or boulder pavements; (2) Pebble-gravel mixed with fines: mixed substrate of pebble-gravel and fines where pebble-gravel is an evident component of the substrate (either through visual observation or within sediment samples). Sediment samples with a content of 10% or more of pebble-gravel in the top layer (6-12 inches) should be delineated; (3) Scattered cobble, scattered boulder, scattered cobble/boulder: mixed substate of cobble and/or boulder and other substrates. The aerial extent of cobbles and/or boulders should be delineated; and (4) All rock ledge outcrops: area should be delineated along the edge of the ledge/outcrop (as defined by NMFS Habitat and Ecosystems Services Branch, Gloucester, MA).
Navigable waters or Navigable waters of the U.S.: These waters are subject to section 10 of the Rivers and Harbors Act of 1899 and are defined as those waters that are subject to the ebb and flow of the tide and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce (33 CFR Part 329). Work or structures in navigable

waters require permits pursuant to §9 and §10 of the Rivers and Harbors Act of 1899. Also see the definition of “waters of the U.S.” below.
Note: Currently the following non-tidal waters have been determined to be navigable waters of the U.S. subject to permit jurisdiction in Massachusetts: Merrimack River, Connecticut River, and Charles River to the Watertown Dam.
Nearshore disposal: This is defined in the USACE Coastal Engineering Manual as “(1) In beach terminology an indefinite zone extending seaward from the shoreline well beyond the breaker zone. (2) The zone which extends from the swash zone to the position marking the start of the offshore zone, typically at water depths of the order of 20m.” A nearshore berm is an artificial berm built in shallow water using dredged material. Often, the berm is intended to renourish the adjacent and downdrift shore over time under the influence of waves and currents.
Non-regulated activity: Only structures or fills that were previously authorized and are in compliance with the terms and condition of the original authorization can be maintained as a non-regulated activity under 33 CFR 323.4(a)(2). Minor deviations from the previously authorized footprint do not qualify as a non-regulated activity and require new authorization from the USACE. The state’s maintenance provisions may differ from the USACE and a project may require reporting and written authorization from the state.
Non-tidal wetlands: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. Non-tidal wetlands contiguous to tidal waters are located landward of the HTL (*i.e.,* spring HTL). Also see the definition of “Waters of the U.S.” below.
Oil or natural gas pipeline: Any pipe or pipeline for the transportation of any form of oil or natural gas, including products derived from oil or natural gas, such as gasoline, jet fuel, diesel fuel. heating oil, petrochemical feedstocks, waxes, lubricating oils, and asphalt.
Ordinary High Water Mark (OHWM): A line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas. See 33 CFR 328.3(e).
Overall project: The overall project, for purposes of these GPs, includes all regulated activities that are reasonably related and necessary to accomplish the project purpose. Also see the definition of “single and complete linear project.”
Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.
Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.
Permanent impacts: Permanent impacts means waters of the U.S. that are permanently affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent impacts include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody.
Preconstruction notification (PCN): A request submitted by the applicant to the USACE for confirmation that a particular activity is authorized by these GPs. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Preconstruction notification may be required by the terms and conditions of these GPs. A PCN may be voluntarily submitted in cases where PCN is not required and the applicant wants confirmation that the activity is authorized under these GPs.
Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions (33 CFR 332.2).
Real estate subdivision: Includes circumstances where a landowner or developer divides a tract of land into smaller parcels for the purpose of selling, conveying, transferring, leasing, or

developing said parcels. This would include the entire area of a residential, commercial or other real estate subdivision, including all parcels and parts thereof

Reconfiguration zone: A USACE authorized area in which permittees may rearrange pile-supported structures and floats without additional authorizations. A reconfiguration zone does not grant exclusive privileges to an area or an increase in structure or float area.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/ historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in again in aquatic resource area and functions (33 CFR 332.2).

Reference Site: Reference sites - Compensatory restoration, rehabilitation, and creation mitigation projects should seek to duplicate the features of reference aquatic resources or enhance connectivity with adjacent natural upland and aquatic resource landscape elements. Performance standards related to reference sites are encouraged. Mitigation project sites must be selected based on their ability to be, and continue to be, resistant to disturbance from the surrounding landscape, by locating them adjacent to refuges, buffers, green spaces, and other preserved natural elements of the landscape. In general, aquatic resource mitigation projects must be designed to be self-sustaining, natural systems within the landscape and climate in which they are located, with little or no ongoing maintenance and/or hydrologic manipulation.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area (33 CFR 332.2).

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation (33 CFR 332.2).

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Sedimentation: Sedimentation is defined as the process of deposition of a solid material from a state of suspension. Deposited sediments may accumulate and have temporal impacts to aquatic resource areas. See secondary effects definition above. For the purposes of this document, “greater than minimal sedimentation” is generally not considered to occur when using proper erosion controls (GC 25) or when sedimentation is considered “de minimis” 33 CFR 323.2(d)(5).

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term “single and complete project” is defined as that portion of the total linear project proposed or accomplished by one owner/ developer or partnership or other association of owners/developers that includes all crossings of a single water of the U.S. (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for the purposes of these GPs. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term “single and complete project” is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete

non-linear project must have independent utility (see the definition of “independent utility”). Single and complete non-linear projects may not be “piecemealed” to avoid the limits in a GP authorization.
Special aquatic sites (SAS): These include inland and saltmarsh wetlands, mud flats, vegetated shallows, sanctuaries and refuges, coral reefs, and riffle and pool complexes. These are defined at 40 CFR 230.3 and listed in 40 CFR 230 Subpart E.
Streambed: The stream substrate between the OHW marks on each side. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the streambed, but outside of the OHW marks, are not considered part of the streambed.
Stream channelization: The manipulation of a stream’s course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the U.S.
Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.
Temporal loss: The time lag between the loss of aquatic resource functions caused by the permitted impacts and the replacement of aquatic resource functions at the compensatory mitigation site(s) (33 CFR 332.2).
Temporary impacts: Temporary impacts include, but are not limited to, jurisdictional waters that are temporarily filled, flooded, excavated, or drained because of the regulated activity. Impacts are considered temporary when they are removed immediately upon completion of the activity. Note: An impact is considered temporary when the aquatic resource is restored to pre-project conditions, but effects to archaeological and/or cultural resources may be permanent in duration.
Tidal wetlands: A wetland that is subject to the ebb and flow of the tide. See the definition of “Waters of the U.S.” below.
Tide gates: Structures such as duckbills, flap gates, manual and self-regulating tide gates, etc. that regulate or prevent upstream tidal flows.
Turbidity: A measure of the level of particles such as sediment, plankton, or organic by-products, in a body of water. As the turbidity of water increases, it becomes denser and less clear due to a higher concentration of these light-blocking particles. Suspended solids are more likely to carry toxic chemicals, and can also negatively affect aquatic organisms, water temperature, and dissolved oxygen levels.
Utility line: Any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose that is not oil, natural gas, or petrochemicals. A utility line also includes any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and radio and television communication. The term ‘utility line’ does not include activities that drain a water of the U.S., such as drainage tile or French drains, but it does apply to pipes conveying drainage from another area.
Vegetated shallows: Permanently inundated areas that under normal circumstances support communities of rooted aquatic vegetation, such as eelgrass *(Zostera marina)* and widgeon grass (*Rupia maritima*) in marine systems (does not include salt marsh) as well as a number of freshwater species in rivers and lakes. These are a type of SAS defined at 40 CFR 230.43. Vegetated shallows are commonly referred to as submerged aquatic vegetation or SAV. Vegetated shallow survey guidance is located at www.nae.usace.army.mil/missions/regulatory /jurisdiction-and-wetlands. Maps of vegetated shallows in Massachusetts are located at www.nae.usace.army.mil/missions/regulatory/state-general-permits/massachusetts-general-permit.
Vernal pools: For the purposes of these GPs, vernal pools are depressional wetland basins that typically dry up in most years and may contain inlets or outlets, typically of intermittent flow. Vernal pools range in both size and depth depending upon landscape position and parent material(s). In

most years, vernal pools support one or more of the following obligate indicator species: wood frog, spotted salamander, blue-spotted salamander, marbled salamander, Jefferson's salamander and fairy shrimp. However, they should preclude sustainable populations of predatory fish.

Water diversions: Water diversions are activities such as bypass pumping (e.g., "dam and pump") or water withdrawals. Temporary flume pipes, culverts or cofferdams where normal flows are maintained within the stream boundary's confines aren't water diversions. "Normal flows" are defined as no change in flow from pre-project conditions.

Waters of the United States (U.S.) These waterbodies are the waters where permits are required for the discharge of dredged or fill material pursuant to §404 of the CWA. These waters include but are not limited to navigable waters of the U.S. and tidal wetlands and include many non-tidal wetlands and other waterbodies. See definitions for navigable waters of the U.S., tidal wetlands, waterbody, and non-tidal wetlands. (33 CFR 328)

Waterbody: Examples of "waterbodies" include oceans, coastal waters, rivers, streams, ditches, lakes, ponds, and wetlands. If a wetland is adjacent to a waterbody determined to be a water of the U.S., that waterbody and any adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)).

Weir: A barrier across a river designed to alter the flow characteristics. In most cases, weirs take the form of a barrier, smaller than most conventional dams, across a river that causes water to pool behind the structure and allows water to flow over the top. Weirs are commonly used to alter the flow regime of a river, prevent flooding, measure discharge and help render a river navigable.

Wetland: Wetlands are areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. The Corps of Engineers Wetlands Delineation Manual in conjunction with the associated regional supplement should be used to determine if a wetland is present and delineate wetland boundaries.

Acronyms

BMPs	Best Management Practices
BUAR	Massachusetts Board of Underwater Archaeological Resources
CWA	Clean Water Act
CZM	Coastal Zone Management
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
EFH	Essential Fish Habitat
FNP	Federal Navigation Project
GC	General Condition
GP	General Permit
HTL	High Tide Line
IP	Individual Permit
LID	Low impact development
MassDEP	Massachusetts Department of Environmental Protection
MA DMF	Massachusetts Division of Marine Fisheries
MHC	Massachusetts Historical Commission
MHW	Mean High Water
MLLW	Mean Lower Low Water
MLW	Mean Low Water
NHPA	National Historic Preservation Act
NMFS	National Marine Fisheries Service
OHW	Ordinary High Water Mark
PCN	Preconstruction Notification
SAS	Special Aquatic Sites
SF	Square Feet
SV	Self-Verification
SHPO	State Historic Preservation Officer
THPO	Tribal Historic Preservation Officer
USFWS	U.S. Fish and Wildlife Service
USCG	U.S. Coast Guard
USFS	U.S. Forest Service
USGS	U.S. Geological Service
WQC	Water Quality Certification

Appendix A: Guidance for NHPA Section 106 Compliance in Massachusetts

1. Purpose & Applicability

Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA) (54 U.S.C § 306108), requires Federal agencies to take into account the effects of their undertakings on Historic Properties and afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. Therefore, in order for an activity to be eligible for authorization under the 2023 Massachusetts General Permit, the USACE must consider the effect the activity may have on historic properties. Historic properties may include, but are not limited to, historic districts, archaeological districts, sites, buildings, structures, objects, sacred sites, traditional cultural places, and traditional cultural landscapes that are included in, or eligible for inclusion in, the National Register of Historic Places (NRHP).

This guidance applies to projects that require authorization under Section 404 of the Clean Water Act (33 U.S.C. § 1344) and/or Section 10 of the Rivers and Harbors Act (33 U.S.C. §403) and will assist applicants when evaluating and documenting the presence of historic properties within or near their project site(s). The prospective applicant will evaluate their proposed project using the criteria below to determine if their project has the potential to affect historic properties and if so, whether or not historic properties are present or are likely to be present. All activities authorized under these GPs shall follow the terms outlined in General Condition 14: Historic Properties and General Condition 6: Tribal Rights & Burial Sites. Prospective applicants shall complete their due diligence according to the procedures below for their application to be deemed complete.

2. No Potential to Affect Historic Properties

Certain activities do not have the potential to cause effects on historic properties, assuming such historic properties were present, based on the nature of the activity and site-specific conditions. Therefore, these activities **do not** require historic property identification efforts or notification of the SHPO, THPOs, and/or BUAR under Section 106. The USACE has determined the following activities within the stated parameters have no potential to affect historic properties:

General Permit	Activity Parameters
1	Temporary buoys, markers and similar structures that are placed during winter events on ice and removed before spring thaw.
2	Repair or rehabilitation of structures that are less than 45 years in age. Any temporary structures or fills or work necessary to complete repairs or rehabilitation must not result in any ground disturbance.
3	Maintenance and replacement of moorings that are less than 45 years in age.
6	Maintenance, repair, replacement, or removal of utility lines, oil or natural gas pipelines, outfall or intake structures, and/or appurtenant features that are less than 45 years in age when all access, staging, and ground disturbance is strictly limited to previously disturbed areas (including any previous ground disturbance). Replacement must be in kind or smaller in size. Installation of tide gates on outfall structures that are less than 45 years in age.
7	Maintenance dredging of previously dredged areas where dredging does not extend beyond the original bottom elevations.

	Disposal of dredged material at an existing established and USACE-approved confined aquatic disposal cell. Beach nourishment in ongoing existing nourishment areas.
11	Fish and wildlife harvesting and attraction devices and activities.
13	Cleanup of hazardous and toxic waste materials, including contaminated sediments, that are less than 45 years in age.
16	Removal of land-based and water-based renewable energy generation facilities and hydropower projects that are less than 45 years in age.
18	Installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures for previously authorized by the USACE and ongoing aquaculture activities. Discharges of dredged or fill material into tidal or non-tidal waters necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities for previously authorized and ongoing aquaculture activities.
20	Maintenance activities for existing living shorelines excluding maintenance activities that require new ground disturbance such as excavation or re-sloping of the bank/shoreline.
22	Reshaping or maintenance of existing drainage ditches less than 45 years in age excluding ditch enlargement.
23	Placement of temporary and removable linear transportation and wetland/stream crossings that have no ground disturbance prior to placement, during placement, and during removal (i.e., placed on the surface and subsequently removed within one year of placement).
24	Placement of temporary and removable crossings and cofferdams that have no ground disturbance prior to placement, during placement, and during removal (i.e., placed on the surface and subsequently removed within one year of placement).
25	Emergency repair of existing structures and/or fills less than 45 years in age.

3. Historic Property Identification

If the activity does not fit under the criteria above, the following historic property identification efforts must be completed to demonstrate compliance with Section 106 of the NHPA. This includes documenting previously identified and unidentified historic properties in the project area.

a. Previously Identified Historic Properties: The prospective applicant shall document if previously identified historic properties are present on or adjacent to the project site by notifying the Massachusetts Historical Commission (MHC) and the Massachusetts Board of Underwater Archaeological Resources (BUAR), as appropriate, of the proposed project. The MHC and BUAR will check their records for the presence of any previously identified historic properties. The following outlines how prospective applicants should notify the MHC and BUAR.

i. The prospective applicant will notify the SHPO and BUAR to identify any previously recorded cultural resources. Applicants shall mail a completed Project Notification Form[18], project narrative, location (coordinates), plans, soil maps, and information on known cultural resources to the MHC. The MHC does not accept submissions via email. Applicants shall email or mail this information to the BUAR when the activity is located in lakes, ponds, rivers, and/or navigable waters in MA. Emailed file attachments should be <10MB. Any files >10MB shall be delivered via a file exchange system or the hard copy documents shall be mailed. Preferred contact information is listed below.

ii. **When sending this information, applicants must also document proof of receipt OR proof the information was delivered.** Proof of receipt constitutes a certified mail receipt, read email receipt, or other mail/email/online tracking services that document the information has reached the intended recipient(s). Proof the information was delivered constitutes a certificate of mailing, email delivery receipt, or other mail/email/online services that document the information was sent at a particular time. When using proof of delivery such (e.g., certificate of mailing), applicants should add 5 days to the 30-day notification period so the mail has time to reach its intended recipient. When using proof of receipt, the applicant may begin the 30-day notification period from the date received by the intended recipient.

iii. When mailing or emailing the application materials, applicants should include the following statement: “Please send responses to this notification directly to the USACE via email: cenae-r-ma@usace.army.mil or address regular mail responses to: Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, Massachusetts 01742-2751.” Email responses to the USACE are strongly preferred. The SHPO and BUAR will contact the USACE and cc the applicant(s) within 30 days of receiving the notification if their records indicate that historic properties are located in the project vicinity, and if additional review and/or surveys are recommended to ensure NHPA compliance. If the SHPO and/or BUAR do not respond within 30 days of receiving the notification, is it presumed that no known historic properties are present.

b. Previously Unidentified Historic Properties: The prospective applicant shall evaluate the project site and determine the sensitivity for the presence of historic properties if the project site has not been previously surveyed for cultural resources within the last 10 years. If the sensitivity is determined to be moderate to high, an intensive archaeological and/or architectural survey is required to investigate the potential presence of historic properties. The individual conducting this survey must meet the Secretary of the Interior’s Standards for Professional Qualifications (48 FR 44738-44739) in the discipline relevant to a particular resource type. For example, archeologists should not document and evaluate buildings or structures and architectural historians should not document and evaluate archaeological sites. The identification and qualifications for those participating in any survey and evaluation of resources should be included with the survey results. The criteria listed below are indicators of low sensitivity for the presence of historic properties for consideration when determining if an archaeological or architectural survey is needed.

Low sensitivity indicators:

- Previous archaeological and/or architectural survey within the last 10 years with negative results.
- In a location created in modern times (i.e., built on fill placed within the last 45 years or within an area excavated within the last 45 years).
- USACE has reviewed the project description and determined that a survey is not warranted based on the proposed activity and its location.

State survey guidance and standards are provided in the September 1995 Historic Properties Survey Manual Guidelines for the Identification of Historical and Archaeological Resources in Massachusetts available. State survey guidance and standards for underwater surveys are provided

[18] https://www.sec.state.ma.us/mhc/mhcform/formidx.htm

in the Board of Underwater Archaeological Resources' 2022 Policy Guidance on Archaeological Investigations and Related Survey Standards for the Discovery of Underwater Archaeological Resources. This guidance is available on the NAE Regulatory website: https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit/.

Please note, a negative result from MHC and/or BUAR does not necessarily mean no historic properties are present. Often proposed project sites have not been previously subject to a survey, so historic properties which may be present have not been previously recorded.

4. Tribal Coordination

Prospective applicants shall mail the Project Notification Form, project narrative, location (coordinates), plans with locus map, soil maps, and information on cultural resources to the Wampanoag Tribe of Gay Head (Aquinnah), Mashpee Wampanoag Tribe, Narragansett Indian Tribe, and/or Stockbridge-Munsee Community Band of Mohican Indians with interests in the project location. Preferred tribal contact information, including their respective areas of interest, can be found below. Applicants shall follow the same procedures as identified in Section 3(a)i-iii above when notifying Tribes of the proposed activity. Applicants shall provide the USACE with any responses received from the tribe(s) with their PCN application. If a tribe does not respond within 30 days of receiving the notification, the applicant shall provide USACE with all documentation of tribal outreach with their SV or PCN submission (e.g., emails, letters, phone call log, etc.). If the tribe indicates the presence of a previously unrecorded cultural resource, including a traditional cultural property (TCP) or traditional cultural landscape (TCL), a PCN is required.

5. Effect Determination

The project may have the potential to affect historic properties and/or tribal resources if 1) notification recipients respond within 30 calendar days of notification with concerns, 2) historic properties eligible for listing, or potentially eligible for listing in the NRHP, are present or 3) tribal resources are known to be present. The USACE may need to further review the project to confirm potential effects to historic properties and/or tribal resources. A PCN is required for any activity that may affect a historic property.

The USACE may determine the project will have 'no effect' on historic properties (i.e., no historic properties affected) when procedures outlined in Section 3 above are followed and no cultural resources are identified. Similarly, if historic properties are identified and will be completely avoided, the USACE may determine 'no effect.'

6. Contact Information:

Massachusetts Historical Commission

The Massachusetts Archives Building
220 Morrissey Boulevard
Boston, Massachusetts 02125

No email. Applicants or their representatives must send project information via certified mail and submit the certified mail receipt to the USACE or send via regular mail and submit proof of delivery.

Area of concern: All of Massachusetts.

Massachusetts Board of Underwater Archaeological Resources (BUAR)

100 Cambridge Street, Suite 900
Boston, Massachusetts 02114
Email: david.s.robinson@mass.gov

Applicants or their representatives must send project information via email (***strongly preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: All waterbodies in Massachusetts.

Wampanoag Tribe of Gay Head (Aquinnah)

Bettina Washington
Tribal Historic Preservation Officer (THPO)
20 Black Brook Road
Aquinnah, Massachusetts 02535
Email: thpo@wampanoagtribe-nsn.gov

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: All of Massachusetts.

Mashpee Wampanoag Tribe

ATTN: David Weeden
Tribal Historic Preservation Officer (THPO)
483 Great Neck Road South
Mashpee, Massachusetts 02649
Email: 106review@mwtribe-nsn.gov
Cc: David.weeden@mwtribe-nsn.gov

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: All of Massachusetts.

Narragansett Indian Tribe

ATTN: John Brown
Tribal Historic Preservation Officer (THPO)
Narragansett Indian Longhouse
4425 South County Trail
Charlestown, Rhode Island 02813
Email: tashtesook@aol.com

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: Massachusetts east of the Connecticut River.

Stockbridge-Munsee Community Band of Mohican Indians

ATTN: Jeff Bendremer
Tribal Historic Preservation Manager
Stockbridge-Munsee Community
Tribal Historic Preservation Extension office
86 Spring Street
Williamstown, Massachusetts 01267
Email: thpo@mohican-nsn.gov

Applicants or their representative must send project information via email (***preferred***) or regular mail and provide proof of receipt or proof of delivery.

Area of concern: West of the Connecticut River and Northfield, Montague, Miller's Falls, Turner's Falls, Sunderland, Amherst, Hadley, South Hadley, Chicopee, Springfield and Longmeadow.

APPENDIX B PRE-CONSTRUCTION NOTIFICATION

U.S. Army Corps of Engineers (USACE), New England District (NAE)

PRE-CONSTRUCTION NOTIFICATION (PCN)

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose The information provided will be used in evaluating activities under Pre-Construction Notification procedures within New England.

Routine Uses This information may be shared with other federal, state, and local government agencies during the application review process. Submission

Disclosure of requested information is voluntary. However, if information is not provided the PCN application cannot be fully evaluated nor can USACE render a permit decision.

Instructions The applicant must complete ALL required sections of this document before their submission to USACE. The PCN submission to USACE shall include one set of drawings which show the location and character of the proposed activity, statements that address each required field below, and documentation that supports each field (e.g., emails, letters, description/narrative, phone calls, surveys, reports, etc.). Electronic submissions to the following address are strongly preferred: cenae-r-ma@usace.army.mil. The email subject line shall contain the following: General Permit #, PCN, City/Town, and date submitted. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY USACE)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME AND TITLE (*agent is not required*)
First - Middle - Last -	First - Middle - Last -
Company -	Company -
E-mail Address -	E-mail Address -
6. APPLICANT'S ADDRESS:	9. AGENT'S ADDRESS:
Address-	Address-
City - State - Zip - Country -	City - State - Zip - Country -
7. APPLICANT'S PHONE NOs. with AREA CODE	10. AGENT'S PHONE NOs. with AREA CODE
a. Residence b. Business c. Fax d. Mobile	a. Residence b. Business c. Fax d. Mobile

STATEMENT OF AUTHORIZATION

11. I hereby authorize, _____ to act on my behalf as my agent in the processing of this general permit PCN application and to furnish, upon request, supplemental information in support of this general permit PCN application.

_____ _____

SIGNATURE OF APPLICANT DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME or TITLE (*see instructions*)

13. NAME OF WATERBODY, IF KNOWN (*if applicable*)	14. PROPOSED ACTIVITY STREET ADDRESS (*if applicable*)
15. LOCATION OF PROPOSED ACTIVITY (*see instructions*)	City: State: Zip:
Latitude: °N Longitude: °W	

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (*see instructions*)

State Tax Parcel ID: Municipality:

Section: Township: Range:

17. DIRECTIONS TO THE SITE.

18. IDENTIFY THE SPECIFIC GENERAL PERMIT(S) YOU PROPOSE TO USE:

19. DESCRIPTION OF PROPOSED GENERAL PERMIT ACTIVITY (*see instructions*)

20. DESCRIPTION OF PROPOSED MITIGATION MEASURES (*see instructions*)

21. PURPOSE OF GENERAL PERMIT ACTIVITY (*Describe the reason or purpose of the project, see instructions*)

22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by Proposed General Permit Activity (*see instructions*)

Area (square feet)	Length (linear feet)	Volume (cubic yards)	Duration	Purpose

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.

23. List any other GP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project on any related activity (*see instructions*)

24. If the proposed activity will result in the loss of aquatic resources that exceed those identified in the New England District Compensatory Mitigation Thresholds, explain how the compensatory mitigation requirement will be satisfied. (*see instructions*)

25. Is Any Portion of the General Permit Activity Already Complete? ☐ Yes ☐ No If Yes, describe the completed work:

26. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed GP activity or utilize the designated critical habitat that might be affected by the proposed GP activity. (*see instructions*)

27. List any historic properties that have the potential to be affected by the proposed GP activity or include a vicinity map indicating the location of the historic property or properties. Attach relevant project information, along with any responses received from project notifications to this submittal. (*see instructions*)

28. For a proposed GP activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, identify the Wild and Scenic River or the "study river":

29. If the proposed GP activity also requires permission from the USACE pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, have you submitted a written request for section 408 permission from the USACE district having jurisdiction over that project? ☐ Yes ☐ No

If "yes", please provide the date your request was submitted to the USACE District:

30. Does the activity require a 401 Water Quality Certification (WQC)? If so, specify the type of 401 WQC that is required (general or individual). In cases where an individual 401 WQC is required, provide the date the 401 WQC certification request was submitted to the certifying authority and their contact information.

31. If the terms of the GP(s) you want to use require additional information to be included in the PCN (i.e. sampling and analysis plan), please include that information in this space or provide it on an additional sheet of paper marked Block 30. (*see instructions*)

32. I certify that the information in this pre-construction notification is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

The Pre-Construction Notification must be signed by the person who desires to undertake the proposed activity (applicant) and, if the statement in block 11 has been filled out and signed, the authorized agent.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions for Preparing a

Department of the Army

General Permit (GP) Pre-Construction Notification (PCN)

Blocks 1 through 4. To be completed by the U.S. Army Corps of Engineers.

Block 5. Applicant' Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the PCN, please attach a sheet of paper with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the PCN. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where they can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by the applicant, if an agent is to be employed.

Block 12. Proposed General Permit Activity Name or Title. Please provide a name identifying the proposed GP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 13. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the GP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Activity Street Address. If the proposed GP activity is located at a site having a street address (not a box number), enter it in Block 14.

Block 15. Location of Proposed Activity. Enter the latitude and longitude of where the proposed GP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area requiring evaluation. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality where the site is located.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide a description of the location of the proposed GP activity, such as lot numbers, tract numbers, or you may choose to locate the proposed GP activity site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed GP activity site if known. If there are multiple locations, please indicate directions to each location on a separate sheet of paper and mark as Block 17.

Block 18. Identify the Specific General Permit(s) You Propose to Use. List the number(s) of the General Permit(s) you want to use to authorize the proposed activity (e.g., GP 4).

Block 19. Description of the Proposed General Permit Activity. Describe the proposed GP activity, including the direct and indirect adverse environmental effects of the proposed activity. The description of the proposed activity should be sufficiently detailed for USACE to determine that the adverse environmental effects of the activity will be no more than minimal. Identify the materials to be used in construction, as well as the methods by which the work is to be done.

Provide drawings to show that the proposed GP activity complies with the terms of the applicable GP(s). Drawings should contain sufficient detail to provide an illustrative description of the proposed GP activity, but do not need to be detailed engineering plans. The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 19.

Block 20: Description of Proposed Mitigation Measures. Describe any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed GP activity. The description of any proposed mitigation measures should be sufficiently detailed for USACE to determine how the measures would avoid and minimize adverse environmental effects. If adverse effects exceed the New England District compensatory mitigation thresholds, you must document how compensatory mitigation would be satisfied in Block 24.

Block 21. Purpose of General Permit Activity. Describe the purpose and need for the proposed GP activity. What will it be used for and why? Also include a brief description of any related activities associated with the proposed project. Provide the approximate dates you plan to begin and complete all work.

Block 22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by the Proposed General Permit Activity. For discharges of dredged or fill material into Waters of the U.S., provide the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained by the proposed GP activity. For structures or work in Navigable Waters of the U.S. subject to Section 10 of the Rivers and Harbors Act of 1899, provide the amount of navigable waters filled, dredged, occupied by one or more structures (e.g., aids to navigation, mooring buoys) by the proposed GP activity. The area of impact includes the structures or fills with direct or indirect effects to waters of the U.S. The length of impact includes the length of a stream, including is banks, that are directly affected by the structures or fills. The duration of impact should be identified as temporary (xx days) or permanent. The impact purpose should briefly describe what structure or fill is responsible for the impact.

Block 23. Identify Any Other General Permit(s), Regional General Permit(s), or Individual Permit(s) Used to Authorize Any Part of Proposed Activity or Any Related Activity. List any other GP(s) or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. For linear projects, list other separate and distant crossings of waters and wetlands authorized by these GPs that do not require PCNs. If more space is needed, attach an extra sheet of paper marked Block 23.

Block 24. Compensatory Mitigation Statement for Losses Greater Than the New England District Compensatory Mitigation Thresholds. New England District requires compensatory mitigation at a minimum one for one replacement ratio or greater for all aquatic resource losses that require a PCN and exceed the New England District Compensatory Mitigation Thresholds, unless USACE determines in writing that either some other form of mitigation is more environmentally appropriate or the adverse environmental effects of the proposed GP activity are no more than minimal without compensatory mitigation, and provides an activity specific waiver of this requirement. Describe the proposed compensatory mitigation for wetland losses greater than the New England District Compensatory Mitigation Thresholds or provide an explanation of why USACE should not require wetland compensatory mitigation for the proposed GP activity. If more space is needed, attach an extra sheet of paper marked Block 24.

Block 25. Is Any Portion of the General Permit Activity Already Complete? Describe any work that has already been completed for the GP activity.

Block 26. List the Name(s) of Any Species Listed As Endangered or Threatened under the Endangered Species Act that Might be Affected by the General Permit Activity. If you are not a federal agency, and if any listed species or designated critical habitat might be affected or is in the vicinity of the proposed GP activity, or if the proposed GP activity is located in designated critical habitat, list the name(s) of those endangered or threatened species that might be affected by the proposed GP activity or utilize the designated critical habitat that might be affected by the proposed GP activity. If you are a Federal agency, and the proposed GP activity requires a PCN, you must provide documentation demonstrating compliance with Section 7 of the Endangered Species Act.

Block 27. List Any Historic Properties that Have the Potential to be Affected by the General Permit Activity. If you are not a federal agency, and if any historic properties have the potential to be affected by the proposed GP activity, list the name(s) of those historic properties that have the potential to be affected by the proposed GP activity. Provide all relevant documentation about these historic properties in the PCN submittal. If you are a Federal agency, and the proposed GP activity requires a PCN, you must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

Block 28. List the Wild and Scenic River or Congressionally Designated Study River if the General Permit Activity Would Occur in such a River. If the proposed GP activity will occur in a river in the National Wild and Scenic River System or in a river officially designated by Congress as a “study river” under the Wild and Scenic Rivers Act, provide the name of the river. For a list of Wild and Scenic Rivers and study rivers, please visit http://www.rivers.gov/

Block 29. General Permit Activities that also Require Permission from the USACE Under 33 U.S.C. 408. If the proposed GP activity also requires permission from the USACE under 33 U.S.C. 408 because it will temporarily or permanently alter, occupy, or use a USACE federal authorized civil works project, indicate whether you have submitted a written request for section 408 permission from the USACE district having jurisdiction over that project.

Block 30. 401 Water Quality Certification. As described above, specify if the activity requires a 401 WQC from the certifying authority.

Block 31. Other Information Required For General Permit Pre Construction Notifications. The terms of some of the General Permits include additional information requirements for preconstruction notifications:

* Maintenance – information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.
* Temporary Construction, Access, and Dewatering – a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.
* Repair of Uplands Damaged by Discrete Events – documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration.
* Commercial Shellfish Aquaculture Activities – (1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the species that will be cultivated during the period this GP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area (a detailed survey is not required).Dredging – (1) a proposed sampling and analysis plan shall be provided to USACE for approval prior to its execution. Pre-application meetings are encouraged.
* Beach Nourishment – sediment grain size should be determined for the length of the beach where nourishment is proposed. The frequency and locations of sediment sampling shall be sufficient to identify the sediment composition of the beach profile. This data shall be consolidated to generate a sediment gradation curve for each sampled transect. Each sampled transect should also be identified on the project plans (drawings).

If more space is needed, attach an extra sheet of paper marked Box 31.

Block 32. Signature of Applicant or Agent. The PCN must be signed by the person proposing to undertake the GP activity, and if applicable, the authorized party (agent) that prepared the PCN. The signature of the person proposing to undertake the GP activity shall be an affirmation that the party submitting the PCN possesses the requisite property rights to undertake the GP activity (including compliance with special conditions, mitigation, etc.).

DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by the USACE. The permittee may ask the USACE to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the USACE does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. The 60-day PCN review period will not start until a delineation has been completed.

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross Section Map. Identify each illustration with a figure or attachment number. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient drawings should also be included. Please submit one copy of all drawings on 8½ x 11 inch plain white paper (electronic submissions preferred). Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

ADDITIONAL INFORMATION AND REQUIREMENTS

For proposed GP activities that involve discharges into waters of the United States, water quality certification from the State, Tribe, or EPA must be obtained or waived. Some States, Tribes, or EPA have issued water quality certification for one or more GPs. Please check the New England District website to see if water quality certification has already been issued for the GP(s) you wish to use. For proposed GP activities in coastal states, state Coastal Zone Management Act consistency concurrence must be obtained, or a presumption of concurrence must occur. Some States have issued Coastal Zone Management Act consistency concurrences for one or more GPs. Please check the New England District website to see if Coastal Zone Management Act consistency concurrence has already been issued for the GP(s) you wish to use.

APPENDIX C SELF-VERIFICATION NOTIFICATION

U.S. Army Corps of Engineers (USACE)

SELF-VERIFICATION NOTIFICATION (SVN)

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose This information will be used in evaluating activities under Self-Verification procedures within Massachusetts.

Routine Uses Routine uses will include: (1) Documenting compliance with the terms and conditions of the General Permit (GP) for activities that may require authorization pursuant to one or more of USACE's Regulatory authorities. (2) Records may be referred to other Federal, State, and local agencies for evaluation and enforcement purposes.

Disclosure Failure to fully comply and abide by the GP terms and conditions prior to commencing work and after completion project may result in formal enforcement action, up to and including monetary penalties and/or legal action, pursuant to 33 CFR Part 326.

Instructions The permittee must complete ALL required sections of this document before commencing USACE-regulated activities. A copy of this completed SVN must be kept on site during construction and be made available for review by USACE and other Federal, State, & Local regulatory authorities at any time. Within 30 days of initiating project construction, the permittee shall submit the completed SVN to USACE. The SVN shall be submitted to USACE as **ONE signed document** that includes project plans and documentation that supports each field (e.g., emails, letters, description, phone calls, surveys). Electronic submissions to the following address are strongly preferred: cenae-r-ma-sv@usace.army.mil. The email subject line shall contain the following: GP #, SVN, City/Town, and date submitted.

(ITEMS 1 THRU 3 TO BE FILLED BY USACE)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED

APPLICANT AND AGENT INFORMATION

4. APPLICANT'S NAME	7. AGENT'S ADDRESS:
First - Middle - Last -	First - Middle - Last -
Company -	Company -
E-mail Address -	E-mail Address -
5. APPLICANT'S ADDRESS:	8. AGENT'S ADDRESS:
Address-	Address-
City - State - Zip - Country -	City - State - Zip - Country -
6. APPLICANT'S PHONE NOs. w/AREA CODE	9. AGENTS PHONE NOs. w/AREA CODE
a. Residence b. Business c. Fax	a. Residence b. Business c. Fax

NAME, LOCATION, AND DESCRIPTION OF PROJECT SITE

10. PROJECT NAME OR TITLE

11. FILE NUMBER(S) OF PREVIOUS USACE ACTIONS ON THE SITE (if applicable)	12. NAME OF WATERBODY
13. PROJECT COORDINATES (in decimal degrees)	14. PROJECT STREET ADDRESS (if applicable)
Latitude: ◦N Longitude: ◦W	Address
	City - State - Zip -

ACTIVITY TYPE, PROJECT IMPACTS, AVOIDANCE & MINIMIZATION

15. GENERAL PERMIT ACTIVITIES (CHECK ALL THAT APPLY)

1 ☐	6 ☐	11 ☐	16 ☐	21 ☐
2 ☐	7 ☐	12 ☐	17 ☐	22 ☐
3 ☐	8 ☐	13 ☐	18 ☐	23 ☐
4 ☐	9 ☐	14 ☐	19 ☐	24 ☐
5 ☐	10 ☐	15 ☐	20 ☐	25 ☐

16. SUMMARY OF PROJECT IMPACTS (*see instructions*)

Area (square feet)	Length (linear feet)	Volume (cubic yards)	Duration

17. PROJECT PLANS (BY CHECKING THE BOXES BELOW, YOU CERTIFY THESE ITEMS ARE COMPLETE) (*see instructions*)

- ☐ a. Plans shall at least contain the following: Vicinity Map, Plan View, and Typical Cross Section View of the proposed activity.
- ☐ b. All direct, indirect and secondary impacts from USACE regulated activities are shown on the project plans.
- ☐ c. The size of the impact area for each activity (acre, square feet, linear feet) are shown on the project plans.
- ☐ d. For discharges of fill material (§404), the volume of fill material is identified on the project plans.
- ☐ e. The duration of each impact, permanent or temporary (X days), is identified on the project plans.
- ☐ f. Do activities with permanent impacts result in the loss of waters? If so, this is identified on the project plans.
- ☐ g. All aquatic resources in the vicinity of the USACE regulated activities are delineated on the project plans.

18. AVOIDANCE & MINIMIZATION (BY CHECKING THE BOXES BELOW, YOU CERTIFY THESE CRITERIA ARE MET) (*see instructions*)

- ☐ a. The project has been designed to avoid and minimize impacts to aquatic resources.
- ☐ b. The footprint of activities in waters of the U.S. has been reduced to only what is necessary to achieve the overall project purpose.
- ☐ c. All practicable measures have been taken to avoid and minimize impacts to aquatic resources through construction techniques and site access (e.g., Best Management Practices, Time of Year Restrictions).
- ☐ d. All temporary impacts from USACE regulated activities will be restored upon completion of construction and the project area will be returned to pre-construction contours and conditions.

COMPLIANCE WITH FEDERAL REGULATIONS & SUPPLEMENTAL INFORMATION

19. DUE DILIGENCE (*see instructions*)

Complete the entries below to document compliance with the following Federal requirements. Construction may NOT begin if a PCN is/may be required, and you must contact USACE to determine permitting requirements. Documentation that demonstrates how the activity complies with each field below shall be submitted to the USACE as noted in the instructions block. See each General Condition (GC) in the GP for how to comply with each requirement.

a. State Historic Preservation Officer	Select Option		
b. Massachusetts BUAR	Select Option		
c. Tribal Historic Preservation Officers	Select Option		
d. Endangered Species Act - NOAA	Select Option		
e. Endangered Species Act - USFWS	Select Option		
f. Northern Long Eared Bat (ESA)	Select Option		
g. Essential Fish Habitat	Select Option		
h. Wild & Scenic Rivers	Select Option		
i. 401 Water Quality Certification 401	Select Option		
	401 WQC/OOC File Number:	OOC issued:	401 issued:
j. Section 408 Permission	Select Option		
k. Coastal Zone	Select Option		
l. Construction Mats	Select Option		
m.Time of Year Restrictions	Select Option		
n. Vernal Pools	Select Option		
o. Sediment & Erosion Controls	Select Option		
p. Stream/Wetland Crossings	Select Option		

20. AQUACULTURE ACTIVITIES - GP 18 (*see instructions*)

- ☐ a. If required, an Aquaculture Certification from the Massachusetts Division of Marine Fisheries was obtained prior to commencing work.
- ☐ b. Coordination with the U.S. Coast Guard pursuant to Private Aids to Navigation has occurred prior to commencing work.
- ☐ c. If required, a MEPA Certificate was obtained from the Massachusetts Environmental Protection Agency prior to commencing work. Select Option
- ☐ d. The prospective permittee contacted local authorities (e.g. harbormaster, select board, shellfish constable) for authorization of their facility prior to commencing work.

21. ADDITIONAL INFORMATION/ATTACHMENTS (*see instructions*)

- ☐ a. The project plans are enclosed in this SVN submittal (see block 17).
- ☐ b. The activity Select Option funded through the Bipartisan Infrastructure Bill (also known as the Infrastructure Investment and Jobs Act).
- ☐ c. All required state, local and federal approvals were acquired prior to starting construction in USACE jurisdiction.
- ☐ d. After construction of the activity is completed, a complete Certificate of Compliance will be submitted to USACE.

22. IS THERE ANOTHER LEAD FEDERAL AGENCY:

☐ YES ☐ NO

23. STATEMENT OF AUTHORIZATION *(see instructions)*

I certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

24. SIGNATURES *(see instructions)*

I hereby certify that the information in this Self-Verification Notification is complete and accurate. As the applicant or their duly authorized agent, I certify the activity was completed in accordance with the terms and conditions of the GP. This includes all applicable terms, general conditions, and activity-specific GP criteria. I agree to allow the duly authorized representatives of the Corps of Engineers Regulatory Program and other regulatory or advisory agencies to enter upon the premises of the project site at reasonable times to evaluate inspect and photograph site conditions. This consent to enter the property is superior to, takes precedence over, and waives any communication to the contrary. For example, if the property is posted as “no trespassing” this consent specifically supersedes and waives that prohibition and grants permission to enter the property despite such posting.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions for Preparing a
Department of the Army
General Permit (GP) Self-Verification

Blocks 1 through 3. To be completed by the Corps of Engineers.

Block 4. Applicant' Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the self-verification, please attach a sheet of paper with the necessary information marked Block 4.

Block 5. Address of Applicant. Please provide the full address of the party or parties responsible for the self-verification. If more space is needed, attach an extra sheet of paper marked Block 5.

Block 6. Applicant Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 7 through 9. To be completed, if you choose to have an agent.

Block 7. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 8 and 9. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where they can be reached during normal business hours.

Block 10. Proposed General Permit Activity Name or Title. Please provide a name identifying the proposed GP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 11. File Number(s) of Previous USACE Actions on the Site Please provide any known USACE file number. If the activity does not have a known USACE file number, you may state N/A.

Block 12. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the GP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 13. Proposed Activity Coordinates. Please enter the latitude and longitude of where the proposed GP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 13.

Block 14. Proposed Activity Street Address. If the proposed activity is located at a site having a street address (not a box number), enter it in Block 14.

Block 15. General Permit Activity Type. Please select all GP activity types that apply to the proposed activity. A list of GP activity types can be found in Section III of the GP.

Block 16. Summary of Project Impacts. Please provide ALL proposed impacts, both temporary and permanent in duration, that are located in Waters of the United States. The area of impact shall be provided in square feet (SF). When applicable, impacts that result in conversion of stream bank or shoreline must also be identified in linear feet (LF). Dredging or the discharge of dredged or fill material shall also include the volume, cubic yards (CY), of material removed from or placed into Waters of the U.S. If more entries are required, please attach a table matching the desired format in Block 16.

Block 17. Project Plans. Please verify that items a-g are included in the project plans. Three types of illustrations are necessary to properly depict the proposed work. These illustrations or drawings are identified as a Vicinity Map, a Plan View (Aerial view) and a Cross Section Map. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient drawings (longitudinal profile) should also be included. Plans must accurately depict the existing conditions and all aspects of the proposed activity located in waters of the U.S. Please submit one copy of all drawings formatted to print on 8½ x 11 inch or 11 x 17 inch plain white paper. Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross section). While illustrations need not be certified engineering sheets; they should be clear, accurate, contain all necessary information, and depict all proposed work. Each submission must also include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by USACE.

Block 18. Avoidance & Minimization. Please verify that items a-d have been implemented for the proposed activity.

Block 19. Due Diligence. Please complete all the fields and submit documentation to USACE to demonstrate compliance with the above requirements. This Documentation may include emails, letters, meeting notes, phone call log, project narrative, project plans, a species list from the NOAA Section 7 Mapper, a completed copy of the IPAC determination keys, etc. Documentation should be limited to what is necessary to demonstrate how the proposed activity meets each requirement. Refer to the MA GP, Appendix A, for specific guidance on the identification of previously identified historic properties and previously unidentified historic properties. Endangered Species: *The applicant must be designated as the non-federal representative for the purposes of Section 7 consultation to select the Rangewide D-Key options. Otherwise, the applicant shall select the following option when IPAC indicates the NLEB is present: "The activity IS located within the NLEB Species Range (PCN Required)."

Block 20. Aquaculture Activities. Please verify that items a-d have been obtained or completed prior to commencing work in waters of the U.S.

Block 21. Additional Information/Attachments. Please verify that items a-d have been completed prior to commencing work in waters of the U.S.

Block 22. Lead Federal Agency. Please identify if there is another lead federal agency involved with the proposed activity. Enter the lead federal agency name (e.g., the Federal Emergency Management Agency, FEMA) and the agency's designated person of contact for the activity.

Block 23. Statement of Authorization. The applicant shall sign this section for all activities. If an agent is to be employed, the agent shall sign this section.

Block 24. Signatures. The SVN must be signed by the person proposing to undertake the GP activity, and if applicable, the authorized party (agent) that prepared the SVN. The signature of the person proposing to undertake the GP activity shall be an affirmation that the party submitting the SVN possesses the requisite property rights to undertake the GP activity.

US Army Corps of Engineers®
New England District

APPENDIX D: PCN APPLICATION CHECKLIST

The following information shall be submitted for all PCNs for USACE to properly evaluate your application. Some applications may require more information and this checklist is offered as a tool to assist applicants with submitting a complete application.

SECTION 1: GENERAL APPLICATION INFORMATION

1. ☐ Complete the Pre-Construction Notification document (Appendix B).
2. ☐ Specify which local/state/federal authorizations are required for the project and if any have been obtained or applied for at the time of USACE application submittal.
3. ☐ Identify all funding sources the project will receive or has received to date. Provide any relevant information in the application submission.
4. ☐ Is this part of a larger project that is being implemented in phases? If so, describe the project schedule and how each phase will be implemented.
5. ☐ Describe the existing conditions on the site and the general land use in the vicinity of the project at the time application submittal.
6. ☐ Provide any historic information available that you may have of project area, e.g., existing USACE permit numbers, the names under which the permits were obtained if the permit numbers are unknown, construction dates and proof of prior existence (aerials, photos, town hall records, affidavits, state or local permits, etc.) to verify that the project predates regulation and is "vested".[19]
7. ☐ The anticipated start and end dates for construction.

SECTION 2: WETLAND DELINEATION

8. ☐ Data used to support aquatic resource boundary determinations (delineation forms, delineation map(s) that show the locations of each aquatic resource in the project area, aerial and ground photographs, LIDAR imagery, national wetland inventory maps, soil maps, national hydrography dataset maps, floodplain maps, historical imagery, etc.).
9. ☐ Photographs of the wetland(s) and/or waterway(s) where impacts are proposed. Photos at low tide are preferred for work in tidal waters.
10. ☐ Indicate the relationship of the project area to waters of the U.S., i.e., adjacent wetlands, tidal influence or hydraulic connectivity through culverts, or other conveyances, etc.
11. ☐ At minimum the delineation map/figure should include the following:
    a. Contour lines showing topography.
    b. North arrow.
    c. Bar and text scale.
    d. Legend.
    e. Drawn project boundary.
    f. High tide line, mean high water, mean low water, ordinary high water mark, and/or wetland boundaries.
    g. Captions with a unique name for each aquatic resource and the area or length of the aquatic resource within the project area.

[19] Vested is exempt (someone or something) from a new law or regulation.

h. Appropriate landmarks and features (e.g., culverts, special aquatic sites, etc.).
i. Points showing the paired upland and wetland delineation locations for tidal and non-tidal wetlands only.

SECTION 3: AVOIDANCE & MINIMIZATION

12. ☐ Describe specific measures taken to avoid impacts to aquatic resources or describe why aquatic resources could not be avoided while achieving the project purpose and need.
13. ☐ For impacts to aquatic resources that could not be avoided, describe specific considerations/ measures taken to minimize the area of proposed impacts to aquatic resources in designing the project.
14. ☐ Describe specific measures taken to avoid and minimize the proposed direct, indirect, and secondary impacts to aquatic resources and their functions through construction techniques and timing.
15. ☐ If applicable, provide a restoration plan that describes how all temporary fills and structures will be removed and the area restored to pre-impact conditions (see GC 22).
16. ☐ If applicable, provide an Invasive Species Control Plan (see GC 29). For sample control plans, see www.nae.usace.army.mil/missions/regulatory/invasive-species.
17. ☐ If applicable, describe how the proposed wetland/waterbody crossing is compliant with GC 31, Stream Work and Crossings, and Wetland Crossings.

SECTION 4A: PROJECT IMPACTS

18. ☐ Describe the overall project and the activities located in Waters of the U.S. (WOTUS) that you are seeking authorization for.
19. ☐ Identify the following for project impacts in WOTUS:
    a. ☐ Direct, indirect, secondary impacts[20] within WOTUS.
    b. ☐ The size of each impact (square feet or acres, or linear feet).
    c. ☐ For discharges of fill material (§404), specify the volume of fill material to be discharged (cubic yards).
    d. ☐ The impact duration from each activity, permanent or temporary (X days).

SECTION 4B: PROJECT PLANS

20. ☐ Submit project plans that depict all impacts in WOTUS. On the project plans, applicants shall provide:

    General Information

    a. ☐ Plan view and typical cross-section view sheets that show the existing and proposed conditions. These illustrations should each be identified with a figure number, date of the map, the project title, the name of the applicant and the type of illustration (vicinity map, plan view, or cross section).
    b. ☐ Drawings, sketches, or plans that are legible, reproducible (color is encouraged, but features must be distinguishable in black and white), drawn to scale, and no larger than 11”x17” and 10 MB when submitted in digital format. Numeric and graphic/bar scales must agree, and plan details must be measurable using a standard engineer’s scale on printed plans. Reduced plans are not acceptable.
    c. ☐ The north arrow and remove miscellaneous non-wetland or water project related features such as conduits, utility poles, guardrails, etc.

[20] See definitions section for the definitions of direct, indirect, secondary impacts.

d. ☐ Clearly draw the overall limits of work, staging areas, disposal sites, access routes, and any permittee responsible mitigation sites. These areas may include both aquatic resources and upland areas.
e. ☐ Names or numbers of all roads in the site's vicinity and ownership and numbers of abutting parcels.
f. ☐ Datum in plan and elevation views. The horizontal datum shall be in the NAD 83 Massachusetts State Plane Coordinate System (INSERT) in U.S. survey feet. The vertical data in coastal projects shall be referenced to either MLLW or the North American Vertical Datum of 1988 (NAVD 88). Both the distance and depth units shall be U.S. survey feet and specified on the project plans.

Aquatic Resources & Project Impacts

g. ☐ Delineation of all aquatic resource types on site including salt marsh; other special aquatic sites (vegetated shallows, mudflats, riffles and pools, coral reefs, and sanctuaries and refuges); other waters, such as lakes, ponds, vernal pools, natural rocky habitat (tidal only), and perennial, intermittent, and ephemeral streams.
h. ☐ Identify the substrate type (cobble/gravel, organic detritus, sand/shell, silt, mud) and the approximate percentage of each substrate type on site. Grain sizes shall be based on Wentworth grain size classification scale for granules, pebbles, cobbles, and boulders. Sediment samples with a content of 10% or more of pebble-gravel-cobble and/or boulder in the top layer (6-12 inches) should be delineated and material with epifauna/macroalgae should be differentiated from bare pebble-gravel-cobble and boulder.
i. ☐ The direction of ebb and flood in tidal waters and direction of flow in non-tidal waters.
j. ☐ In tidal waters, the project boundary distance from special aquatic sites identified in 20g above if within 25 feet from that resource.
k. ☐ USACE jurisdictional boundaries including ordinary high-water mark (OHWM), high tide line (HTL), mean high water (MHW). Other boundaries include mean low water (MLW), mean lower low water (MLLW), as applicable.
   - Non-tidal: OHWM and/or wetland boundaries.
   - Tidal (structures/work only): MHW, MLW.
   - Tidal (Fill and Structures/work): HTL, MHW, MLW.
   - Tidal (Dredging/Beach Nourishment): HTL, MHW, MLW, MLLW.
l. ☐ Identification of each aquatic resource with a unique name (ex. Wetland 1, Wetland 2, Tributary 1, Beaver Brook, Atlantic Ocean) and the size of each aquatic resource within the project area (square feet or acres).
m. ☐ Impacts to each aquatic resource with captions denoting the size of each impact (square feet, acres, or linear feet) and the duration of the impact (ex. Permanent, Temporary (X days).

SECTION 4C: PROJECT PLANS - SPECIFIC PROJECT INFORMATION

21. ☐ For projects involving Navigation, Structures, Dredging, and/or Beach Nourishment, the applicant shall also address the following:

Navigation

a. ☐ Identify the locations of adjacent Federal navigation project (FNP) and/or state/local navigation projects on the project plans.
b. ☐ Specify the distance between the FNP and proposed project boundary, the authorized depths of the FNP, and state plane coordinates of seaward end(s) of project structures near an FNP.

Structures

a. ☐ Identification of the piling type (steel, timber, concrete) and diameter to be removed and/or installed.
b. ☐ Specify the minimal height of the structures' frame over saltmarsh. To meet the SV threshold, piers must be ≤4 feet in width and this minimal height must achieve a 1.5:1 ratio (i.e., a 4-foot-wide pier is 6 feet above a saltmarsh).
c. ☐ For floats, the methods of securing them (piles, bottom anchors) and for keeping them off substrate (skids, stops) at low water. To meet the SV threshold, a minimum depth of 18-inches of water should be maintained below a floating dock/structure at lower tide levels.

Dredging

a. ☐ The area (SF, acre) and volume (CY) of material to be dredged waterward of MHW for each dredge location.
b. ☐ Dredge boundaries.
c. ☐ Bathymetry for existing, proposed, and historical (include dates and USACE permits) dredge depths.
d. ☐ The likely final angle of repose of the side cuts based on the physical characterization of the material to be dredged and based upon the high/ medium/low, wave or current energy of the location.
e. ☐ Label area whether the dredging is new, maintenance, improvement, or a combination.
f. ☐ Location of the disposal site (include location sheet). NOTE: For projects proposing open water, nearshore disposal, or beach nourishment, contact USACE as early as possible for sampling and testing protocols. Sediment testing, including physical (e.g., grain-size analysis), chemical and biological testing may be required. Sampling/testing of sediments without such contact should not occur and if done, will be at the applicant's risk.
g. ☐ The methods and areas used to retain or prevent dredged material from running back into the wetland or waterway. Provide the capacity of the storage area and points of runback, including the overflow route, into the aquatic system.
h. ☐ For open-water disposal, explain why inland or beneficial reuse sites are not practicable.
i. ☐ Show the finished top elevation of the disposal site.

Beach Nourishment

a. ☐ For beach nourishment, identify the disposal footprint, existing and proposed nourishment profiles (multiple profiles are appropriate if the site is more than 150 feet long or non-contiguous), total fill area (SF) and volume (CY), fill area and volume waterward of the HTL, and delineation of dunes, banks, existing beach vegetation, and contours.
b. ☐ For beach nourishment identify the substrate type (fine sand, sand, cobble, boulder) and/or grain-size of existing material.

SECTION 5: STRUCTURES

22. ☐ For projects with the removal of existing pilings identify the number, type (steel, timber, concrete) and diameter of pilings to be removed and the methodology for removal (cut off at mud line, pulling, vibratory, etc.).
23. ☐ For projects with the installation of new pilings identify the number, type (steel, timber, concrete) and diameter of pilings to be installed and the methodology for installation (vibratory hammer, impact hammer etc.).
24. ☐ Identify any existing structures and moorings in waters adjacent to the proposed activity, their dimensions, and the distance to the limits and coordinates of any proposed mooring field or reconfiguration zone. For reconfiguration zone and mooring fields, provide the coordinates for all

corners based on the Massachusetts State Plane Coordinate System. Specify the maximum number of slips and/or moorings within proposed reconfiguration zones or anchorage areas.

25. ☐ The dimensions of the structure or work and extent of encroachment waterward of MHW and from affixed point on the shoreline or upland.
26. ☐ Shoreline of adjacent properties and property boundary offset for structures. In narrow waterbodies, the distance to opposite shoreline, waterway width, and structures across from proposed work.
27. ☐ For new commercial boating facilities, anchorage areas or reconfiguration zones, provide a description of the type of vessels that would use the facility, and any plans for sewage pump-out facilities, fueling facilities and contingency plans for oil spills.
28. ☐ See Sections 4A-C above.

SECTION 6: AQUACULTURE

29. ☐ Identify the coordinates for lease area corners and gear configuration area on the project plans.
30. ☐ Identify the proposed aquaculture gear type (buoys, floats, racks, trays, nets, lines, tubes, cages, containers, and other structures). Provide the impacts for each aquaculture gear type (see Section 4A 19a-d).
31. ☐ For a GP 18 to be valid, applicants must have (a) their MA DMF Aquaculture Certification letter for licensed shellfish aquaculture sites, (b) documentation that the applicant has coordinated with the U.S. Coast Guard regarding USCG Private Aids to Navigation standards, (c) their MEPA Certificate (if required), and (d) documentation that the applicant has contacted their local authorities (ex. harbormaster, select board, shellfish constable) for authorization of their facility.
32. Provide information on site the operation, maintenance, and access. Will the site be accessed via boat, kayak, etc.? Will cages be removed in the winter? How often will gear be checked on? Is there an operations plan for the proposed aquaculture area?
33. ☐ See Sections 4A-C above.

SECTION 7: DREDGING

34. ☐ Sampling plan requests for new, improvement or maintenance dredging must submit completed **Dredged Material Evaluation checklist found at Dredged Material Evaluation Checklist, Sampling and Analysis Plan Requirements from Applicant (army.mil)** and identify the method of handling/transporting the dredged material.
35. ☐ Identify grain-size of material to be dredged (e.g., silty sand) and provide any existing sediment grain size and bulk sediment chemistry data from the proposed project or nearby projects. Include information on any recent spills of oil and/or other hazardous materials and/or nearby outfalls. Document the information source, e.g., EPA database, the harbormaster or fire chief. If there are none, state “none”.
36. ☐ See Section 4A, 4B and 4C, Dredging 21(a-i) above.

SECTION 8: WETLAND/WATERBODY CROSSINGS

37. ☐ For the stream crossing, identify the crossing methodology on the project plan (e.g., dam and pump, dry, wet, etc.). Submit a waterway crossing sequencing plan with the application.
38. ☐ If the project includes a permanent crossing of a tidal waterway, your project design should be modified to match the velocity, depth, cross-sectional area, and substrate of the existing waterbody adjacent to the crossing and provide documentation (hydraulic analysis including low lying property analysis) that the size of the crossing will not restrict tidal flow over the full natural tide range and will not adversely affect abutting infrastructure.

39. ☐ If the work includes a permanent crossing of a non-tidal stream, your project design should be modified to match the culvert gradient of the existing stream channel profile, provide clearance for ≥1.2 times bank full width and conveyance should be embedded ≥1-2 feet for box culverts and pipe arches or ≥1-2 feet and at least 25 percent for rounded pipes/culverts in accordance with the Massachusetts Stream Crossing Standards. Provide the basis for any variation to this requirement.
40. ☐ If the work includes a permanent crossing of a non-tidal stream, the structure should be designed to include a natural bottom substrate within the conveyance that matches the characteristics of the substrate in the natural stream channel and the character of the banks (mobility, slope, stability, confinement, grain and rock size). The conveyance should be designed with a minimum openness ratio ≥0.82-feet (0.25-meters). For how to calculate openness ratio and stream simulation ecological approach for road and stream crossings, see https://www.nae.usace.army.mil/Missions/Regulatory/Stream-and-River-Continuity/.

SECTION 9: COMPENSATORY MITIGATION

41. ☐ Does the project require Compensatory Mitigation[21] for impacts to Waters of the U.S.? (See Section V in the 2023 Massachusetts General Permit)
42. ☐ If the project requires mitigation, does the selected compensatory mitigation option (i.e., In-Lieu Fee, permittee-responsible mitigation) deviate from the order of the options presented in §332.3(b)(2)-(6)? If so, please explain why. https://www.ecfr.gov/current/title-33/chapter-II/part-332/section-332.3
43. ☐ For any compensatory mitigation that involves preservation, the applicant must use a site protection instrument to preserve the parcel in perpetuity. (Conservation Easement, Deed Restriction, etc.) https://www.mass.gov/service-details/conservation-restriction-review-program.

SECTION 10: HISTORIC PROPERTIES & NOTIFICATIONS TO SHPO, THPOs, BUAR

44. ☐ Notify the SHPO, Massachusetts Historical Commission, of the Project via Certified Mail and include proof of delivery or receipt in the application package (See Appendix A).
45. ☐ As applicable, notify the THPOs, Narragansett Indian Tribe, Wampanoag Tribe of Gay Head (Aquinnah), and Mashpee Wampanoag Tribe, of the Project via email OR mail and include proof of delivery or receipt in the application package (See Appendix A).
46. ☐ As applicable, notify the BUAR via email (*strongly preferred*) OR mail and include proof of delivery or receipt in the application package (See Appendix A).
47. ☐ Include responses to this notification in the permit application.
48. ☐ As applicable, information on historic properties (Tribal and Archaeological) within the project area should be provided in the permit application.

SECTION 11: ENDANGERED SPECIES & ESSENTIAL FISH HABITAT

49. ☐ Provide a USFWS Information for Planning and Consultation (IPaC) Official Species List from https://ecos.fws.gov/ipac and the email of the individual who generated the list (see GC 10 of the 2023 Massachusetts General Permit for more information).
50. ☐ Provide a species list from the NMFS Section 7 Endangered Species Act mapper at https://noaa.maps.arcgis.com/apps/webappviewer/index.html.
51. ☐ Provide a species list from the NMFS Essential Fish Habitat Mapper at https://www.habitat.noaa.gov/apps/efhmapper/?page=page_3.

[21] Your mitigation proposal must be consistent with the December 29, 2020 Compensatory Mitigation Standard Operating Procedures at https://www.nae.usace.army.mil/Portals/74/docs/regulatory/Mitigation/Compensatory-Mitigation-SOP-2020.pdf and 2008 Mitigation Rule.

52. ☐ If the project will generate turbidity, describe the extent of turbidity and if erosion controls will be used to contain turbidity. If turbidity controls are not operationally feasible, explain the basis for your conclusion and identify any other measures that you will implement to minimize resuspension of sediment.
53. ☐ Identify the substrate type and any aquatic resources that will be affected by the proposed action. (SAV, salt marsh, sand, silt/clay, rocky/hard bottom)
54. ☐ For projects which will include the installation of pilings/sheet-piles, identify the substrate at the project site (sand, cobble, silt/mud/clay), the installation method (vibratory hammer, impact hammer, combination) and indicate whether the following “soft start” procedures at beginning of the workday and after a 30-minute period of rest will be deployed:
    a. ☐ Vibratory Pile Installation: pile driving will be initiated for 15 seconds at reduced energy followed by a one-minute waiting period. This sequence of 15 seconds of reduced energy driving, one-minute waiting period will be repeated two additional times, followed immediately by pile-driving at full rate and energy.
    b. ☐ Impact Pile Installation: pile driving will commence with an initial set of three strikes by the hammer at 40% energy, followed by a one-minute wait period, then two subsequent 3-strike sets at 40% energy, with one-minute waiting periods, before initiating continuous impact driving.
55. ☐ If the project involves dredging, describe any dredge history, number of dredge events to be covered by the permit, erosion/sediment controls, dredge type, intake structures (mesh screen size), dredged material disposal site.
56. ☐ For project activities associated with structures, identify the number, type (drill barge, work boat, tugboat, etc.), and size of any temporary vessels that will be used. Specify measures that will be implemented to ensure vessels are not berthed in shallow water or will “ground out” at low tide.
57. ☐ For aquaculture projects identify whether any component of the gear is seasonal (will be removed annually) or will be in place year-round. If gear will be present year-round and will be variably managed (e.g., floating in summer, bottom in winter) identify month/date for such configurations.
58. ☐ For aquaculture projects identify whether the project will involve use of an existing vessel or new vessel. Identify the length for all work vessels and identify the distance round trip from vessel berthing location and aquaculture area.
59. ☐ For project activities associated with docking structures (either commercial, industrial, or recreational) identify the number, type (motorized/non-motorized, jet-ski, sailboat, kayak, canoe, other that will be berthed there and the sizes of each.
60. ☐ Information required for Section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act:
    a. Results of an eelgrass survey completed per the INSERT.
    b. Essential Fish Habitat Assessment to determine project-related impacts to essential fish habitat, using guidance developed by the National Marine Fisheries Service.
61. ☐ A document containing the following information (requirements of 50 CFR §600.920(e)(3)):
    a. Description of proposed action.
    b. Analysis of potential adverse effects on essential fish habitat.
    c. Conclusions regarding the effects of the action on essential fish habitat.
    d. If applicable, proposed mitigation.
    e. Analysis of alternatives to the proposed action.
    f. Other:

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DOCUMENT A00840

MASSACHUSETTS
Department of Environmental Protection

Water Quality Certificate Application

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401 WQC/ 404 PCN Joint Permit Application

Bridge Replacement No. L-05-004 (059)
Meadow Street over
Powder Mill Brook (a.k.a. Beartown Brook)
Lee, Massachusetts



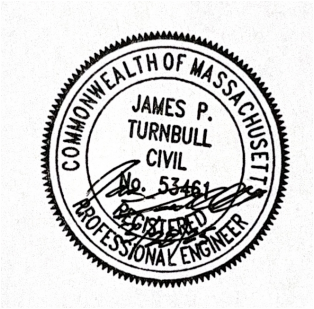
March 31, 2025

Applicant:

Massachusetts Department of Transportation (MassDOT)
Highway Division
10 Park Plaza
Boston, MA 02116

Representative:

James P. Turnbull, P.E.
Gill Engineering Associates, Inc.
63 Kendrick Street
Needham, MA 02494



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- **Attachment 05 – Application Narrative**
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- **Attachment 07 – Soil Survey**
- **Attachment 08 – FEMA Flood Insurance Map (FIRM)**
- **Attachment 09 – Environmental Constraints Map**
- **Attachment 10 – Section 106 Documentation**
- **Attachment 11 – Permit Drawings & Project Plan Sets**
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- **Attachment 13 – Site Photographs**
- **Attachment 14 – Wetland Delineation Information**
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- **Attachment 18 – Alternatives Analysis**

ATTACHMENT 01

Cover Letters

Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbits-Nutt, Secretary and CEO
Jonathan L. Gulliver, Highway Administrator

massDOT
Massachusetts Department of Transportation
Highway Division

March 31, 2025

Heidi Davis
Massachusetts Department of Environmental Protection Wetlands Program
100 Cambridge Street, Suite 900
Boston, MA 02114

RE: Water Quality Certification
Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook Lee, MA
MassDOT Project 607597

Dear Ms. Davis,
The Massachusetts Department of Transportation, Highway Division (MassDOT) is submitting this 401 Water Quality Certification (WOC) application for the replacement of a bridge on Meadow Street over Powder Mill Brook (a.k.a. Beartown Brook), in Lee, MA, under the bridge exemption in the 2014 Transportation Bond Bill. The bridge replacement is the functional equivalent of and in similar alignment to the existing bridge.

The project requires a 401 WOC and authorization under Section 404 as it will permanently impact an estimated 3,441 square feet of Waters of the United States associated with Powder Mill Brook. The project will also permanently impact 208 linear feet and temporarily impact 100 linear feet of Bank. Additionally, the project will temporarily impact an estimated 1,505 square feet of Bordering Vegetated Wetland.

A pre-application meeting for this project was held on March 26, 2024, with the Massachusetts Department of Environmental Protection. The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief. The project proponent hereby requests that the certifying authority review and act on this CWA 401 certification request within the applicable reasonable period of time.

If you require any additional information regarding the subject project, please contact me at (857) 262-0757 or by email at courtney.l.walker@dot.state.ma.us.
Sincerely,

Courtney Walker

Courtney Walker
Wetlands and Water Resources Coordinator
MassDOT Highway Division, Environmental Services

Cc: Joshua Bartus, MassDOT
Michael Joa, MassDOT
Tyler Lewis, MassDEP
Ryan Hale, MassDEP
Jamie Iannelli, MassDEP
Dan Vasconcelos, USACE
Kevin Newton, USACE
Dawn Genes, Lee Conservation Commission

Ten Park Plaza, Suite 4160, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
mass.gov/massdot

Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbits-Nutt, Secretary and CEO
Jonathan L. Gulliver, Highway Administrator

massDOT
Massachusetts Department of Transportation
Highway Division

March 31, 2025

Dan Vasconcelos
Regulatory Division
Department of the Army New England District, Corps of Engineers
696 Virginia Road
Concord, MA 01742

RE: Water Quality Certification
Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook
Lee, MA
MassDOT Project 607597

Dear Mr. Vasconcelos,

The Massachusetts Department of Transportation, Highway Division (MassDOT) is submitting this application for a Pre-Construction Notification Application for the proposed replacement of the bridge on Meadow Street over the Powder Mill Brook in Lee, MA, under the MassDOT bridge exemption.

The project requires a 401 WQC and authorization under Section 404 as it will permanently impact an estimated 3,441 square feet of Waters of the United States associated with the Powder Mill Brook. The project will also permanently impact 208 linear feet and temporarily impact 100 linear feet of Bank. Additionally, the project will temporarily impact an estimate of 1,505 square feet of Vegetated Wetland.

If you require any additional information regarding the subject project, please contact me at (857) 262-0757 or by email at courtney.l.walker@dot.state.ma.us.

Sincerely,

Courtney Walker

Courtney Walker
Wetlands and Water Resources Coordinator
MassDOT Highway Division, Environmental Services

Cc: Joshua Bartus, MassDOT
Michael Joa, MassDOT
Tyler Lewis, MassDEP
Ryan Hale, MassDEP
Jamie Iannelli, MassDEP
Kevin Newton, USACE
Dawn Genes, Lee Conservation Commission

Ten Park Plaza, Suite 4160, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
mass.gov/massdot

ATTACHMENT 02

Public Notice

PUBLIC NOTICE

Massachusetts Department of Environmental Protection
Division of Wetlands and Waterways
MassDEP Boston Office
100 Cambridge Street Suite 900
Boston, MA 02114

Pursuant to 33 U.S.C. 1341 and M.G.L. c. 21 §§ 26 - 53 and 33 U.S.C. 1341 and M.G.L. c. 21 §43 notice is given of a 401 Water Quality Certification application for the replacement of Bridge #L04-005, Meadow Street over Powder Mill Brook in the Town of Lee, Massachusetts by the Massachusetts Department of Transportation – Highway Division, Ten Park Plaza, Room 7360, Boston, MA 02116. The bridge replacement project includes removal of the existing wingwalls and abutments as well as streambed restoration to improve the area. Two weirs will also be constructed in order to reduce the scour related to the waterway and bridge. Additional information may be obtained from the Massachusetts Department of Transportation – Highway Division at the above address, attention Courtney Walker or by emailing courtney.l.walker@dot.state.ma.us. Written comments should be sent to Heidi Davis, MassDEP Wetlands Program, 100 Cambridge Street, Suite 900, Boston, MA 02114 or heidi.davis@mass.gov within twenty-one days of this notice.

Any group of ten persons, any aggrieved person, or any governmental body or private organization with a mandate to protect the environment who submits written comments may appeal the Department's Certification. Failure to submit written comments before the end of the public comment period may result in the waiver of any right to an adjudicatory hearing.

ATTACHMENT 03

USACE PCN

U.S. Army Corps of Engineers (USACE), New England District (NAE)

PRE-CONSTRUCTION NOTIFICATION (PCN)

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.

Principal Purpose The information provided will be used in evaluating activities under Pre-Construction Notification procedures within New England.

Routine Uses This information may be shared with other federal, state, and local government agencies during the application review process. Submission

Disclosure of requested information is voluntary. However, if information is not provided the PCN application cannot be fully evaluated nor can USACE render a permit decision.

Instructions The applicant must complete ALL required sections of this document before their submission to USACE. The PCN submission to USACE shall include one set of drawings which show the location and character of the proposed activity, statements that address each required field below, and documentation that supports each field (e.g., emails, letters, description/narrative, phone calls, surveys, reports, etc.). Electronic submissions to the following address are strongly preferred: cenae-r-ma@usace.army.mil. The email subject line shall contain the following: General Permit #, PCN, City/Town, and date submitted. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY USACE)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETE

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME
First - Courtney Middle - L Last - Walker
Company - MassDOT - Highway Division
E-mail Address - courtney.l.walker@dot.state.ma.us

6. APPLICANT'S ADDRESS:
Address- 10 Park Plaza, Room 7360
City - Boston State - MA Zip - 02116 Country - USA

7. APPLICANT'S PHONE NOs. with AREA CODE
a. Residence b. Business c. Fax d. Mobile
857-262-075

8. AUTHORIZED AGENT'S NAME AND TITLE (*agent is not required*)
First - James Middle - P Last - Turnbull
Company - Gill Engineering Associates, Inc.
E-mail Address - jturnbull@gill-eng.com

9. AGENT'S ADDRESS:
Address- 63 Kendrick Street
City - Needham State - MA Zip - 0249 Country - USA

10. AGENT'S PHONE NOs. with AREA CODE
a. Residence b. Business c. Fax d. Mobile
781-613338 617-721769

STATEMENT OF AUTHORIZATION

11. I hereby authorize, James P. Turnbull to act on my behalf as my agent in the processing of this general permit PCN application and to furnish, upon request, supplemental information in support of this general permit PCN application.

Courtney Walker — SIGNATURE OF APPLICANT
3/31/2025 — DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME or TITLE (*see instructions*)
Lee Meadow Street over Powder Mill Brook (a.k.a. Beartown Brook) Bridge No. L-05-004 (CEB) Replacement

13. NAME OF WATERBODY, IF KNOWN (*if applicable*)
Beartown Brook

14. PROPOSED ACTIVITY STREET ADDRESS (*if applicable*)
137 Meadow Street
City: Lee State: MA Zip: 01238

15. LOCATION OF PROPOSED ACTIVITY (*see instructions*)
Latitude: 42.273218 °N Longitude: -73.269395 °W

16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (*see instructions*)

State Tax Parcel ID: Map # 35, Lot 1 & Map #34, Lot 11 Municipality: Lee, MA

Section: Township: South Lee Range:

17. DIRECTIONS TO THE SITE.

When traveling to the site from I-90, take exit 10 for US-20E. Then, turn left onto US-20 E and travel for 194 feet. Next, turn right on to MA-102 W and continue for 2.6 miles. Turn left onto Meadow Street and continue for approximately 0.5 miles to reach the project site. You will travel through the Holiday Inn Club Vacations Oak n' Spruce Resort just before arriving at the project site.

18. IDENTIFY THE SPECIFIC GENERAL PERMIT(S) YOU PROPOSE TO USE:

Massachusetts GP 23 for Linear Transportation Projects and Wetland/Stream Crossings

19. DESCRIPTION OF PROPOSED GENERAL PERMIT ACTIVITY (*see instructions*)

The existing bridge over Beartown Brook is structurally deficient and will be replaced with a new bridge span of 64 feet. The existing substructure will be demolished to below the stream bed. A new substructure and wingwalls will be constructed outside WOTUS. Stream restoration will be constructed within limits of WOTUS to address scouring at the bridge. The project proposes dredging accumulated stream sediment, the dredging will be followed by placement of material to restore the thalweg of the stream. Stone weirs will be placed in the channel upstream of the proposed bridge for scour mitigation.

20. DESCRIPTION OF PROPOSED MITIGATION MEASURES (*see instructions*)

The project has implemented the proposed stream restoration design as a mitigation measure for the proposed bank impacts and o address existing scour issues. Demolition of the existing abutments and restoration of the stream's thalweg will be completed in phases to reduce concurrent impact to the stream. Stream dredging and backfill will be completed during periods of low flow to reduce potential sedimentation. Crushed stone, three feet of rip rap, and one foot of streambed material will be placed in the stream to mitigate scour and further erosion of the bank. Bank slopes will be stabilized with native seeding.

21. PURPOSE OF GENERAL PERMIT ACTIVITY (*Describe the reason or purpose of the project, see instructions*)

The project will replace a structurally deficient bridge with new bridge substructure and superstructure components to achieve a new design life for the Meadow Street roadway crossing over Beartown Brook. The dredging and stream restoration activities are proposed with consideration for the surrounding potential wildlife habitat and coldwater fisheries resources. The proposed scour mitigation will restore the streambed to a natural thalweg and restore potential streambank habitat. Temporary impacts to Vegetated Wetlands are required for bridge abutment construction and relocating overhead wires.

22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by Proposed General Permit Activity (*see instructions*)

Area (square feet)	Length (linear feet)	Volume (cubic yards)	Duration	Purpose
3,441	-	630	Permanent	Existing WOTUS Dredged - Demo, Stream Restoration
4,988	-		Permanent	Proposed WOTUS Created - Stream Restoration
3,441	-	508	Permanent	Material Discharged - Stream Restoration
1,505	-	-	Temporary	Vegetated Wetland - Grading, Tree Trimming
-	208 LF/100 LF	-	Perm./Temp	Bank Excavation, Wall Reconstruction, Bank Restoration

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site.

23. List any other GP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project on any related activity (*see instructions*)

No other GP's anticipated for this project.

24. If the proposed activity will result in the loss of aquatic resources that exceed those identified in the New England District Compensatory Mitigation Thresholds, explain how the compensatory mitigation requirement will be satisfied. (*see instructions*)

The proposed activities do not exceed the threshold of 5,000 S.F. of impact to inland wetland, and therefore do not meet the criteria for additional compensatory wetland mitigation. This project does not exceed the bank impact threshold of 500 LF of impact for both banks of the stream. The streambed will be restored to address scour issues and restore potential habitat. Wetland areas affected by bridge construction will be restored 1:1.

25. Is Any Portion of the General Permit Activity Already Complete? [ ] Yes [X] No If Yes, describe the completed work:

26. List the name(s) of any species listed as endangered or threatened under the Endangered Species Act that might be affected by the proposed GP activity or utilize the designated critical habitat that might be affected by the proposed GP activity. (*see instructions*)

USFW concurred project is NLAA for the endangered Indiana bat (Myotis sodalis) and/or the endangered Northern long-eared bat (Myotis septentrionalis). MassDOT, on behalf of FHWA, determined the project action will not jeopardize the continued existence of the proposed endangered species listed within the project action area (Monarch Butterfly and Tri-colored Bat.) The project site is within NHESP Priority Habitat 1216 for Wood Turtle (Glyptemys insculpta), State-listed as Special Concern.

27. List any historic properties that have the potential to be affected by the proposed GP activity or include a vicinity map indicating the location of the historic property or properties. Attach relevant project information, along with any responses received from project notifications to this submittal. (*see instructions*)

A letter has been provided to the Lee Historical Commission for project notification. MassHistoric Commission does not have any listed inventory points or historic areas within the project limits. See attachment 13.

28. For a proposed GP activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, identify the Wild and Scenic River or the "study river":

Beartown Brook is not classified in the National Wild and Scenic River System. See attachment 14.

29. If the proposed GP activity also requires permission from the USACE pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, have you submitted a written request for section 408 permission from the USACE district having jurisdiction over that project? [ ] Yes [X] No

If "yes", please provide the date your request was submitted to the USACE District:

30. Does the activity require a 401 Water Quality Certification (WQC)? If so, specify the type of 401 WQC that is required (general or individual). In cases where an individual 401 WQC is required, provide the date the 401 WQC certification request was submitted to the certifying authority and their contact information.

Individual.

31. If the terms of the GP(s) you want to use require additional information to be included in the PCN (i.e. sampling and analysis plan), please include that information in this space or provide it on an additional sheet of paper marked Block 30. (*see instructions*)

Attachment 11 - Permit Drawings & Project Plan Sets
Attachment 15 - Wetland Delineation Information
Attachment 16 - Sediment Sampling Plan and Due Diligence Analysis

32. I certify that the information in this pre-construction notification is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

Courtney Walker	3/31/2025		4/4/2025
SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

The Pre-Construction Notification must be signed by the person who desires to undertake the proposed activity (applicant) and, if the statement in block 11 has been filled out and signed, the authorized agent.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions for Preparing a

Department of the Army

General Permit (GP) Pre-Construction Notification (PCN)

Blocks 1 through 4. To be completed by the U.S. Army Corps of Engineers.

Block 5. Applicant' Name. Enter the name and the e-mail address of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the name of the organization and responsible officer and title. If more than one party is associated with the PCN, please attach a sheet of paper with the necessary information marked Block 5.

Block 6. Address of Applicant. Please provide the full address of the party or parties responsible for the PCN. If more space is needed, attach an extra sheet of paper marked Block 6.

Block 7. Applicant Telephone Number(s). Please provide the telephone number where you can usually be reached during normal business hours.

Blocks 8 through 11. To be completed, if you choose to have an agent.

Block 8. Authorized Agent's Name and Title. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer, consultant, or any other person or organization. Note: An agent is not required.

Blocks 9 and 10. Agent's Address and Telephone Number. Please provide the complete mailing address of the agent, along with the telephone number where they can be reached during normal business hours.

Block 11. Statement of Authorization. To be completed by the applicant, if an agent is to be employed.

Block 12. Proposed General Permit Activity Name or Title. Please provide a name identifying the proposed GP activity, e.g., Windward Marina, Rolling Hills Subdivision, or Smith Commercial Center.

Block 13. Name of Waterbody. Please provide the name (if it has a name) of any stream, lake, marsh, or other waterway to be directly impacted by the GP activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14. Proposed Activity Street Address. If the proposed GP activity is located at a site having a street address (not a box number), enter it in Block 14.

Block 15. Location of Proposed Activity. Enter the latitude and longitude of where the proposed GP activity is located. Indicate whether the project location provided is the center of the project or whether the project location is provided as the latitude and longitude for each of the "corners" of the project area requiring evaluation. If there are multiple sites, please list the latitude and longitude of each site (center or corners) on a separate sheet of paper and mark as Block 15.

Block 16. Other Location Descriptions. If available, provide the Tax Parcel Identification number of the site, Section, Township, and Range of the site (if known), and / or local Municipality where the site is located.

Block 17. Directions to the Site. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site. You may also provide a description of the location of the proposed GP activity, such as lot numbers, tract numbers, or you may choose to locate the proposed GP activity site from a known point (such as the right descending bank of Smith Creek, one mile downstream from the Highway 14 bridge). If a large river or stream, include the river mile of the proposed GP activity site if known. If there are multiple locations, please indicate directions to each location on a separate sheet of paper and mark as Block 17.

Block 18. Identify the Specific General Permit(s) You Propose to Use. List the number(s) of the General Permit(s) you want to use to authorize the proposed activity (e.g., GP 4).

Block 19. Description of the Proposed General Permit Activity. Describe the proposed GP activity, including the direct and indirect adverse environmental effects of the proposed activity. The description of the proposed activity should be sufficiently detailed for USACE to determine that the adverse environmental effects of the activity will be no more than minimal. Identify the materials to be used in construction, as well as the methods by which the work is to be done.

Provide drawings to show that the proposed GP activity complies with the terms of the applicable GP(s). Drawings should contain sufficient detail to provide an illustrative description of the proposed GP activity, but do not need to be detailed engineering plans. The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked Block 19.

Block 20: Description of Proposed Mitigation Measures. Describe any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed GP activity. The description of any proposed mitigation measures should be sufficiently detailed for USACE to determine how the measures would avoid and minimize adverse environmental effects. If adverse effects exceed the New England District compensatory mitigation thresholds, you must document how compensatory mitigation would be satisfied in Block 24.

Block 21. Purpose of General Permit Activity. Describe the purpose and need for the proposed GP activity. What will it be used for and why? Also include a brief description of any related activities associated with the proposed project. Provide the approximate dates you plan to begin and complete all work.

Block 22. Quantity of Wetlands, Streams, or Other Types of Waters Directly Affected by the Proposed General Permit Activity. For discharges of dredged or fill material into Waters of the U.S., provide the amount of wetlands, streams, or other types of waters filled, flooded, excavated, or drained by the proposed GP activity. For structures or work in Navigable Waters of the U.S. subject to Section 10 of the Rivers and Harbors Act of 1899, provide the amount of navigable waters filled, dredged, occupied by one or more structures (e.g., aids to navigation, mooring buoys) by the proposed GP activity. The area of impact includes the structures or fills with direct or indirect effects to waters of the U.S. The length of impact includes the length of a stream, including is banks, that are directly affected by the structures or fills. The duration of impact should be identified as temporary (xx days) or permanent. The impact purpose should briefly describe what structure or fill is responsible for the impact.

Block 23. Identify Any Other General Permit(s), Regional General Permit(s), or Individual Permit(s) Used to Authorize Any Part of Proposed Activity or Any Related Activity. List any other GP(s) or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. For linear projects, list other separate and distant crossings of waters and wetlands authorized by these GPs that do not require PCNs. If more space is needed, attach an extra sheet of paper marked Block 23.

Block 24. Compensatory Mitigation Statement for Losses Greater Than the New England District Compensatory Mitigation Thresholds. New England District requires compensatory mitigation at a minimum one for one replacement ratio or greater for all aquatic resource losses that require a PCN and exceed the New England District Compensatory Mitigation Thresholds, unless USACE determines in writing that either some other form of mitigation is more environmentally appropriate or the adverse environmental effects of the proposed GP activity are no more than minimal without compensatory mitigation, and provides an activity specific waiver of this requirement. Describe the proposed compensatory mitigation for wetland losses greater than the New England District Compensatory Mitigation Thresholds or provide an explanation of why USACE should not require wetland compensatory mitigation for the proposed GP activity. If more space is needed, attach an extra sheet of paper marked Block 24.

Block 25. Is Any Portion of the General Permit Activity Already Complete? Describe any work that has already been completed for the GP activity.

Block 26. List the Name(s) of Any Species Listed As Endangered or Threatened under the Endangered Species Act that Might be Affected by the General Permit Activity. If you are not a federal agency, and if any listed species or designated critical habitat might be affected or is in the vicinity of the proposed GP activity, or if the proposed GP activity is located in designated critical habitat, list the name(s) of those endangered or threatened species that might be affected by the proposed GP activity or utilize the designated critical habitat that might be affected by the proposed GP activity. If you are a Federal agency, and the proposed GP activity requires a PCN, you must provide documentation demonstrating compliance with Section 7 of the Endangered Species Act.

Block 27. List Any Historic Properties that Have the Potential to be Affected by the General Permit Activity. If you are not a federal agency, and if any historic properties have the potential to be affected by the proposed GP activity, list the name(s) of those historic properties that have the potential to be affected by the proposed GP activity. Provide all relevant documentation about these historic properties in the PCN submittal. If you are a Federal agency, and the proposed GP activity requires a PCN, you must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

Block 28. List the Wild and Scenic River or Congressionally Designated Study River if the General Permit Activity Would Occur in such a River. If the proposed GP activity will occur in a river in the National Wild and Scenic River System or in a river officially designated by Congress as a "study river" under the Wild and Scenic Rivers Act, provide the name of the river. For a list of Wild and Scenic Rivers and study rivers, please visit http://www.rivers.gov/

Block 29. General Permit Activities that also Require Permission from the USACE Under 33 U.S.C. 408. If the proposed GP activity also requires permission from the USACE under 33 U.S.C. 408 because it will temporarily or permanently alter, occupy, or use a USACE federal authorized civil works project, indicate whether you have submitted a written request for section 408 permission from the USACE district having jurisdiction over that project.

Block 30. 401 Water Quality Certification. As described above, specify if the activity requires a 401 WQC from the certifying authority.

Block 31. Other Information Required For General Permit Pre Construction Notifications. The terms of some of the General Permits include additional information requirements for preconstruction notifications:

* Maintenance – information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals.
* Temporary Construction, Access, and Dewatering – a restoration plan showing how all temporary fills and structures will be removed and the area restored to pre-project conditions.
* Repair of Uplands Damaged by Discrete Events – documentation, such as a recent topographic survey or photographs, to justify the extent of the proposed restoration.
* Commercial Shellfish Aquaculture Activities – (1) a map showing the boundaries of the project area, with latitude and longitude coordinates for each corner of the project area; (2) the name(s) of the species that will be cultivated during the period this GP is in effect; (3) whether canopy predator nets will be used; (4) whether suspended cultivation techniques will be used; and (5) general water depths in the project area (a detailed survey is not required).Dredging – (1) a proposed sampling and analysis plan shall be provided to USACE for approval prior to its execution. Pre-application meetings are encouraged.
* Beach Nourishment – sediment grain size should be determined for the length of the beach where nourishment is proposed. The frequency and locations of sediment sampling shall be sufficient to identify the sediment composition of the beach profile. This data shall be consolidated to generate a sediment gradation curve for each sampled transect. Each sampled transect should also be identified on the project plans (drawings).

If more space is needed, attach an extra sheet of paper marked Box 31.

Block 32. Signature of Applicant or Agent. The PCN must be signed by the person proposing to undertake the GP activity, and if applicable, the authorized party (agent) that prepared the PCN. The signature of the person proposing to undertake the GP activity shall be an affirmation that the party submitting the PCN possesses the requisite property rights to undertake the GP activity (including compliance with special conditions, mitigation, etc.).

DELINEATION OF WETLANDS, OTHER SPECIAL AQUATIC SITES, AND OTHER WATERS

Each PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current wetland delineation manual and regional supplement published by the USACE. The permittee may ask the USACE to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the USACE does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. The 60-day PCN review period will not start until a delineation has been completed.

DRAWINGS AND ILLUSTRATIONS

General Information.

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View or a Typical Cross Section Map. Identify each illustration with a figure or attachment number. For linear projects (e.g. roads, subsurface utility lines, etc.) gradient drawings should also be included. Please submit one copy of all drawings on 8½ x 11 inch plain white paper (electronic submissions preferred). Use the fewest number of sheets necessary for your drawings or illustrations. Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate, and contain all necessary information.

ADDITIONAL INFORMATION AND REQUIREMENTS

For proposed GP activities that involve discharges into waters of the United States, water quality certification from the State, Tribe, or EPA must be obtained or waived. Some States, Tribes, or EPA have issued water quality certification for one or more GPs. Please check the New England District website to see if water quality certification has already been issued for the GP(s) you wish to use. For proposed GP activities in coastal states, state Coastal Zone Management Act consistency concurrence must be obtained, or a presumption of concurrence must occur. Some States have issued Coastal Zone Management Act consistency concurrences for one or more GPs. Please check the New England District website to see if Coastal Zone Management Act consistency concurrence has already been issued for the GP(s) you wish to use.

ATTACHMENT 04

Proof of ePlace Filing

Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs

Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

WW26 - Combined Licenses/Permits for Waterways and Water Quality Certification Application

Permittee Information

Name: MassDOT Highway Division
Phone: (857) 262-0757
Address: 10 PARK PLAZA, ROOM 7360
BOSTON, MA 02116

Application Submitter Information

Name: LILY SPICER
Phone: (781) 690-7524
Address: 63 KENDRICK STREET
NEEDHAM, MA 02494

Location Information

Beartown Brook
0 MEADOW STREET LEE, MA 01260
Latitude: 42.273218
Longitude: 73.269395

Pre-Consultation Information

Have you consulted with MassDEP about the combined application process?	Yes
Date you consulted with MassDEP	03/26/2024

Application Information

Please select the 401 Water Quality Certification for Dredging Application (if applicable)	WW08 - 401 Minor Dredging - Minor < 5000 cubic yards
Please select the 401 Water Quality Certification for Fill/Excavation Application (if applicable)	WW11 - 401 Minor Fill and Excavation - Minor < 5000 square feet

Other Primary Location Info

Proposal No. 607597 - 132402

Parcel ID	Map #35, Lot 1 & Map #34, Lot 11
Municipality	LEE

Project Location Info

Will the project occur in multiple municipalities?	No

List of Abutters

Full Legal Name	Abutting Property Address
Silverleaf Resorts, Inc.	137 Meadow Street South Lee, MA 01260
Silverleaf Resorts, Inc.	11 Beartown Mountain Road South Lee, MA 01260
Conservation Restriction, Berkshire Natural Resources Council, Inc. and Lee Land Trust, Inc.	11 Beartown Mountain Road South Lee, MA 01260
Commonwealth of Massachusetts Department of Conservation and Recreation	381 Meadow Street South Lee, MA 01260

Dredging Information

Please select the type	Improvement dredging
What is the volume of the material to be dredged? (cubic yards)	630
What is the area of the dredge foot print? (square feet)	3441
What is the maximum dredge depth including over-dredge (referenced to Mean Low Water)?	5
Describe dredge spoil disposal location/method	See attachment: "Project Narrative"
Is the dredge spoil compatible for beach nourishment?	No

Dredging Method

Hydraulic	
Mechanical	Yes
Other	

Pre-Application Information

Has the DEP Agency specified that you are exempt from this process?	No Proposal No. 607597 - 132402
Has the project's Sampling Analysis Plan been approved by the DEP Agency? If yes, please attach a document 'DEP Sampling Analysis Plan' in the document section.	Yes

Project Information

Project Name	Lee - Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook (a.k.a. Beartown Brook)
Have you completed the Public Notice as per 314 CMR 9.00? If yes, please attach a completed 'Proof of Public Notice' document in the document section.	No
Will the proposed project occur in any wetlands or waters designated as 'Outstanding Resource Waters'?	No
Identify the loss, or alteration, in square feet for Land under water	3441
Identify the loss, or alteration, in square feet for Other Resources	1505

Material to be Dredged

Briefly describe in general the proposed project or activity, including the purpose and intended use of the project, and the duration of the work within any waterbody	MassDOT Project File 607597: to be processed under the MassDOT/MassDEP ISA. The purpose of this project is to replace the structurally deficient bridge L-05-004 (059) with a new structure and to restore the stream channel of Beartown Brook. The proposed channel restoration will protect the proposed bridge foundations and provide an opportunity to restore the stream to a natural state. The bridge will be reconstructed with a clear span width of 53.1 feet to meet the Massachusetts Stream Crossing Standards to the maximum extent practicable. This project will provide a benefit to the stream resource areas associated with Beartown Brook while replacing the deficient bridge structure. Dewatering of excavations will take place in stages as described above during summer months. Control of water will begin and be maintained in various stages beginning July 1, 2026, and ending September 30, 2026. Control of water is proposed during these months so that sandbags may be used for channelizing low stream flow. Temporary dewatering discharge sites, if required, are anticipated to be located within the Meadow Street public right of way in drywells. Dewatering is not expected to create a new point discharge. See attached: "Project Narrative" for more information.
Proposed Start Date	07/01/2026
What is the expected frequency of maintenance dredging of this project?	0
Length of the proposed project (If applicable, please include the maximum and minimum)	110 feet
Width of the proposed project (If applicable, please include the maximum and minimum)	64 feet

Depth of the proposed project (If applicable, please include the maximum and minimum)	0 feet to 5 feet
Volume of the proposed project(Cubic yards)	630
Type of proposed project	Improvement dredging
Briefly describe the physical dredging operation (such as., dredging methods), the method of release of the dredged material into the disposal site, and the name of the contractor if other than the applicant. (Please attach a detailed document - "Dredging and Disposal Operation" in the document section of the application)	The method of dredging will be mechanical with an excavator. All dredged material shall be stockpiled on-site within the project limits. Dredged material deemed suitable for reuse shall be used as streambed restoration material. Staging and laydown areas are expected to be located in the Meadow Street public right of way and Town easements. Stockpiling will occur outside of resource areas and is managed by MassDOT standard specifications for stockpile stabilization and sedimentation control. Stockpile storage off-site will not be allowed unless approved by Contractor. See attached: "Project Narrative"
Briefly describe all measures designed to avoid and minimize adverse impacts of the project on aquatic life and the aquatic ecosystem. Where impacts cannot be avoided or minimized, what mitigation measures are proposed? (If necessary, please attach a document - "Performance Standard to avoid and minimize and mitigate impact" in the document section of the application)	The project scope includes dredging the stream bottom and laying natural stream bed material and installing two stone weirs for the purpose of improving the hydraulic performance upstream of the structure. This scour improvement has a dual benefit of a naturalized path and shelter for aquatic wildlife along the Bank area. The dredging will be completed by the Contractor in phases to reduce overall impacts to the Stream and fishery resource and restore the natural thalweg of the streambed. See attached: "Project Narrative"
Does the proposed project have any past history of chemical or oil spills of discharge?	No
Does the proposed project have any past history of Upstream or on-site industrial or municipal discharge within 1,000 feet of the proposed project?	No
Does the proposed project have any past history of chronic pollutant loading from port or harbor use and/or other sources of pollutants? (eg. CSO or POTW discharges)	No

Disposal/Dewatering Land Site

Location of proposed disposal and dewatering sites and physical boundaries	Dredged material deemed suitable for reuse shall be used as streambed restoration material. Staging and laydown areas are expected to be located in the Meadow Street public right of way and Town easements. Stockpiling will occur outside of resource areas and is managed by MassDOT standard specifications for stockpile stabilization and sedimentation control. Stockpile storage off-site will not be allowed unless approved by Contractor an Applicant. Temporary dewatering discharge sites, if required, are anticipated to be located within the Meadow Street public right of way in drywells. Dewatering is not expected to create a new point discharge. The Contractor's Licensed Site Professional will evaluate excess dredged stream material and classify for disposal at appropriate facilities. See attached: "Project Narrative".

Indicate drainage characteristics of dewatering and disposal sites from the results of test pits, borings, and percolation tests as applicable	The first 15 feet of soil is mostly fine to coarse sand, it is anticipated that infiltration into existing soils can occur. Temporary dewatering discharge sites, if required, are anticipated to be located within the Meadow Street public right of way in drywells. Dewatering is not expected to create a new point discharge. See attached: "Project Narrative".
How long are the dewatering and disposal sites estimated to be in use from this project?	Approximately three months for dewatering and one week for disposal.

Proposed Barge Site

Are you proposing dewatering of dredged sediment on a barge? If yes, please attach a document 'Plans for adequate containment' in the document section.	No

Grain Size Analysis

Number of Sieve	Percentage of total by weight passing
200	6.5
60	22
40	43
10	90
4	95

Additional Information

Is your project subject to U.S. Army Corps of Engineers – Section 404 of Federal Clean Water Act? If yes, please attach a document 'USACE Authorization' in the document section.	Yes
Is your project subject to Massachusetts Environmental Policy Act (MEPA)? If yes, application cannot be submitted until 1) the MEPA process is completed and 2) a Final certificate issued by MEPA is submitted to the “Document(s)” Tab. If no, please attach a document with justification that this project is not subject to MEPA review in the document section (including addressing the applicability of the MEPA review thresholds at 301 CMR 11.03)	No
Is your project subject to Massachusetts Wetlands Protection Act?	No

Is the project going to impact Eelgrass bed? If yes, please attach a document 'Eelgrass Management Plan' in the document section.	No
Does this project contain an attached written Alternatives Analysis? If yes, please attach a document 'Alternatives Analysis' in the document section.	Yes
If yes, does this Alternatives Analysis screen all practicable alternatives to the proposed discharge that would have less adverse impact on the aquatic ecosystem?	Yes
Does this project require a license from the Federal Energy Regulatory Commission?	No
Is any of your proposed work exempt from the Massachusetts Wetlands Protection Act or taking place in a federal non-state wetland?	Yes
If yes, please provide additional information	The project is bridge exempt under the 2014 Transportation Bond Bill and is therefore not subject to the Wetlands Protection Act (WPA), Chapter 91, and Massachusetts Environmental Policy Act (MEPA).

Statement and Disclosures

Proposed dredging activity or dredged material management might occur within Rare Species Habitat as defined at 314 CMR 9.02. By checking this box, you agree that you have consulted with the Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife. Please attach a 'NHESP Determination Letter or Conservation Management Permit' in the document section.	Yes
Any in-water activity may effect fish or shellfish, spawning and/or habitat. By checking this box, you agree that you have consulted with Massachusetts Division of Marine Fisheries (DMF) and/or Massachusetts Division of Fisheries and Wildlife (DFW) about Time of Year Restriction (TOY). Please attach Consultation Letter from DMF and/or DFW in the document section.	Yes

Project Information

Project Name	Lee - Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook (a.k.a. Beartown Brook)

Proposed Activity	The proposed impacts are necessary to restore the streambed when the bridge is replaced, and to restore the upstream bank as a betterment to the stream Resource Area. Layers of crushed stone, riprap, and repurposed streambed material will be installed to reinforce the irregular bend in Beartown Brook. Boulders will be reused to construct two stone weirs upstream of the bridge. The stone weirs are meant to divert the flow away from the bend in the stream and recenter the flow towards the thalweg. Installation of the stone weirs and the streambed reinforcement promote a betterment to the stream by increasing bankfull width and reducing scour flows at the structure. See attached: "Project Narrative"

Project Type

Industrial	
Utility	
Real Estate Subdivision	
Institutional	
Other	Yes
Please provide additional information for the selection of your project major type	MassDOT bridge replacement project

Proposed Areal Extent Info

Bordering Vegetated Wetland (sqft)	1505
Isolated Vegetated Wetland (sqft)	0
Non-tidal Land Under Water (sqft)	3441
Salt Marsh (sqft)	0
Land Under the Ocean (sqft)	0
Intertidal Zone (sqft)	0
Total cumulative loss (sqft)	4946

Compliance with 314 CMR 9.00

Does the proposed project meet the definition of a Single and Complete Project at 314 CMR 9.02?	Yes
Does the proposed project include "multi-phased activities"?	Yes
Does the proposed project meet the definition of an Ecological Restoration Project?	Yes
Have you completed the Public Notice as per 314 CMR 9.05(3)? If yes, please attach a completed 'Proof of Public Notice' document in the document section.	No
Does the required Alternatives Analysis screen all practicable alternatives to the proposed discharge that would have less adverse impact on the aquatic ecosystem?	Yes

Does this proposed project meet the definition of Water-Dependent at 314 CMR 9.02?	Yes Proposal No. 607597 - 132402
Is the proposed project restricted to access to one dwelling unit?	No
Will the cumulative discharges of dredged or fill material to Waters of the United States within the Commonwealth exceed 1 acre in areal extent?	No
Report the areal extent, as expressed in square feet, of all proposed restoration or replication of Bordering Vegetated Wetlands and/or Isolated Vegetated Wetlands	1505
Will any proposed discharges of dredged or fill material or any proposed restoration or replication occur within Rare Species Habitat as defined at 314 CMR 9.02?	Yes
If yes, does the Permittee presently hold a “no adverse effect determination” and/or a “no take determination”, or a Conservation and Management Permit from the Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife? Also, please attach a document 'NHESP Determination Letter or Conservation Management Permit' in the document section.	No
Will the proposed project include or consist of the construction of a new non-tidal crossing of any Land Under Water?	No
Will the proposed project include or consist of the construction of a new tidal crossing of any Land Under Water?	No
Will the proposed project include or consist of the repair, replacement, and/or expansion of an existing non-tidal crossing of any Land Under Water?	Yes
If yes, will such repair, replacement, and/or expansion of an existing crossing comply with the Massachusetts River and Stream Crossing Standards (March 8, 2012) to the maximum extent practicable (see Practicable at 314 CMR 9.02)?	Yes
Will the proposed project include or consist of the repair, replacement, and/or expansion of an existing tidal crossing of any Land Under Water?	No
Does the proposed project include any amount of discharges of dredged or fill material to any Outstanding Resource Water?	No

Will any proposed "discharge of dredged or fill materials" occur within any certified Vernal Pool (as defined at 314 CMR 9.02)?	No

Additional Information

Is your project subject to Massachusetts Environmental Policy Act (MEPA)?	No
Is your project subject to Massachusetts Wetlands Protection Act?	No
Is your project subject to Massachusetts Public Waterfront Act?	No
Is your project subject to Massachusetts Historical Commission?	Yes
Is your project subject to Massachusetts Bureau of Underwater Archeological Resources?	Yes
Is your project subject to U.S. Army Corps of Engineers – Section 404 of Federal Clean Water Act?	Yes

List of Documents

Documents	Required Documents: 1. Alternatives Analysis 2. Consultation Letter from DMF and/or DFW 3. DEP Sampling Analysis Approval 4. Dredging and Disposal Operation 5. Grain Size Analysis 6. NHESP Determination Letter or Conservation Management Permit 7. Plans for adequate containment during dewatering on a barge 8. Project Narrative 9. Project Plan Set 10. Site Plans 11. USGS Quadrangle Map

Special Fee Provision

Exemption	Yes
Exemption Type	State Agency (only applicable if fee < or = to $100)
Exclusion (special agreement or policy)	
Substitution (ASP/IRP)	
Double Fee for Enforcement	
Hardship payment extension request	

Attachments

Proposal No. 607597 - 132402

Name	Description	Type	Latest Updated
10 - Site and Permit Plans.pdf	Site Plans	Site Plans	04/02/2025
11. USGS Quad.pdf	USGS Quadrangle Map	USGS Quadrangle Map	04/02/2025
2 - NHESP-DFW Determination.pdf	Consultation Letter from DMF and/or DFW	Consultation Letter from DMF and/or DFW	04/02/2025
3. Sediment Sampling Plan Approval.pdf	DEP Sampling Analysis Approval	DEP Sampling Analysis Approval	04/02/2025
9 - Project Plan Set.pdf	Project Plan Set	Project Plan Set	04/02/2025
5. Grain Size Analysis.pdf	Grain Size Analysis	Grain Size Analysis	04/02/2025
6. NHESP Determination.pdf	NHESP Determination Letter	NHESP Determination Letter or Conservation Management Permit	04/02/2025
7. Dewatering.pdf	s for adequate containment during dewate	Plans for adequate containment during dewatering on a barge	04/02/2025
8. Project Narrative.pdf	Project Narrative	Project Narrative	04/02/2025
4 Dredging and Disposal Operation.pdf	Dredging and Disposal Operation	Dredging and Disposal Operation	04/02/2025
1. Alternative Analysis.pdf	Alternative analysis	Alternatives Analysis	04/02/2025

Application Contacts

Name	Organization Name	Contact Person	Telephone #	Contact Type	Email
LILY, SPICER	n/a	n/a	(781) 690-7524	Application Prepared By	lspicer@gill-eng.com
JAMES, TURNBULL	n/a	n/a	(617) 721-7694	Application Prepared By	jturnbull@gill-eng.com

Certification Information

Individual
LILY SPICER
63 KENDRICK STREET
NEEDHAM, MA 02494
United States

Telephone #: (781) 690-7524
E-mail: lspicer@gill-eng.com

I certify that I have read and understand the instructions that accompany this application and that the statements made as part of this application are true, complete, and correct and that no material information has been omitted. By checking the box below, I understand and agree that I am electronically signing and filing this application.

ATTACHMENT 05

Application Narrative

1. Introduction

Gill Engineering has prepared this Joint Permit Application for filing with MassDEP as a 401 Water Quality Certification and the United States Army Corps of Engineers (USACOE) as a PCN (Pre-Construction Notification) under Massachusetts GP 23. This project will be filed with MassDEP under BRP WW 26: Combined Licenses/Permits for Waterways and Water Quality Certification. This project qualifies as bridge exempt under the 2014 Massachusetts Transportation Bond Bill, therefore, this bridge replacement project is not subject to the Wetlands Protection Act (WPA), Chapter 91, and Massachusetts Environmental Policy Act (MEPA). Documentation of permitting progress with other jurisdictional State and local agencies is attached to this application.

The purpose of this project is to replace the structurally deficient bridge L-05-004 (059) with a new structure and to restore the stream channel of Beartown Brook (a.k.a. Powder Mill Brook.) The proposed channel restoration will protect the proposed bridge foundations and provide an opportunity to restore the stream to a natural state. The bridge will be reconstructed with a span length of 64 feet which will provide a clear opening of 53.1 feet to meet the Massachusetts Stream Crossing Standards to the maximum extent practicable. This project will benefit the stream resource areas associated with Beartown Brook while replacing a deficient bridge structure.

Meadow Street crossing over the bridge is a rural two-lane collector roadway with very low traffic volumes. Meadow Street and the bridge over Beartown Brook are owned by the Town of Lee and within public right of way, the Town has acquired easements to the South of the project site to relocate utilities and reconstruct the bridge. The roadway approaches at the bridge will be restored similar to the existing roadway with two 12-foot shared vehicle travel lanes. Overhead utility wires will be temporarily relocated outside the existing right of way to utility easements South of the bridge during construction. At completion of the bridge replacement, overhead utility wires will be relocated permanently back to the Meadow Street Town-owned right of way. New guardrails and a new gravel driveway apron will be installed approaching the bridge to improve public access to Beartown State Forest to the South of the site. Roadside landscape features will be restored with native seeding and hardwood plantings at the site. This bridge replacement project will provide continued roadway access via Meadow Street to residential, hotel, public recreation, and industrial uses in the village of South Lee.

The proposed channel restoration will permanently impact Waters of the U.S. (WOTUS) by dredging 3,441 square feet of the existing streambed of Beartown Brook. The dredged material will be stockpiled, and suitable material may be re-used as restoration material for Beartown Brook. The stream bed will be restored with twelve inches of crushed stone over geotextile fabric, three feet of rip rap for scour mitigation at the bridge abutments per MAssDOT standard bridge details, and twelve inches of natural streambed material to restore the natural stream substrate. The stream restoration is intended to meet the Massachusetts Stream Crossing Standards. The restoration work will place less cubic yardage of fill and widen the stream at the bridge, resulting in a *gain* of square footage of WOTUS at the site, totaling 4,988 S.F. for the proposed improvements.

This project will temporarily impact Vegetated Wetlands adjacent to Beartown Brook with excavation activities. Construction of the northwest wingwall will temporarily impact 340 square feet of Vegetated

Wetland. The wetland area will be restored to the functional equivalent of existing at a 1:1 ratio. Vegetated Wetlands will be restored according to the attached Special Provisions and wetland restoration details. Relocation of overhead wires will require selective tree trimming and clearing of tree limbs encroaching into the public right of way. The tree work will be completed with a certified arborist present to monitor roadside forest regrowth potential. Removal of tree shading is a potential temporary impact to an additional 1,165 square feet of Vegetated Wetlands at the site. Therefore, temporary impacts to Vegetated Wetlands total to 1,505 square feet for the project site.

The following sections address the Joint Permit Application Checklist, DEP WW26 ePlace portal application, and ACOE PCN GP 23.

2. Existing Conditions

The existing structure is owned by the Town of Lee and was constructed in 1939 and is a steel stringer bridge and concrete deck supported on concrete gravity abutments with spread footings. The existing bridge was closed in 2013, with work completed at that time to remove the existing bridge railing and patch the bridge deck. A temporary bridge structure was then placed over the existing deck on temporary abutments. Meadow Street remains open as a local roadway crossing over Beartown Brook.

The clear span of the existing bridge is 30 feet and is skewed to the normal flow of the stream at approximately 30 degrees at the bridge and 90 degrees to the bridge opening 20 feet upstream. Splayed wingwalls exist at each corner on the downstream side and at the southwest corner of the upstream side. The southeast upstream corner has a 40-ft retaining wall at the 90-degree bend in the stream. Due to the inadequate span of the existing structure, and the 90-degree bend in the stream, significant scour has occurred along the east abutment and the southeast wing wall.

Beartown Brook is a stream tributary to the Housatonic River that flows south to north with a stream confluence approximately 0.25 miles downstream. The watershed for the structure is approximately 8.82 square miles and has a mean basin slope of 7.74 percent according to USGS Streamstats. The land cover consists of mostly forested land with some forested and non-forested wetlands. The difference in elevation from the stream bed below the bridge to the highest point in the watershed is about 1,300 ft. The stream bottom primarily consists of loose granular material. The slope of the channel was determined by a field survey to be 0.01 ft/ft based on water elevations taken 350 feet upstream and 350 feet downstream. Beartown Brook has a varying channel width upstream of the bridge due to human made channelization. A geomorphological survey was completed by SLR International to confirm bankfull width.

SLR International Corp. performed a fluvial geomorphology assessment to determine the bankfull width during a site visit on March 29th, 2022. The bankfull width was determined to be 44 feet by measuring three upstream and one downstream reach sections. The recommended minimum bridge hydraulic opening is 1.2 times the measured bankfull width of 44 feet, or a minimum of **52.8 feet**. The proposed bridge span is 64 feet long which will provide a clear opening of 53.1 feet to meet the minimum required hydraulic opening, when measured upstream of the bridge, normal to the stream. See Table 1.

BANKFULL WIDTH MEASUREMENTS

Location	Bankfull Channel Width (FT)	Notes
825 feet upstream of bridge	42.5	OK indicators. Fill on north bank.
335 feet upstream of bridge	34.0	Constricted by fill along Meadow Street.
140 feet upstream of bridge	33.5	Constricted by fill along Meadow Street.
260 feet downstream of bridge	44.0	Good bankfull indicators. No fill. Best measurement.

Table 1 – Bankfull Width Determination

The wetland delineation was completed by Tighe & Bond on November 11th, 2021. See Attachment 14.

The delineation report identified a Vegetated Wetland located west of Beartown Brook and on the north side of Meadow Street under Flag series 1G (1G-1 to 1G-23). This wetland is classified as a Palustrine Scrub-Shrub/Forested (PSS/FO1E) wetland. This wetland will be temporarily impacted during construction excavation activities and will be restored to pre-construction conditions.

The Ordinary High Water (OHW) of Beartown Brook, EL. 844.0 (NAVD88) was determined based on observations of bankfull indicators and changes in vegetation and slope. Inland Bank and OHW are coincident throughout much of this reach of the Beartown Brook, however, four distinct areas were observed in which they diverge at point bars.

The 1A-1B series of flags defines a portion of the northern and southern OHW and Bank of Beartown Brook. At the project site, Beartown Brook ranges from about 15 feet to 30 feet wide and about six inches to six feet in depth. The bank west of the Meadow Street bridge is well defined by boulders, the bank area within the project limits is also part of the maintained roadway shoulder of Meadow Street. The bank then transitions from boulders to rip rap and human-made concrete walls that line both sides of Beartown Brook and connect to the Meadow Street bridge.

East of the Meadow Street bridge, Beartown Brook transitions from well-defined and rocky; to a sinuous, sandy, estuary to the Housatonic River. The 1C through 1F series of flags mark the extents of sandy point bars within Beartown Brook where the extents of inland bank diverge from OHW. Land Under Waterbodies and Waterways (LUWW) (a.k.a. WOTUS) primarily consist of boulders, cobbles, gravel, and sand. No submerged aquatic vegetation was observed at the project site.

The site of the bridge is located within the 100-year flood zone A8, Special Flood Hazard Area (SFHA), of the Housatonic River. The crossing site is located within the Housatonic River's National Flood Insurance Program (NFIP) Special Flood Hazard Area (SFHA) Zone A8 delineation. The horizontal and vertical limits of that SFHA were determined during the 1981 Lee NFIP Flood Insurance Study (FIS). The local horizontal limits of that SFHA delineation are illustrated on Lee FIS Floodway/Flood Insurance Rate Map (Floodway/FIRM) Community Panel 2500280005. The vertical limits of that SFHA delineation coincide with the river's currently effective NFIP local base (100-year) flood elevation (BFE) profile as illustrated on Lee FIS Flood Profile 01P. The approved hydraulic report indicates that project activities will result in temporary impacts to the BFE of Beartown Brook but not result in any increase to the Housatonic River's currently effective BFE profile, or require revision of horizontal limits of the river's SFHA Zone A delineation in proximity to the project location. See the FEMA Firm 5 of 13 Lee, MA in Attachment 08.

The project limits include areas under jurisdiction of the U.S. Fish and Wildlife Service, NHESP priority and estimated habitats of rare species, and Mass Wildlife. The project site is mapped as PH 1216 Priority Habitat for Wood Turtle (Glyptemys insculpta), which is state listed as Special Concern. Beartown Brook is listed by Mass Wildlife as a Coldwater Fisheries Resource. See the Environmental Constraints Map in Attachment 09.

The area surrounding the project is mostly undeveloped. To the east, lands are heavily wooded on both sides of Meadow Street with driveways for single residential homes, public recreation, and agricultural use. The project lies primarily on public roadway right of way, with public easements acquired for bridge reconstruction and utility relocation. To the south of the project is privately owned land with a conservation restriction connecting to the 12,000-acre Beartown State Forest. To the west of the project, the Holiday Inn Oak N' Spruce timeshare resort is located on both sides of Meadow Street. There is an existing privately owned footbridge over Beartown Brook approximately 500 feet upstream of the project. A public walking path network connects to a gravel driveway located near the southeast corner of the bridge.

There are overhead wires present that follow the alignment of Meadow Street and cross the roadway from north to south at the bridge. The roadway is heavily forested on both sides of Meadow Street at the project site and has overgrown into the right of way. Relocation of the overhead wires and tree maintenance will be required to replace the bridge.

There is no drainage infrastructure present on Meadow Street within the project limits. The existing roadway drains by roadside infiltration or "country drainage" at the site and the surrounding area. The existing roadway does not have any existing point discharges to Beartown Brook. The first 15 feet of soil is mostly fine to coarse sand, it is anticipated that infiltration into existing soils can occur. Country drainage appears to function properly at the site discharging to gravelly and sandy soils within the right of way.

3. Proposed Conditions

The proposed bridge replacement consists of replacing the existing bridge with precast prestressed concrete NEXT 28F Beams supported on integral concrete abutments with a single row of steel H-piles. The bridge will have a span length of 64 feet and an outer width of 27 feet 9 inches. A small portion of the existing abutment footings will remain and be buried below the stream bed as part of scour countermeasures. The other portions of the existing bridge abutments and wingwalls will be removed. The wingwall that extends 40 feet from the southeast corner of the bridge will be demolished and reconstructed with a new precast concrete block retaining wall.

Replacement of the structure will meet Massachusetts Stream Crossing Standards to the greatest extent practical. The Massachusetts Stream Crossing Standards listed below have all been satisfied with the proposed design:

1. **Type of crossing -** The optimum type of crossing has been met as the proposed structure is a bridge.
2. **Embedment -** The embedment requirements do not apply to bridges.

3. **Crossing span -** The general requirement for the crossing span is to be 1.2 times the bankfull width of the stream. A geomorphological assessment was performed to determine the bankfull width is about 44 feet for the reference reach, with a minimum required clear opening of 52.8 feet. The proposed clear opening is 53.1 feet measured upstream of the bridge perpendicular to Beartown Brook, between the west abutment and southeast abutment wingwall. The proposed bridge span is 64 feet, parallel to the Meadow Street baseline. The proposed clear opening width will allow for establishment of bank habitat and less frequent overtopping of the roadway during storm events.
4. **Openness -** The optimum openness ratio must be at least 1.64 feet and is defined as the cross-sectional area divided by the crossing length. There must also be a minimum height of 6 feet. The openness ratio of the proposed structure is 11.58 feet with a minimum height of about 7 feet. The proposed low chord elevation shall be EL 847.2(NAVD 88).
5. **Substrate -** The substrate shall be a natural bottom that matches the upstream and downstream substrate and shall resist displacement during flooding and maintain an appropriate bottom during normal flows per the stream crossing standards. This project will reinforce the stream substrate and address existing stream scour issues.
6. **Water depth and velocity** – Water depth and velocities are comparable to those modeled upstream and downstream in the existing condition in the Hydraulic Report Memorandum that was submitted to MassDOT on June 23rd, 2022.

Both the stream assessment and hydraulic design recommended that scour countermeasures be installed as part of this project. Streambed restoration has been proposed to address scour and undermining issues present at the structure. Significant sediment build up was observed upstream of the wall on the south bank of Beartown Brook exacerbating the undermining of the east abutment. The streambed will be dredged to restore the natural thalweg" V" shape of the stream. The existing sediment will be removed and stockpiled on site or a location designated by the Contractor. Layers of crushed stone, riprap, and repurposed streambed material will be installed to reinforce the irregular bend in Beartown Brook. Boulders will be reused to construct two stone weirs upstream of the bridge. The stone weirs are meant to divert the flow away from the bend in the stream and recenter the flow towards the thalweg. Installation of the stone weirs and the streambed reinforcement are a betterment to the stream by increasing bankfull width and reducing scour flows at the structure. This project is both a bridge replacement and stream improvement project that increases the stream bank available for the potential habitat of various aquatic, amphibious, and small mammal life.

Only ground areas necessary for regrading will be cleared and grubbed. Nine trees will be removed to access the bridge and to relocate utility wires. Selective tree trimming will be completed outside these areas to relocate utility poles and facilitate crane access to the site. Selective clearing and thinning will be monitored by an arborist and is limited to necessary limb removal only to complete the work. The site will be restored with native tree plantings and roadside seeding and wetlands mixes.

The proposed roadway curvature will be slightly adjusted to improve the irregular roadway layout at the bridge. The vertical profile will be raised to accommodate the proposed bridge structure while maintaining the existing freeboard for Beartown Brook. Approach roadway work includes full depth paving, guardrail installation, traffic lines, and signage. The proposed roadway width is 24'-6" which allows for two varying

12'-0" shared vehicle lanes. Sidewalks and shoulders have been eliminated from the roadway design to reduce grading impacts on the site and adjacent stream.

The proposed drainage maintains the existing function of a rural, two-lane, roadway with "country drainage." Stormwater runoff is anticipated to infiltrate similar to existing conditions. Soil conditions were confirmed with soil borings and sediment samples taken in the stream. Stone drainage channels shall be installed at the low point of the roadway and are sufficient length to provide infiltration rather than creating a new point discharge.

This work will be performed in dry conditions by implementing temporary control of water with sandbags or other similar water control devices. Erosion controls will be installed prior to ground disturbance. Plans for adequate containment during dewatering on a barge are not applicable.

Control of water work will be done during periods of low flow to ensure the water control system is well below the design capacity. See attached project plans for water control measures and construction sequencing. Temporary support of excavations will be installed, if necessary, prior to excavation of the existing bridge.

The dredging impacts are proposed to restore the streambed when the bridge is replaced, and to restore the upstream bank as a betterment to the stream Resource Areas. The proposed work will permanently impact the Waters of the U.S. (WOTUS) associated with Beartown Brook and will temporarily impact Vegetated Wetlands adjacent to Beartown Brook. This project will include Special Provisions for phased construction, seasonal construction limitations during low flow months, sedimentation controls, and stream restoration.

Temporary Vegetated Wetland impacts adjacent to the proposed bridge abutment will be restored to pre-construction conditions with a native wetland seed mix. Temporary impacts to Vegetated Wetlands are also anticipated for overhead wire relocation. This work will require selective clearing of roadside trees which will temporarily impact shading over adjacent Vegetated Wetlands. At the completion of bridge work, overhead wires will be relocated back to the public right of way and the roadside forest will be left to re-establish itself. Native hardwood tree plantings are proposed on the south side of the roadway at the request of the Town to compensate for tree removal. These impacts have been minimized to achieve the goal of replacing the bridge and to provide scour resistance for the streambank and structure.

4. Construction Sequence

The construction work for the project is carried out in different stages, as follows:

Preconstruction activities include procurement and approval of submittals and shop drawings. Once submittals have been approved, the process of utility relocation is to be initiated.

Construction activities include:

1. Mobilization

2. Initial Site Work

3. Temporary Relocation of Utilities

4. Stages 1 – 8: For the bridge replacement and stream restoration. See description below.

5. Permanent relocation of utilities.

6. Meadow Street Road Construction

7. Final Activities

8. Closeout

The replacement of the existing structure and stream channel restoration will be done in multiple stages after the Initial Sitework is completed. The Initial Sitework activities include Traffic Management, Installation of erosion controls and tree protection, then clearing and grubbing, and tree trimming & removal. Temporary utility relocation will be carried out by others prior to the start of major excavation work. The following describes the work sequence occurring in multiple stages including the bridge replacement and stream channel restoration:

Stage 1: This stage consists of removing the temporary bridge superstructure, installing In Water Control for dewatering and demolishing temporary bridge abutments and the existing superstructure.

Stage 2: All activities related to Earth Excavation occur in this stage.

Stage 3: Following the earth excavation are Pile Installation activities that consist of excavating a trench for piles, installing proposed piles, and backfilling the remaining trench with crushed stone.

Stage 4: In this stage, proposed concrete abutments are constructed and damp proofed. Stage 4 also includes the construction of Wingwalls.

Stage 5: Temporary water control is achieved through installing sandbags or other diversion devices, dewatering, and then demolishing the existing abutments.

Stage 6: In this stage Phase 1 of the stream restoration takes place on the west side of the stream at the site. This phase includes re-setting sandbags or other diversion devices, dewatering the area, and excavating the channel, followed by placing geotextile fabric and crushed stone. It also includes riprap and stream channel material placement.

Stage 7: Similar to Stage 6, Stage 7 consists of the same activities but takes place on the east side of the stream.

Stage 8: Bridge superstructure construction begins, following approach slab construction on the east and west sides respectively, backfill of abutments with gravel borrow as per the limits shown on plans. Then permanent relocation of utilities by others as noted on the plans. This is followed by Meadow Street Road construction activities that include removal and disposal of the existing pavement and installation of full depth pavement.

Work within the stream required to remove the existing substructure and restore the stream will impact the Waters of the U.S. (WOTUS) and Banks permanently. Work is anticipated to be completed by mechanical means with an excavator within the right of way and a public parking area adjacent to the bridge. The bridge is being constructed of pre-cast bridge elements that require crane installation, the crane will be staged at the southeast corner of the bridge in the public parking area at the site. Construction activities to construct the bridge and to relocate utilities will impact Vegetated Wetlands temporarily. See Table 1 for the area and volume of dredged material and Attachment 11 - Permit Drawing for the dredging limits.

5. Dewatering Schedule and Constraints

Dewatering for excavations will take place in stages as described above during summer months. Control of water will begin and be maintained in various stages beginning July 1, 2026, and ending September 30, 2026. Control of water is proposed during these months so that sandbags may be used for channelizing low stream flow. Temporary dewatering discharge sites, if required, are anticipated to be located within the Meadow Street public right of way in drywells. Dewatering is not expected to create a new point discharge.

6. Resource Area Impacts

An important aspect of the project is to limit impacts to Resource Areas as much as practical by ensuring that direct impacts are only temporary during construction and restored as a betterment to the Resource.

Stream Channel and Bank Impacts

The permanent impact to naturally occurring Bank is 92 linear feet, the permanent impact to non-naturally occurring bank (i.e. the existing bridge wingwall) is 116 feet. The total 208 feet of Permanent Bank impacts within the project area will be restored as naturally occurring bank.

The proposed bridge span is 64 feet, so that the proposed abutments and wingwall are located outside the of restored stream bank. The top of the proposed retaining wall is EL. 849.10, which will be above the Ordinary High Water (OHW) elevation El. 844.0. Therefore, the area behind the proposed retaining wall is anticipated to not be considered Bank Area.

The banks abutting the bridge will be permanently impacted by regrading and reconstruction to install the new bridge, increase the hydraulic opening, and restore the resource area. The project proposes to place scour mitigation material and restore the upper natural substrate at the bridge. The stream bed will be dredged and restored in stages with twelve inches of crushed stone, three feet of rip rap, and twelve inches of natural streambed aggregate. Existing stream soil consists of mostly granular sand, cobbles, and boulders, which may be partially reused to restore the streambed, if suitable, by the Contractor. The proposed structure will be built outside of the measured 1.2 bankfull width clear opening requirement to meet the Massachusetts Stream Crossing Standards. The bank will be used for access by workers and small machinery within the limits of the streambed restoration. The final bank condition will replicate and improve upon the function and appearance of the original bank. See Table 2 for a summary of the effected resource areas and Attachment 11 - Permit Drawing for the resource area limits.

Resource Area Impacts		
	Permanent	**Temporary**
Existing WOTUS	3,441 S.F.	
Vegetated Wetlands		1,505 S.F.
Bank	208 L.F.	100 L.F.
Dredge	630 C.Y.	
Discharge	508 C.Y.	
WOTUS GAINED	4,998 S.F.	

Table 2 – Resource Area Impacts

1. *Vegetated Wetlands = temporary impacts to this resource area for construction access.*
2. *Bank (Permanent) = permanent bank impact for removing the existing structure*
3. *Bank (Temporary) = temporary impact to bank areas to be restored to pre-construction conditions*
4. *Dredge = volume of material removed from the existing LUWW/WOTUS*
5. *Discharge = volume of fill discharged to the existing LUWW/WOTUS for the purposes of streambed restoration*

This project has greater than 100 cubic yards of dredging. A sediment sampling plan has been prepared and approved by DEP as of May 21, 2024. Sediment Sampling Plan results are contained in Attachment 16.

The method of dredging will be mechanical with an excavator. All dredged material shall be stockpiled on-site within the project limits. Dredged material deemed suitable for reuse shall be used as streambed restoration material. Staging and laydown areas are expected to be located within the Meadow Street public right of way and Town easements. Stockpiling will occur outside of resource areas and is managed by MassDOT standard specifications for stockpile stabilization and sedimentation control. Stockpile storage off-site will not be allowed unless at an approved facility submitted by the Contractor.

Discharge of dredged or fill material as defined by USACE "…means any addition of dredged [or] fill material into U.S. waters." The discharged quantity in Table 2 includes repurposed dredged material and fill such as riprap and crushed stone.

Vegetated Wetland Impacts

The proposed work will directly impact about 340 SF of Vegetated Wetland within the project limits defined by the series of flags 1G-1, 1A-18 to 1A-19. This wetland is adjacent to the northwest bridge abutment and must be excavated to construct the proposed bridge end post. Impacts to the wetland are expected to be temporary and the area will be re-graded to the functional equivalent of the existing wetland and restored at a 1:1 ratio.

The proposed work will indirectly impact about 1,165 SF of Vegetated Wetland at the eastern project limits defined by the series of flags 2A-2 to 2A-5. This wetland will be impacted by trimming overhead tree limbs for relocation of utility poles. The wetland may be impacted by changing adjacent tree cover and shading. The extent of these impacts is minimal, and the resource is expected to be re-shaded naturally by the adjacent forest. Typically, this category of work is allowable for public utilities.

7. Resource Area Mitigation

This project limits the impact to WOTUS to the most extent practical by limiting the proposed bridge and retaining wall footprints. The roadway crossing the stream has been reduced to the minimum width practical to reduce grading impacts at the structure. The existing streambed exhibits scour and undermining issues at the bridge, which suggests it is constricted at the roadway crossing. The increase of the hydraulic opening and bankfull width at the bridge structure is mitigation for the impacted WOTUS and Bank area. The project also takes a phased approach to diverting the stream to complete the work. Re-grading of the bank slopes adjacent to the proposed bridge will maintain or improve the bank stability. Repurposing the surface streambed material is also intended to benefit Beartown Brook by matching the representative stream reach with similarly graded aggregate.

The 340 square feet of temporary impacts to the Vegetated Wetland denoted as flags 1G-1, 1A-18 to 1A-19 will be restored to pre-construction condition. Following stream bank armoring, the proposed grade will meet the functional equivalent of the existing wetland. The wetland resource area will be restored with jute mesh, compost topdressing and native wetland seed mix. This wetland appears to be an isolated depression in the floodplain and the work is not anticipated to impact adjacent wetland systems. Sediment control barriers shall be placed around the work to limit runoff to adjacent resources. Impacts to the Vegetated Wetlands have been minimized to the greatest extent practicable. It is anticipated that restoration will be a betterment to Vegetated Wetland resource area by removing invasive roadside growth and stabilizing with native wetland seeding.

The 1,165 square feet of temporary impacts to the Vegetated Wetland denoted as the series of flags 2A-2 to 2A-5 will be mitigated by the project. Erosion controls will be installed prior to the start of work. The work will be monitored by an arborist to complete selective tree limb removal. Tree work can be completed from the roadway and earthwork is not anticipated in this area. The project will plant new native hardwood planting to mitigate tree removal and promote roadside forest regrowth. The adjacent roadway embankment will be stabilized and natively seeded in the final condition to restore this Vegetated Wetland to pre-construction conditions.

Stream and wetland restoration details are shown in Attachment 11 - Environmental Permit Plans. Impact Quantities are shown in Table 2 above.

8. Mitigation Specifications

The MassDOT Standard Items that will be used in the proposed project to mitigate impact and manage vegetation are: 102.521 Tree and Plant Protection Fence, 102.55 Arborist, 698.3 Geotextile Fabric for Separation, 698.4 Geotextile Fabric for Permanent Erosion Control, 751.7 Compost Blanket, 755.45 Wetland Restoration, 755.75 Wetland Specialist, 765.21 Annual Cover Crop for Native Seeding, 765.451 Part Shade Roadside Mix, 765.555 Wetland Seed – Part Shade Mix, 765.635 Native Seeding & Establishment, 765.664 Mowing for Native Seed Establishment, and 767.121 Sediment Control Barrier. Special provisions have been included for Item 984.1 Natural Streambed Restoration Material and Item 984.2 Boulder Bendway Weirs.

9. Erosion and Sediment Control

Sediment control barriers shall be placed around the project limits to limit sediment runoff to adjacent resources areas. Sediment controls shall be installed prior to the commencement of any work. Sediment barrier and erosion controls are addressed in MassDOT standard specifications and special provisions.

10. Stormwater

Meadow Street currently does not have a closed drainage system. Therefore, context sensitive Low Impact Development measures were considered first to reduce to the overall footprint of the bridge replacement project. MassDEP's stormwater report checklist considers the following LID Measures: no disturbance to any Wetland Resource Areas, minimizing disturbance to existing trees and shrubs, use of "country drainage" versus curb and gutter conveyance and pipe, and the installation of water quality swales. This project will realign the roadway curvature slightly to minimize necessary impacts to wetlands present on either side of the bridge. The proposed utility pole relocation has been aligned to reduce impact to trees abutting the right of way. The roadway will continue to be a two-lane shared vehicular lane with country drainage to the existing low-point east of the bridge. The project will install two water quality swales at these low points to provide potential pre-treatment. The proposed change in impervious surface is minimal and can be accommodated by country drainage. Installation of a closed drainage system would be impractical at this site as there is no connection to an existing system.

The project is being considered a redevelopment as it relates to compliance with the guidelines provided in the Handbook. As such, strict adherence with the Handbook is limited to Standards 1, 8, 9 and 10. More information can be found in the MassDOT Stormwater Management Memo for Bridges shown in Attachment 17.

11. Alternatives Analysis

The Alternative Analysis is shown in Attachment 18.

12. U.S Fish and Wildlife

Beartown Brook is identified by Mass Wildlife as a Coldwater Fisheries Resource (see attachment 10). The proposed bridge will meet the Stream Crossing Standard of 1.2 times the bankfull width. This minimizes the impact of the structure on the natural hydrology of the stream and provides potential habitat for fish species. The expanded bank width and removal of the limited hydraulic opening in Beartown Brook will allow for a lower flow rate and better passage of aquatic wildlife. The proposed stabilization and natural bank restoration will allow for cover, shelter, and other bank uses needed by aquatic wildlife. Rather than the observed constricted flows and sediment deposits that have resulted in scour and irregular point bars forming.

The project scope includes dredging the stream bottom and laying natural stream bed material and installing two stone weirs for the purpose of improving the hydraulic performance upstream of the structure. This scour improvement has a dual benefit of a naturalized path and shelter for aquatic wildlife

along the Bank area. The dredging will be completed by the Contractor in phases to reduce overall impacts to the Stream and fishery resource and restore the natural thalweg of the streambed. The existing gradation of the streambed will also be matched by repurposing dredged streambed material. The widening of the channel at the structure is expected to provide greater area and lower flows for aquatic life. The existing banks are rocky with overlain topsoil and vegetation, this project will stabilize and restore this condition with native plantings and seeding. The proposed streambed and Bank improvements will temporarily impact the fisheries resource to provide a greater permanent benefit.

Coldwater Fisheries are classified as "Stormwater Critical Areas" under standard 6 of the Massachusetts Stormwater standards. With the project also being a Redevelopment under MassDEP's Stormwater checklist, Low Impact Development (LID) techniques were considered. Reducing the size of the structure and minimizing impacts at the site were deemed a priority. Country drainage is expected to handle runoff from the site consistent with current conditions. Stabilizing roadway shoulders and installation of water quality swales at roadway low points improve upon the existing condition. Stabilizing the stream bank with the proposed wall, restoring Bank area, and native seeding will also be an improvement for potential Coldwater fish. Therefore, we believe the project will benefit the Resource and adjacent public recreation.

The U.S. Fish and Wildlife Service (Service) has verified that the Proposed Action may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 et seq.). The Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (Myotis sodalis) and/or the endangered Northern long-eared bat (Myotis septentrionalis). This project is anticipated to meet the requirements of MassDOT's programmatic agreement with U.S. Fish and Wildlife for NLEB and Indiana Bat, see attachment 12 for correspondence with U.S. Fish and Wildlife.

MassDOT, on behalf of FHWA, determined the project action will not jeopardize the continued existence of the proposed species listed within the project's action area (Monarch Butterfly and Tri-Colored Bat.)

13. Natural Heritage and Endangered Species Program (NHESP)

The NHESP designated endangered species habitat within the project limits is PH 1216, Priority and Estimated Habitat for Wood Turtle (Glyptemys insculpta). See Attachment 10 for the map of this NHESP designated endangered species. See Attachment 12 for Agency Correspondence with NHESP. The IPaC resource list was submitted to MassDOT as part of the Early Environmental Coordination Checklist on August 12th, 2022 and has been coordinated by the applicant with NHESP.

Widening the structure span and stabilizing the bank is expected to aid amphibious life. The project aims to create more Bank area which is a potential habitat increase for this species. Further, and more importantly for amphibious life, the project will restore stepped bank access from the Stream to the floodplain of Beartown Brook. Stream flows are expected to be dispersed toward the thalweg in the center of the stream, increasing the amount of bank available. Considering the net improvement to Coldwater Fisheries and

potential amphibious habitat, the temporary impacts of this bridge replacement project appear to be minimized with large potential for permanent habitat improvement.

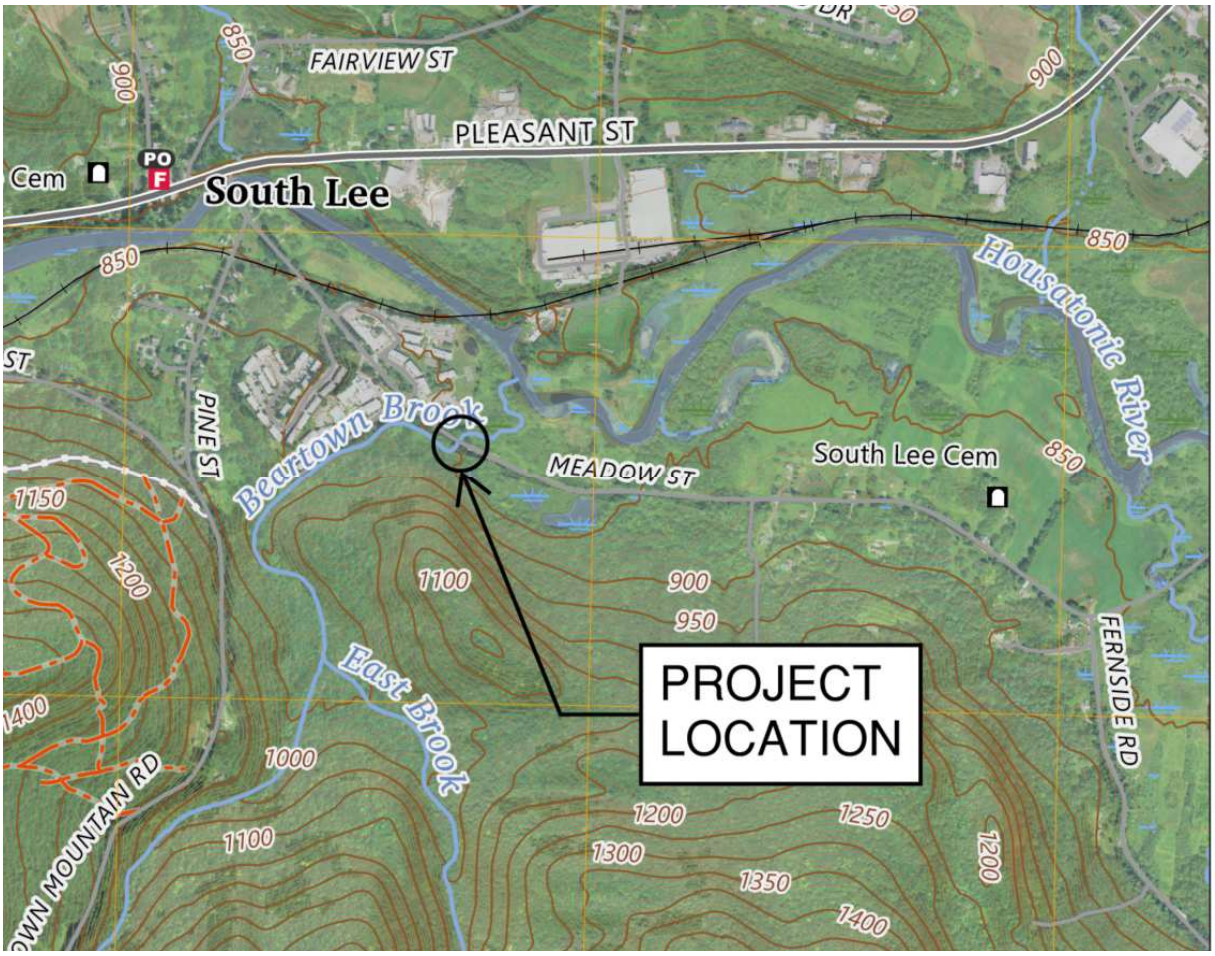
Conclusion

In conclusion, the replacement of Bridge L-05-004 (059) over Beartown Brook is a comprehensive project aimed at addressing structural deficiencies and enhancing the longevity of the Meadow Street roadway crossing. By implementing new integral bridge abutments, a clear span width of 64 feet, and extensive scour mitigation measures, the project ensures compliance with Massachusetts Stream Crossing Standards and improves the resilience of the streambank. The careful planning and execution of dredging, installation of stone weirs, and restoration of Vegetated Wetlands demonstrate a commitment to minimizing environmental impacts while achieving the project's goals.

The applicant respectfully requests that MassDEP and the U.S Army Corps of Engineers find these measures adequately protective of the interests identified in the 401 Water Quality and 404 Regulations and issue a Water Quality Certification and 404 Authorization approving the work shown on the accompanying plan set.

ATTACHMENT 06

USGS Map





QUADRANGLE LOCATION

ROAD CLASSIFICATION

Expressway
Secondary Hwy
Ramp
Local Connector
Local Road
4WD
Interstate Route
US Route
State Route

1	2	3
4		5
6	7	8

1 Canaan
2 Pittsfield West
3 Pittsfield East
4 State Line
5 East Lee
6 Egremont
7 Great Barrington
8 Monterey

ADJOINING QUADRANGLES

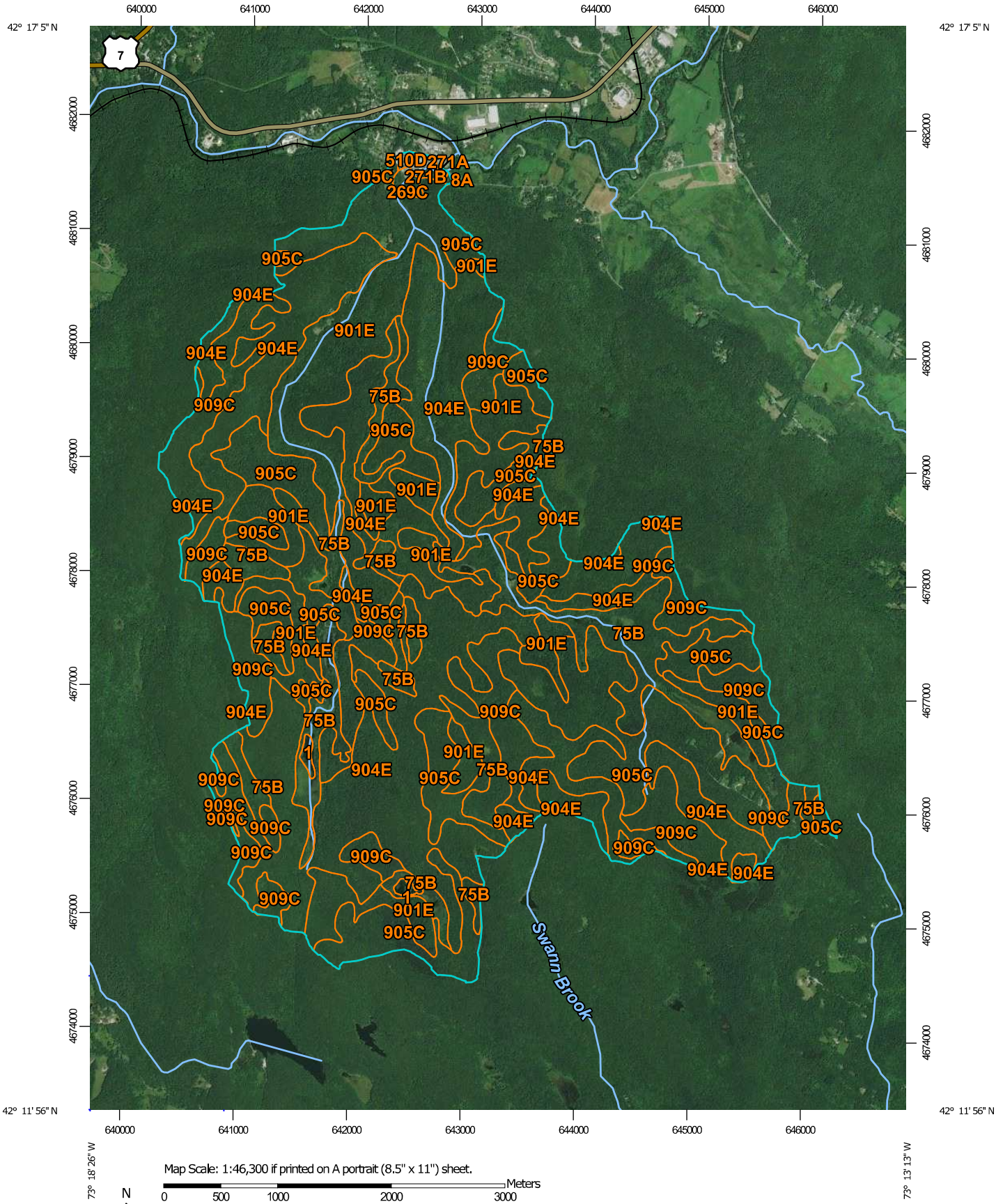
USGS 2024 STOCKBRIDGE PLATE

SOUTH LEE, MA

ATTACHMENT 07

Soil Survey

Soil Map—Berkshire County, Massachusetts
(globalwatershed)



Map Scale: 1:46,300 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 500 1000 2000 3000

Feet
0 2000 4000 8000 12000

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

Proposal No. 607597 - 132402

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MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

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.

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: Berkshire County, Massachusetts
Survey Area Data: Version 16, Sep 2, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 8, 2019—Sep 17, 2019

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.

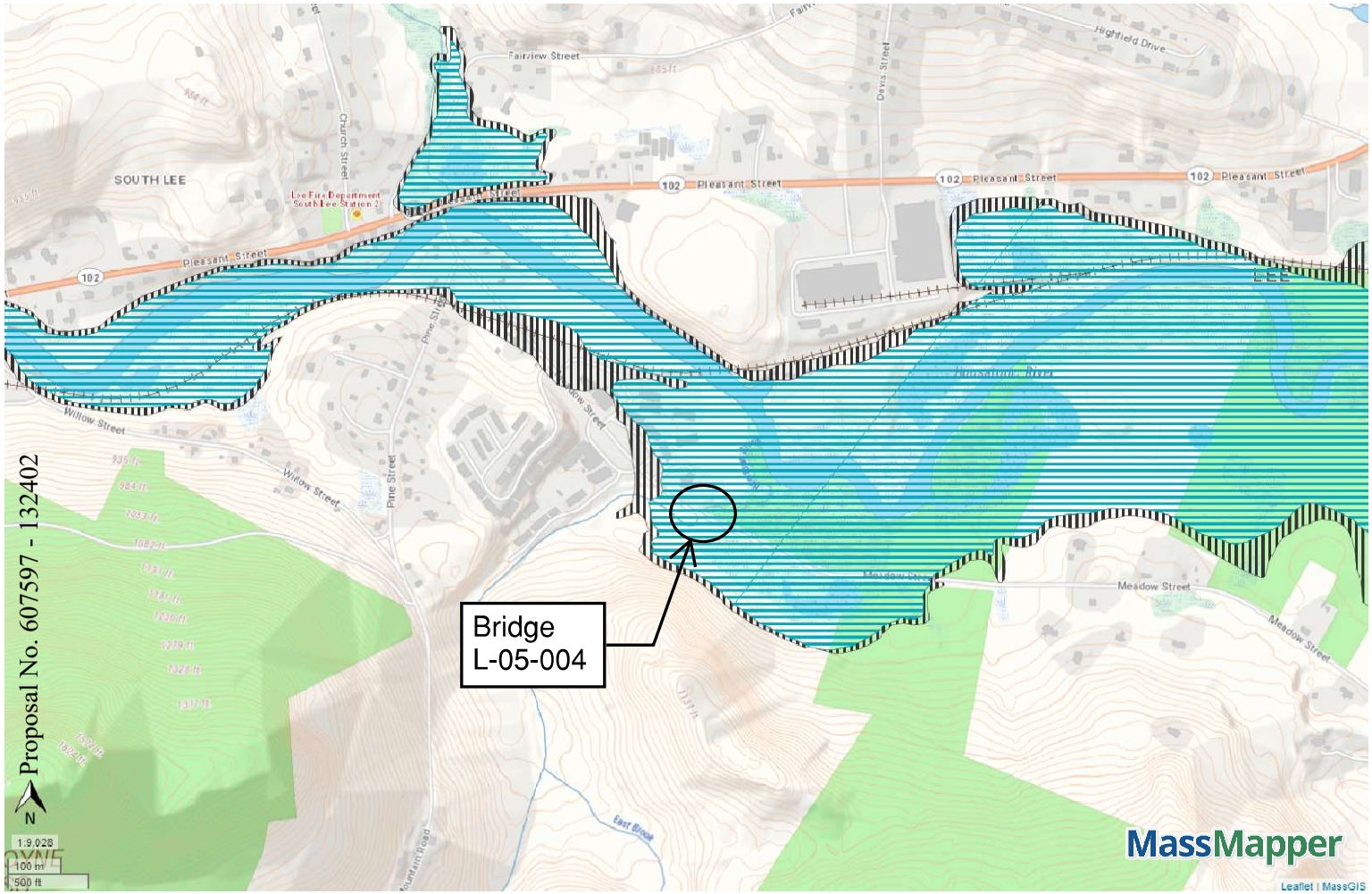
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Cwater	12.8	0.2%
8A	Limerick silt loam, 0 to 3 percent slopes, frequently flooded	0.9	0.0%
75B	Pillsbury fine sandy loam, 0 to 8 percent slopes, very stony	690.8	12.2%
269C	Groton gravelly sandy loam, 8 to 15 percent slopes	11.3	0.2%
271A	Hero variant gravelly loam, 0 to 3 percent slopes	2.5	0.0%
271B	Hero variant gravelly loam, 3 to 8 percent slopes	12.0	0.2%
510D	Pittsfield loam, 15 to 25 percent slopes	3.8	0.1%
901E	Berkshire-Marlow association, 15 to 45 percent slopes, extremely stony	1,079.0	19.1%
904E	Lyman-Tunbridge association, 15 to 60 percent slopes, extremely stony	1,684.5	29.9%
905C	Peru-Marlow association, 3 to 15 percent slopes, extremely stony	1,318.1	23.4%
909C	Tunbridge-Lyman association, 3 to 15 percent slopes, extremely stony	826.4	14.6%
Totals for Area of Interest		**5,642.1**	**100.0%**

ATTACHMENT 08

FEMA Flood Insurance Map (FIRM)

FEMA Floodways



FEMA National Flood Hazard Layer Polygons

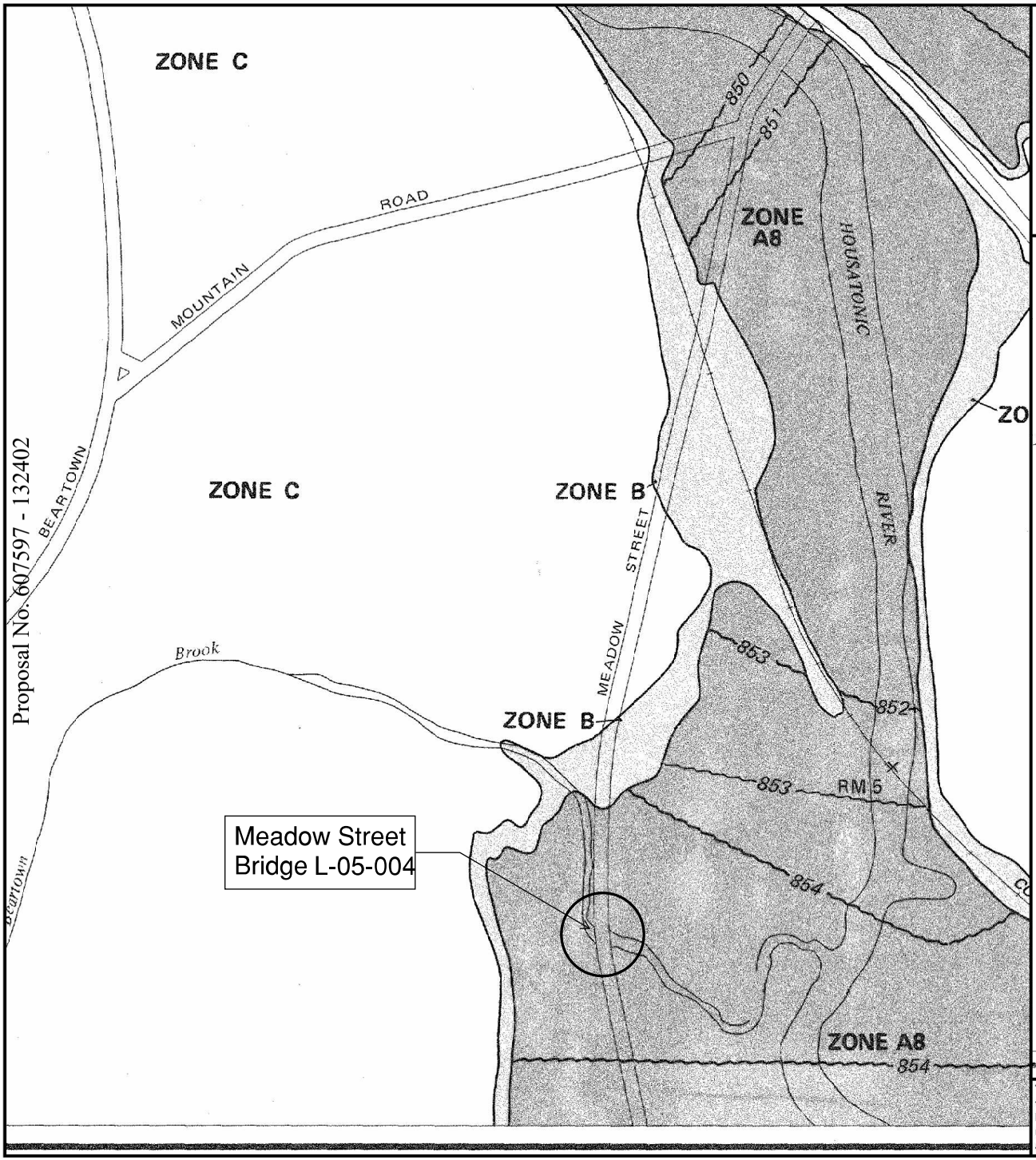
- A: 1% Annual Chance of Flooding, no BFE
- AE: 1% Annual Chance of Flooding, with BFE
- AE: Regulatory Floodway
- AH: 1% Annual Chance of 1-3ft Ponding, with BFE
- AO: 1% Annual Chance of 1-3ft Sheet Flow Flooding, with
- VE: High Risk Coastal Area
- D: Possible But Undetermined Hazard
- X: 0.2% Annual Chance of Flooding
- X: 1% Drainage Area < 1 Sq. Mi.
- X: Reduced Flood Risk due to Levee
- Area Not Included
- Area with no DFIRM - Paper FIRMs in Effect

Q3 Flood Zones (from Paper FIRMs, where NFHL Unavailable)

- A
- AE
- AE Floodway
- AH
- AO
- D
- VE
- Area Not Included
- X500

Railroads - Active Service

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Proposal No. 607597 - 132402



APPROXIMATE SCALE

400 0 400 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM

FLOOD INSURANCE RATE MAP

TOWN OF
LEE,
MASSACHUSETTS
BERKSHIRE COUNTY

PANEL 5 OF 13
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
250028 0005 B

EFFECTIVE DATE:
JUNE 1, 1982

Federal Emergency Management Agency

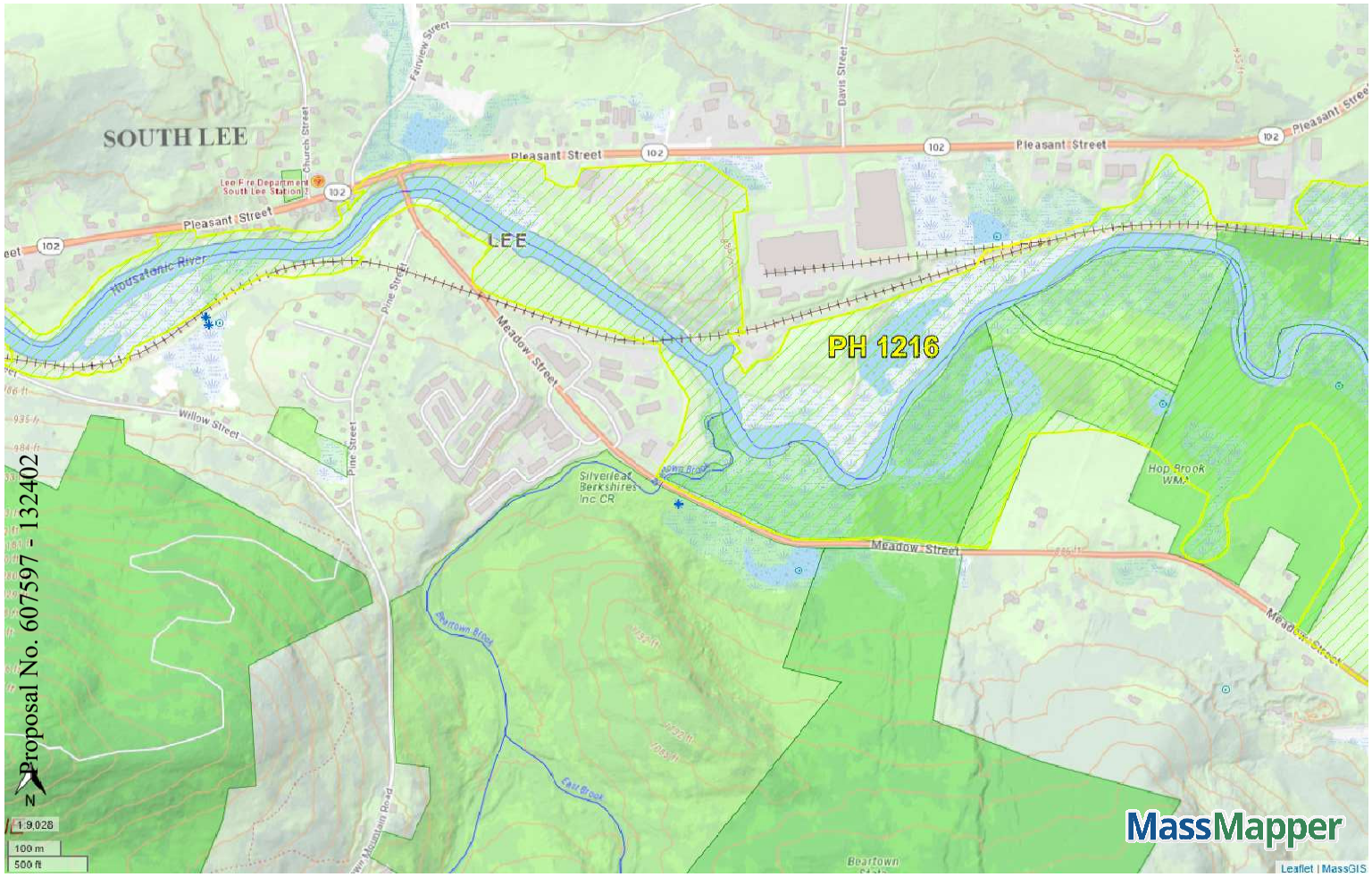
This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.

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ATTACHMENT 09

Environmental Constraints Map

Environmental Constraints



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NHESP Estimated Habitats of Rare Wildlife

NHESP Priority Habitats of Rare Species

Potential Vernal Pools

NHESP Certified Vernal Pools

Openspace Outlines Protected

Openspace Outlines Non-Protected

Outstanding Resource Waters Outlines
- ACEC
- Cape Cod National Seashore
- Protected Shoreline
- Public Water Supply Watershed
- Retired Public Water Supply
- Scenic/Protected River
- Wildlife Refuge

Outstanding Resource Waters
- ACEC
- Cape Cod National Seashore
- Protected Shoreline
- Public Water Supply Watershed
- Retired Public Water Supply
- Scenic/Protected River
- Wildlife Refuge

DFW Coldwater Fisheries Resources

Zone IIs

Zone IIs Dissolved

Shellfish Growing Areas
- APPROVED
- CONDITIONALLY APPROVED
- RESTRICTED
- CONDITIONALLY RESTRICTED
- PROHIBITED

Railroads - Active Service

Areas of Critical Environmental Concern ACECs

Areas of Critical Environmental Concern ACECs Boundaries
- ROAD/RAIL BASED
- RIVER BASED
- WETLAND BASED
- FLOODPLAIN BASED
- TIDAL BASED
- CONTOUR BASED
- POLITICAL BOUNDARY
- PROPERTY LINE BASED
- OTHER
- NOT DEFINED

ATTACHMENT 10

Section 106 Documentation

Gill Engineering Associates, Inc.
63 Kendrick Street
Needham, MA 02494
www.gill-eng.com
781-355-7100

August 12, 2022

Lee Historical Commission
Attn: Sandra Cozzaglio
32 Main Street
Lee, MA 01238

RE: Lee – Bridge Replacement of Bridge L-05-004
Meadow Street over Powder Mill Brook (a.k.a. Beartown Brook)
MassDOT Project File No. 607597

Dear Commission Members,

The Massachusetts Department of Transportation (MassDOT) proposes to replace Bridge L-05-004, which carries Meadow Street over Powder Mill Brook. This project may be supported in part with Federal funds which will require review, therefore, under Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800.) The enclosed project information is provided for the Lee Historical Commission's review in compliance with the regulations governing Section 106.

The project area consists of Meadow Street in Lee, Massachusetts where the road crosses over Powder Mill Brook. The existing bridge was closed by MassDOT due to its deteriorated condition and a temporary single lane bridge was placed over the existing bridge until a new permanent structure is constructed by this project. The existing structure was constructed in 1939 and is a steel stringer bridge with a concrete deck supported on concrete gravity type abutments with spread footings.

The proposed project will consist of replacing the existing structure with a pre-stressed concrete NEXT F Beam bridge supported on integral abutments with a span length of 64 feet, and an out-to-out width of 27 feet 9 inches. In addition, the existing wingwalls and abutments will be demolished; a small portion of the existing abutment footings will remain and be capped to assist in scour countermeasures. Boulders will be used to construct weirs upstream of the bridge to reduce bend scour on the proposed structure and the stream bank will be reconstructed with natural materials in line Massachusetts Stream Crossing Standards to encourage wildlife passage and habitat potential. It is estimated that the total project length will be approximately 465 feet, including 200 ft of roadway approach work to the west of the bridge and 200 ft to the east.

MassDOT Highway Division requests that the Lee Historical Commission review the enclosed materials at its earliest convenience and solicit any comments that the Commission wishes to make regarding this project. Written comments should be submitted to: Ms. Carrie

Lavallee, PE, Chief Engineer, MassDOT Highway Division, 10 Park Plaza, Boston, MA 02116, Attn: Hung Pham with a copy to Gill Engineering Associates, Inc.

If you have any questions concerning the enclosed project information, please feel free to contact Hung Pham (857-368-8831) of MassDOT Highway Division's Project Management Section. If you have any questions concerning the Section 106 process, please feel free to contact Jeffrey Shrimpton (857.368.9317) of MassDOT Highway Division's Cultural Resources Unit.

Sincerely,
Gill Engineering Associates, Inc.

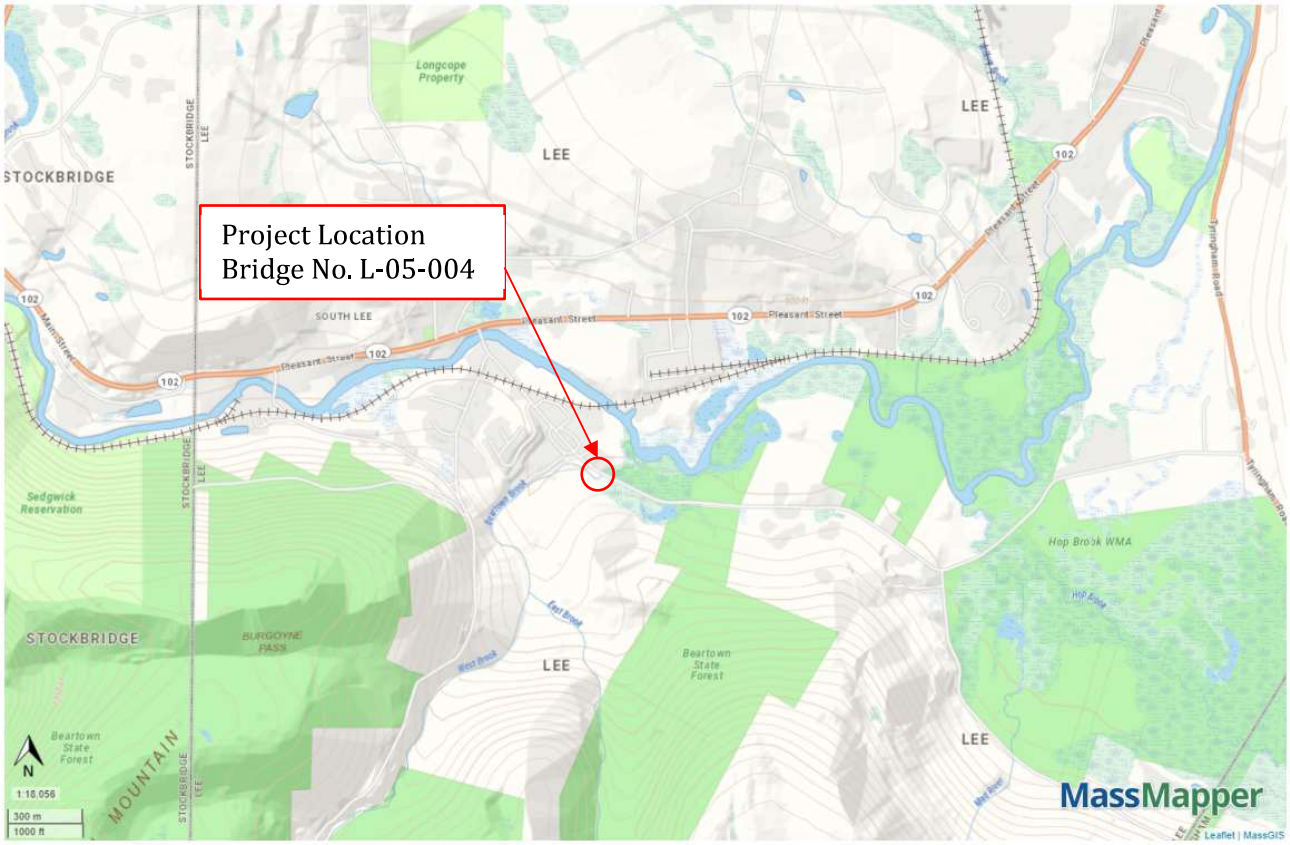


James Turnbull, PE
Senior Civil Engineer

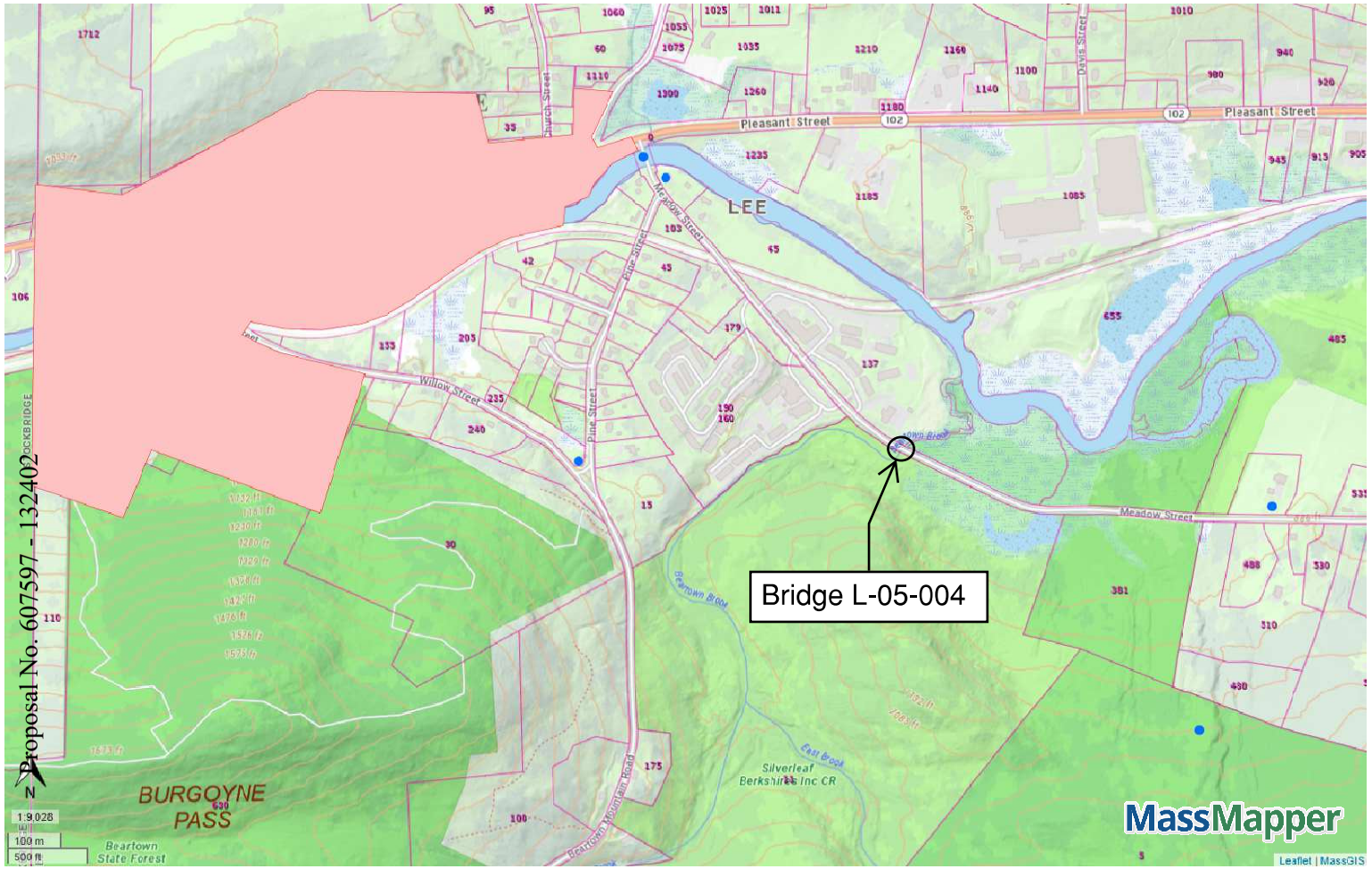
Attch: Locus Map

CC: Brona Simon, State Historic Preservation Officer, MHC
Jeffrey Shrimpton, MassDOT Highway Division

Figure 1: Locus Map



MHC Inventory



MassHistoric Commission Inventory (Areas)

- National Register of Historic Places
- Preservation Restriction
- Massachusetts Historic Landmark
- Local Historic District
- NRHP and LHD
- Inventoried Property

MassHistoric Commission Inventory (Points)

- National Register of Historic Places
- Preservation Restriction
- Massachusetts Historic Landmark
- Local Historic District
- NRHP and LHD
- Inventoried Property

Property Tax Parcels

Proposal No. 607597 - 132402

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CULTURAL RESOURCES PROJECT RECORD

City/Town: Lee | Project # 607597 | Date Cleared 8/29/2023

Project Name: Bridge L-05-004 | Date Filed 8/29/2023 | Finding Under Review ☐

FHWA to MHC

Project Type: Bridge Replacement | Early Coord. Letter Sent: ☑

Review: Section 106 (PA) | Comment Received: ☐ MHC ☐ LHC | Reviewer: JPS

Finding: Appendix 1 | Consultant

Comment: PNF submitted to SHPO and THPOs 10/15/2015 under the consultation requirements of USACE. SHPO stamped PNF and MTHPO and SMTHPO provided no concerns comments. Bridge L-05-004, constructed in 1939, is comprised of a single-span steel stringer superstructure carried on reinforced concrete abutments. The bridge is a minor structural type and is not eligible for listing in the National Register of Historic Places nor is the bridge a contributing property in any historic district. Little or no archaeological potential may be ascribed to the project area based on the absence of recorded sites, the effects of previous bridge and roadway construction, and unfavorable environmental conditions (riverbank). LHC letter 8/12/22 (Copy to SHPO). PNF to NTHPO, ATHPO, and BUAR by email 5/30/24.

Determination based on: ☑ Scope of Work ☑ Plan ☑ Inventory ☐ Site Visit ☐ Archaeological Survey

Attach appropriate documentation for checked items

Projects Requiring No Massachusetts SHPO Review

Programmatic Agreement, Appendix 1 (check all that apply) :

- ☐ 1) Interstate bridge or roadway projects
- ☐ 2) Resurfacing, repair existing roadways
- * ☐ 3) Reconstruction on existing roadway
- * ☐ 4) Roadway geometrics, intersections
- * ☐ 5) Curbs and sidewalks
- ☐ 6) Pavement markings, rumble strips, etc
- ☐ 7) Curbs, sidewalks (MAAB, ADA)
- * ☐ 8) Removal of trees
- ☐ 9) Landscaping
- ☐ 10) Utilities
- ☐ 11) Railroad crossing
- ☐ 12) Stream stabilization and restoration
- ☐ 13) Wetland mitigation area
- * ☐ 14) Bridge (NR "Not Eligible" or "Conditionally Not Eligible")
- * ☑ 15) Bridge (concrete slab post 1900, steel stringer)
- ☐ 16) Bridge (less than 20' span)
- * ☐ 17) Highway safety improvement
- ☐ 18) Drainage system element
- * ☐ 19) Traffic signal, safety improvement
- * ☐ 20) Intelligent Transportation System project
- ☐ 21) Rest area, maintenance facility
- * ☐ 22) Bicycle, pedestrian lane, path or facility
- ☐ 23) Lighting system
- ☐ 24) Sign
- ☐ 25) Hazardous waste
- ☐ 26) Highway fencing
- ☐ 27) Emergency repair
- ☐ 28) Erosion control
- ☐ 29) Noise barrier

* National Register eligibility evaluation required

-OR-

No Historic Properties Affected
Programmatic Agreement Stipulation V.B. (check one):

- ☐ No NR listed or -eligible properties within Area of Potential Effect
- ☐ No effect on National Register listed or -eligible properties

Reviewer's Initials: JPS JMH

LS

APPENDIX A

MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

RECEIVED

OCT 19 2015

MASS. HIST. COMM
RC.57462

PROJECT NOTIFICATION FORM

Project Name: Bridge Replacement, L-05-004 (607597)

Location /Address: Meadow Street over Powder Mill Brook (aka Beartown Brook)

City/Town: Lee

Project Proponent

Name: Massachusetts Department of Transportation

Address: 10 Park Plaza

City/Town/Zip/Telephon Boston, MA 02116 / T: 857-368-8824

After review of MHC files and the materials you submitted, it has been determined that this project is unlikely to affect significant historic or archaeological resources.

11/4/15
Date

Historic Preservation Planner
Massachusetts Historical Commission

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name	Type of License or funding (specify)
Army Corps of Engineers	General permit, Section 404 of the Clean Water Act
FHWA	Federal Funding (lead)
MassDOT	State Funding

Project Description (narrative):

Bridge L-05-004, constructed in 1939, is a town-owned bridge comprised of a single-span steel stringer superstructure carried on reinforced concrete abutments. A concrete wingwall extends for approximately 30' downstream of the bridge along the easterly bank of Powder Mill Brook. The bridge deck carries two 10'-wide travel lanes. The bridge was closed in 2012 as a result of "severe section loss in beams 2 and 5 and severe deterioration of the bridge deck." A temporary Acrow panel bridge has been installed over the existing superstructure. MassDOT proposes to expend state funds to remove both the 1939 superstructure and the Acrow panel temporary bridge and to construct a new steel stringer superstructure on the same alignment. New integral concrete abutments for the new superstructure will be constructed behind the existing abutments. The existing concrete abutments and wingwall will remain in place, but the abutments will be cut down to provide clearance for the new superstructure to pass over to the new abutments. The new bridge deck will carry two 12'-wide travel lanes. Approach roadways will be reconstructed for approximately 200' at either end of the bridge. The approaches will be widened along the northerly side of the roadway to conform to the wider bridge deck. New guardrails will be installed along the approach roadways.

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

No.

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation

No.

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

No.

APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

A review of the National Register of Historic Places and the Inventory of Historic Assets of the Commonwealth revealed no listed or inventoried properties in the immediate vicinity of the project area. The nearest inventoried properties are the 1954 Franklin Sturgis Jr. Memorial Bridge (LEE.903), which carries Meadow Street over the Housatonic River, approximately 0.5 mile west of the project area and the c. 1760 Isaac Davis-Henry McAllister House (LEE.258) at 720 Meadow Street, approximately 0.5 mile east of the project. A review of the MHC archaeological base maps on MACRIS revealed no recorded pre-contact or historic sites in the vicinity of the project area. Little or no archaeological potential may be ascribed to the project area based on the absence of recorded sites, the effects of previous bridge and roadway construction, and unfavorable environmental conditions (riverbank).

What is the total acreage of the project area?

Woodland		acres	Productive Resources:		
Wetland		acres	Agriculture		acres
Floodplain		acres	Forestry		acres
Open Space		acres	Mining/Extraction		acres
Developed		acres	Total Project Acreage		acres

What is the acreage of the proposed new construction? <1 acres

What is the present land use of the project area?

Bridge and roadway.

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of person submitting this form: Jeffrey Shrimpton **Date:** October 15, 2015

Name: Jeffrey Shrimpton

Address: 10 Park Plaza

City/Town/Zip: Boston, MA 02116

Telephone: 857-368-8824

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

CC: USACOE, SHPO, ATHPO, MTHPO, SMTHPO, NTHPO, BUAR

Proposal No. 607597 - 132402

Stockbridge-Munsee Tribal Historic Preservation

Main Office
W13447 Camp 14 Rd
Bowler, WI 54416

New York Office
P.O. Box 718
Troy, NY 12181

Patricia Leavenworth
Chief Engineer
MassachusettsDOT, Highway Division
10 Park Plaza
Boston MA 02116
ATTN: Jeffrey Shrimpton

January 28, 2015

RE: Lee Bridge L05504 Meadow Street over Powder Mill Brook
Section 106 Review

Dear Ms. Leavenworth:

We have completed review under our Section 106 responsibilities for the above-referenced project.

We requested and received more explanation from Foresight Land Services on 1/27/15 regarding the extent of new ground disturbance for this project. We understand that the project will not involve new ground disturbance because it is entirely replacing the existing bridge in place, and that the project falls entirely within the existing right of way.

Therefore, we have determined we do not have significant cultural resource concerns for this project and no more information is needed. However, as always, we ask that should any cultural materials inadvertently be discovered during project construction that the project is halted and that we be notified.

Thank you & Kind regards,

B. Hartley

Bonney Hartley
Tribal Historic Preservation Assistant- NY Office

Cc: Marc Volk, Foresight Land Services *via email*

(518) 326-8870 *Email: bonney.hartley@mohican-nsn.gov*

Proposal No. 607597 - 132402

Mashpee Wampanoag Tribe
Section 106 Review
Consultation Response Form

Project Docket Number:	Lee, Bridge L-05-004
Consultant/Environmental Firm:	MassDOT
Address or Location Description:	Lat. 42.273237, Long. -73.269444
City, State:	South Lee, MA
Point of Contact	Jeffrey Shrimpton

Response:

☒ We have no concerns related to the proposed project. MWT anticipates no adverse affects to our sites of cultural significance, by you or your client.

☐ The MWT considers this project in compliance with the MWT's section 106 review process with agreed upon mitigations.

☐ This site will require the on-site presence of a Tribal Cultural Resource Monitor during ground disturbing activities. Contact the Compliance Review Supervisor with construction schedule.

☐ This project has the potential to have "adverse effects" to historic or cultural resources important to our tribe. We recommend the following actions:

This consultation process is in compliance to the National Historic Preservation Act of 1966 and all relevant amendments including but not limited to section 106 and 36 CFR 800.

Condition: In the case that archeological resources or human remains are found during construction, you must immediately stop construction and notify us..

Ramona Peters, Compliance Review Supervisor
Tribal Historic Preservation Department

12/2/15
Date

Mashpee Wampanoag Indian Tribal Council
Historic Preservation Department
483 Great Neck Rd South, Mashpee, MA 02649 | Phone: 508-477-0208*101 | Email: 106review@mwtribe.com

Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, Secretary & CEO
Thomas J. Tinlin, Administrator

MassDOT
Massachusetts Department of Transportation
Highway Division

October 15, 2015

RE: Lee, Bridge L-05-004, Meadow Street over Powder Mill Brook (607597)
Project Notification Form

Ms. Ramona Peters
Tribal Historic Preservation Officer
Mashpee Wampanoag Tribe
483 Great Neck Road South
Mashpee, Massachusetts 02649

Dear Ms. Peters:

Enclosed please find a Project Notification Form (PNF) for the above-noted project in Lee. This project will be supported entirely with state funds, but work in water will require a permit from the U.S. Army Corps of Engineers (Corps), the jurisdiction of which will cover the entire project area. MassDOT is submitting the enclosed project information to the Tribal Historic Preservation Officer in accordance with the Corps' updated permit notification requirements, which went into effect on February 4, 2015.

Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Patricia Leavenworth, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jeffrey Shrimpton. Comments also may be submitted to jeffrey.shrimpton@state.ma.us.

Please feel free to contact me at 857-368-8824 or Jameson Harwood at 857-368-8799 if you have any questions regarding this project.

Sincerely,

Jeffrey Shrimpton
Senior Historic Resources Specialist
Environmental Services

c.c.: D. Vasconcelos, ACOE

encs: PNF
Locus map
Plan

Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, Secretary & CEO
Thomas J. Tinlin, Administrator

Proposal No. 607597 - 132402

MassDOT
Massachusetts Department of Transportation
Highway Division

October 15, 2015

RE: Lee, Bridge L-05-004, Meadow Street over Powder Mill Brook (607597)
Project Notification Form

Ms. Bettina Washington
Tribal Historic Preservation Officer
Wampanoag Tribe of Gay Head (Aquinnah)
20 Black Brook Road
Aquinnah, MA 02535

Dear Ms. Washington:

Enclosed please find a Project Notification Form (PNF) for the above-noted project in Lee. This project will be supported entirely with state funds, but work in water will require a permit from the U.S. Army Corps of Engineers (Corps), the jurisdiction of which will cover the entire project area. MassDOT is submitting the enclosed project information to the Tribal Historic Preservation Officer in accordance with the Corps' updated permit notification requirements, which went into effect on February 4, 2015.

Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Patricia Leavenworth, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jeffrey Shrimpton. Comments also may be submitted to jeffrey.shrimpton@state.ma.us.

Please feel free to contact me at 857-368-8824 or Jameson Harwood at 857-368-8799 if you have any questions regarding this project.

Sincerely,

Jeffrey Shrimpton
Senior Historic Resources Specialist
Environmental Services

c.c.: D. Vasconcelos, ACOE
encs: PNF
Locus Map
Plan

Harwood, Jameson (DOT)

From: Microsoft Outlook
To: Bettina Washington
Sent: Thursday, May 30, 2024 10:20 AM
Subject: Relayed: MassDOT Project #607597 - Lee, Bridge L-05-004

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:

Bettina Washington (thpo@wampanoagtribe-nsn.gov)

Subject: MassDOT Project #607597 - Lee, Bridge L-05-004

Harwood, Jameson (DOT)

From: Harwood, Jameson (DOT)
Sent: Thursday, May 30, 2024 10:20 AM
To: Bettina Washington
Subject: MassDOT Project #607597 - Lee, Bridge L-05-004
Attachments: Lee, Bridge L-05-004 (607597) PNF and plans.pdf; PNF letter to ATHPO 2015.pdf

Ms. Washington,

MassDOT is submitting information for the above-referenced project to the THPO to meet the Section 106 consultation requirements of FHWA (lead federal agency) and the US Army Corps of Engineers. The project information was previously submitted to your office in 2015 (letter attached).

Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Carrie Lavallee, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jameson Harwood.

You also may send comments, questions, or requests for more information by email to Jameson.Harwood@state.ma.us

Thank you,
Jamie

Jameson M. Harwood, Cultural Resources Supervisor
Environmental Services Section
***MassDOT* – Highway Division**
10 Park Plaza
Boston, MA 02116

Harwood, Jameson (DOT)

From: Microsoft Outlook
To: Robinson, David S (EEA)
Sent: Thursday, May 30, 2024 10:16 AM
Subject: Delivered: MassDOT Project #607597 - Lee, Bridge L-05-004

Your message has been delivered to the following recipients:

Robinson, David S (EEA) (David.S.Robinson@mass.gov)

Subject: MassDOT Project #607597 - Lee, Bridge L-05-004

Harwood, Jameson (DOT)

From: Harwood, Jameson (DOT)
Sent: Thursday, May 30, 2024 10:15 AM
To: Robinson, David S (EEA)
Subject: MassDOT Project #607597 - Lee, Bridge L-05-004
Attachments: Lee, Bridge L-05-004 (607597) PNF and plans.pdf

David,

MassDOT is submitting information for the above-referenced project to the BUAR to meet the Section 106 consultation requirements of FHWA (lead federal agency) and the US Army Corps of Engineers. Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Carrie Lavallee, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jameson Harwood.

You also may send comments, questions, or requests for more information by email to Jameson.Harwood@state.ma.us

Thank you,
Jamie

Jameson M. Harwood, Cultural Resources Supervisor
Environmental Services Section
***MassDOT* – Highway Division**
10 Park Plaza
Boston, MA 02116

Harwood, Jameson (DOT)

From: Microsoft Outlook
To: Tashtesook@aol.com; markandrews0563@outlook.com
Sent: Thursday, May 30, 2024 10:21 AM
Subject: Relayed: MassDOT Project #607597 - Lee, Bridge L-05-004

Delivery to these recipients or groups is complete, but no delivery notification was sent by the destination server:

Tashtesook@aol.com (Tashtesook@aol.com)

markandrews0563@outlook.com (markandrews0563@outlook.com)

Subject: MassDOT Project #607597 - Lee, Bridge L-05-004

Harwood, Jameson (DOT)

From: Harwood, Jameson (DOT)
Sent: Thursday, May 30, 2024 10:21 AM
To: Tashtesook@aol.com
Cc: markandrews0563@outlook.com
Subject: MassDOT Project #607597 - Lee, Bridge L-05-004
Attachments: Lee, Bridge L-05-004 (607597) PNF and plans.pdf

Mr. Brown,

MassDOT is submitting information for the above-referenced project to the THPO to meet the Section 106 consultation requirements of FHWA (lead federal agency) and the US Army Corps of Engineers. Please submit any written comments or concerns regarding historic or archaeological properties that may be affected by this project to Carrie Lavallee, P.E., Chief Engineer, Massachusetts Department of Transportation, 10 Park Plaza, Boston, MA 02116-3973, Attn: Jameson Harwood.

You also may send comments, questions, or requests for more information by email to Jameson.Harwood@state.ma.us

Thank you,
Jamie

Jameson M. Harwood, Cultural Resources Supervisor
Environmental Services Section
***MassDOT* – Highway Division**
10 Park Plaza
Boston, MA 02116

ATTACHMENT 11

Permit Drawings & Project Plan Sets

TOWN OF LEE

MEADOW STREET OVER
POWDER MILL BROOK (a.k.a. BEARTOWN BROOK)
BRIDGE L–05–004

IN THE TOWN OF

LEE, MA
BERKSHIRE COUNTY

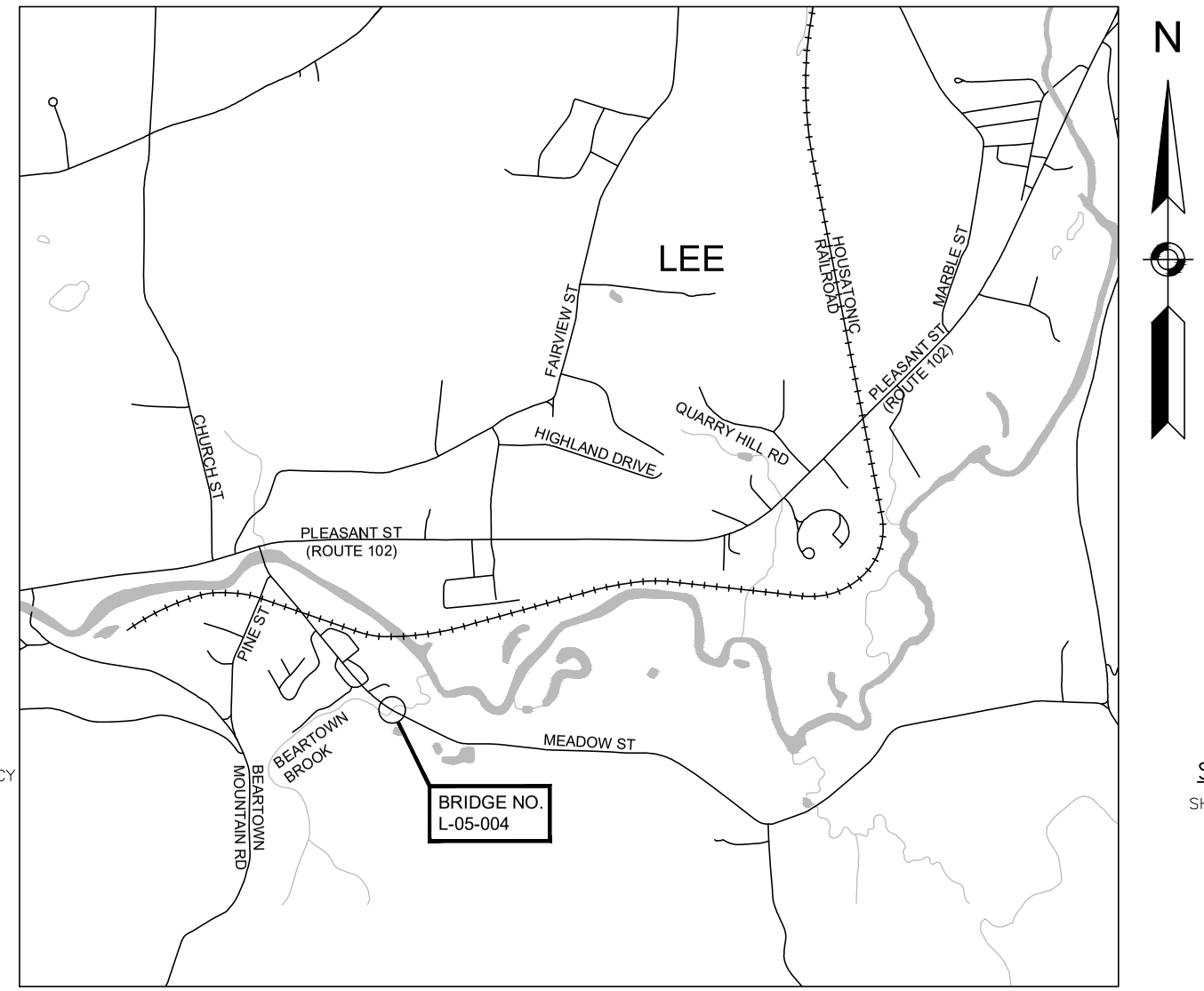
ENVIRONMENTAL PERMIT PLANS

SURVEY NOTES:

1. COORDINATES IN U.S. SURVEY FEET, ARE REFERENCED TO THE MASSACHUSETTS COORDINATE SYSTEM, MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983

2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988

3. BENCHMARK:
   DISK
   N: 2929556.362
   E: 177348.962
   EL. 850.04



SCALE: 1" = 2000'

LIST OF RESOURCE ABBREVIATIONS

VW = VEGETATED WETLAND
WOTUS = WATERWAYS OF THE UNITED STATES
OHW = ORDINARY HIGH WATER

RESOURCE IMPACTS:

LAND UNDER WATERWAYS/WOTUS EXISTING AREA DREDGED (PERMANENT) = 3,441 SF, 630 CY
LAND UNDER WATERWAYS/WOTUS PROPOSED AREA (PERMANENT) = 4,988 SF
MATERIAL DISCHARGED (FILL) TO WOTUS (PERMANENT) = 3,441 SF, 508 CY
VEGETATED WETLAND (TEMPORARY) = 1,505 SF
BANKS (PERMANENT) = 208 LF
BANKS (TEMPORARY) = 100 LF

SHEET LIST TABLE

SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	EXISTING CONDITIONS PLAN
3	EXISTING CONDITIONS PLAN (2)
4	PROPOSED CONDITIONS PLAN
5	PROPOSED CONDITIONS PLAN (2)
6	EXISTING AND PROPOSED LONGITUDINAL SECTIONS
7	ENVIRONMENTAL IMPACT PLAN
8	ENVIRONMENTAL IMPACT PLAN (2)
9	DEMOLITION PLAN
10	CONTROL OF WATER PLAN

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

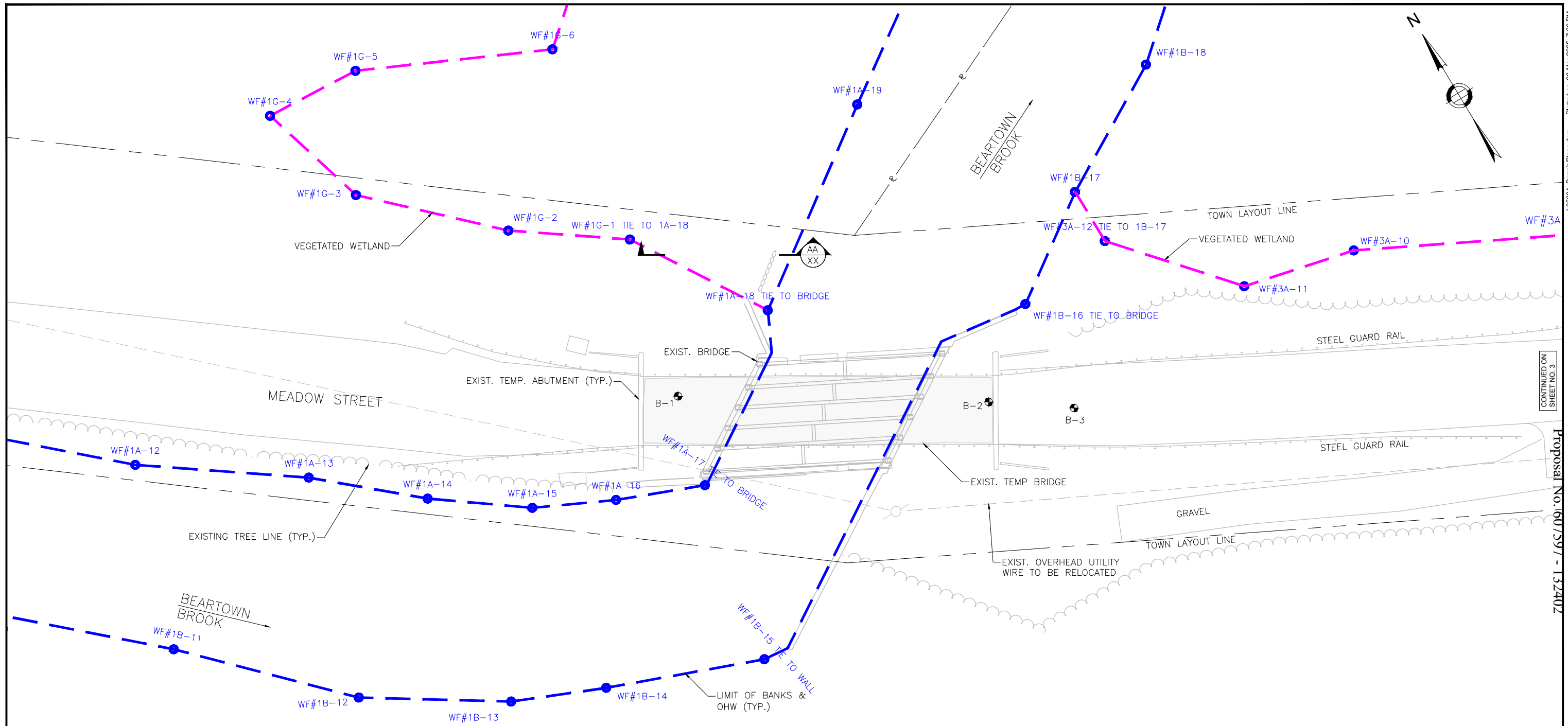
L05004_Permit Plans (Title Sheet).dwg Plotted on 28-Mar-2025 7:06 PM

Proposal No. 607597 - 132402

A00840 - 72

L05004_Permit Plans.dwg Plotted on 28-Mar-2025 7:06 PM

Proposal No. 90757 - 152402



EXISTING PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

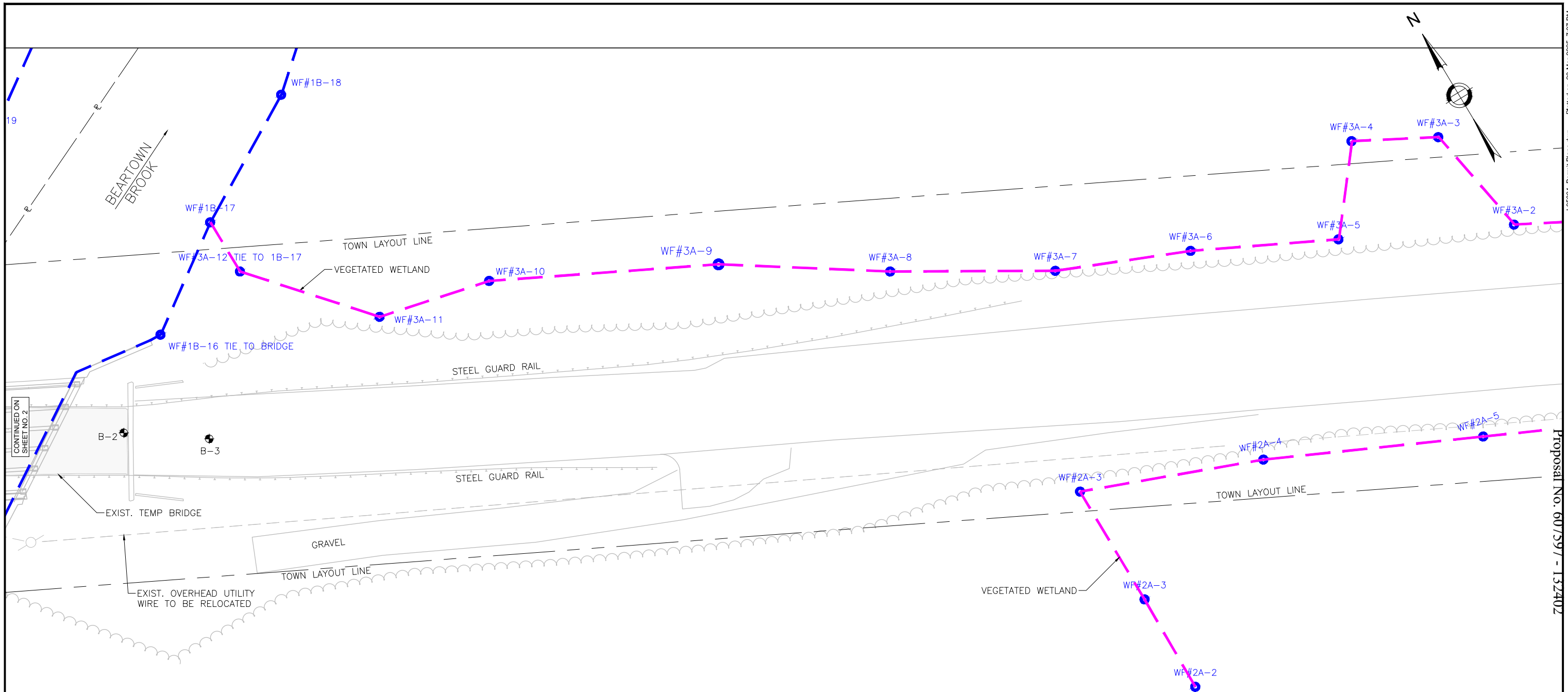
BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

EXISTING CONDITIONS PLAN

SHEET 2 OF 10

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EXISTING PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

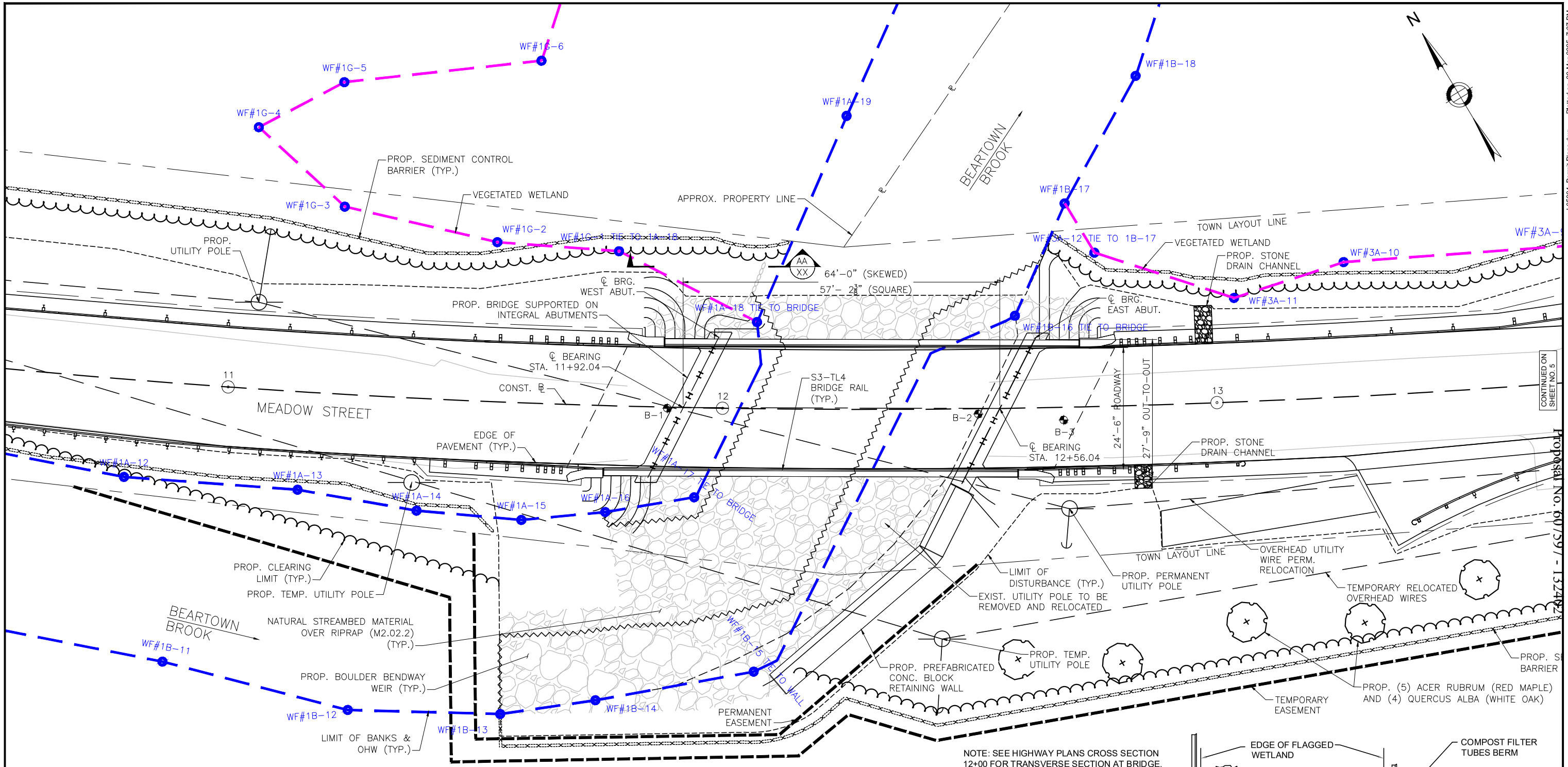
SHEET
3
OF 10

Plotted on 28-Mar-2025 7:07 PM
L05004_Permit Plans.dwg
Proposal No. 607359 - L32402

A00840 - 75

L05004_Permit Plans.dwg Plotted on 28-Mar-2025 7:07 PM

Proposal No. 60759 - 132482

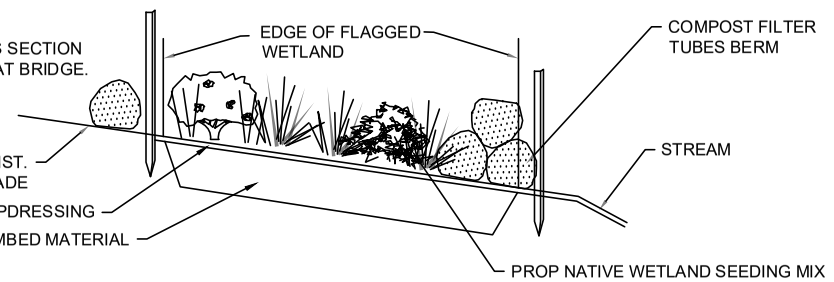


PROPOSED PLAN

0 20 40 60 80

SCALE: 1" = 20'

NOTE: SEE HIGHWAY PLANS CROSS SECTION 12+00 FOR TRANSVERSE SECTION AT BRIDGE.



TYPICAL WETLAND RESTORATION

SECTION A–A

SCALE: N.T.S.

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

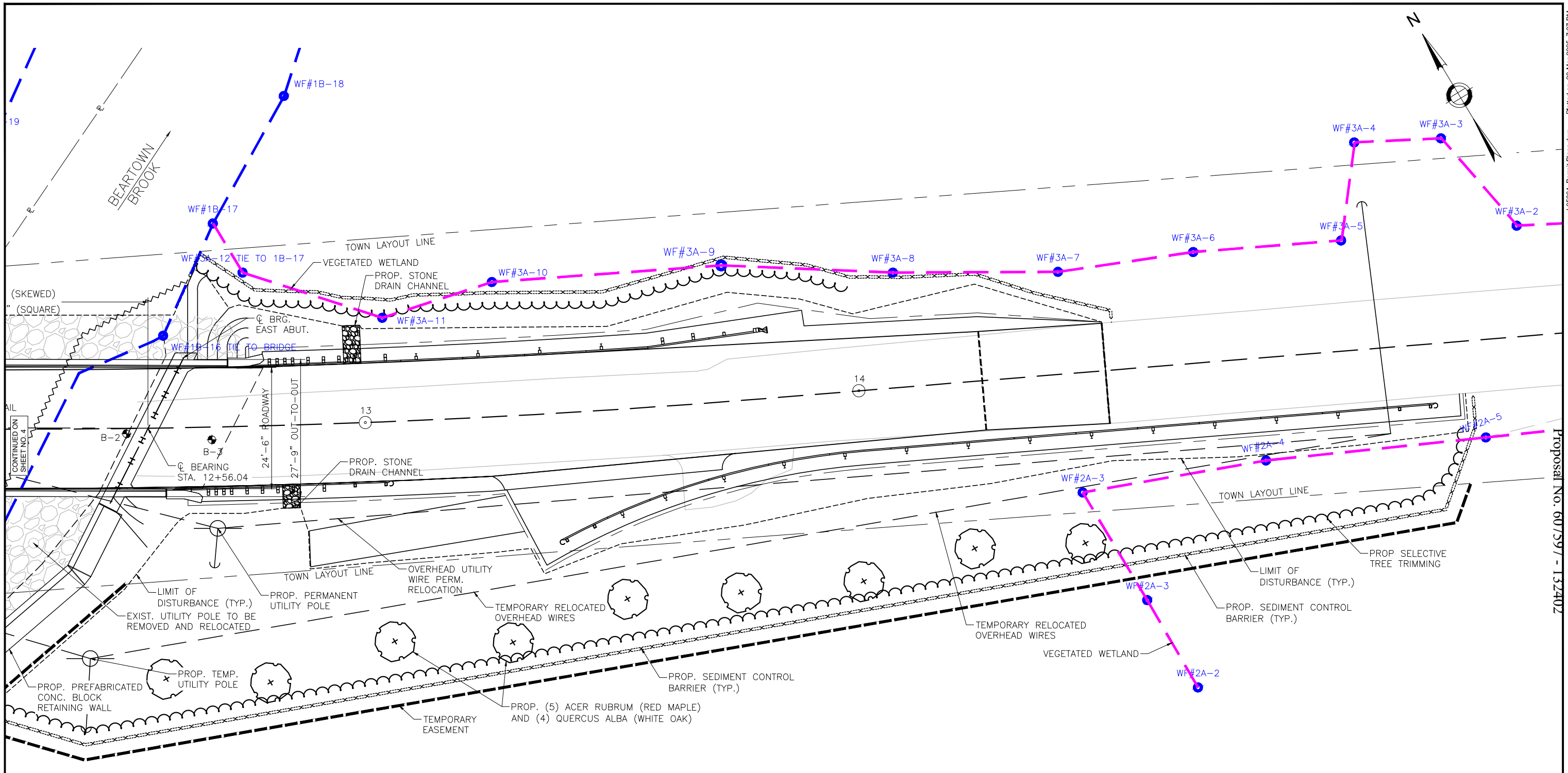
PROPOSED CONDITIONS PLAN

SHEET 4 OF 10

A00840 - 76

L05004_Permit Plans.dwg Plotted on 28-Mar-2025 7:07 PM

Proposs No. 607S9 - 152402



PROPOSED PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

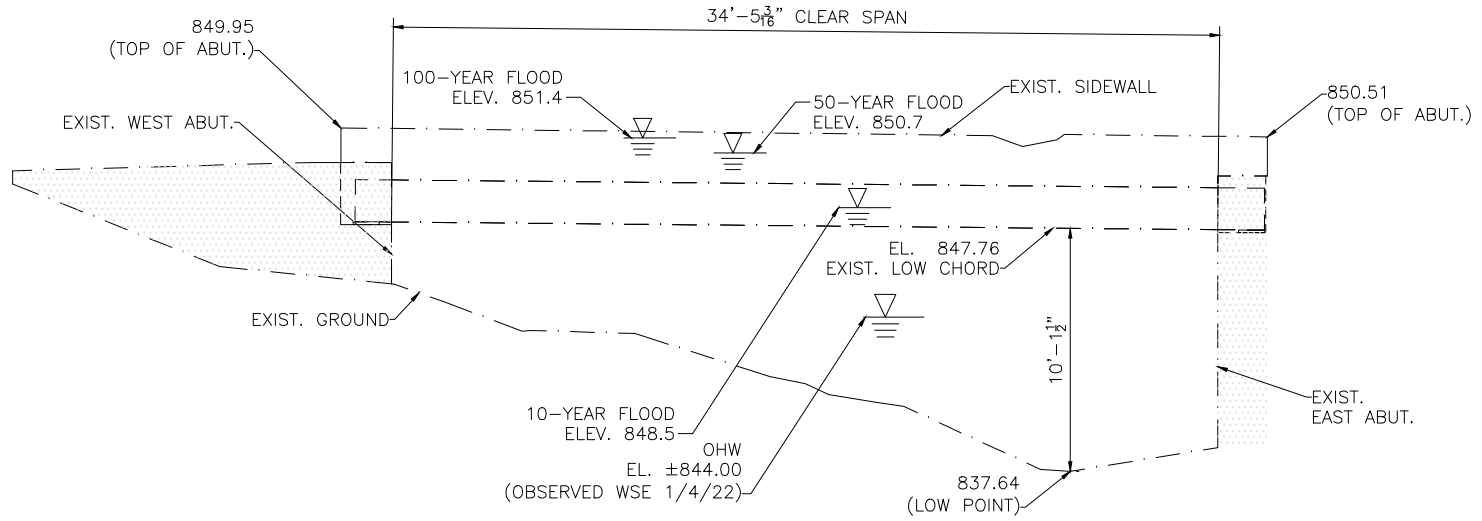
GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

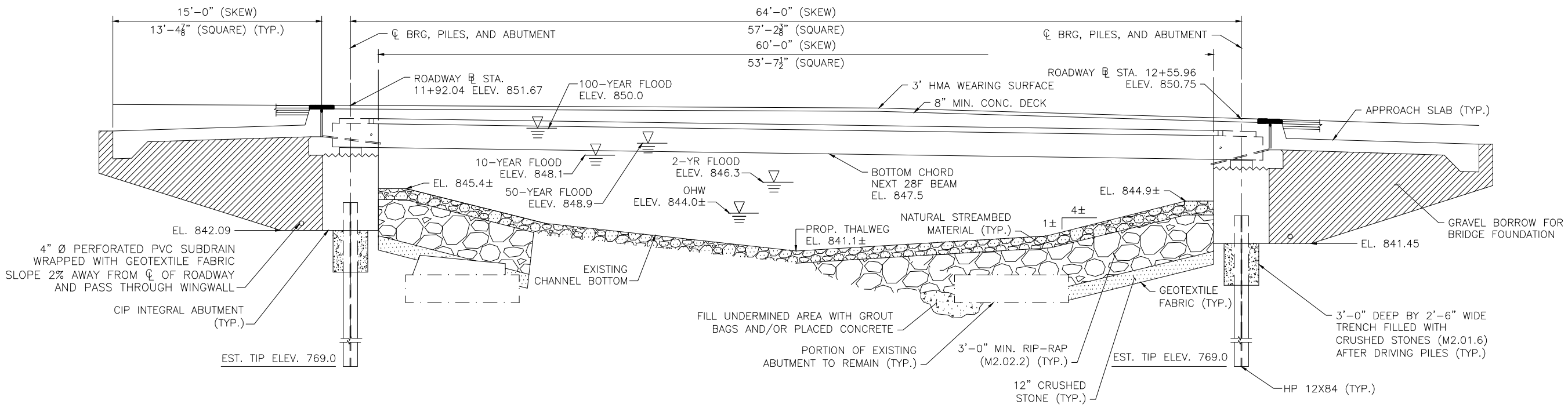
SHEET
5
OF 10



EXISTING LONGITUDINAL SECTION

0 8 16 24 32

SCALE: 1" = 8'



PROPOSED LONGITUDINAL SECTION

0 8 16 24 32

SCALE: 1" = 8'

DATUM
NAVD 88

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

EXISTING AND PROPOSED LONGITUDINAL SECTIONS

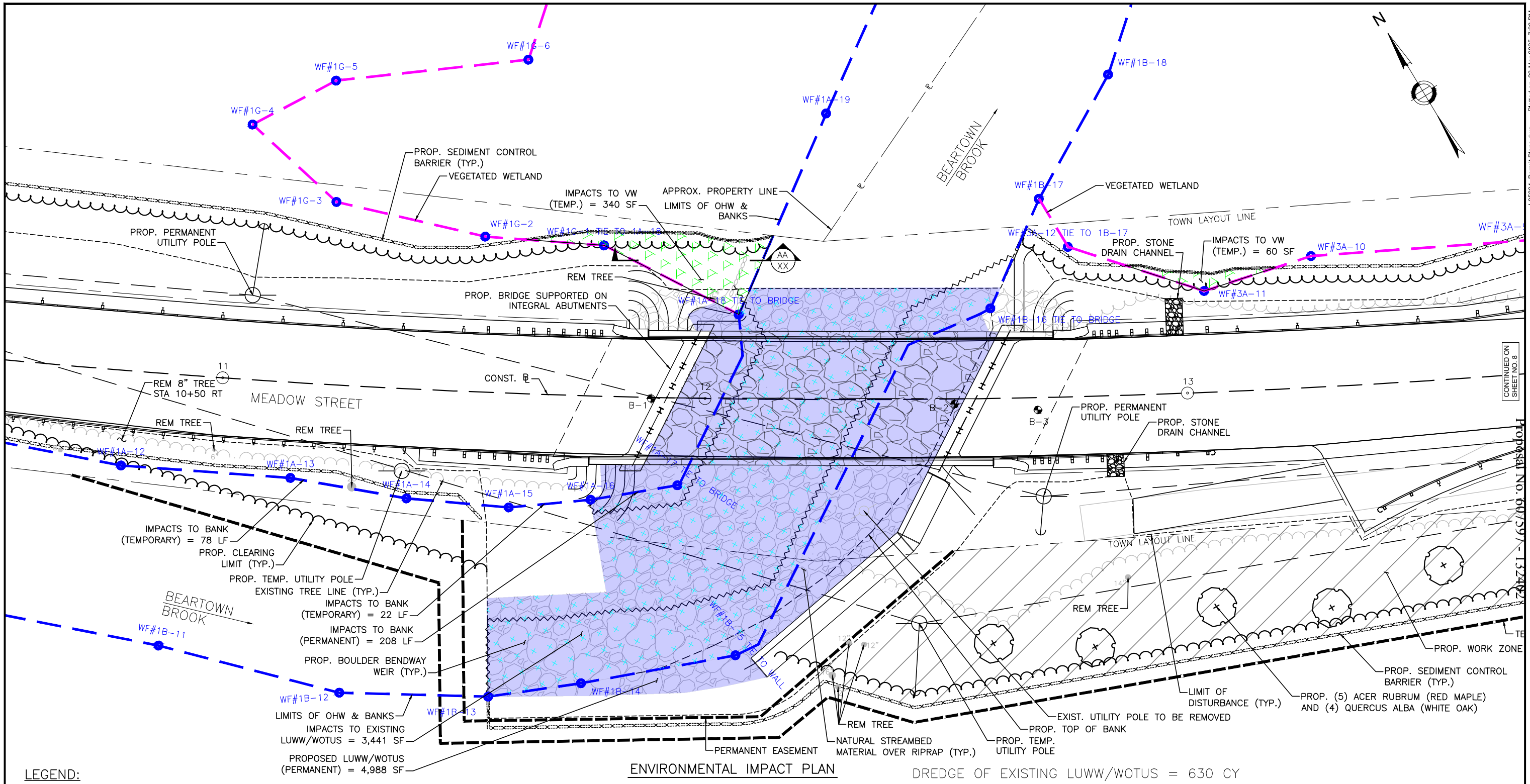
SHEET 6 OF 10

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A00840 - 77

L05004_Permit Plans.dwg Plotted on 28-Mar-2025 7:08 PM

Proposal No. 608697 - 132402



ENVIRONMENTAL IMPACT PLAN

LEGEND:

IMPACT TO EXISTING LAND UNDER WATERWAYS/WOTUS (PERMANENT) = 3,441 SF

PROPOSED LAND UNDER WATERWAYS/WOTUS CONSTRUCTED (PERMANENT) = 4,988 SF

IMPACT TO VEGETATED WETLAND (TEMPORARY) = 1,505 SF

DREDGE OF EXISTING LUWW/WOTUS = 630 CY

DISCHARGE TO EXISTING LUWW/WOTUS = 508 CY

IMPACTS TO BANK (PERMANENT) = 208 LF

IMPACTS TO BANK (TEMPORARY) = 100 LF

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

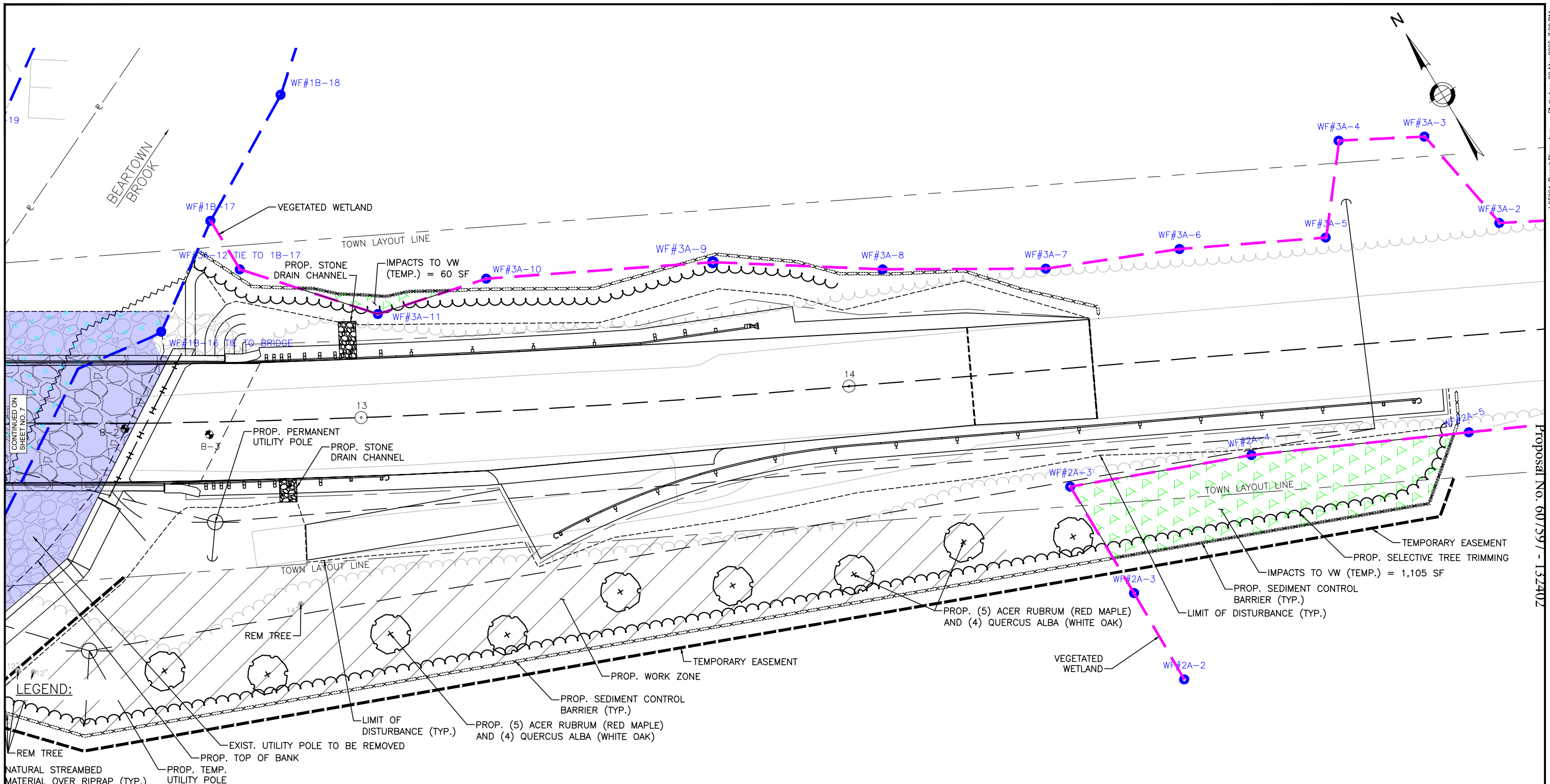
BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

ENVIRONMENTAL IMPACT PLAN

SHEET 7 OF 10

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

Plotted on 28-Mar-2025 7:08 PM
L05004_Permit Plans.dwg
Proposal No. 607-15240



ENVIRONMENTAL IMPACT PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

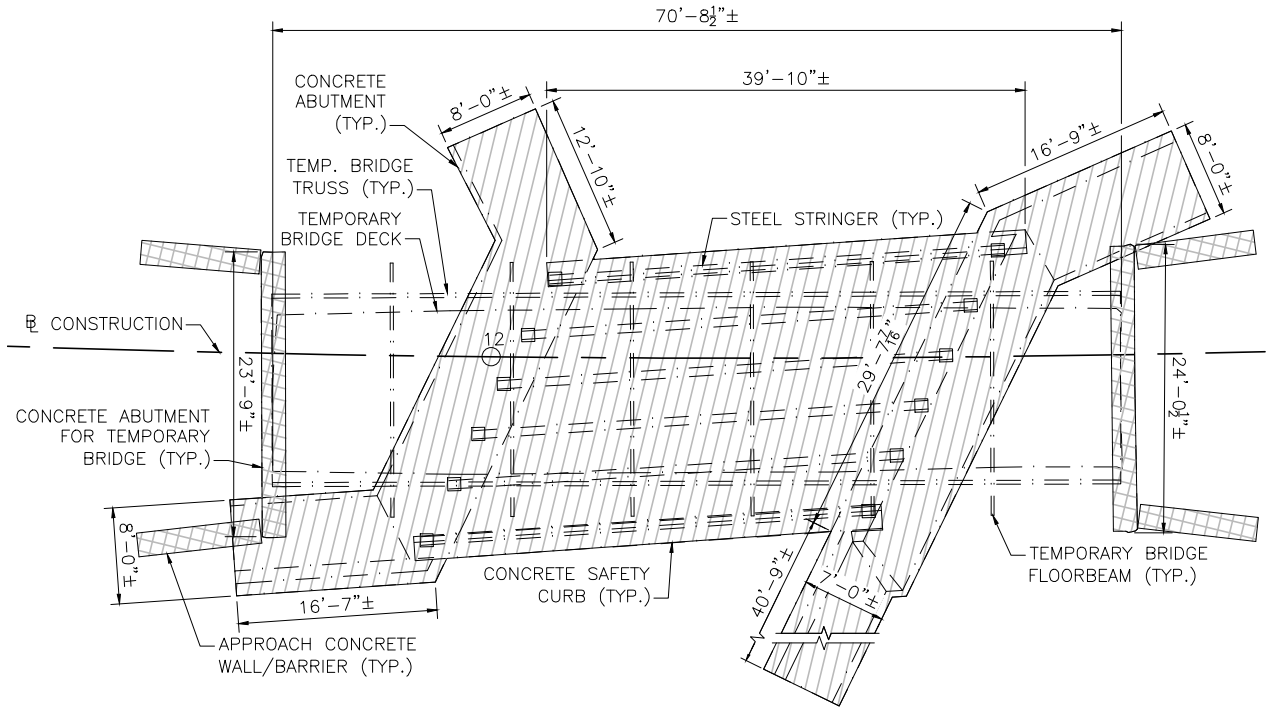
SHEET 8 OF 10

Proposal No. 607597 - 132402

Plotted on 28-Mar-2025 7:08 PM

L05004_Permit Plans.dwg

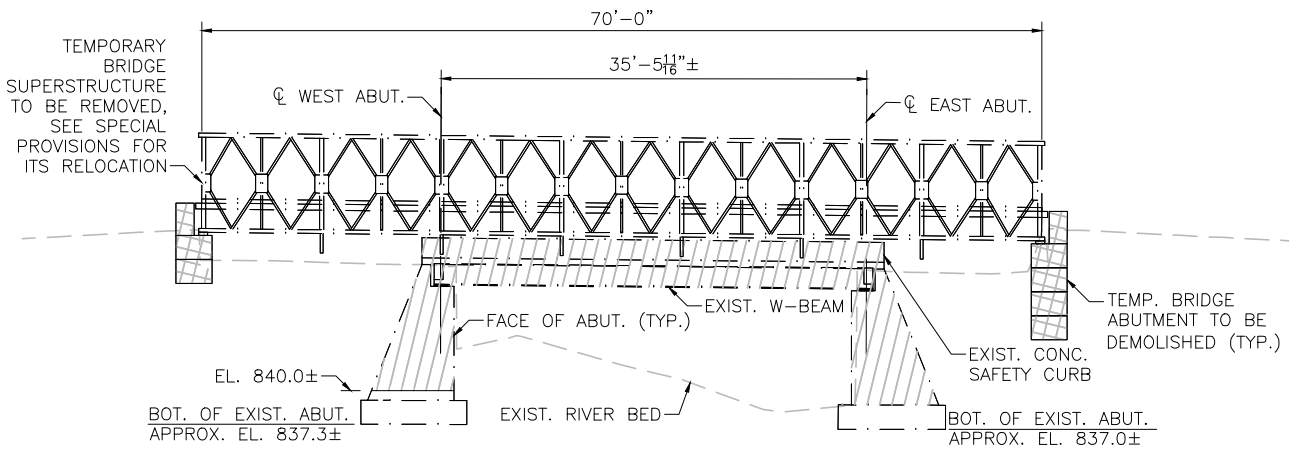
A00840 - 79



DEMOLITION PLAN

0 16 32 48

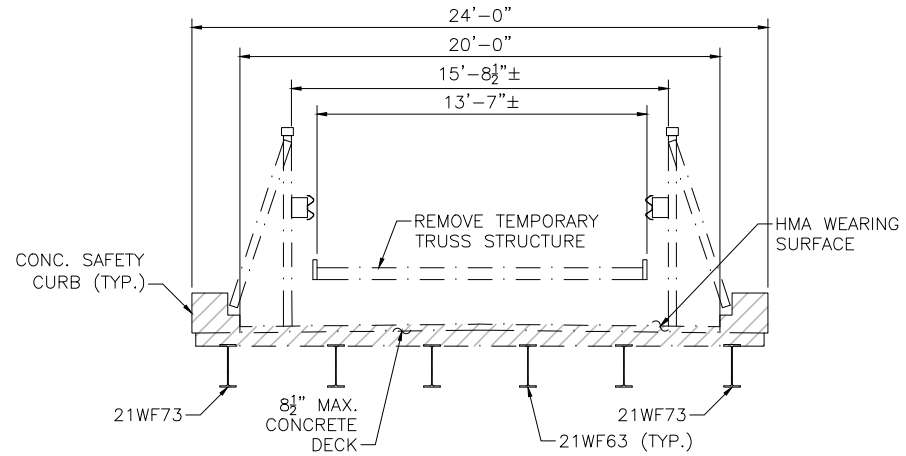
SCALE: 1" = 16'



DEMOLITION – EXISTING BRIDGE SECTION

0 16 32 48

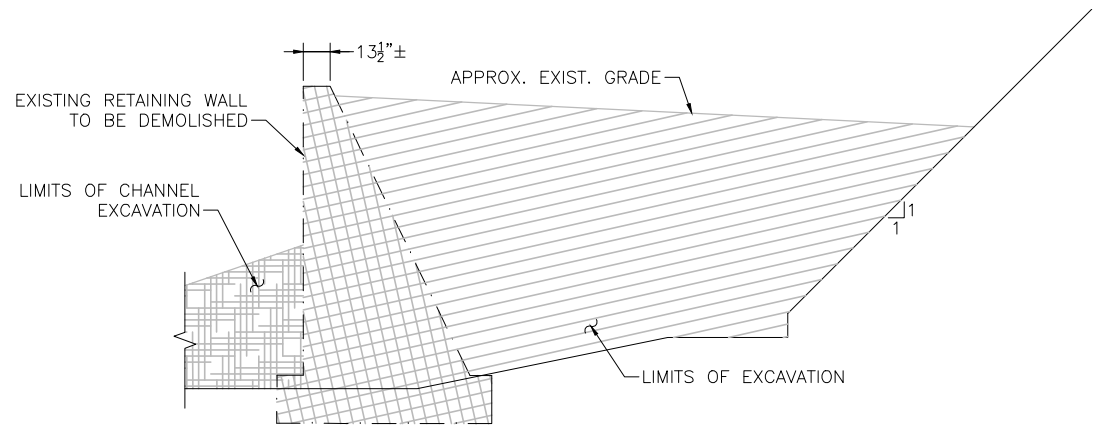
SCALE: 1" = 16'



DEMOLITION – EXISTING BRIDGE TRANSVERSE SECTION

0 8 16 24

SCALE: 1" = 8'



WALL DEMOLITION AND EXCAVATION SECTION

0 8 16 24

SCALE: 1" = 8'

DEMOLITION NOTES

1. EXISTING BRIDGE STRUCTURES SHOWN ARE PER RECORD PLANS AND SURVEY.
2. TEMPORARY TRUSS STRUCTURE TO BE REMOVED CAREFULLY WITHOUT DAMAGE.
3. SEE SHEET 6 FOR STAGE DEMOLITION DETAILS.

DEMOLITION LEGEND

LIMITS OF DEMOLITION OF EXISTING BRIDGE

LIMITS OF DEMOLITION OF TEMPORARY BRIDGE ABUTMENTS

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

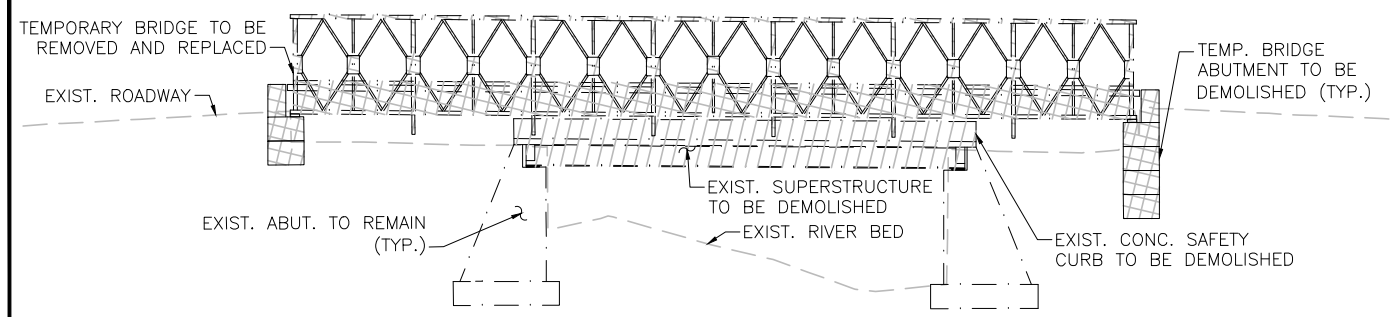
BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

DEMOLITION PLAN

SHEET 9 OF 10

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

Proposal No. 09/S9 / L-22402
L05004_Permit Plans (Demo & Control of Water).dwg Plotted on 28-Mar-2025 7:09 PM
A00840 - 80

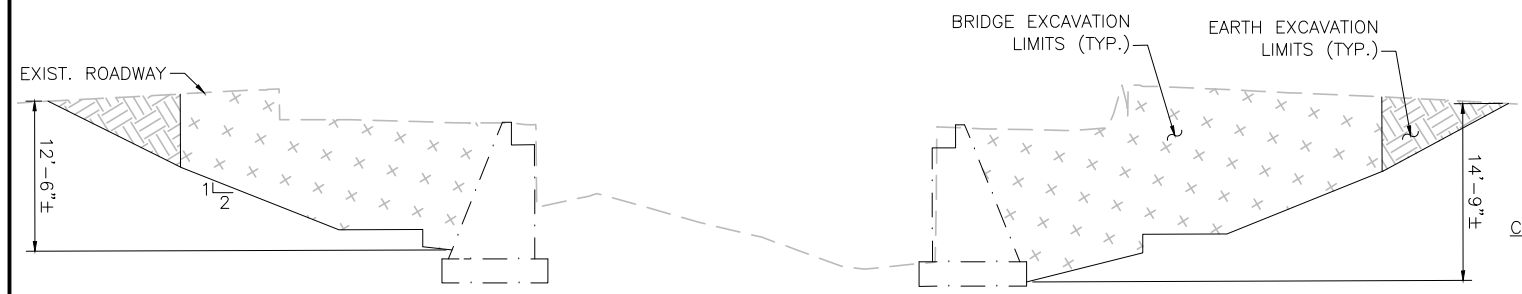


STAGE 1 – DEMOLITION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. REMOVE AND STACK TEMPORARY BRIDGE SUPERSTRUCTURE.
2. DEMOLISH TEMPORARY BRIDGE ABUTMENTS.
3. DEMOLISH EXISTING SUPERSTRUCTURE.

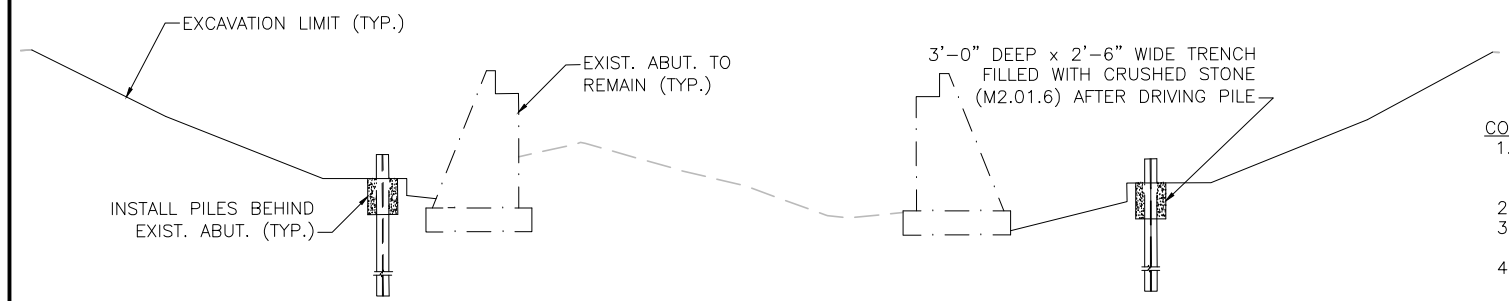


STAGE 2 – EXCAVATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. EXCAVATE TO LIMITS SHOWN. EXCAVATED MATERIAL MAY BE USED FOR BACKFILLING IF IT MEETS THE SPECIFICATIONS FOR M1.03.0, TYPE A.

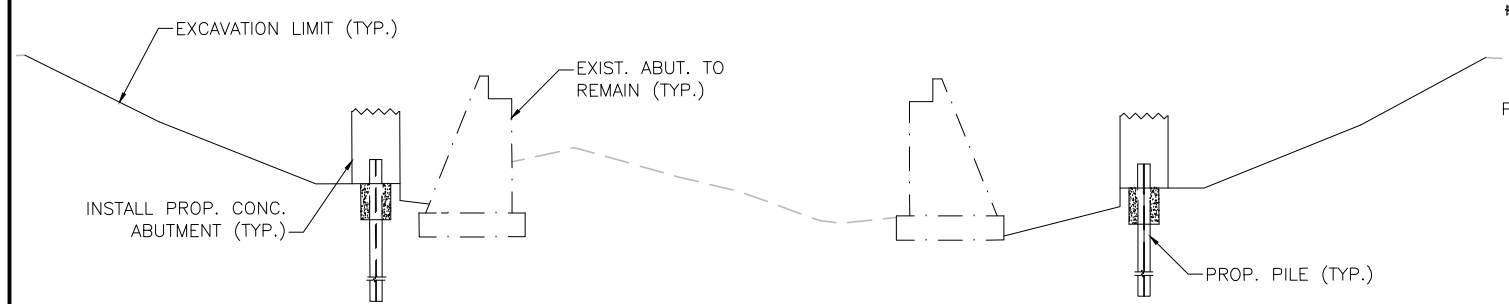


STAGE 3 – PILE INSTALLATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. DIG 3'–0" x 2'–6" TRENCH AS SHOWN.
2. INSTALL PILES.
3. FILL TRENCH WITH CRUSHED STONE.

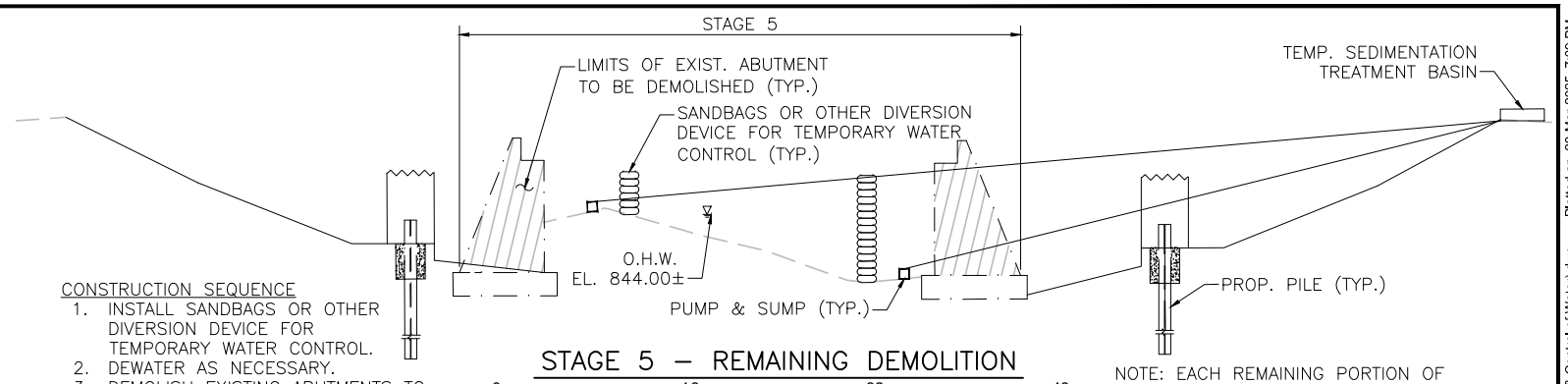


STAGE 4 – ABUTMENT INSTALLATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. INSTALL CONCRETE ABUTMENTS.



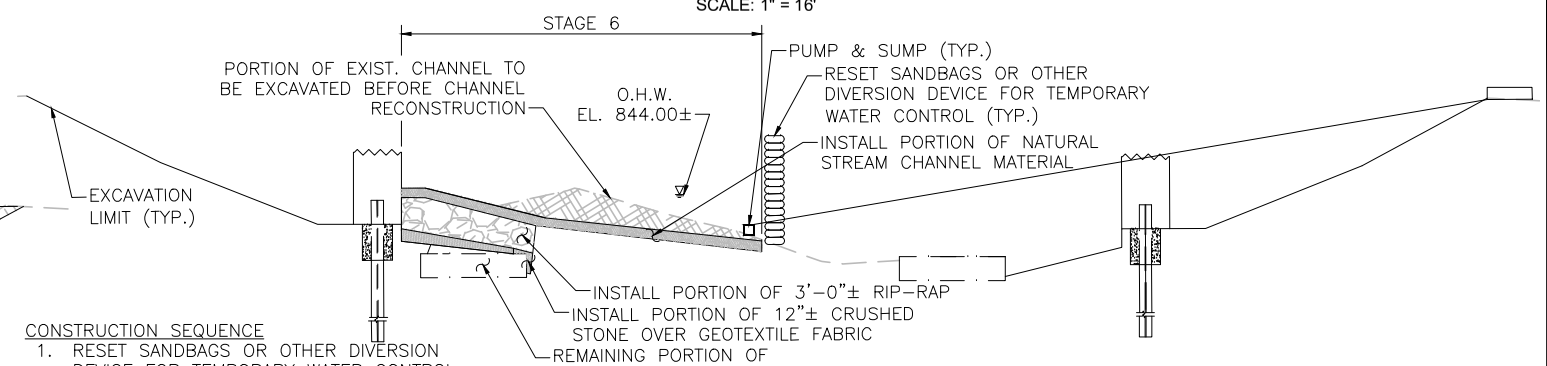
CONSTRUCTION SEQUENCE
1. INSTALL SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. DEMOLISH EXISTING ABUTMENTS TO LIMITS SHOWN.

STAGE 5 – REMAINING DEMOLITION

0 16 32 48

SCALE: 1" = 16'

NOTE: EACH REMAINING PORTION OF ABUTMENT DEMOLITION MAY BE DONE WITH EACH PHASE OF CHANNEL RECONSTRUCTION.

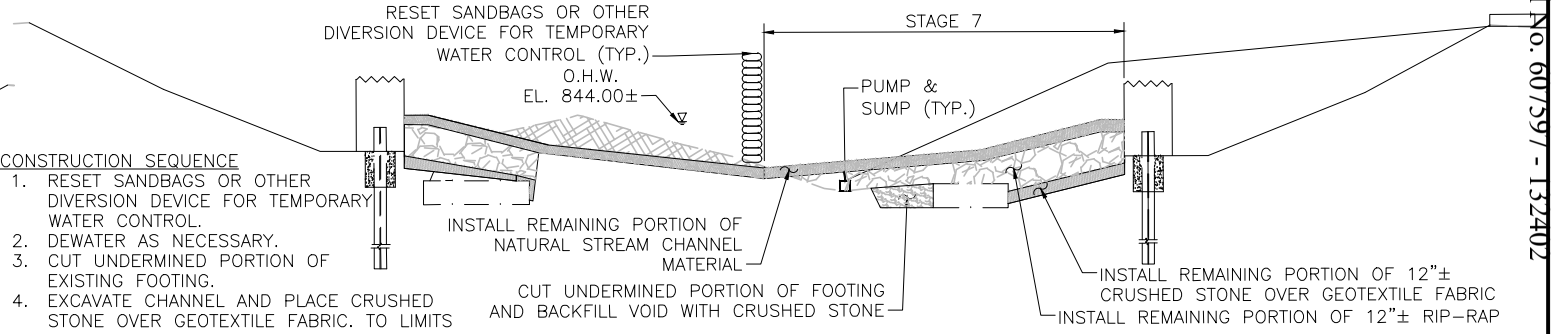


CONSTRUCTION SEQUENCE
1. RESET SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. EXCAVATE CHANNEL AND PLACE CRUSHED STONE OVER GEOTEXTILE FABRIC TO LIMITS SHOWN.
4. PLACE RIP–RAP.
5. PLACE STREAM CHANNEL MATERIAL.

STAGE 6 – CHANNEL RECONSTRUCTION PHASE 1

0 16 32 48

SCALE: 1" = 16'

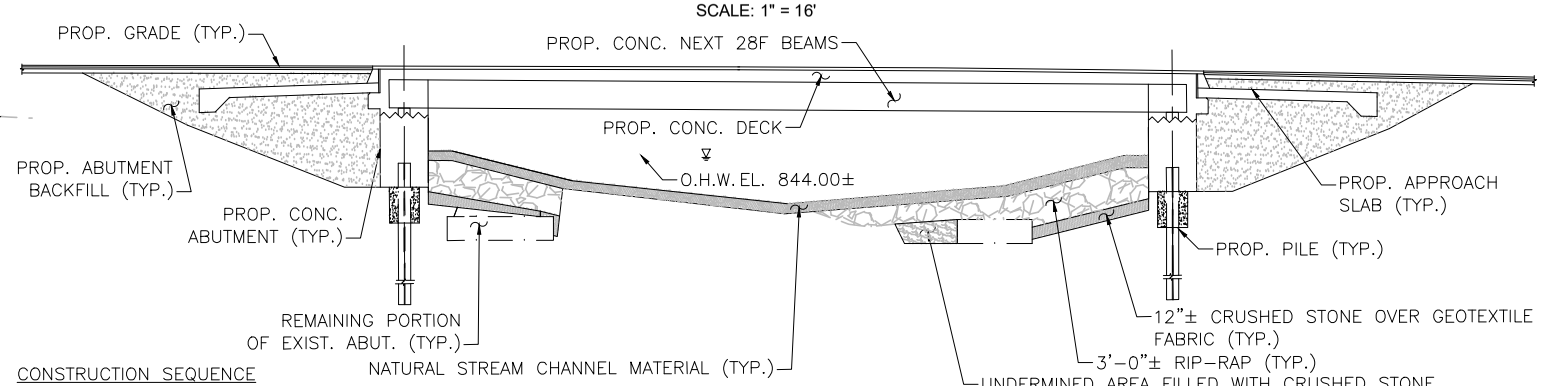


CONSTRUCTION SEQUENCE
1. RESET SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. CUT UNDERMINED PORTION OF EXISTING FOOTING.
4. EXCAVATE CHANNEL AND PLACE CRUSHED STONE OVER GEOTEXTILE FABRIC. TO LIMITS SHOWN.
5. PLACE RIP–RAP.
6. PLACE STREAM CHANNEL MATERIAL.

STAGE 7 – CHANNEL RECONSTRUCTION PHASE 2

0 16 32 48

SCALE: 1" = 16'



CONSTRUCTION SEQUENCE
1. INSTALL REMAINING PROPOSED COMPONENTS OF SUBSTRUCTURE.
2. INSTALL PROPOSED SUPERSTRUCTURE.
3. BACKFILL ABUTMENTS.
4. PLACE HMA PAVEMENT.

PROPOSED LONGITUDINAL SECTION

0 16 32 48

SCALE: 1" = 16'

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

CONTROL OF WATER PLAN

SHEET 10 OF 10

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

L05004_Permit Plans (Demo & Control of Water).dwg Plotted on 28-Mar-2025 7:09 PM

Proposal No. 607597 - 132402

ATTACHMENT 12

Agency Correspondence

GILL ENGINEERING

Lexi Stickelman <astickelman@gill-eng.com>

MassDOT Project No. 607597: Lee - Bridge Replacement Meadow Street over Powder Mill Brook (Bridge L-05-004)

James Turnbull <jturnbull@gill-eng.com> Thu, Mar 28, 2024 at 1:19 PM
To: Lexi Stickelman <astickelman@gill-eng.com>

FYI

James Turnbull, P.E. (MA)
Senior Project Manager | **Gill Engineering**
63 Kendrick Street | Needham, MA 02494
o 781-355-7100 | m 617-721-7694

---------- Forwarded message ---------
From: **Glorioso, Lauren (FWE)** <lauren.glorioso@state.ma.us>
Date: Wed, Aug 24, 2022 at 5:56 PM
Subject: RE: MassDOT Project No. 607597: Lee - Bridge Replacement Meadow Street over Powder Mill Brook (Bridge L-05-004)
To: James Turnbull <jturnbull@gill-eng.com>
Cc: Cheeseman, Melany (FWE) <melany.cheeseman@state.ma.us>, Pham, Hung (DOT) <hung.pham@state.ma.us>, Dexter, Timothy D. (DOT) <timothy.dexter@state.ma.us>, Paulson, David J (DOT) <david.j.paulson@state.ma.us>

NHESP 12-31172

DOT Project No. 607597: Lee - Bridge Replacement Meadow Street over Powder Mill Brook (Bridge L-05-004)

James,

Thank you for submitting the attached letter regarding the proposed bridge replacement. The project site is mapped as Priority Habitat for Wood Turtle (*Glyptemys insculpta*), state-listed as Special Concern. I'd like to know more about the design and placement of boulders as upstream weir(s) – I need to understand how this will function, and impact aquatic habitat connectivity for rare species and associated with the CFR. Representative photos from another site of the use of boulders as the weirs you describe could be helpful, as well as a conceptual drawing, and photos of the existing site. At this time, we need some additional information to provide feedback regarding Wood turtles and the Coldwater Fisheries Resource.

Sincerely,

Lauren Glorioso (she/her)

Endangered Species Review Biologist

Natural Heritage & Endangered Species Program

Division of Fisheries & Wildlife

1 Rabbit Hill Road, Westborough, MA 01581

c: (508) 281-9909 | o: (508) 389-6361 | f: (508) 389-7890
mass.gov/masswildlife | facebook.com/masswildlife

[Quoted text hidden]

607597_Massachusetts Division of Fisheries & Wildlife Letter.pdf
4112K

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: 11/11/2024 19:18:59 UTC
Project code: 2023-0033599
Project Name: 607597 - LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK

Subject: Concurrence verification letter for the '607597 - LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK' project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

To whom it may concern:

The U.S. Fish and Wildlife Service (Service) has received your request dated November 11, 2024 to verify that the **607597 - LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK** (Proposed Action) may rely on the concurrence provided in the February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat (PBO) to satisfy requirements under Section 7(a)(2) of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C 1531 *et seq.*).

Based on the information you provided (Project Description shown below), you have determined that the Proposed Action is within the scope and adheres to the criteria of the PBO, including the adoption of applicable avoidance and minimization measures, and may affect, but is not likely to adversely affect (NLAA) the endangered Indiana bat (*Myotis sodalis*) and/or the threatened Northern long-eared bat (*Myotis septentrionalis*). Consultation with the 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.

The Service has 14 calendar days to notify the lead Federal action agency or designated non-federal representative if we determine that the Proposed Action does not meet the criteria for a NLAA determination under the PBO. If we do not notify the lead Federal action agency or designated non-federal representative within that timeframe, you may proceed with the Proposed Action under the terms of the NLAA concurrence provided in the PBO. 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.

NOTE: The Service reclassified the NLEB as an endangered species on November 30, 2022. This ruling becomes effective on January 30, 2023. This NLAA determination does not require reinitiation. For projects requiring consultation after the effective date of January 30, 2023, please use the 2022 FHWA, FRA, FTA PBO.

For Proposed Actions that include bridge/culvert or structure removal, replacement, and/or maintenance activities: If your initial bridge/culvert or structure assessment documented signs of bat use or occupancy, or an assessment failed to detect Indiana bats and/or NLEBs, yet are later detected prior to, or during construction, please submit the Post Assessment Discovery of Bats at Bridge/Culvert or Structure Form (User Guide Appendix E) to this Service Office within 2 working days of any potential take. In these instances, potential incidental take of Indiana bats and/or NLEBs is covered under the Incidental Take Statement in the 2018 FHWA, FRA, FTA PBO (provided that the take is reported to the Service).

If the Proposed Action is modified, or new information reveals that it may affect the Indiana bat and/or Northern long-eared bat in a manner or to an extent not considered in the PBO, further review to conclude the requirements of ESA Section 7(a)(2) may be required. If the Proposed Action may affect any other federally-listed or proposed species, and/or any designated critical habitat, additional consultation between the lead Federal action agency and this Service Office is required. If the proposed action 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 contact this Service Office.

The following species may occur in your project area and **are not** covered by this determination:

- Monarch Butterfly *Danaus plexippus* Candidate
- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

PROJECT DESCRIPTION

The following project name and description was collected in IPaC as part of the endangered species review process.

NAME

607597 - LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK

DESCRIPTION

607597 - LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK

This project will provide a replacement bridge for the existing deteriorated steel stringer bridge. The replacement structure will most likely consist of a multi-beam steel stringer, or a pre-cast concrete butted box beam bridge with reinforced concrete deck, founded on pile-supported integral abutments located behind the existing abutments. Sheet pile scour protection will be placed in front of existing abutments, wing walls and retaining wall. Space between the sheet pile wall and front of footing will be filled with concrete, along with all scour voids below the footings.

Tricolored Bat: Proposed Endangered Species only. The project action will not jeopardize the continued existence of a proposed species.

Monarch Butterfly: Candidate Species only, no conservation measures at this time.

DETERMINATION KEY RESULT

Based on your answers provided, this project(s) may affect, but is not likely to adversely affect the endangered Indiana bat and/or the threatened Northern long-eared 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 revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-eared Bat.

QUALIFICATION INTERVIEW

1. Is the project within the range of the Indiana bat[1]?

   [1] See Indiana bat species profile

   Automatically answered
   No

2. Is the project within the range of the Northern long-eared bat[1]?

   [1] See Northern long-eared bat species profile

   Automatically answered
   Yes

3. Which Federal Agency is the lead for the action?

   A) Federal Highway Administration (FHWA)

4. Are *all* project activities limited to non-construction[1] activities only? (examples of non-construction activities include: bridge/abandoned structure assessments, surveys, planning and technical studies, property inspections, and property sales)

   [1] Construction refers to activities involving ground disturbance, percussive noise, and/or lighting.

   No

5. Does the project include *any* activities that are **greater than** 300 feet from existing road/rail surfaces[1]?

   [1] Road surface is defined as the actively used [e.g. motorized vehicles] driving surface and shoulders [may be pavement, gravel, etc.] and rail surface is defined as the edge of the actively used rail ballast.

   No

6. Does the project include *any* activities **within** 0.5 miles of a known Indiana bat and/or NLEB hibernaculum[1]?

   [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

   No

7. Is the project located **within** a karst area?

   Yes

8. Will the project include *any* type of activity that could impact a **known** hibernaculum[1], or impact a karst feature (e.g., sinkhole, losing stream, or spring) that could result in effects to a **known** hibernaculum?

   [1] For the purpose of this consultation, a hibernaculum is a site, most often a cave or mine, where bats hibernate during the winter (see suitable habitat), but could also include bridges and structures if bats are found to be hibernating there during the winter.

   No

9. Is there *any* suitable[1] summer habitat for Indiana Bat or NLEB **within** the project action area[2]? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

   [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

   [2] The action area is defined as all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR Section 402.02). Further clarification is provided by the User's Guide for the Range-wide Programmatic Consultation for Indiana Bat and Northern Long-eared Bat.

   Yes

10. Will the project remove *any* suitable summer habitat[1] and/or remove/trim any existing trees **within** suitable summer habitat?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    Yes

11. Will the project clear more than 20 acres of suitable habitat per 5-mile section of road/rail?

    No

12. Have presence/probable absence (P/A) summer surveys[1][2] been conducted[3][4] **within** the suitable habitat located within your project action area?

    [1] See the Service's summer survey guidance for our current definitions of suitable habitat.

    [2] Presence/probable absence summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate distance from hibernacula) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    [3] For projects within the range of either the Indiana bat or NLEB in which suitable habitat is present, and no bat surveys have been conducted, the transportation agency will assume presence of the appropriate species. This assumption of presence should be based upon the presence of suitable habitat and the capability of bats to occupy it because of their mobility.

    [4] Negative presence/probable absence survey results obtained using the summer survey guidance are valid for a minimum of two years from the completion of the survey unless new information (e.g., other nearby surveys) suggest otherwise.

    Yes

    SUBMITTED DOCUMENTS

    - *607597_MassDOT_Lee_NLEB Memo-Final.pdf https://ipac.ecosphere.fws.gov/project/WSKYC245SVH6NOHAB5TOQDJXMI/projectDocuments/121134531*

13. Did the presence/probable absence (P/A) summer surveys detect Indiana bats and/or NLEB[1]?

    [1] P/A summer surveys conducted within the fall swarming/spring emergence home range of a documented Indiana bat hibernaculum (contact local Service Field Office for appropriate home range) that result in a negative finding requires additional consultation with the local Service Field Office to determine if clearing of forested habitat is appropriate and/or if seasonal clearing restrictions are needed to avoid and minimize potential adverse effects on fall swarming and spring emerging Indiana bats.

    No

14. Were the P/A summer surveys conducted **within** the fall swarming/spring emergence range of a documented Indiana bat hibernaculum[1]?

    [1] Contact the local Service Field Office for appropriate distance from hibernacula.

    No

15. Does the project include activities **within documented NLEB habitat**[1][2]?

    [1] Documented roosting or foraging habitat – for the purposes of this consultation, we are considering documented habitat as that where Indiana bats and/or NLEB have actually been captured and tracked using (1) radio telemetry to roosts; (2) radio telemetry biangulation/triangulation to estimate foraging areas; or (3) foraging areas with repeated use documented using acoustics. Documented roosting habitat is also considered as suitable summer habitat within 0.25 miles of documented roosts.)

    [2] For the purposes of this key, we are considering documented corridors as that where Indiana bats and/or NLEB have actually been captured and tracked to using (1) radio telemetry; or (2) treed corridors located directly between documented roosting and foraging habitat.

    No

16. Will the removal or trimming of habitat or trees occur **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors?

    Yes

17. What time of year will the removal or trimming of habitat or trees **within** suitable but **undocumented NLEB** roosting/foraging habitat or travel corridors occur?

    B) During the inactive season

18. Will *any* tree trimming or removal occur **within** 100 feet of existing road/rail surfaces?

    Yes

19. Will *any* tree trimming or removal occur **between** 100-300 feet of existing road/rail surfaces?

    No

20. Are *all* trees that are being removed clearly demarcated?

    Yes

21. Will the removal of habitat or the removal/trimming of trees include installing new or replacing existing **permanent** lighting?

    No

22. Does the project include wetland or stream protection activities associated with compensatory wetland mitigation?

    No

23. Does the project include slash pile burning?

    No

24. Does the project include *any* bridge removal, replacement, and/or maintenance activities (e.g., any bridge repair, retrofit, maintenance, and/or rehabilitation work)?

    Yes

25. Is there *any* suitable habitat[1] for Indiana bat or NLEB **within** 1,000 feet of the bridge? (includes any trees suitable for maternity, roosting, foraging, or travelling habitat)

    [1] See the Service's current summer survey guidance for our current definitions of suitable habitat.

    Yes

26. Has a bridge assessment[1] been conducted **within** the last 24 months[2] to determine if the bridge is being used by bats?

    [1] See User Guide Appendix D for bridge/structure assessment guidance

    [2] Assessments must be completed no more than 2 years prior to conducting any work below the deck surface on all bridges that meet the physical characteristics described in the Programmatic Consultation, regardless of whether assessments have been conducted in the past. Due to the transitory nature of bat use, a negative result in one year does not guarantee that bats will not use that bridge/structure in subsequent years.

    Yes

    SUBMITTED DOCUMENTS

    - *607597_Lee_Bridge_Assessment.pdf https://ipac.ecosphere.fws.gov/project/WSKYC245SVH6NOHAB5TOQDJXMI/projectDocuments/152283732*

27. Did the bridge assessment detect *any* signs of Indiana bats and/or NLEBs roosting in/under the bridge (bats, guano, etc.)[1]?

    [1] If bridge assessment detects signs of *any* species of bats, coordination with the local FWS office is needed to identify potential threatened or endangered bat species. Additional studies may be undertaken to try to identify which bat species may be utilizing the bridge prior to allowing *any* work to proceed.

    Note: There is a small chance bridge assessments for bat occupancy do not detect bats. Should a small number of bats be observed roosting on a bridge just prior to or during construction, such that take is likely to occur or does occur in the form of harassment, injury or death, the PBO requires the action agency to report the take. Report all unanticipated take within 2 working days of the incident to the USFWS. Construction activities may continue without delay provided the take is reported to the USFWS and is limited to 5 bats per project.

    No

28. Will the bridge removal, replacement, and/or maintenance activities include installing new or replacing existing **permanent** lighting?

    No

29. Does the project include the removal, replacement, and/or maintenance of *any* structure other than a bridge? (e.g., rest areas, offices, sheds, outbuildings, barns, parking garages, etc.)

    No

30. Will the project involve the use of **temporary** lighting *during* the active season?

    Yes

31. Is there *any* suitable habitat **within** 1,000 feet of the location(s) where **temporary** lighting will be used?

    Yes

32. Will the project install new or replace existing **permanent** lighting?

    No

33. Does the project include percussives or other activities (**not including tree removal/ trimming or bridge/structure work**) that will increase noise levels above existing traffic/ background levels?

    Yes

34. Will the activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the active season[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    Yes

35. Will *any* activities that use percussives (**not including tree removal/trimming or bridge/ structure work**) and/or increase noise levels above existing traffic/background levels be conducted *during* the inactive season[1]?

    [1] Coordinate with the local Service Field Office for appropriate dates.

    Yes

36. Are *all* project activities that are **not associated with** habitat removal, tree removal/ trimming, bridge and/or structure activities, temporary or permanent lighting, or use of percussives, limited to actions that DO NOT cause any additional stressors to the bat species?

    Examples: lining roadways, unlighted signage , rail road crossing signals, signal lighting, and minor road repair such as asphalt fill of potholes, etc.

    Yes

37. Will the project raise the road profile **above the tree canopy**?

    No

38. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the active season within undocumented habitat.

39. Are the project activities that use percussives (not including tree removal/trimming or bridge/structure work) and/or increase noise levels above existing traffic/background levels consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the activities are within 300 feet of the existing road/rail surface, greater than 0.5 miles from a hibernacula, and conducted during the inactive season

40. Is the location of this project consistent with a Not Likely to Adversely Affect determination in this key?

    Automatically answered
    Yes, because no bats were detected during presence/probable absence surveys conducted during the summer survey season and outside of the fall swarming/spring emergence periods. Additionally, all activities were at least 0.5 miles from any hibernaculum.

41. Is the bridge removal, replacement, or maintenance activities portion of this project consistent with a No Effect determination in this key?

    Automatically answered
    Yes, because the bridge has been assessed using the criteria documented in the BA and no signs of bats were detected

42. **General AMM 1**
    Will the project ensure *all* operators, employees, and contractors working in areas of known or presumed bat habitat are aware of *all* FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable Avoidance and Minimization Measures?

    Yes

43. **Hibernacula AMM 1**
    Will the project ensure that on-site personnel will use best management practices[1], secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula?

    [1] Coordinate with the appropriate Service Field Office on recommended best management practices for karst in your state.

    Yes

44. **Hibernacula AMM 1**
    Will the project ensure that, where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography?

    Yes

PROJECT QUESTIONNAIRE

1. Have you made a May Affect determination for *any* other species on the FWS IPaC generated species list?

   N/A

2. How many acres[1] of trees are proposed for removal between 0-100 feet of the existing road/rail surface?

   [1] If described as number of trees, multiply by 0.09 to convert to acreage and enter that number.

   0.2

3. Please describe the proposed bridge work:

The proposed project will consist of replacing the existing structure with a pre-stressed concrete NEXT F Beam bridge supported on integral abutments with a span length of 64 feet, and an out-to-out width of 27 feet 9 inches. In addition, the existing wingwalls and abutments will be demolished; a small portion of the existing abutment footings will remain and be capped to assist in scour countermeasures. Boulders will be used to construct weirs upstream of the bridge to reduce bend scour on the proposed structure and the stream bank will be reconstructed with natural materials in line Massachusetts Stream Crossing Standards. It is estimated that the total project length will be approximately 465 feet, including 200 ft of roadway approach work to the west of the bridge and 200 ft to the east. Based on availability of alternate routes, a section of Meadow Street will be closed during construction and the bridge will be constructed in one phase. Utility pole relocations are required for crane access to the existing bridge location and placement of proposed Next Beams.

The proposed full depth pavement cross-section will provide two 12' shared travel lanes (one in each direction) for a proposed 24' total edge to edge of pavement width. There will be 2' of proposed pavement milling mulch and proposed guardrail on either side of Meadow Street on both approaches to the bridge. The proposed mill and overlay cross section will provide two 10.5' shared lanes (one in each direction) for a proposed 21' total edge to edge of pavement width.

4. Please state the timing of all proposed bridge work:

   Fall 2024 - 2026

5. Please enter the date of the bridge assessment:

   7/31/2024

6. Have you made a No Effect determination for *all* other species indicated on the FWS IPaC generated species list?

   N/A

AVOIDANCE AND MINIMIZATION MEASURES (AMMS)

This determination key result includes the committment to implement the following Avoidance and Minimization Measures (AMMs):

GENERAL AMM 1

Ensure all operators, employees, and contractors working in areas of known or presumed bat habitat are aware of all FHWA/FRA/FTA (Transportation Agencies) environmental commitments, including all applicable AMMs.

HIBERNACULA AMM 1

For projects located within karst areas, on-site personnel will use best management practices, secondary containment measures, or other standard spill prevention and countermeasures to avoid impacts to possible hibernacula. Where practicable, a 300 foot buffer will be employed to separate fueling areas and other major containment risk activities from caves, sinkholes, losing streams, and springs in karst topography.

DETERMINATION KEY DESCRIPTION: FHWA, FRA, FTA PROGRAMMATIC CONSULTATION FOR TRANSPORTATION PROJECTS AFFECTING NLEB OR INDIANA BAT

This key was last updated in IPaC on December 01, 2022. 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) for the endangered **Indiana bat** (*Myotis sodalis*) and the threatened **Northern long-eared bat** (NLEB) (*Myotis septentrionalis*).

This decision key should only be used to verify project applicability with the Service's February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects. The programmatic biological opinion covers limited transportation activities that may affect either bat species, and addresses situations that are both likely and not likely to adversely affect either bat species. This decision key will assist in identifying the effect of a specific project/activity and applicability of the programmatic consultation. The programmatic biological opinion is not intended to cover all types of transportation actions. Activities outside the scope of the programmatic biological opinion, or that may affect ESA-listed species other than the Indiana bat or NLEB, or any designated critical habitat, may require additional ESA Section 7 consultation.

IPAC USER CONTACT INFORMATION

Agency: Massachusetts Department of Transportation
Name: Emily Puglisi
Address: 10 Park Plaza
City: Boston
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Email emily.a.puglisi@dot.state.ma.us
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LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

ATTACHMENT 13

Site Photographs

Site Photographs

Photo No. 1

Description:

North Approach
Looking South

(photo taken from approach 3/29/22)



Photo No. 2

Description:

South Approach
Looking North

(photo taken from approach 3/29/22)



Photo No. 3



Description:

North Elevation
Looking South

(photo taken 3/29/22)

Photo No. 4



Description:

South Elevation
Looking North

(photo taken 3/29/22)

Photo No. 5



Description:

Southwest quadrant

(photo taken from end of Southeast wingwall 3/29/22)

Photo No. 6



Description:

Southeast quadrant

(photo taken from end of Southeast wingwall 3/29/22)

Photo No. 7

Description:

Northwest quadrant

(photo taken from edge of bank 3/29/22)



Photo No. 8

Description:

Northeast quadrant

(photo taken from Northwest wingwall 3/29/22)



ATTACHMENT 14

Wetland Delineation Information

Meadow Street Bridge over Beartown Brook - Wetland Delineation

TO: William Kelly, PLS, WSP USA

FROM: Melissa P. Coady, Christina Pacella, Mary H. Grover

DATE: November 19, 2021

On November 11, 2021, Tighe & Bond wetland scientists visited the Meadow Street Bridge over Beartown Brook located in Lee, Massachusetts, and conducted wetland resource area investigations. These investigations were conducted to support a Massachusetts Department of Transportation (MassDOT) bridge replacement project survey as requested by WSP USA (WSP). Wetland delineations were completed within the following areas as per the geographic scope of work defined by WSP in email correspondence dated October 29, 2021:

- A distance of approximately 50 feet north and 50 feet south of the edge of pavement along the roadway limits of Meadow Street, extending approximately 500 feet west of the bridge and 300 feet east of the bridge
- A distance of approximately 500 feet upstream of the bridge and 500 feet downstream of the bridge along the Beartown Brook stream channel

This wetland delineation report presents a summary of jurisdictional wetland resource areas delineated at the Project Site (i.e., the area defined above and as determined through a review of publicly available information). Wetland resource areas and areas subject to jurisdiction, as defined by the Commonwealth of Massachusetts (Massachusetts Wetlands Protection Act [MA WPA; M.G.L. Chapter 131 Section 40] and the MA WPA regulations [310 CMR 10.00]), and the United States Army Corps of Engineers (USACE; Sections 401 and 404 of the Clean Water Act) were identified and field delineated by Tighe & Bond. Site photographs are provided in Attachment A.

Methodology of Resource Area Investigations

Tighe & Bond's wetland resource area investigations were conducted in accordance with state and federal guidelines including the MA WPA and associated Wetlands Protection regulations (310 CMR 10.00); Delineating Bordering Vegetated Wetlands under the MA WPA (1995) the 1987 Corps of Engineers Wetlands Delineation Manual; the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral and Northeast Region (2012); and Field Indicators for Identifying Hydric Soils in New England (Version 4, 2017). As of the date of this report, the Town of Lee does not have a local wetlands protection bylaw.

Wetland Resource Areas

The following wetland resource areas have been identified at or near the Project Site:

- Inland Bank
- Bordering Vegetated Wetlands (BVW)
- Land Under Waterbodies and Waterways (LUWW)
- Bordering Land Subject to Flooding (BLSF)
- Riverfront Area

Table 1, below, summarizes these wetland resource areas.

TABLE 1
Summary of Resource Areas within the vicinity of the Project Site

Flag Series	Resource Area[1]	Cowardin Classification
1A-1 to 1A-35[4]	Inland Bank / MAHW[2]	R4UBH
1B-1 to 1B-43[4]	Inland Bank / MAHW[2]	R4UBH
1C-1 to 1C-4	Inland Bank[3]	R4UBH
1D-1 to 1D-4	Inland Bank[3]	R4UBH
1E-1 to 1E-4	Inland Bank[3]	R4UBH
1F-1 to 1F-5	Inland Bank[3]	R4UBH
1G-1 to 1G-23[4]	BVW	PSS1A
2A-1 to 2A-6[4]	BVW	PEM/SS1E
3A-1 to 3A-12	BVW	PSS/FO1E

[1] BLSF is also present as part of resource areas on-site but is not a delineated by a flag series.

[2] Associated with the Beartown Brook.

[3] Point bar where Bank and MAHW diverge.

[4] Flag series demarcate the wetland resource area boundary to the geographic extent of the project scope.

Table 2 provides an overview of the jurisdictional status of each resource area at the state (MA WPA) and federal (Section 401 and 404 of the Clean Water Act (CWA)) level.

TABLE 2
Wetland Resource Areas and Regulatory Jurisdiction

Resource Area Series ID	MA WPA				Clean Water Act (CWA) (Sections 401 and 404)
	Inland Bank	BVW	100-foot Buffer Zone	200-foot Riverfront Area	Water of the US
1A/B	✓		✓	✓	✓
1C	✓		✓		✓
1D	✓		✓		✓
1E	✓		✓		✓
1F	✓		✓		✓
1E	✓		✓		✓
1G		✓	✓		✓
2A		✓	✓		
3A		✓	✓		✓

Descriptions of each resource area are provided in the following sections.

Inland Bank and Mean Annual High Water

Inland Bank is defined at 310 CMR 10.54(2)(a) as *"the portion of the land surface which normally abuts and confines a water body. It occurs between a water body and a vegetated bordering wetland and adjacent floodplain, or, in the absence of these, it occurs between a water body and an upland."*

Mean Annual High Water (MAHW) of Beartown Brook was determined based on observations of bankfull indicators and changes in vegetation and in slope. Inland Bank and MAHW are coincident throughout much of this reach of the Beartown Brook, however, four distinct areas were observed in which they diverge at point bars.

1A, 1B Series

The 1A flag series (1A-1 to 1A-35) and 1B flag series (1B-1 to 1B-43) defines a portion of the northern and southern MAHW and Bank of Beartown Brook, respectively. Beartown Brook, a Lower Perennial Riverine system (R4UBH), flows northward to the Housatonic River. In the vicinity of the Project Site, the stream ranges from approximately 15 feet wide to 30 feet wide and six inches to six feet in depth. Vegetation identified along inland Bank included red maple (*Acer rubrum;* FAC), Japanese honeysuckle (*Lonicera japonica*; FACU), Japanese barberry (*Berberis thunbergii*; FACU), and Oriental bittersweet (*Celastrus orbiculatus*; UPL).

West of the Meadow Street Bridge, the Bank is well defined by boulders. Near the bridge, the Bank transitions from rip rap to man-made concrete walls which line both sides of Beartown Brook and connect to the Meadow Street Bridge. East of the Meadow Street Bridge, the Bank along both flag series transitions from well-defined and rocky to sinuous, alternating between vertical cut banks and sandy point bars.

1C, 1D, 1E, 1F Series

The 1C (1C-1 to 1C-4), 1D (1D-1 to 1D-4), 1E (1E-1 to 1E-4), and 1F (1F-1 to 1F-5) series demarcate the extents of inland Bank where it diverges from MAHW to form point bars within Beartown Brook. These point bars were noted to be composed of sand and gravel. Vegetation within and along these Banks are dominated by Japanese honeysuckle, silky dogwood (*Cornus amomum;* FACW), willows (*Salix spp.*), and goldenrods (*Solidago spp.*)

Bordering Vegetated Wetlands

BVWs are defined at 310 CMR 10.55(2)(a) as *"freshwater wetlands which border on creeks, rivers, streams, ponds and lakes. The types of freshwater wetlands are wet meadows, marshes, swamps, and bogs. Bordering Vegetated Wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants."*

Tighe & Bond delineated BVW per the criteria described earlier in this report. Three areas of BVW were identified in the vicinity of the Project Site during the November 2021 resource area investigation. These BVWs are described below. Copies of the USACE Wetland Determination Data Forms are provided in Attachment B; forms were completed for each wetland area delineated, as well as corresponding upland plots. Three wetland plots and two upland plots were evaluated; a single representative upland plot for wetland areas 2A and 3A was chosen due to the lack of available nearby upland areas not otherwise disturbed by human activity.

1G Series

Flag series 1G (1G-1 to 1G-23) demarcates the boundary of a low-lying BVW located west of the Beartown Brook, on the north side of Meadow Street. Located within a floodplain, evidence of flow paths and drift deposits were observed throughout this BVW. This wetland is classified as a Palustrine Scrub-Shrub/Forested (PSS/FO1E) wetland. Dominant vegetation identified included red maple, silky dogwood, Japanese honeysuckle, and sensitive fern (*Onoclea sensibilis;* FACW). Some occurrences of field horsetail (*Equisetum arvense;* FAC) were also observed. Soils were evaluated to a depth of approximately 18 inches, in which the S5 (Sandy Redox) hydric soil indicator criteria were met. Soils were observed to exhibit a matrix color of 10YR 2/2 to approximately 6 inches, after which the matrix color was observed to be 10YR 4/1 with approximately 10 percent concentrations of 10YR 5/8.

2A Series

Flag series 2A (2A-1 to 2A-6) defines the boundary of a BVW located along the southern side of Meadow Street, situated in a low-lying area adjacent to Beartown Brook. The full extent of the wetland boundary is beyond the geographic scope of this proposal, however, based on Massachusetts Geographic Information System (MassGIS) data, this wetland borders upon a waterbody located further southeast of Meadow Street. According to the USGS Topographic Map for this region (Stockbridge, MA 2018), this waterbody is an unnamed pond. In addition, this area is mapped as a Potential Vernal Pool (PVP) in MassGIS. As such, it has been conservatively classified as a BVW rather than an Isolated Vegetated Wetland (IVW). Per MassGIS, a Certified Vernal Pool (CVP) is mapped within BVW 2A; however, it was not observed in the field as it is likely beyond the geographic limits of the scope of this delineation.

This BVW is a Palustrine Emergent/Scrub-shrub (PEM/SS1E) wetland dominated by reed canary grass (*Phalaris arundinacea*; FACW). Additional vegetation observed included silky dogwood, marsh fern (*Thelypteris palustris*; FACW), Japanese honeysuckle, red maple, and goldenrods. Soils were observed to exhibit a matrix color of 10YR 3/2 with approximately 10 percent depletions. Soils were saturated at approximately 18 inches. Water-stained leaves were observed throughout the delineated area. At the location of the data plot, evaluated soils did not meet the criteria for field indicators of hydric soil per the Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Northcentral and Northeast Region (2012); and Field Indicators for Identifying Hydric Soils in New England (Version 4, 2017). Therefore, this wetland would not be considered jurisdictional under the CWA per the USACE. As the MA WPA defines a wetland by hydrophytic vegetation and hydrology, this wetland is considered jurisdictional under the MA WPA.

3A Series

Flag series 3A (3A-1 to 3A-12) defines the boundary of a BVW located along the northern side of Meadow Street. This Palustrine Scrub-Shrub (PSS1A) wetland is situated in a low-lying area adjacent to Meadow Street, which gradually slopes downward to Beartown Brook. This wetland is dominated by reed canary grass, silky dogwood, and goldenrods. Evaluated soils exhibited a matrix color of 10YR 4/1 with approximately 10 percent of concentrations colored 10YR 4/4, which presents an F3 (Depleted Matrix) hydric soil indicator.

Land Under Waterbodies and Waterways

Land Under Waterbodies and Waterways (LUWW) is defined at 310 CMR 10.56(2)(a) as *"the land beneath any creek, river, stream, pond or lake."*

Land Under Waterbodies and Waterways (LUWW) was identified within Beartown Brook (R4UBH). The substrate of Beartown Brook was observed to be comprised of cobbles, gravel, and sand. No submerged aquatic vegetation was observed at the time of the site visit.

Beartown Brook flows generally northward, towards its confluence with the Housatonic River. As previously noted, Beartown Brook ranges from approximately 15 feet wide to 30 feet wide and 6 inches to 6 feet in depth.

Bordering Land Subject to Flooding

Bordering Land Subject to Flooding (BLSF) is defined under 310 CMR 10.57(2)(a) as *"… 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 FEMA Flood Insurance Study (FIS) does not include areas along Beartown Brook; however, review of the FEMA Flood Insurance Rate Map (FIRM) Community-Panel No. 250028 0005 B for the Town of Lee, Massachusetts (effective date June 1, 1982) indicates that the Project Site is located within the limits of Zone A8, an area of 100-year flooding. The base flood elevation (BFE) for Zone A8 is established as 854 feet, per the National Geodetic Vertical Datum of 1929 (NGVD 29). Converted to the North American Vertical Datum of 1988 (NAVD88), the BFE is 853.37 feet. A FEMA FIRMette is provided in Attachment C.

Riverfront Area

Riverfront Area is defined at 310 CMR 10.58 (2)(a) as "*the area of land between a river's mean annual high-water line and a parallel line measured horizontally. The riverfront area may include or overlap other resource areas or their buffer zones. The riverfront area does not have a buffer zone.*"

The Riverfront Area within the Project Site is comprised of the existing paved roadway and maintained road shoulders of Meadow Street, BVW, a Holiday Inn timeshare facility and an associated man-made stormwater swale, picnic facilities within maintained landscaped areas and parking areas, and undeveloped forest. In vegetated areas, Riverfront Area is dominated by non-native invasive species such as barberry, Oriental bittersweet, Japanese honeysuckle, and garlic mustard (*Alliaria petiolata*; FACU).

100-foot Buffer Zone

The following wetland resource areas identified within the vicinity of the Project Site have an associated 100-foot Buffer Zone protected by the MA WPA.

- Inland Bank
- Bordering Vegetated Wetlands

Buffer Zone under the MAWPA is defined as the "*area of land extending 100 feet outward from the boundary of any area specified in 310 CMR 10.01(1)(a)".* The Buffer Zone is considered an area protected under the MA WPA but is not regulated as a resource area. The 100-foot Buffer Zones within the Project Site consist of upland forested areas, the paved roadway and maintained road shoulders of Meadow Street, structures associated with the Holiday Inn timeshare facility, and the Meadow Street Bridge.

Rare Species

According to MassGIS, portions of the Project Site and surrounding area are within the limits of mapped *Priority Habitats of Rare Species* (PH1216) by the Massachusetts Natural Heritage Program (NHESP) (August 1st, 2021; 15th edition). Specifically, the areas north of Meadow Street are within PH1216. The Project Site is not mapped as *Estimated Habitats of Rare*

Wildlife. As previously noted, there is one mapped CVP (1993) and one PVP (12270) located south of Meadow Street, in the vicinity of the Project Site.

Attachments

A Site Photographs
B US Army Corps of Engineers Wetland Determination Data Forms
C FEMA FIRMette

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Tighe&Bond

ATTACHMENT A

Photographic Log

Client: WSP USA **Job Number:** W-5066-003

Site: Meadow Street Bridge over Beartown Brook (Lee, Massachusetts)

Photograph No.: 1	**Date:** 11/11/2021	**Direction Taken:** East

Description: Meadow Street, east of the Meadow Street Bridge. Bordering Vegetated Wetland (BVW) areas (Flag Series 2A and 3A) were delineated along the roadway.



Photograph No.: 2	**Date:** 11/11/2021	**Direction Taken:** West

Description: The eastern approach of the Meadow Street Bridge. Beartown Brook flows beneath the bridge in a northerly direction, to its confluence with the Housatonic River.



Photographic Log

Client: WSP USA **Job Number:** W-5066-003

Site: Meadow Street Bridge over Beartown Brook (Lee, Massachusetts)

Photograph No.: 3	**Date:** 11/11/2021	**Direction Taken:** Southwest

Description: Representative photograph of inland Bank (Flag Series 1A/B) conditions of Beartown Brook south of the Meadow Street Bridge. In this portion of the stream, Bank was well defined and rocky. Flow direction is indicated by the red arrow. A footbridge is located further upstream.



Photograph No.: 4	**Date:** 11/11/2021	**Direction Taken:** West

Description: In the vicinity of the Meadow Street Bridge, inland Bank of Beartown Brook (Flag Series 1A/B) transitions from being composed of rock to concrete walls. Flow direction is indicated by the red arrow.



Photographic Log

Client: WSP USA **Job Number:** W-5066-003

Site: Meadow Street Bridge over Beartown Brook (Lee, Massachusetts)

Photograph No.: 5	**Date:** 11/11/2021	**Direction Taken:** Northeast
Description: Representative photograph of inland Bank conditions of the Beartown Brook north of the Meadow Street Bridge. Flow direction is indicated by the red arrow.		



Photograph No.: 6	**Date:** 11/11/2021	**Direction Taken:** West
Description: Representative photograph of a point bar (pink arrow) and cut bank (yellow arrow) along Beartown Brook (Flag Series 1A/B). The point bar (Flag Series 1F) is composed primarily of sand and gravel. Flow direction is indicated by the red arrows.		



Photographic Log

Client: WSP USA **Job Number:** W-5066-003

Site: Meadow Street Bridge over Beartown Brook (Lee, Massachusetts)

Photograph No.: 7	**Date:** 11/11/2021	**Direction Taken:** Southwest
Description: Representative photograph of BVW 2A, situated along the southern side of Meadow Street. This BVW extends westward, to Beartown Brook.		



Photograph No.: 8	**Date:** 11/11/2021	**Direction Taken:** West
Description: Representative photograph of BVW 3A, situated along the northern side of Meadow Street.		



Photographic Log

Client: WSP USA **Job Number:** W-5066-003

Site: Meadow Street Bridge over Beartown Brook (Lee, Massachusetts)

Photograph No.: 9	**Date:** 11/11/2021	**Direction Taken:** Northeast
Description: Representative photograph of BVW 1G, which borders upon the northern side of Beartown Brook, north of Meadow Street.		



Photograph No.: 10	**Date:** 11/11/2021	**Direction Taken:** Northeast
Description: The confluence of Beartown Brook and the Housatonic River. Flow direction is indicated by the red arrow.		



Tighe&Bond

ATTACHMENT B

Proposal No. 607597 - 132402

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Meadow Street Bridge over Beartown Brook City/County: Lee / Berkshire Sampling Date: 11/11/2021

Applicant/Owner: N/A State: MA Sampling Point: Wetland 2A

Investigator(s): Christina Pacella, Mary Grover Section, Township, Range:

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 3

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 42.272957128315696 Long: -73.26909175904873 Datum: WGS84

Soil Map Unit Name: Limerick silt loam, frequently flooded NWI classification: PEM1

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ____ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
This plot is located south of Meadow Street, along the side of the road. It is located approximately between flags 2A-3 and 2A-4.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- x Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- x Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ____	Depth (inches): ____
Water Table Present?	Yes x	No ____	Depth (inches): 18
Saturation Present? (includes capillary fringe)	Yes x	No ____	Depth (inches): 18

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: Wetland 2A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Betula populifolia*	10	Yes	FAC
2. *Acer rubrum*	25	Yes	FAC
3.			
4.			
5.			
6.			
7.			
	35	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Cornus amomum*	18	Yes	FACW
2. *Rubus occidentalis*	15	Yes	UPL
3.			
4.			
5.			
6.			
7.			
	33	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Phalaris arundinacea*	90	Yes	FACW
2. *Cirsium vulgare*	5	No	FACU
3. *Thelypteris palustris*	18	No	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	113	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1. *Celastrus orbiculatus*	5	Yes	UPL
2.			
3.			
4.			
	5	=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	126	x 2 =	252
FAC species	35	x 3 =	105
FACU species	5	x 4 =	20
UPL species	20	x 5 =	100
Column Totals:	186 (A)		477 (B)

Prevalence Index = B/A = 2.56

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland 2A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	90	N 4/	10	d	m	Loamy/Clayey	
10-24	10YR 3/2	90	5G 4/1	10	d	m	Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Proposal No. 607597 - 132402

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Meadow Street Bridge over Beartown Brook City/County: Lee / Berkshire Sampling Date: 11/11/2021

Applicant/Owner: N/A State: MA Sampling Point: Wetland 3A

Investigator(s): Christina Pacella, Mary Grover Section, Township, Range:

Landform (hillside, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope %: 3

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 42.27313934600467 Long: -73.26872457291958 Datum: WGS84

Soil Map Unit Name: Limerick silt loam, frequently flooded NWI classification: PSS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
This plot is located north of Meadow Street, along the side of the road. It extends westward to Beartown Brook. This plot is located approximately between flags 3A-9 and 3A-10.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- X Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): ____

Water Table Present? Yes ____ No ____ Depth (inches): ____

Saturation Present? Yes ____ No ____ Depth (inches): ____
(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: Wetland 3A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Cornus amomum*	5	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
	5 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Phalaris arundinacea*	85	Yes	FACW
2. *Solidago sp.*	80	Yes	
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	165 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	90 (A)		180 (B)

Prevalence Index = B/A = 2.00

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland 3A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 4/1	95	10YR 4/4	5	c	m	Loamy/Clayey	Distinct redox concentrations
12-18	10YR 4/1	90	10YR 4/4	10	c	m	Loamy/Clayey	Distinct redox concentrations
18-24	10YR 4/1	90	10YR 4/4	10	c	m	Sandy	Distinct redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Proposal No. 607597 - 132402

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Meadow Street Bridge over Beartown Brook City/County: Lee / Berkshire Sampling Date: 11/11/2021

Applicant/Owner: N/A State: MA Sampling Point: Upland 2A/3A

Investigator(s): Christina Pacella, Mary Grover Section, Township, Range:

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): None Slope %: 3

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 42.273021114821745 Long: -73.27010738842138 Datum: WGS84

Soil Map Unit Name: Hero variant gravelly loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**		
Hydric Soil Present?	Yes ____	No x	**within a Wetland?**	**Yes** ____	**No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:		

Remarks: (Explain alternative procedures here or in a separate report.)
This plot is located southeast of Beartown Brook, and south of Meadow Street. It is located approximately 30 feet west of flag 2A-1.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ____	Depth (inches): ____
Water Table Present?	Yes ____	No ____	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ____	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No evidence of wetland hydrology was observed.

VEGETATION – Use scientific names of plants. Sampling Point: Upland 2A/3A

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhus typhina*	10	Yes	UPL
2. *Lonicera japonica*	15	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	25	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Solidago sp.*	40	Yes	
2. *Grass sp.*	20	Yes	
3. *Alliaria petiolata*	2	No	FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	62	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	17	x 4 =	68
UPL species	10	x 5 =	50
Column Totals:	42 (A)		163 (B)

Prevalence Index = B/A = 3.88

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland 2A/3A

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-7	10YR 3/3	100					Sandy	
7-12	2.5Y 4/4	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Very dense sand

Depth (inches): 12

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Meadow Street Bridge over Beartown Brook City/County: Lee / Berkshire Sampling Date: 11/11/2021

Applicant/Owner: N/A State: MA Sampling Point: Wetland 1G

Investigator(s): Christina Pacella, Mary Grover Section, Township, Range:

Landform (hillside, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope %: 3

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 42.27354422171017 Long: -73.26890696313804 Datum: WGS84

Soil Map Unit Name: Hero variant gravelly loam NWI classification: PSS1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area**
Hydric Soil Present?	Yes X	No ____	**within a Wetland?** **Yes** X **No** ____
Wetland Hydrology Present?	Yes X	No ____	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
This plot is located west of Beartown Brook and southwestof the Housatonic River, between flags 1G-2 and 1G-3.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- X Sediment Deposits (B2)
- X Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- X Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- X Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- X Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- X Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ____ No ____ Depth (inches): ____

Water Table Present? Yes ____ No ____ Depth (inches): ____

Saturation Present? Yes ____ No ____ Depth (inches): ____

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: Wetland 1G

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. *Acer rubrum*	15	Yes	FAC
2.			
3.			
4.			
5.			
6.			
7.			
	15	=Total Cover	
Sapling/Shrub Stratum (Plot size: 15)			
1. *Cornus amomum*	20	Yes	FACW
2. *Lonicera japonica*	5	Yes	FACU
3.			
4.			
5.			
6.			
7.			
	25	=Total Cover	
Herb Stratum (Plot size: 5)			
1. *Onoclea sensibilis*	20	Yes	FACW
2. *Equisetum arvense*	5	No	FAC
3. *Solidago sp.*	2	No	
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	27	=Total Cover	
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
		=Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	40	x 2 =	80
FAC species	20	x 3 =	60
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	65 (A)		160 (B)

Prevalence Index = B/A = 2.46

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

X 2 - Dominance Test is >50%

X 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Wetland 1G

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 2/2	100					Sandy	
6-18	10YR 4/1	90	10YR 5/8	10	c	m	Sandy	Prominent redox concentrations

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- _X_ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** _X_ **No** ___

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Meadow Street Bridge over Beartown Brook City/County: Lee / Berkshire Sampling Date: 11/11/2021

Applicant/Owner: N/A State: MA Sampling Point: Upland 1G

Investigator(s): Christina Pacella, Mary Grover Section, Township, Range:

Landform (hillside, terrace, etc.): Hillside Local relief (concave, convex, none): Convex Slope %: 3

Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 42.2737942906995 Long: -73.26882113244699 Datum: WGS84

Soil Map Unit Name: Hero variant gravelly loam NWI classification: N/A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area**
Hydric Soil Present?	Yes ____	No X	**within a Wetland?** **Yes** ____ **No** X
Wetland Hydrology Present?	Yes ____	No X	If yes, optional Wetland Site ID:

Remarks: (Explain alternative procedures here or in a separate report.)
This plot is located west of Beartown Brook, approximately 15 feet northwest of flag 1G-21.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ____	No ____	Depth (inches): ____
Water Table Present?	Yes ____	No ____	Depth (inches): ____
Saturation Present? (includes capillary fringe)	Yes ____	No ____	Depth (inches): ____

Wetland Hydrology Present? **Yes** ____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
No evidence of hydrology was observed.

VEGETATION – Use scientific names of plants. Sampling Point: Upland 1G

Tree Stratum (Plot size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 15)			
1. *Rhus typhina*	40	Yes	UPL
2.			
3.			
4.			
5.			
6.			
7.			
	40 =Total Cover		
Herb Stratum (Plot size: 5)			
1. *Solidago sp.*	15	No	
2. *Frangula alnus*	5	No	FAC
3. *Grass sp.*	85	Yes	
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	105 =Total Cover		
Woody Vine Stratum (Plot size: 30)			
1.			
2.			
3.			
4.			
	=Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	40	x 5 =	200
Column Totals:	45 (A)		215 (B)

Prevalence Index = B/A = 4.78

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ___ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: Upland 1G

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3	100					Loamy/Clayey	
6-24	10YR 3/3	100					Sandy	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ High Chroma Sands (S11) (**LRR K, L)**
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (**LRR K, L**)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

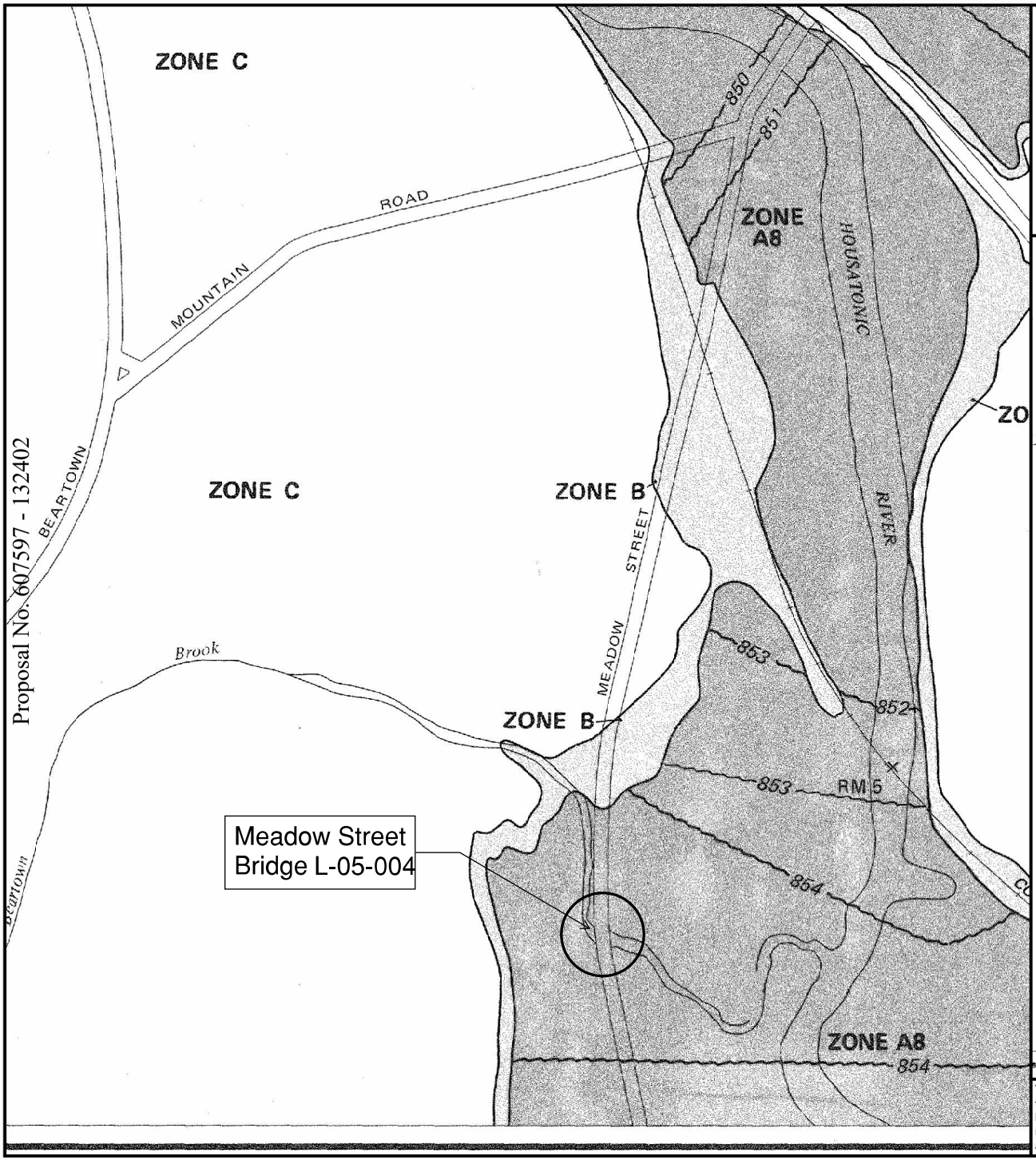
Hydric Soil Present? **Yes** ____ **No** X

Remarks:

This data form is revised from Northcentral and Northeast Regional Supplement Version 2.0 to include the NRCS Field Indicators of Hydric Soils, Version 7.0, 2015 Errata. (http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_051293.docx)

Tighe&Bond

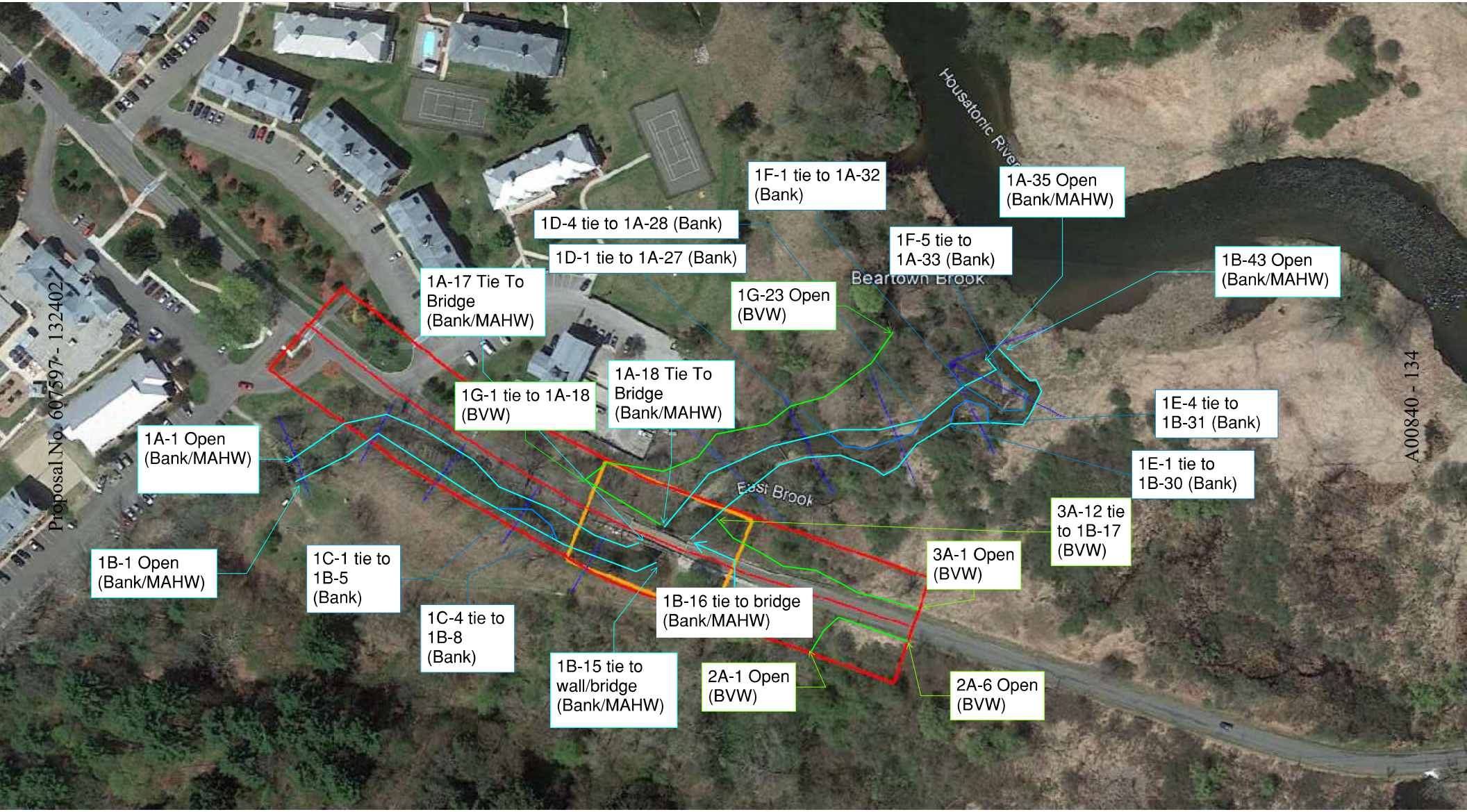
ATTACHMENT C



Proposal No. 607597 - 132402

A00840 - 133

This is an official FIRMette showing a portion of the above-referenced flood map created from the MSC FIRMette Web tool. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For additional information about how to make sure the map is current, please see the Flood Hazard Mapping Updates Overview Fact Sheet available on the FEMA Flood Map Service Center home page at https://msc.fema.gov.


Housatonic River
Beartown Brook
East Brook
1F-1 tie to 1A-32 (Bank)
1A-35 Open (Bank/MAHW)
1D-4 tie to 1A-28 (Bank)
1F-5 tie to 1A-33 (Bank)
1D-1 tie to 1A-27 (Bank)
1B-43 Open (Bank/MAHW)
1A-17 Tie To Bridge (Bank/MAHW)
1G-23 Open (BVW)
1A-18 Tie To Bridge (Bank/MAHW)
1G-1 tie to 1A-18 (BVW)
1E-4 tie to 1B-31 (Bank)
1A-1 Open (Bank/MAHW)
1E-1 tie to 1B-30 (Bank)
3A-12 tie to 1B-17 (BVW)
1B-1 Open (Bank/MAHW)
1C-1 tie to 1B-5 (Bank)
3A-1 Open (BVW)
1B-16 tie to bridge (Bank/MAHW)
1C-4 tie to 1B-8 (Bank)
1B-15 tie to wall/bridge (Bank/MAHW)
2A-1 Open (BVW)
2A-6 Open (BVW)
Proposal No. 607597 - 132402
A00840 - 134

ATTACHMENT 15

Specifications

ITEM 102.523 TREE AND PLANT PROTECTION FENCE - VISIBILITY STAKES FOOT

REV. 2022.01.01 (REV. DATE TO BE REMOVED BY MASSDOT CONTRACTS)

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 consists of furnishing, installing, removing and resetting, maintaining fence in a vertical and effective position at all times, and final removal of temporary fence.

The purpose of the fence is to prevent damage to tree roots, tree trunks, soil, and all other vegetation within a delineated Tree and Plant Protection Zone (TPPZ) as shown on the plans, as directed by the Engineer, and as described herein.

Protection shall be for the duration of the construction activities unless otherwise directed.

MATERIALS

Temporary Fence shall be such that it provides a minimum 48-inch tall barrier that remains vertical and effective (not sagging) for the duration of period required. Fence shall be plastic orange safety fence (recommended where high visibility is necessary), wooden snow fencing, or other approved material.

Per the Engineer, additional posts, deeper post depths, and/or additional attachments will be used if the fabric or fence sags, leans or otherwise shows signs of failing to create a sufficient barrier to access.

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 TPPZ

Fencing shall be used for construction areas, staging areas, and stockpile areas as shown on the plans and as directed by the Engineer to establish the Tree and Plant Protection Zone (TPPZ).

Fence shall be located as close to the work zone limit and as far from the trunk 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.

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 as shown on the plans and details. The Drip Line is defined as the limit of tree canopy.

The Contractor shall not engage in any construction activity within the TPPZ without the approval of the Engineer, including: operating, moving or storing equipment; storing supplies or materials; locating temporary facilities including trailers or portable toilets; and shall not permit employees to traverse the area to access adjacent areas of the project or use the area for lunch or any other work breaks.

METHOD OF WORK

Fence shall be installed prior to any construction work or staging activities and shall be installed and maintained in a vertical and effective position at all times.

Fence shall be repositioned where and as necessary for optimum effectiveness. Repositioning shall be incidental to this item. Fence 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 directed by the Engineer, fence, stakes, and other materials 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-inch depth of wood chips or approved matting for root protection, pruning of branches, and/or trunk protection. These protection measures will be paid under applicable items.

Landscaping work specified within the TPPZ shall be accomplished by hand tools. Where hand work is not feasible, with permission of the Engineer, work shall be conducted with the smallest mechanized equipment necessary.

TREE AND PLANT DAMAGES OR LOSS

If the TPPZ is intruded upon, at the discretion of the Engineer, the Contractor will be required to provide a more durable barrier (e.g., Jersey Barriers) to secure the area. Cost of furnishing and installing additional or more durable barrier shall be borne by the Contractor.

If the Contractor intrudes into a TPPZ without approval, soil will be considered compacted and tree root damage will be assumed. Action will be taken as specified below.

In the event that 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 obtain an Arborist. The Arborist shall be approved by MassDOT.

In the event of spills, compaction or damage, 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 damages can be remedied by corrective measures, such as repairing trunk or limb injury, soil compaction remediation, pruning, and/or watering, the damage will be repaired as soon as possible within the appropriate season for such work and according to industry standards.

If the Engineer determines that damages are irreparable, the Contractor shall pay for the damages in the amount of $500.00 per diameter inch at breast height (DBH) per tree.

Additionally, if the Engineer determines that the damages are such that the tree is sufficiently compromised as to pose a future safety hazard, the tree shall be removed. Tree removal will include cleanup of all wood parts, 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.

Shrubs will be replaced with a plant of similar species and equal size or the largest size plants reasonably available. The Engineer will approve the size and quality of the replacement plant. Replacement will include a minimum of one year of watering and care.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 102.523 will be measured and paid for payment by the foot of Tree and Plant Protection Fence – Visibility Stakes, complete in place. This includes all labor, materials, equipment, maintenance, final removal and disposal of the protective materials, damages repair, and all incidental cost required to complete the work.

Payment of 40 percent of value will be made upon installation of Fence. The remaining 60 percent will be made when protection materials have been removed and disposed off-site.

No separate payment will be made for costs of remedial actions, including addition of more durable barriers, or arborist services, but all costs in connection therewith shall be included in the Contract unit price bid.

In the event of irreparable damage due to lack of proper protective measures being take there will be no compensation in addition to the $500.00 per diameter inch penalty.

ITEM 102.55 **ARBORIST** **HOUR**

Designer: *Please modify the Scope of Work below to the specific services needed from the Arborist for each project. Consult with MassDOT Landscape Design as needed.*

REV. 2022.01.01 (REV. DATE TO BE REMOVED BY CONTRACTS)

DESCRIPTION

The work under this Item is for the services of a Certified Arborist. Arborist shall be an International Society of Arboriculture (ISA) Certified Arborist or a Massachusetts Certified Arborist. The Arborist shall have at least 10 years of experience in tree care, including tree protection during construction, and shall demonstrate a familiarity with the American National Standards Institute (ANSI) A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance Part 1Pruning, Part 5 Construction Management Standards, and Part 9 Tree Risk Assessment.

The Arborist's general responsibilities include protecting high priority trees within and adjacent to the project limits, stating areas, and access routes; recommending removal of diseased, damaged or otherwise unhealthy trees that pose a potential safety hazard; evaluating effects of construction on future health of trees close to proposed work; and recommending and/or overseeing tree work amd care.

The Arborist for this item shall not be from the same company as the company responsible for selective clearing or tree removal work.

For projects with multiple phases, projects where construction activities (work or stockpiling) shifts, or when otherwise directed by the Engineer, the Arborist shall re-evaluate conditions and provide follow-up recommendations.

SUBMITTALS

- Contractor shall submit to the Engineer for approval by MassDOT Landscape Design the qualifications and experience of the Arborist. Submittal shall include copy of current certification and a resume summarizing specific construction experience (including relevant MassDOT projects) for a minimum of five projects.

- Arborist's Report documenting recommendations shall be submitted to the Engineer and an electronic copy forwarded to MassDOT Landscape Design Section. Report shall include the following:

SCOPE OF WORK

The Arborist shall be responsible for the following tasks:
[Select, remove or otherwise modify as appropriate to project. Not all items are typically needed in all projects with an Arborist. Consult with MassDOT Landscape Design as needed.]

- Initial Evaluation and Report
  - recommend and prioritize trees that require removal as appropriate to contract scope, project limits, and project intent;
  - review and mark limits of protective fencing for trees and groups of trees to be retained;
  - review and recommend protection measures for high priority trees;

- submit a marked-up Construction Plan that briefly notes recommendations and decisions made in the field;
- submit a corresponding report including photo documentation;

- Oversight
  - direct or execute pruning of branches and/or roots, air spading, and/or other tree care operations
- Monitoring and Inspections
  - periodically inspect fencing and ensure root zones are properly protected and clear of equipment and materials as required by the Engineer
  - reevaluate tree protection measures for various phases of a project
  - submit inspection notes with relevant and dated photos to the Engineer.

METHODS

Prior to any work, the Arborist shall walk the site with the Contractor, the Engineer, and the Town Tree Wardento review trees, limits of construction activities, and other concerns. Where required for proper assessment of tree impacts, limits of work shall be staked or otherwise marked in the field prior to the site walk.

Trees to be removed shall be painted or otherwise marked.

Trees to be retained shall be marked such that it does not mar or damage the tree and such that marker is not easily removed. As applicable to the work and scope of the project, trees designated for removal or to be retained shall be noted on the plan and/or in the arborist's report and photographed.

Trees designated to remain that are damaged or removed by construction activities shall be noted and photographed for inclusion in inspection reports submitted to the Engineer.

MEASUREMENT AND BASIS OF PAYMENT

Item 102.55 will be measured for payment by the Hour of time spent onsite.

Item 102.55 will be paid at the contract unit price per hour upon submittal and acceptance of Reports described above.

ITEM 698.3 GEOTEXTILE FABRIC FOR SEPARATION SQUARE YARD

The work to be performed under this item includes furnishing and installing geotextile fabric in the construction of stone drainage channels.

Materials

The material to be supplied under this Item shall conform to the MassDOT Standard Specifications for materials M9.50.0: Geotextile Fabrics and be listed on the MassDOT Qualified Construction Materials List for Application Code 2: Separation.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Geotextile Fabric for Separation will be measured and paid for at the Contract unit price per square yard, complete in place, which shall include all labor, equipment, and materials necessary to complete the specified work. Overlaps shall be measured as a single layer of cloth.

ITEM 698.4 GEOTEXTILE FABRIC FOR PERMANENT EROSION CONTROL SQUARE YARD

The work to be performed under this item includes furnishing and installing geotextile fabric in the construction of bridge elements, retaining walls, and stream restoration.

Materials

The material to be supplied under this Item shall conform to the MassDOT Standard Specifications for materials M9.50.0: Geotextile Fabrics and be listed on the MassDOT Qualified Construction Materials List for Application Code 4: Permanent Erosion Control.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Geotextile Fabric for Permanent Erosion Control will be measured and paid for at the Contract unit price per square yard, complete in place, which shall include all labor, equipment, and materials necessary to complete the specified work. Overlaps shall be measured as a single layer of cloth.

ITEM 751.7 COMPOST BLANKET CUBIC YARD

REV. 2022.01.01 (REV. DATE TO BE REMOVED BY MASSDOT CONTRACTS)

The work under this Item shall conform to the relevant provisions of Subsection 751 and M1.06.0 Organic Soil Additives of the Standard Specifications and the following:

Work shall consist of furnishing and pneumatically applying compost as a thin mulch blanket (1/2-1 inch depth) over prepared soil to provide temporary soil stabilization and organic matter for plant growth.

SUBMITTALS AND MATERIALS

No materials shall be delivered until the required submittals have been approved by the Engineer. Delivered materials shall match the approved samples. Approval of test results does not constitute final acceptance.

Contractor shall submit to the Engineer samples and certified test results no sooner than 60 days prior to application of compost. Vender certification that material delivered meets the test results shall be submitted if requested.

Compost may be a blended product of compost and fine wood chips. No kiln-dried wood, construction debris or ground palette is allowed. Material shall meet the following criteria:

- Organic matter content shall be minimum 30 percent (dry weight basis)
- Moisture content shall be 30-60 percent (wet weight basis)
- Bulk Density <1000 lb/cy
- pH shall be 5.5-7.5
- Conductivity shall be a maximum of 4 mmhos
- Stability test shall produce a maximum of 8mg CO2-C/gram of organic material per day
- Particle size shall not exceed ¾ inch
- Compost may be a blended product of compost and fine wood chips.

Compost testing shall be by a laboratory approved by the US Compost Council using the Testing Method for the Examination of Compost and Composting (TMECC) protocols.

The Engineer shall approve the Contractor's equipment for application.

CONSTRUCTION METHODS

Application of compost material shall not begin until the Engineer has approved the site and soil conditions. Soil preparation shall be as specified under the applicable item for soil placement or for seeding. The Contractor shall notify the Engineer when areas are ready for inspection and application of compost.

Compost blanket shall be pneumatically applied (blown on) to a minimum depth of one half to one inch. Where shown on the plans or when directed by the Engineer depth may be increased to provide berms for sediment control or to otherwise prevent slope erosion.

When compost blanket is proposed with seeding, seed shall be broadcast and shall occur in conjunction with compost blanket, as specified under the relevant item for seeding.

When compost blanket is proposed for areas with planting, compost (and seed if applicable) shall be applied after planting. If compost and seed occur prior to planting, areas shall be regraded and compost and seed reapplied to the satisfaction of the Engineer and at the Contractor's expense.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 751.7 will be measured and paid for at the Contract unit price per Cubic Yard which price shall include all labor, materials, equipment, and all incidental costs required to complete the workof pneumatically applying compost.

Surface preparation of substrate receiving compost blanket shall be compensated under the applicable item for placement of loam, sand, ordinary borrow, wetland soil, topsoil rehandled andspread, tilled existing soil, or other specified substrate.

Seeding will be compensated for under the appropriate seeding items.

ITEM 755.45 WETLAND RESTORATION SQUARE YARD

REV. 2022.01.01 (REV. DATE TO BE REMOVED BY MASSDOT CONTRACTS)

DESCRIPTION

The work under this item shall conform to the relevant provisions of Subsections 120, 751, 765, 767, and 771 of the Standard Specifications and the following:

The work under this item shall include all labor and furnishing of materials to complete the work specified herein to protect and restore existing inland wetland areas that will be temporarily impacted as shown on the drawings and as required by the Engineer.

Inland Wetland Replication work shall be as specified and compensated under that item. Tidal wetland mitigation shall be as specified under the appropriate item for tidal wetlands.

Restoration Area shall be constructed to meet the requirements of all associated permits and certifications, including relevant performance standards of the Massachusetts Wetlands Protection Act (MGL C. 131, s40), Section 401 Water Quality Certification, and Section 404, U.S. Army Corps of Engineers General Permit.

All work shall be in coordination with an approved Wetland Specialist. Wetland Specialist qualifications and requirements shall be per Item 755.75, Wetland Specialist.

SUBMITTALS – DOCUMENTS

Request for Conditional Acceptance: As specified below, a letter requesting Conditional Acceptance of the work and the site conditions shall be submitted to the Engineer.

Request for Certificate of Compliance (Partial or Full): If applicable, request for a Certificate of Compliance shall be submitted to the Engineer for distribution to appropriate regulatory agencies as specified below.

ASSOCIATED ITEMS AND MATERIALS

Compost shall be in accordance with Subsection 751 and M1.06.0 Organic Soil Additives of the Standard Specifications. Compost shall not contain seeds, roots, stems, or other viable parts of invasive plants or other noxious plants. Off-site sources shall be identified and available for inspection prior to transport of material to the site to verify that they are likely to be free of invasive plant species, including all viable plant parts.

Compost Blanket shall be as specified under that item.

Seed Mix

Required submittals include:

- Certificate of Materials from the supplier shall be submitted and approved 30 days prior to ordering seed. Seed species listed on the certificate shall include ecotype region (i.e., *Asclepias incarnata*, PA Ecotype).
- Seed tag from the bag of seed used shall be submitted to the Engineer at the time of seeding.

Seed tag shall include ecotype region and species, guaranteed percentages of purity, weed content and germination of the seed, and the net weight. Seed tag shall match the Certificate of Materials, include the name of the supplier, and date material was sent.

- Bill of lading or a notarized Certificate of Compliance from the Supplier serving as proof of purchase shall be submitted if requested by the Engineer. Document shall include date of sale, quantity, lot number, and address of Supplier. This shall match the seed tag. Notary shall not work for either the contractor or seed supplier.

Seed mix shall be:

765.555 Wetland Seed – Part Shade Mix: 20 lbs/acre PLS.

Fertilizers shall not be used.

Straw mulch or hydromulch shall be per Section M6 of the Standard Specifications.

Water

The Contractor shall provide water and all equipment required at no extra cost. Water shall be suitable for irrigation and free from ingredients harmful to plants and wildlife. Water from the adjacent water bodies or waterways shall not be utilized. It is the Contractor's responsibility to correct injury or damage due to the lack of water, too much water, or use of contaminated water.

CONSTRUCTION METHODS & SEQUENCE

Site Protection Prior to Impacts

Prior to any land work, as part of the initial site-walk, the Wetland Specialist shall photo-document the site and provide a summary report of existing conditions as outlined under Item 755.75 Wetland Specialist.

Where and as required vegetation shall be cut flush and area surveyed to establish pre-construction elevations.

Following the cutting and surveying, temporary separation fabric or timber matting shall be placed as required to protect soil and vegetation from compaction, contamination, and/or other damages. Fabric and timber mats shall be placed as specified under the respective items and the Engineer shall approve placement.

Restoration Upon Completion of Roadway Construction Work

Sediment Barriers

If required for sediment control during Restoration work (i.e, tilling is required to restore soil), sediment barriers shall be installed along the downslope perimeter of the Restoration Area beginning and ending in the surrounding upland so that no disturbed soil can enter adjacent wetlands or waters. Sediment barriers shall be in place and approved by the Engineer prior to any soil disturbance. No work shall take place outside the barriers.

Removal of Fill and Grading

Fill and temporary separation fabric or mats shall be removed and disposed of as specified under the respective items.

If required, grades shall be restored to pre-construction elevations as shown in the baseline survey or as required by the Engineer and Wetland Specialist to restore hydrologic functions. Final elevations shall be approved by the Engineer prior to soil preparation and seeding. Grading shall be incidental to this item.

Following approval of grading to elevations required, soil shall be prepared and seeded as follows.

Soil Scarification

Compacted soil shall be scarified with equipment approved by the Engineer. Upon approval of soil scarification, the area shall be **seeded with Compost Blanket** as specified below. Seeding shall immediately follow soil preparation.

Seeding with Compost Blanket

Application of compost blanket and seed shall be done as one application and shall not begin until the Engineer has approved the site and soil conditions. The Contractor shall notify the Engineer when raked areas are ready for inspection and application of compost blanket and seed.

Compost shall be pneumatically applied (blown on) to a depth of one half to one inch at the same time that seed is broadcast such that seed is covered by a light application of compost.

When planting occurs on projects with compost blankets and seed application, planting shall occur prior to application of compost and seed. Otherwise, compost and seed shall be re-applied to the satisfaction of the Engineer and at not cost to the contract.

Seed tags shall be submitted at time of seeding.

PLANT AND SEED ESTABLISHMENT

Seeding that fails to establish according to the conditions of acceptance below shall be over-seeded as required by the Engineer. Washouts and channels shall be repaired and stabilized prior to overseeding. Excessive weed growth shall be pulled out by the roots or, with approval from the Engineer, cut prior to over-seeding. Soil repair and weed control are incidental to this item.

CONDITIONAL ACCEPTANCE OF WORK

Conditional Acceptance shall indicate approval of the wetland restoration work and agreement that work has been done according to plan or modified as approved.

Upon completion of construction, the Contractor shall submit a Request for Conditional Acceptance that includes a brief narrative from the Wetland Specialist (if applicable to project) demonstrating that the wetland restoration work was done according to plans (or how modified) and meets required permit conditions (if applicable). The narrative shall include, photo-documentation of pre-construction conditions as well as soil work, planting, and seeding. Seed tags shall be submitted as part of the Request for Conditional Acceptance.

Upon receipt of a Request for Conditional Acceptance, the Engineer, the Wetland Specialist, and regulatory representative (if required) shall assess the Restoration Area and the surrounding areas. At a minimum, the following conditions shall be included in the narrative and reviewed as part of the on-site assessment of whether:

- The target elevations have been restored per the survey or adjusted per the Engineer. Areas that

are too high or too low should be identified along with suggested corrective measures.

- Soil compaction has been mitigated.
- Soils are stabilized and there is no sediment in the wetland and no channeling of slopes.
- Hydrology meets performance standards and has been adequately restored.
- Specified seed mix has been seeded and seeded species in the wetland and adjacent upland show signs of good germination and healthy growth.
- Planted woody and herbaceous species (if included) meet specifications and are establishing well.
- There are no invasive plants visible in the restored wetland area.
- Silt fence and non-biodegradable sediment barrier materials have been removed.

Upon approval that the work meets the above conditions, MassDOT will issue a letter of Conditional Acceptance. If the Wetland Restoration work is not approved, MassDOT will issue a rejection letter requiring corrective actions. Work not approved shall be addressed by the Contractor at no extra cost.

Erosion of adjacent slopes or the flow of sediments into the wetland between Conditional and Final Acceptance shall be immediately addressed by the Contractor.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 755.45 will be paid for at the Contract unit price per Square Yard, which price shall include all labor, materials, compost and amendments, seed, mulch, equipment, submittals, maintenance, grading, and incidental costs necessary to complete the work as required.

Payment shall be as follows:

- 50% upon completion of soil preparation and seeding
- 50% upon Conditional Acceptance

Sediment Control Barrier will be paid under Item 767.121
Compost Blanket will be paid under Item 751.73
Wetland Specialist will be paid under Item 755.75
Seeding will be paid under the respective items.

ITEM **765.21** **ANNUAL COVER CROP FOR NATIVE SEEDING** **POUND**

Work under this item shall be in according with Subsection 765 of the Standard Specifications and the following.

Description

Work consists of furnishing and applying the appropriate annual grass to be seeded as a cover crop in conjunction with upland native seeding and at the rate specified herein.

A cover crop shall be used for following conditions:

- when specified under Application Rate for the permanent native upland seed mix
- for slopes 2:1 or steeper and an annual is not already specified as part of the permanent mix
- when seeding out of season and the native seed mix does not already specify an annual
- as required to prevent erosion until the permanent seed establishes.

A cover crop is not necessary for wetland seeding and is not typically necessary for soil stabilization when seeding in conjunction with a compost blanket application.

Annual rye (*Lolium multiflorum*) will not be accepted as an annual cover crop.

Using annual rye or exceeding the application rate such that a dense stand of annual grasses prevents germination of the native grasses will require mowing of annual grasses. In this instance, mowing of cover crop will be incidental to this item.

Seed and Application Rate

Add 30 pounds/acre of the following seed based on seeding season:

Avena sativa (Grain Oats):	1 January to 31 July
Cecale cereale (Grain Rye):	1 August to 31 December

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Annual Cover Crop will be measured for payment per pound of seed, complete in place.

Annual Cover Crop will be paid at the contract unit price per pound upon approval of seed bag tags or other documentation of correct application rate and species, and upon acceptance of a satisfactory stand of annual grasses three weeks following seeding.

Application and care of cover crop will be paid for separately under Item 765.635 Native Seeding and Establishment.

ITEM 765.451 PART SHADE ROADSIDE MIX POUND
ITEM 765.555 WETLAND SEED – PART SHADE MIX POUND

Work under this item shall consist of furnishing the mix(es) specified below in the required quantity.

Submittals

1) Pre-Verification of Seed Availability. Within 30 days after the Notice to Proceed, the Contractor shall submit to the Engineer the supplier's verification of availability of seed species in the required quantities and for the anticipated date of seeding. Verification shall be on the supplier's letterhead and notarized by the supplier's notary. Species not expected to be available should be noted and substitutions recommended.

2) Final Verification of Seed Availability. No earlier than 21 days prior to ordering, the Contractor shall submit to the Engineer the supplier's verification of availability of seed species and in the required quantities. Verification shall be on the supplier's letterhead and notarized by the supplier's notary. A copy of this submittal shall be forwarded to the MassDOT Landscape Design Section. Substitutions or changes in the mix at this time must be approved by MassDOT Landscape Design Section.

3) Seed Worksheet provided herein shall be submitted to the Engineer prior to ordering seed to determine the number of pounds of Pure Live Seed required.

4) Seed Tags. The contractor shall submit original seed tags from each bag of seed used on the project or ensure that each tag is photo documented by the Engineer while on the unopened bag.

   Number of tags submitted must correspond to number of bags delivered.

   Species listed on the seed tag shall match the Final Verification of Seed Availability (Submittal #2) unless approved otherwise. Tag must include: variety and species name; lot number; purity; percentage of inert matter; percentage of weeds, noxious seeds, and other crop seeds; germination, dormant or hard seed; total viability; origin of seed; germination test date, net weight, and name and address of seller. The origin of seed must be listed on the seed tag for all species in the mix to provide verification of original (generation 0) seed source. The smallest known geographic area (township, county, ecotype region, etc.) shall be listed. Ecotypes and cultivars shall be as close to Massachusetts as possible and appropriate to the site conditions.

   A copy of this submittal shall be forwarded to the MassDOT Landscape Design Section.

5) Verification of Seed Delivery. Prior to payment, contractor shall submit the Seed Delivery Verification form contained within the contract or the Supplier's Verification on company letterhead or a bill of lading. Supplier verification must include all information requested on the Verification form within this contract. The bill of lading must include variety and species name, lot number, net weight shipped, date of sale, invoice, project or seeding location, and name and address of Supplier. All information must be filled in and complete for acceptance. Information must match the seed tags and quantity of seed used on the job. A copy of this submittal shall be forwarded to the MassDOT Landscape Design Section

6) Seed Sample. If requested or if seed is from a previously opened bag, the contractor may be asked to submit to the Engineer a sample of seed from the seed bag (1-2 cups) at the time of seeding.

Seeding Season

The appropriate seeding seasons are:

Spring: April 1 - May 15
Fall: October 1 - December 1 for dormant seeding

Permanent Seed Mix(es)

Calculating Pure Live Seed (PLS)
Quantities specified are PURE LIVE SEED. Greater quantities of ordered seed may be required to achieve actual specified seeding rates.

Pure Live Seed (PLS) is defined as a percentage calculated by multiplying the percent of pure seed by the percent of viable seed (total germination, hard seed, and dormant seed). For example:

If a seed label indicates 90% purity, 78% germination, 10% hard seed, and 2% dormancy, it is calculated to be 90% x [78 + 10 + 2]% = 81% PLS.

Therefore, each pound of PLS would need 1 pound / 0.81 = 1.2 pounds of seed with a 90% purity and 90% total germination

Seed Mix(es) shall be as specified below. Ecotypes and cultivars shall be as close to Massachusetts as possible and appropriate to the site conditions.

765.451 Part Shade Roadside Mix

	Botanical Name	Common Name	% PLS by Weight
Grass			
	Festuca rubra	Creeping Red Fescue	25.70%
	Elymus virginicus	Virginia Wild Rye	24.00%
	Schizachyrium scoparium	Little Blue Stem	22.50%
	Panicum virgatum	Switch Grass	10.00%
	Panicum clandestinum 'Tioga'	Deer Tongue 'Tioga'	7.00%
	Carex vulpinoidea	Fox Sedge	2.00%
	Agrostis perennans	Upland Bentgrass	2.00%
	Juncus effusus	Soft Rush	0.20%
			93.40%
Herb/Forb			
	Chamaecrista fasciculata	Partridge Pea	3.00%
	Penstemon digitalis	Beard-tongue	1.00%
	Zizia aurea	Golden Alexanders	0.30%
	Desmodium canadense	Showy Tick Trefoil	0.30%
	Solidago bicolor	White Goldenrod	0.20%
	Solidago caesia	Woodland Goldenrod	0.20%
	Rudbeckia hirta-VT ecotype	Black-eyed Susan-VT ecotype	0.20%
	Aster novae-angliae	New England Aster	0.20%
	Solidago odora	Licorice Scented Goldenrod	0.20%
	Aster divaricatus	White Wood Aster	0.20%
	Heliopsis helianthoides	Ox-Eye Sunflower	0.20%
	Pycnanthemum tenuifolium	Slender Mountain Mint	0.20%
	Monarda fistulosa	Wild Bergamot	0.10%
	Eupatorium perfoliatum	Boneset	0.10%
	Aster lateriflorus	Calico Aster	0.10%
	Oenothera fruticosa var. fruticosa	Sundrops	0.10%
			6.60%
			100.00%

Seeding Rate: 15.0 lbs PLS/Acre

765.555 Wetland Seed – Part Shade Mix

Botanical Name	Common Name	% PLS By Weight
Grass		
Poa palustris	Fowl Bluegrass	25.00%
Elymus riparius	Riverbank Wild Rye	19.00%
Carex lurida	Shallow Sedge	17.00%
Carex vulpinoidea	Fox Sedge	10.00%
Cinna arundinacea	Sweet Woodreed	5.00%
Sparganium eurycarpum	Giant Bur Reed Eco PA	4.00%
Carex scoparia	Broom sedge	4.00%
Carex lupulina	Hop Sedge	4.00%
Scirpus polyphyllus	Many Leaved Bulrush	3.00%
Juncus effusus	Soft Rush	2.50%
Carex intumescens	Bladder Sedge	2.00%
Sparganium americanum	Burrweed	2.00%
Scirpus cyperinus	Woolgrass	1.00%
Carex crinita	Fringed Sedge	1.00%
Juncus tenuis	Path Rush	0.50%
		100.00%

Seeding Rate: Species ecotype shall be as native to New England region as possible. Apply this mix at 20 lbs PLS/acre.

Application Rate

Part Shade Roadside Mix: 15 lbs/acre PLS. In addition, apply 30 pounds of cover crop (grain oats or grain rye) as appropriate to the season.

Wetland Seed – Part Shade Mix: 20 lbs/acre PLS. In addition, apply 30 pounds of cover crop (grain oats or grain rye) as appropriate to the season.

Any species substitution shall be with a species having similar characteristics and function. Substitutions must be approved by MassDOT Landscape Design Section per the documentation submittal process.

50% Increase Adjustment for Field Conditions

Seeding under the following conditions requires a 50% increase in the permanent mix at the time of construction:

- Seeding out of season
  OR
- Seeding after Compost Blanket has been applied (unless already increased for out of season).

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Part Shade Roadside Mix and Wetland Mix – Part Shade Mix will be measured for payment by the pound of Pure Live Seed delivered and complete in place.

Part Shade Roadside Mix and Wetland Mix – Part Shade Mix will be paid at the contract unit price per pound of Pure Live Seed delivered upon approval of all Seed Submittal Documentation. Overseeding required to correct poor germination or establishment shall be incidental to the item.

Cover crop not included as part of the permanent mix composition will be paid for under Item 765.21, Annual Cover Crop.

Application and care of native seed mix will be paid for separately under Item 765.635 Native Seeding and Establishment.

NATIVE SEED WORKSHEET

Project Description: _____ Project No: _____

Contractor: _____ Contract No: _____

Seed Mix Number & Description: _____

Contractor: Complete Prior To Ordering

Pounds of Seed Required Per Contract:

_____lbs./acre for _____Acre(s) OR _____ SY

Additional 50% increase if required (out of season or seeding over compost blanket):

_____**lbs. Total Seed Required**

Calculated Quantity for **P**ure **L**ive **S**eed (PLS[1]):

_____ **Total Pounds PLS**

Engineer: Verification at Time of Application

Number pounds delivered to site[2]: _____ Date(s): _____

Actual Seed Bag Tag/s Received or photo documented by Engineer: _____

[1] *PLS=% pure seed x % viable seed (total germination, hard seed, and dormant seed).*
[2]*Quantity delivered should match pounds* ***Total Pounds PLS*** *and* ***Verification of Seed Delivery****. Pounds should be shown on each Seed Tag.*

SUPPLIER VERIFICATION OF SEED DELIVERY FOR MASSDOT PROJECTS

Date_____

We hereby certify that (*Seed Supplier*):_____

Furnished to (*Contractor*): _____

For use on: (*Project Description*) _____

Project #: _____ Contract #: _____

Pounds of Pure Live Seed: _____

Of Mix (*Description*): _____

Lot Number _____

The material was delivered on (*Date*)_____.

The labels and contents meet all State and Federal regulations. The mixture consists of the following species, including cultivars (as applicable) and ecotype region, and at the following percentages (may be attached separately):

Name (print): _____ Title: _____

Supplier: _____

Signature and Seal: _____

ITEM 765.635 NATIVE SEEDING AND ESTABLISHMENT SQUARE YARD

Work shall conform to the relevant provisions of Subsections 765 and 767 of the Standard Specifications and the following:

The work under this item shall consist of seeding, mowing, and other care to establish a stand of grass in the areas shown on the plans or as required by the Engineer. For the purposes of these specifications, the term "grass" shall apply to all the forbs, grasses, sedges, and rushes included in the materials.

Qualifications

Seeding shall be done by a company having a minimum of five years of experience with native seed establishment. Prior to beginning work, the seeding Contractor shall furnish proof of qualifications to the Engineer for approval. Proof of qualifications shall include providing documentation (photos and contacts) to demonstrate knowledge and expertise with native seeding and establishment and proof of having completed successful native seeding projects.

Seeding Season

Seeding seasons for native mixes is April 1 - May 15 and October 1 - December 1 for dormant seeding. Written approval must be obtained for seeding outside the seeding season and, if approved, the permanent seed rate shall be increased by 50%.

Seeding season for cover crops shall be grain oats January 1 – July 31 and grain rye August 1 – December 1.

Material and Submittals

Seed Mixes and Submittals shall be per the item(s) for permanent and annual (cover crop) seed mixes.

Compost Blanket, if used, shall meet the material and submittal requirements for that item.

Hydromulch shall be wood fiber or straw applied per the Standard Specifications and at the rates specified below and per the manufacturer.

A certified statement shall be furnished, prior to start of work, to the Engineer by the Contractor as to the number of pounds of hydromulch, tackifier, and seed, per 100 gallons of water and as applicable to products used. This statement should also specify the number of square yards of seeding that can be covered with the solution specified above.

Fertilizer

No fertilizers shall be applied.

Water
Water, including hose and all other watering equipment required for the work, shall be furnished by the Contractor to the site at no additional cost. Water shall be suitable for irrigation and free from ingredients harmful to plant life. All plants injured or work damaged due to the lack of water or the use of too much water shall be the Contractor's responsibility to correct.

Seeding
Hand broadcast method shall be used for all areas smaller than half an acre and when specified on the plans for areas over half an acre.

Seeding shall occur within 72 hours of placement of loam and final grading or the Contractor shall propose a reasonable, alternative schedule that shall be approved by the Engineer.

Surface Preparation
No seeding or soil preparation shall be done if soils are muddy or dry and compacted. Bare soils shall be raked to remove large stiff clods, lumps, brush, roots, stumps, litter and other foreign matter. Ruts and depressions shall be filled with additional loam or compost and the soil shall be re-graded to a relatively smooth finish corresponding to the required grades.

When seeding over existing or compacted soil or soil that has sat bare for more than 30 days, surface will be prepared by tilling or raking to a minimum depth of 2 inches prior to seeding and prior to Compost Blanket application (when applied).

Surface preparation shall be compensated for under for loam placement or topsoil rehandled and spread as appropriate to the project.

Jute or coir mesh, when specified in the contract, shall be placed after seeding and per the Standard Specifications and the manufacturer’s instruction.

Surface preparation shall be approved by the Engineer prior to seeding.

Seeding over Various Substrates

Loam: Seeding shall occur within 72 hours of loam placement to prevent loss of topsoil. Seed shall be manually broadcast for areas less than half an acre (each area, not cumulative area) and when specified on the plans. Broadcasting shall be immediately followed by hydromulching as specified below. When not specified on the plans, larger areas may be hydroseeded as specified below.

Compost Blanket: Compost Blanket shall be applied as specified under that item. Seed should be hand broadcast at the same time as compost application to ensure a thin cover of compost over seed.

When seeding is done after application of Compost Blanket the rate shall be increased by 50%. If the Compost Blanket is applied after December 1, seed shall be broadcast or hydroseeding over the compost in the Spring and the rate increased by 50% specified under Seed Application.

Compost Mulch over Modified Rock: Compost Mulch and seed shall be applied as specified under that item. No hydromulch is required.

Cover Crop

Cover crop shall be used when seeding out of season, when specified with the permanent native seed mix under that item, and as required to prevent erosion until the permanent seed establishes.

A cover crop should not be used with a steep slope mix or other permanent mix which already contains either cereal rye or oats in the composition of the mix. A cover crop is not necessary for wetland seeding and is not typically necessary for soil stabilization when seeding in conjunction with a compost blanket application.

Seed Application

All seed shall be mulched as specified herein.

Seed application shall be by broadcast seeding or by hydroseeding as described below.

Broadcast Seeding

Seed shall be broadcast spread using a cyclone or whirlwind seeder or hand broadcast. Small or light-seeded species such as bluestem may be mixed with approved filler to achieve an even distribution. Seed shall not be broadcast when wind velocities are greater than 15 mph.

Broadcast seeding shall be undertaken in two separate passes at ninety degrees to each other. One-half the seeding rate shall be applied in each direction (horizontally and vertically). To ensure seed to soil contact with broadcasting of seed, seeding shall be followed by rolling or tracking with equipment approved by the Engineer.

Broadcast seed shall be mulched with weed-free straw mulch unless seeding is done as part of Compost Blanket in which case it shall be as specified above under seeding with Compost Blanket application. Hydromulching shall be as specified under Hydromulching.

Hydroseeding and Hydromulching

Hydroseed and mulching shall be per the manufacturer's directions and as follows.

Hydroseeding shall only be used for sites over half an acre in size or with permission of the Engineer.

Tank and hoses shall be cleaned from all previous hydroseeding and hydromulching projects. Seed shall be mixed into the slurry immediately before application and slurry applied within 30 minutes after seeds have been placed in the tank. Once seed has been placed in the tank, tank shall be agitated only enough to mix the seeds and keep slurry from separating.

A 2-step process shall be used for seeding in conjunction with hydromulch. Seed shall be applied with 500 lbs/acre of hydromulch in the first pass. A second pass with 1,000 lbs/ acre of hydromulch shall be applied in a second pass. Each pass shall be applied in a different direction.

Once the seed has been added to the tank mixture a one-hour time limit is set for spreading the mixture on the soil. Once the one hour has passed the excess mixture must be discarded.

For broadcast seeding, hydromulch shall be applied immediately following seeding at a rate of 1,000 lbs/acre. Tank shall be cleaned from any previous hydroseeding.

Care During Germination and Establishment

Contractor shall care for seeded areas as necessary for successful germination. Care will include watering and weed control as necessary to achieve establishment of the specified seeded species after one growing season as specified below.

The contractor shall maintain the stand of grasses to ensure healthy growth of the seeded species. Work shall include mowing or weed-whacking for weed control, watering if necessary, and removal of invasive plants.

Watering shall be sufficient to achieve soil moisture to a depth of 2 inches or more and such moisture is uniform. Method of watering shall not erode or damage soil or grassed surfaces.

General Weed Control: Unless otherwise directed, mowing shall be as specified under Mowing for Weed Control for seed establishment. Weeds shall be mowed prior to weeds setting seed (by the end of July unless otherwise approved).

Control of Invasive and Aggressive Weeds: Invasive and aggressive weeds, including but not limited to mugwort, ragweed, knapweed, foxtail, crabgrass, and chicory must be cut or treated prior to going to seed. Herbicide treatment must be coordinated with MassDOT. Undesired species (such as chicory) introduced due to use of incorrect seed mix shall be removed at the Contractor's expense.

Mowing for Weed Control

Mowing for weed control shall be completed after weeds have sprouted and show leaf and bud growth, but prior to setting seed, generally between July 7th and August 1st, unless directed otherwise by the MassDOT Landscape Architect and the Engineer.

Mowing height shall be as needed for weed control, generally to a height of 8 inches and not below 4 inches, unless directed otherwise. Mowing shall be with a brush hog mower or string trimmer other approved equipment. Conventional lawn mowers which cannot achieve the appropriate cut shall not be used.

Contractor shall give 48-hour notice prior to mowing work. Mowing shall only occur in dry sunny weather. Litter pickup should occur prior to mowing in all areas. If required, cut grass

shall be raked and removed. Litter pickup and raking and removal of grass shall be incidental to the work.

Mowing equipment shall be approved by the Engineer prior to work.

Over-Seeding

Areas of bare ground greater than 2-3 feet in diameter shall be over-seeded with the specified mix during the appropriate season for seeding. Where required for overseeding mowing shall be as close to the soil as possible. Soil that is compacted shall be raked or otherwise roughened prior to over-seeding.

Over-seeding rates and methods shall those specified above under Materials and Methods. Following over-seeding, soil shall be lightly tamped to ensure seed to soil contact and areas shall be mulched with straw mulch and watered with a fine mist to moisten soil to a depth of at least 2 inches.

Over-seeding, mulch, watering, and all work for over-seeding shall be incidental.

Determining Satisfactory Grass Establishment

A well-established stand of the specified seeded species as determined by the Engineer and the MassDOT Landscape Architect will be required for Final Acceptance. The expectation is that an acceptable number and variety of the desired permanent seeded species (not the cover crop) will be visible. Generally:

- A minimum of 75% coverage by the specified permanent seeded species after one growing season. Of that percentage, generally, depending on the mix species:
    - At least 3 types of the permanent seeded grass species shall be visible.
    - At least 3 species of wildflowers shall be visible.
- There will be no significant gaps or bare soil (generally 2-3 feet in diameter or greater).
- There will be no more than 25% coverage by weed species.
- All soil shall be stabilized and there shall be no channeling or erosion.
- There will be no invasive or aggressive species within the stand at the time of acceptance.
- There shall be no evidence of seed from non-native mixes (i.e., clover) due to failure to clean the hydroseeding tank or using incorrect mix.

Invasive and aggressive weeds (such as mugwort, ragweed, knapweed, and chicory) must be cut or treated prior to going to seed for Interim Acceptance. Herbicide treatment must be coordinated with MassDOT.

A warm-season grass mix with perennials will not have uniform growth. A uniform stand of grass may indicate use of an incorrect mix.

Acceptance of Seeding and Establishment Work

Conditional Acceptance shall be based on proper application of seed as specified herein.

Interim Acceptance of Care. Seeding will be inspected by mid-July to assess germination and Establishment conditions as described above. When necessary for Interim Acceptance, areas shall be mowed prior to weed species producing seed and as specified above under Weed Control. ***Areas requiring weed control that are not mowed prior to weed seed dispersal will not be approved for Interim Acceptance.*** Seeding that shows good germination and is determined by the Engineer and Landscape Architect to not require weed control at time of inspection shall be accepted for Interim Acceptance payment.

Final Acceptance of Establishment shall be given upon satisfactory Establishment as described above.

If the seeded area fails to meet the requirements of Establishment by the end of the growing season, contractor shall propose and implement remediations and site shall be inspected during the following growing season after July 1st. All remediation shall be at the contractor's expense.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Native Seeding and Establishment will be measured for payment by the square yard, complete in place.

Native Seeding and Establishment will be paid at the Contract unit price by the square yard upon Conditional, Interim, and Final Acceptances as described above. This price shall include all submittals, seeding, rolling to ensure seed-to-soil contact, weed control other than mowing, water, over-seeding, labor, materials, equipment, and all incidental costs required to complete the work of establishing a satisfactory stand of grass.

Native seed and cover crop mixes shall be compensated under the respective items.

Site preparation, including raking, tilling, removal of debris and stones, and other work to the prepare site for seeding shall be compensated under loam placement or topsoil rehandled and spread as relevant to the project. If used, Compost Blanket shall be compensated under the respective item.

Mowing for weed control will be incidental to this item.

Schedule of payment shall be as follows:

30% upon Conditional Acceptance

20% upon Interim Acceptance of Care, except this amount will be reduced to zero and final payment will be reduced accordingly when areas requiring weed control are not mowed as specified in the Interim Acceptance criteria.

50% upon Final Acceptance of Establishment

ITEM 765.664 MOWING FOR NATIVE SEED ESTABLISHMENT SQUARE YARD

DESCRIPTION

Item 765.664 Mowing for Native Seed Establishment shall be used solely for the purpose of weed management for upland native seed establishment, only when required by the Landscape Architect and the Engineer, and only during the period prior to weed seed dispersal as specified herein unless otherwise directed.

METHODS

Mowing shall be completed after weeds have sprouted and show leaf and bud growth, but prior to setting seed, generally between July 7th and August 1st, unless directed otherwise by the MassDOT Landscape Architect and the Engineer.

Mowing height shall be as needed for weed control, generally to a height of 8 inches and not below 4 inches, unless directed otherwise. Mowing shall be with a brush hog mower or string trimmer other approved equipment. Conventional lawn mowers which cannot achieve the appropriate cut shall not be used.

Contractor shall give 48-hour notice prior to mowing work. Mowing shall not occur when ground or grasses are wet. Litter pickup should occur prior to mowing in all areas. If required, cut grass shall be raked and removed. Litter pickup and raking and removal of grass shall be incidental to the work.

Mowing equipment shall be approved by the Engineer prior to work.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Mowing for Native Seed Establishment will be measured for payment per Square Yard of area mowed complete in place.

Mowing for Native Seed Establishment will be paid at the contract unit price per Square Yard of area mowed and upon completion during the approved period for mowing as described under Methods. Payment shall include all labor, materials, equipment, traffic controls, and all incidental work required for satisfactory completion of mowing.

ITEM 767.121 SEDIMENT CONTROL BARRIER FOOT
REV. 2022.02.01 (REV. DATE TO BE REMOVED BY MASSDOT CONTRACTS)

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.

Compost Filter Tube

Compost material inside the filter tube shall meet M1.06.0, except for the following: no peat, manure or bio-solids shall be used; no kiln-dried wood or construction debris shall be allowed; material shall pass through a 2-inch sieve; and the C:N ratio shall be disregarded.

Outer tube fabric shall be made of 100% biodegradable materials (i.e., cotton, hemp or jute) and shall have a knitted mesh with openings that allow for sufficient water flow and effective sediment capture.

Tubes shall be tamped, but not trenched, to ensure good contact with soil. When reinforcement is necessary, tubes shall be stacked as shown on the detail plans.

Straw Bales

Straw bales shall be used if shown on the plans or when specified by Orders of Condition or other permit requirements.

Bales should be placed in a single row, lengthwise on the contour, with ends of adjacent bales tightly abutting one another. All bales should be either wire-bound or string-tied. Straw bales should be installed so that bindings are oriented around the sides (rather than along the tops and bottoms) of the bales in order to prevent deterioration of the bindings.

The barrier should be entrenched and backfilled. A trench should be excavated the width of a bale and the length of the proposed barrier to a minimum depth of 4 inches. The trench must be deep enough to remove all grass and other material which might allow underflow. After the bales are staked and chinked (filled by wedging), the excavated soil should be backfilled against the barrier. Backfill soil should conform to the ground level on the downhill side and should be built up to 4 inches against the uphill side of the barrier.

Each bale should be securely anchored by at least 2 stakes or re-bars driven through the bale. The first stake in each bale should be driven toward the previously laid bale to force the bales together. Stakes or re-bars should be driven deep enough into the ground to securely anchor the bales. For safety reasons, stakes should not extend above the bales but should be driven in flush with the top of the bale.

The gaps between the bales should be chinked (filled by wedging) with straw to prevent water from escaping between the bales. Loose straw scattered over the area immediately uphill from a straw bale barrier tends to increase barrier efficiency. Wedging must be done carefully in order not to separate the bales.

When used in a swale, the barrier should be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale to assure that sediment-laden

runoff will flow either through or over the barrier but not around it.

Sedimentation Fence
Materials and Installation shall be per 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.

For naturalized areas, biodegradable, natural fabric and material may be left in place to decompose on-site. In urban, residential, or other locations where aesthetics is a concern, the following shall apply:

- Compost filter tube fabric shall be cut and removed, and compost shall be raked to blend evenly (as would be done with a soil amendment or mulch). No more than a 2-inch depth shall be left on soil substrate.
- Straw bales shall be removed and disposed off-site by the Contractor. Areas of trenching shall be raked smooth and disturbed soils stabilized with a seed mix matching adjacent seeding or existing grasses (i.e., lawn or native grass mix).
- Sedimentation fence, stakes, and other debris shall be removed and disposed off-site. Site shall be restored to a neat and clean condition.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Item 767.121 will be measured and paid for at the contract unit price per foot of sediment control barrier which price shall include all labor, equipment, materials, maintenance, dismantling, removal, restoration of soil, and all incidental costs required to complete the work.
Additional barrier, such as double or triple stacking of compost filter tubes, will be paid for per foot of tube installed.

Barriers that have been driven over or otherwise damage by construction activities shall be repaired or replaced as directed by the Engineer at the Contractors expense.

ITEM 984.1 **NATURAL STREAMBED RESTORATION MATERIAL** **CUBIC YARD**

DESCRIPTION

This work shall consist of restoring the river bed where disturbance takes place in the project area. Streambed restoration will take place at the bridge where replacement is planned, in the necessary upstream and downstream structure approaches, along proposed retaining walls, and at proposed equipment access areas – all within the limits of work. Work will primarily include removing, stockpiling, and replacing river bed material. The streambed restoration shall replicate the existing natural channel bed outside the work area in terms of material, roughness, shape, profile, and appearance. The ultimate product will, to the extent possible, replicate the function and appearance of the natural stream channel.

The Contractor shall coordinate with his/her sub-contractors to ensure all required equipment is available on-site to complete the work in this manner. The streambed restoration is required to comply with environmental permits issued for the project. It is required that members of the Contractor team working on streambed restoration must have experience in relevant streambed and resource area reconstruction.

MassDOT Environmental Services will provide a Fluvial Geomorphologist (Geomorphologist) to provide review of the final design and on-site assistance during streambed restoration construction to ensure the restoration is constructed as required by these Special Provisions and in accordance with permit requirements.

At least 30 days prior to the commencement of construction, the Contractor shall coordinate with David Paulson (MassDOT Wildlife Unit Supervisor, (508) 389-6366 / david.j.paulson@state.ma.us) to set up an initial (virtual or inperson) meeting with MassDOT's Geomorphologist, Contractor, and Engineer. At this meeting, the Geomorphologist will provide an overview of the restoration work. The Contractor should be prepared to discuss the anticipated means, methods, and schedule.

Process Approval:

In lieu of a mockup, the Contractor shall schedule an additional onsite meeting to discuss the streambed restoration with the Geomorphologist and respective parties from MassDOT. The Geomorphologist shall be onsite during initial streambed restoration. The Contractor shall provide the Geomorphologist adequate access to observe, direct, and inspect the channel restoration work throughout the duration of the removal, stockpile, and reinstallation of the existing streambed material.

Material

The top 1.5 feet of streambed material excavated from the existing streambed shall be removed and stockpiled to facilitiate reinstallation and replication of the natural streambed. The excavated streambed material below the top 2 feet shall be stockpiled and reused to fill the voids in the proposed riprap placed below the top streambed restoration layer.

In the event that the excavated material is not suitable or there is not enough available suitable material, additional streambed restoration material shall be locally sourced that matches the composition of the existing native river bed in the upstrean riffle (Figure A).

Approximate Stream Bed Surface Material Size Distribution

Particle*	**Amount (%)**
Boulder	20
Cobble	50
Gravel	20
Sand	10
Silt/Clay	0

The streambed material shall be approved by the Resident Engineer and Geomorphologist prior to use.

Related Items

Crushed Stone. Shall conform to the requirements of Item 156.2 Crushed Stone for Slope Treatment and shall be paid for under that item.

Riprap Stone shall conform to the requirements of Item 983.1 Riprap and shall be paid for under that item.

Construction

The streambed material shall be reinstalled over riprap (MassDOT Item 983.1), as depicted on the plans, to an average thickness of 12 inches, with variations in thickness as necessary to replicate existing channel conditions. The initial placement of streambed material shall fill / choke the voids in the underlying riprap. Fill voids by by shaking stone with the teeth of an excavator bucket, hand tamping with metal tamping rods, and by spraying water to settle fines between large stones. Plate compactors shall not be used. The purpose of filling the voids is to prevent subsurface flow where surface water disappears into large voids between the stone fill below the channel bed surface during low flow conditions. The final streambed shape and appearance shall be finalized in the field as directed by the Geomorphologist.

Reinstallation of the stockpiled streambed material shall be placed on top of the riprap to restore streambed habitat and fish passage. The streambed materials shall be installed during normal low water conditions behind cofferdams in accordance with the environmental permits.

Completion

Once all material has been placed in the stream channel and approved by the Geomorphologist and Resident Engineer for each structure, the Contractor shall remove the cofferdams in such a way as to slowly wet the stream to minimize the initial sediment pulse. Every attempt shall be made to minimize the downstream movement of sediment.

The final streambed shall maintain the general configuration of the existing streambed bedform and there shall be minimal to no subsurface flow upon final inspection by the Resident Engineer and Geomorphologist. The project must be passable by fish and other aquatic organisms following construction.

The streambed restoration to be measured for payment will be the complete and accepted work for restoration of the streambed within the limits shown on the Plans as approved by the Resident Engineer and Geomorphologist.

BASIS OF PAYMENT

The accepted streambed restoration will be measured and paid for on a cubic yard basis of streambed material installed in place. Payment will be full compensation for excavating, stockpiling, transporting, and placing the material specified and for furnishing all labor, tools, equipment, testing, and incidentals necessary to complete the work.

The Geomorphologist will be provided by MassDOT at no cost to the Contractor.

FIGURES



Figure A: Cobble streambed material upstream of bridge

ITEM 984.2 BOULDER BENDWAY WEIRS CUBIC YARD

DESCRIPTION

This work shall consist of placement of large cobbles and boulders to create stream diversion weirs in the restored river bed upstream of the proposed bridge. Stone weirs will be installed within the limits of work. Work will primarily include removing, stockpiling, and replacing existing cobbles and boulders in the stream to construct the weirs. The stone weir construction shall be embedded a minimum of 5 feet into the existing channel bank and shall be constructed in conformance with the details shown in the plans.

The Contractor shall coordinate with his/her sub-contractors to ensure all required equipment is available on-site to complete the work in this manner. The boulder weirs are required to comply with environmental permits and hydraulic design issued for the project. It is required that members of the Contractor team working on the boulder weir installation have experience in streambed and resource area reconstruction.

MassDOT Environmental Services will provide a Fluvial Geomorphologist (Geomorphologist) to provide review of the final design and on-site assistance during boulder weir construction to ensure the restoration is constructed as required by these Special Provisions and in accordance with permit requirements.

At least 30 days prior to the commencement of construction, the Contractor shall coordinate with David Paulson (MassDOT Wildlife Unit Supervisor, (508) 389-6366 / david.j.paulson@state.ma.us) to set up an initial (virtual or inperson) meeting with MassDOT's Geomorphologist, Contractor, and Resident Engineer. At this meeting, the Geomorphologist will provide an overview of the restoration work. The Contractor should be prepared to discuss the anticipated means, methods, and schedule.

Process Approval:

In lieu of a mockup, the Contractor shall schedule an additional onsite meeting to discuss the boulder weirs with the Geomorphologist and respective parties from MassDOT. The Geomorphologist shall be onsite during initial installation. The Contractor shall provide the Geomorphologist adequate access to observe, direct, and inspect the boulder weir installation work throughout the duration of the removal, stockpile, and reinstallation of existing streambed materials.

Material

Cobbles and boulders for construction of the upper course of the weirs shall be sourced or salvaged from within the channel and adjacent floodplain areas during construction where possible. In the event that the excavated material is not suitable or there is not enough available suitable material, additional stone material shall be locally sourced that consists of weathered, naturally formed, boulders and cobbles that match the composition of the existing native river bed.

Cobbles and boulders for construction of the lower courses of foundation stone of the weirs shall be angular boulders or broken ledge salvaged from within the limits of work and adjacent flood plain areas during construction where possible. In the event that the existing material is not suitable, or there is not enough material, riprap shall be used for lower courses of foundation stone.

The boulder weir materials shall be approved by the Resident Engineer and Geomorphologist prior to use.

Related Items

Crushed Stone. Shall conform to the requirements of Item 156.2 Crushed Stone for Slope Treatment and shall be paid for under that item.

Riprap Stone shall conform to the requirements of Item 983.1 Riprap and shall be paid for under that item.

Construction

The boulder weirs shall be installed as depicted on the plans, and extended into the channel bank a minimum of 5 feet, with variations as necessary to replicate existing stream bank. The final streambed shape and appearance shall be finalized in the field as directed by the Geomorphologist.

Reinstallation of the stockpiled boulder material shall be placed as shown on the plans to restore streambed habitat and fish passage. The streambed materials shall be installed during normal low water conditions behind cofferdams in accordance with the environmental permits.

Completion

Once all material has been placed in the stream bank and approved by the Geomorphologist and Resident Engineer for each structure, the Contractor shall remove the control of water in such a way as to slowly wet the stream to minimize the initial sediment pulse. Every attempt shall be made to minimize the downstream movement of sediment.

The final stream bank shall maintain the general configuration of the existing bank and there shall be minimal to no subsurface flow upon final inspection by the Resident Engineer and Geomorphologist. The project must be passable by fish and other aquatic organisms following construction.

The boulder bendway weirs to be measured for payment will be the complete and accepted work of constructed weirs within the limits shown on the Plans as approved by the Resident Engineer and Geomorphologist.

BASIS OF PAYMENT

The accepted boulder weirs will be measured and paid for on a cubic yard basis of stockpiled existing boulders and cobbles installed in place. Payment will be full compensation for excavating, stockpiling, transporting, and placing the material specified and for furnishing all labor, tools, equipment, testing, and incidentals necessary to complete the work.

The Geomorphologist will be provided by MassDOT at no cost to the Contractor.

ITEM 991.1 CONTROL OF WATER - STRUCTURE NO. L-05-004 LS

The work to be done under this item shall conform to the relevant provisions of Sections 140 and 950 of the Standard Specifications and the following:

The work shall include the furnishing, installation, operation, maintenance, and removal of a dewatering system and sedimentation treatment basins required for the construction of the proposed bridge and retaining wall. The dewatering system shall be capable of both preventing flow through the constructed works and the lowering of the water table to an elevation below the bottom of the proposed footings, as shown on the plans.

In addition to the support of excavation/cofferdam, sandbags or other type of diversion system shall be placed to prevent water flow into the construction area for flows up to the 2-year storm event water surface elevation shown on the Plans. The Contractor shall adjust the height of the water control dam structure if needed and use supplemental pumping in the event of an extreme rain event or unusually high flows. The Contractor shall comply with all conditions included with the MassDEP Water Quality Certification, attached hereto (see Appendices).

The use of earthen berms in the stream is prohibited.

All dewatering and related earthwork shall be conducted in such a manner as to prevent siltation or contamination of the waterway. The pumping discharge shall not be allowed to enter directly into the waterway. The water from the work areas shall be pumped to a settling basin. This basin shall be constructed so as to allow the pumped water to pass through the basin with sediments settling out before out-letting. At a minimum, the basin shall be constructed of an earthen or stone berm lined with geotextile fabric and surrounded by staked straw bales or compost filter tubes. The basin shall meet or exceed the following criteria:

A. The size and location of the basins shall be determined based on the size of the contractor's pump and the anticipated flows for the construction of the bridge and wingwalls in the dry.

B. The outlet/weir of the dewatering basins shall not cause erosion of the surrounding area. An approved method of controlling erosion, such as an erosion control blanket, stone, etc., shall be used at the outlet of the basin.

C. The Contractor shall maintain the dewatering operations in working condition, including periodic removal of accumulated sediment within the basins to permit its proper function. The water pump and hoses for dewatering shall be in good working condition and of adequate power and size for the operation.

D. The contractor shall inspect straw bales/compost filter tubes that surround the outlets daily and shall immediately replace any that are damaged.

E. The proposed location and design of the settling basins shall be subject to the approval of the Engineer and MassDEP prior to construction.

Plans and calculations (if applicable) for all sandbagging, settling basins, pumps and other water control measures shall be developed by the Contractor for this item. These plans and calculations shall be prepared and stamped by a Professional Engineer registered in Massachusetts and shall be submitted for the approval of the Engineer prior to the start of construction. Furthermore, this submission shall be submitted to MassDEP as required for review and approval prior to construction.

The Contractor shall be responsible for the removal and proper disposal of all sediments and temporary structures or devices to an off-site location. At the completion of the work the contractor shall remove the sandbags from the abutments and all disturbed areas shall be restored.

METHOD OF MEASUREMENT AND BASIS OF PAYMENT

Payment for the work to be done under this item shall be at the contract lump sum bid price for Item 991.1 Control of Water, which price shall include all labor, materials, equipment, sandbags sedimentation basins, filter bags, pumping, removal of temporary water control devices, restoration of all disturbed areas and all incidental costs required to complete the work.

ATTACHMENT 16

Sediment Sampling Results & Due Diligence

Gill Engineering Associates, Inc.
63 Kendrick Street
Needham, MA 02494
www.gill-eng.com
781-355-7100

MEMORANDUM

To: MassDOT Environmental
Attn: Courtney Walker, Michael Joa

From: James Turnbull, P.E.

CC: Keith Nelson, P.E.

Date: 1/8/2025

Re: 607597 – Lee Meadow Street over Beartown Brook Bridge Replacement - Due Diligence Site Review for Sediment Sampling Plan

---

The site for the project 607597 – Meadow Street L-05-004 over Beartown Brook Bridge Replacement has been reviewed for potential Activity and Use Limitations (AUL's) and supporting information is attached. The proposed bridge replacement will include replacing the substructure of the bridge, dredging, and restoring the stream bed of Beartown Brook. Excavated material will be stockpiled on site and partially reused to complete the stream restoration work. Therefore, a due diligence review of AUL's for nearby sites in the watershed was performed. Following our review, the existing consists of granular non-fine material and the site does not appear to be affected by AUL's in the water shed.

Sediment sampling results are provided in the attached gradation analysis, taken from stream samples at each substructure element. The sediment samples showed consistent results of the streambed material classified as AASHTO A-1-b (1) consisting of mostly stone fragments, gravel, and sand. Samples 1 and 2 showed that there are no more than 10% fines passing the #200 sieve and the sediment consisted of mainly hard, angular aggregate and sand. These results show that the streambed material may be suitable for reuse because of the granular consistency and low percentage of fines present. Soil chemical composition testing will be completed by the Contractor's Licensed Site Professional prior to any reuse or disposal.

Activity and Use Limitation sites (AUL's) were reviewed for potential limited sites in the watershed of the proposed project. The attached map from Mass Mapper shows recent data for AUL sites in the Beartown Brook watershed. There does not appear to be any Activity and Use Limited sites within the watershed for Beartown Brook.

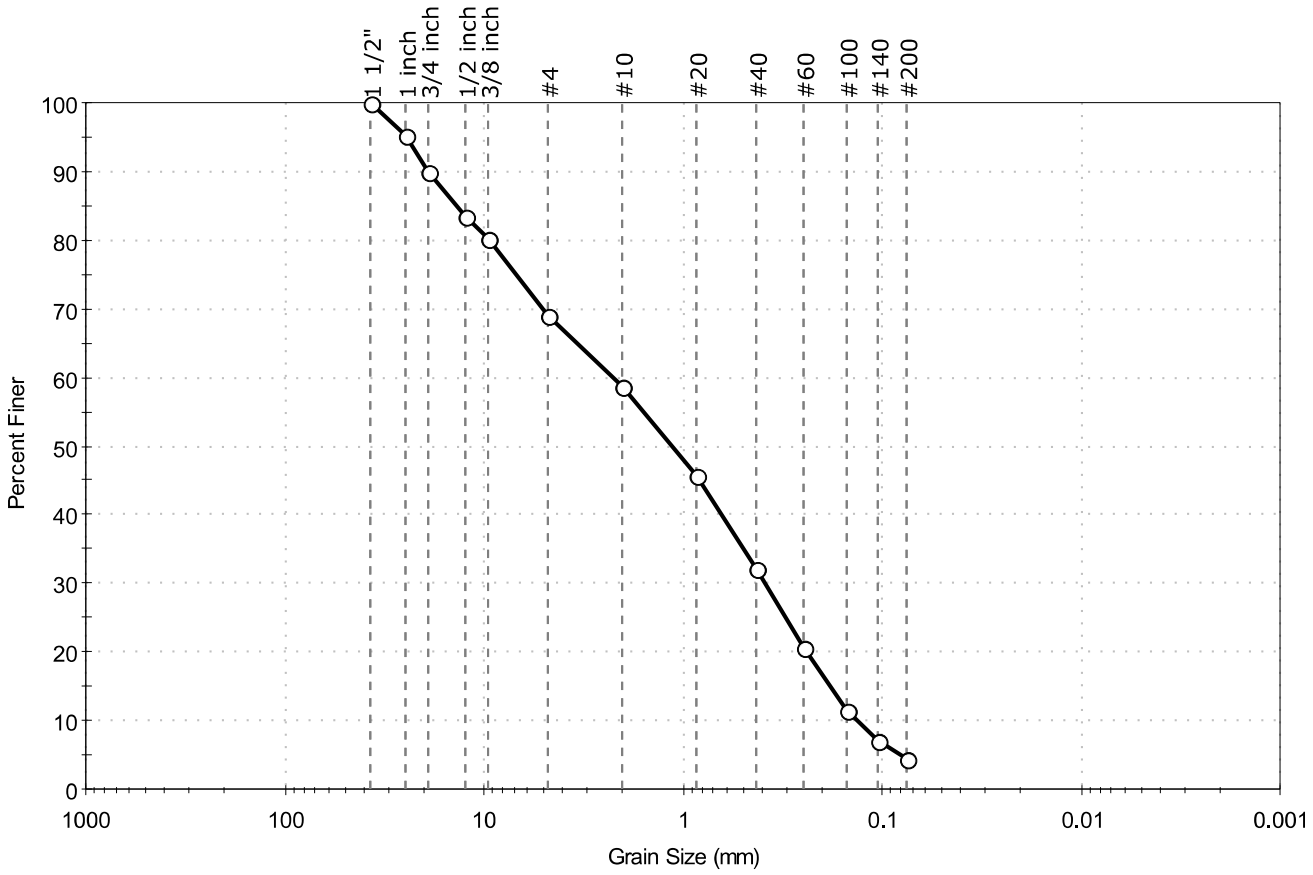
Our research also referenced data on MassDEP's website for potential release sites in the project area. DEP lists 190 Meadow Street (Oak N' Spruce Resort) as a site with an Immediate Response Action (IRA) that was filed for removal of a fuel tank in December of 2005. A Response Action Outcome (RAO) Statement was submitted to DEP on December 6, 2006. The RAO states that a Method 3 Stage 1 ecological screening was completed for the site, identifying Beartown Brook as a potential ecological receptor. The RAO concludes that the contaminated soils from the petroleum release are not accessible to nearby ecological receptors, and the exposure factor for receptors is negligible at this site, therefore

an Active Use Limitation (AUL) was not required. The RAO states, based on this assessment, that the site does not likely represent a risk of harm to the environment or groundwater. Therefore, remediation at this site constitutes as a No Affect to the water shed for containment.

In summary, the proposed bridge site does not appear to be affected by any adjacent AUL's in the watershed or be affected by any adjacent DEP listed sites with potential releases. The sediment sampling results show that the existing stream sediment is mainly gravel and sandy material that would not be susceptible to contamination. The watershed for Beartown Brook consists of mainly conservation land and there are no AUL's active within the watershed. Potential release sites in the watershed have been reported, remediated, and approved by DEP. The sediment sampling and due diligence research shows that the existing streambed material may be suitable for reuse pending further soil analysis by the Contractor and their Licensed Site Professional.

Client:	Gill Engineering Associates, Inc.				
Project:	607597 Mass DOT Lee	Proposal No: 607597 - 132402			
Location:	Lee, MA			Project No:	GTX-319133
Boring ID:	Sample 1	Sample Type:	Bucket	Tested By:	ajl
Sample ID:	Upstream	Test Date:	05/28/24	Checked By:	ank
Depth :	1-3'	Test Id:	770469		
Test Comment:	---				
Visual Description:	Moist, dark grayish brown sand with gravel				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	31.0	64.4	4.6

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2"	37.50	100		
1 inch	25.00	95		
3/4 inch	19.00	90		
1/2 inch	12.50	84		
3/8 inch	9.50	80		
#4	4.75	69		
#10	2.00	59		
#20	0.85	46		
#40	0.42	32		
#60	0.25	21		
#100	0.15	11		
#140	0.11	7		
#200	0.075	4.6		

Coefficients

D_{85} = 13.7134 mm	D_{30} = 0.3830 mm
D_{60} = 2.2375 mm	D_{15} = 0.1825 mm
D_{50} = 1.1344 mm	D_{10} = 0.1337 mm
C_u = 16.735	C_c = 0.490

Classification

ASTM — Poorly graded SAND with Gravel (SP)

AASHTO — Stone Fragments, Gravel and Sand (A-1-b (1))

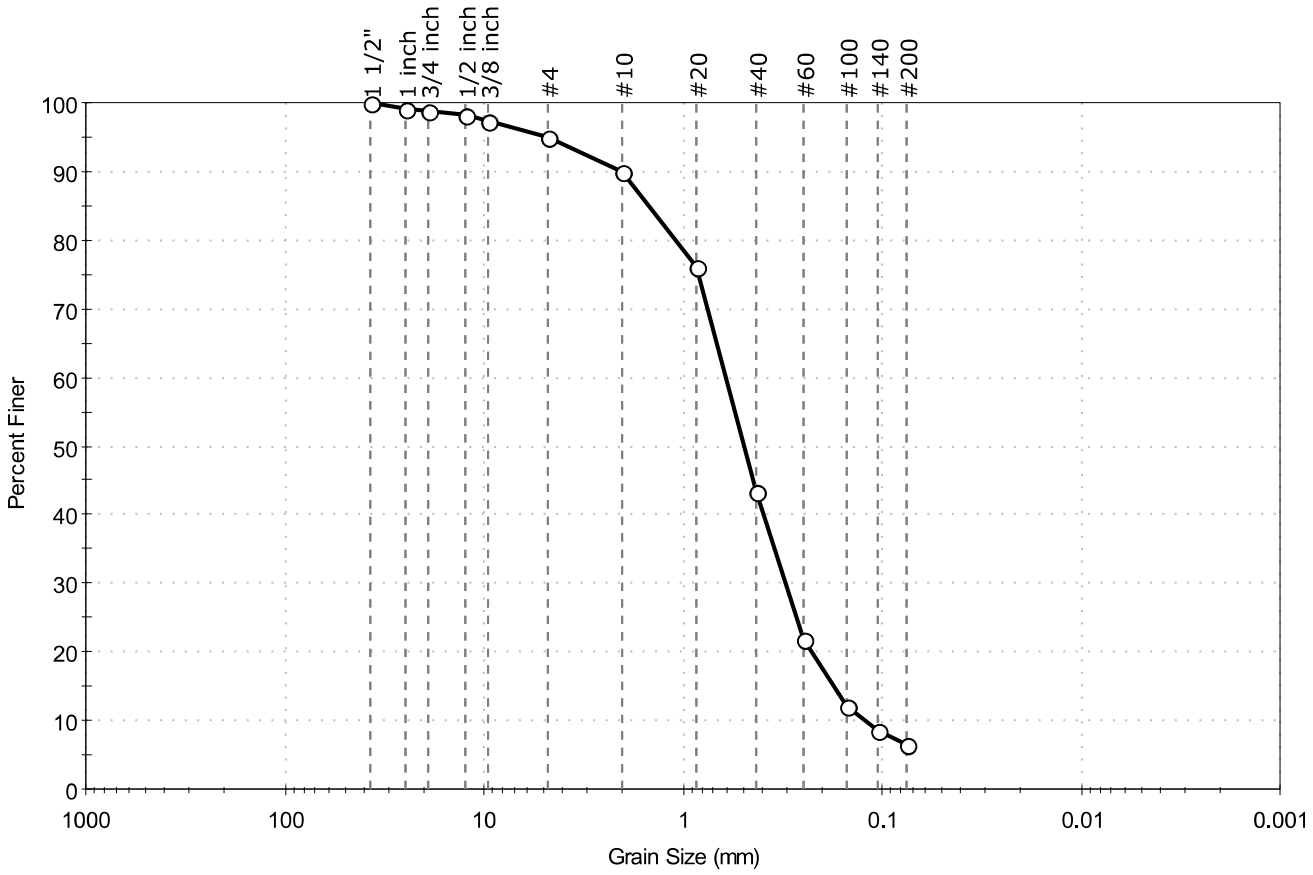
Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Client:	Gill Engineering Associates, Inc.				
Project:	607597 Mass DOT Lee	Proposal No: 607597 - 132402			
Location:	Lee, MA			Project No:	GTX-319133
Boring ID:	Sample 2	Sample Type:	Bucket	Tested By:	ajl
Sample ID:	Downstream	Test Date:	05/28/24	Checked By:	ank
Depth :	1-3'	Test Id:	770470		
Test Comment:	---				
Visual Description:	Moist, dark grayish brown sand with silt				
Sample Comment:	---				

Particle Size Analysis - ASTM D6913



% Cobble	% Gravel	% Sand	% Silt & Clay Size
—	5.0	88.5	6.5

Sieve Name	Sieve Size, mm	Percent Finer	Spec. Percent	Complies
1 1/2"	37.50	100		
1 inch	25.00	99		
3/4 inch	19.00	99		
1/2 inch	12.50	98		
3/8 inch	9.50	97		
#4	4.75	95		
#10	2.00	90		
#20	0.85	76		
#40	0.42	43		
#60	0.25	22		
#100	0.15	12		
#140	0.11	9		
#200	0.075	6.5		

Coefficients

D_{85} = 1.4681 mm	D_{30} = 0.3054 mm
D_{60} = 0.6033 mm	D_{15} = 0.1750 mm
D_{50} = 0.4881 mm	D_{10} = 0.1226 mm
C_u = 4.921	C_c = 1.261

Classification

ASTM N/A

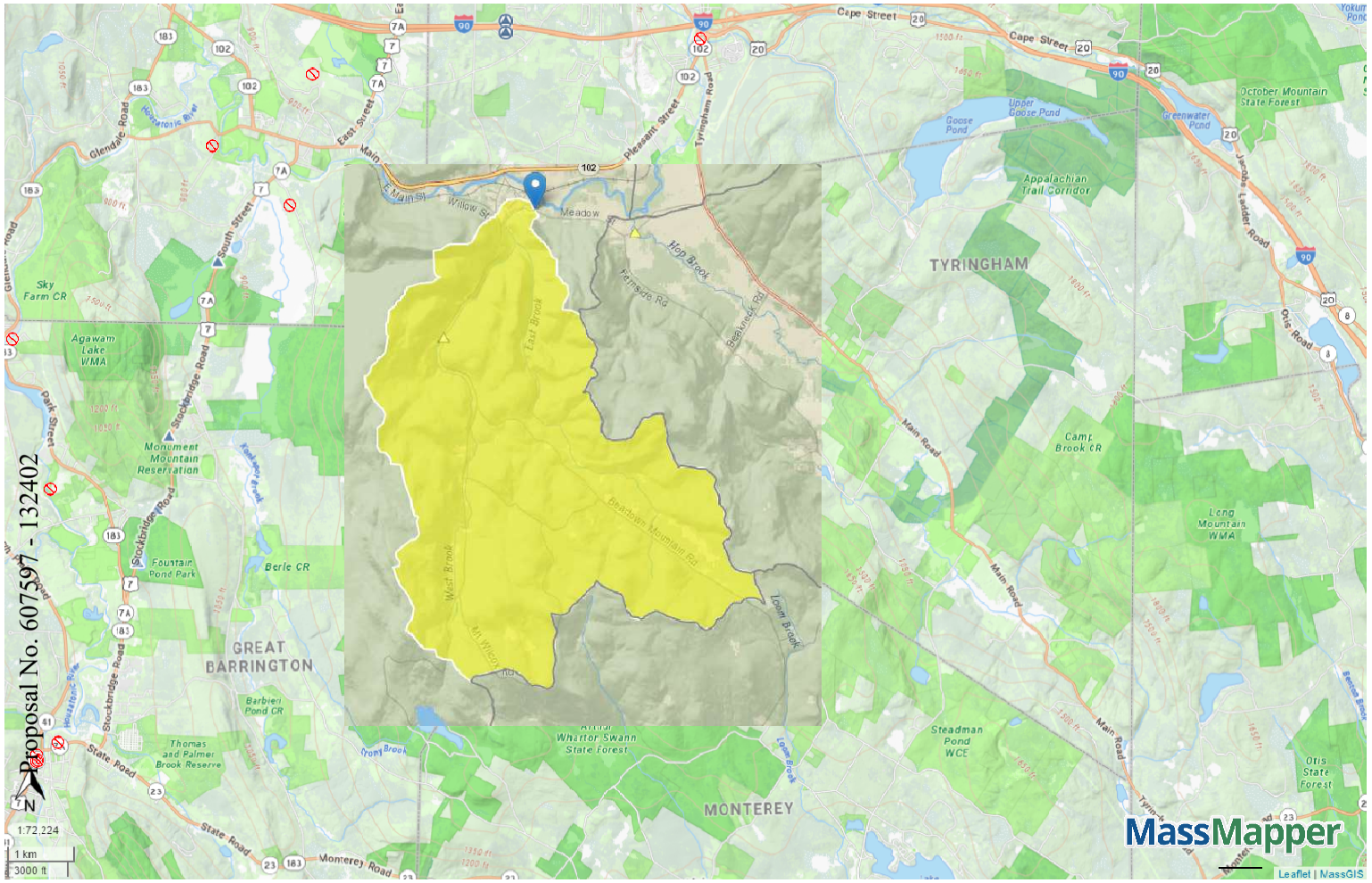
AASHTO Stone Fragments, Gravel and Sand (A-1-b (1))

Sample/Test Description

Sand/Gravel Particle Shape : ANGULAR

Sand/Gravel Hardness : HARD

Activity and Limited Use (AUL)



AUL Labels

AULs

AULs are all outside of the limits of the watershed that discharges to Powder Mill Brook (aka Beartown Brook) at Meadow Street.

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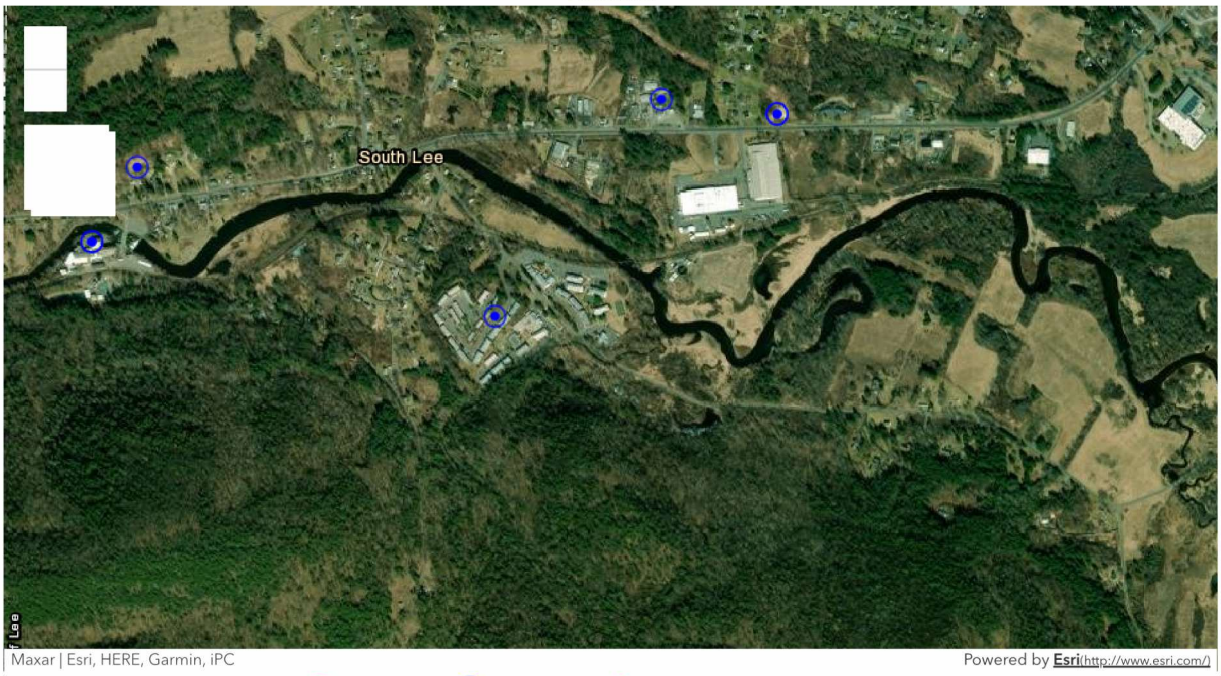
Proposal No. 607597 - 132402

Energy & Environmental Affairs
Data Portal

Waste Site & Reportable Releases Results

HIDE MAP

Locations



Open Sites Closed Sites Closed Sites with Use Limitation

Search Criteria Site Type: All Sites, Town Name: LEE, Zip Code: 01260

TN	CITY/TOWN	RELEAS...	Z...	SITE NAME L...	RE...	NOTIFI...	REGUL...	RE...	PH...	RA...	CH...	F
-0019092 (...	LEE	40 WILLO...	0...	ONYX SPECIA...	TW...	05/21/...	RAO	09...		A2	Ha...	F
-0016009 (...	LEE	190 MEA...	0...	SILVERLEAF R...	72 ...	11/29/2...	RAO	12/...		A2	Oil	F
-0014675 (/...	LEE	1140 PLE...	0...	LIPTON MART	TW...	12/11/2...	RAO	02...		A1	Oil	F
-0011170 (/p...	LEE	RTE 102	0...	AGWAY ENER...	TW...	12/12/1...	RAO	04...		A1	Oil	F
-0011050 (/...	LEE	40 WILLO...	0...	MEAD SPECIA...	TW...	09/21/1...	RAO	11/1...		A2	Oil	F
-0010671 (/...	LEE	1600 PLE...	0...	CAHALAN RE...	TW...	12/24/1...	RAO	10/...		A2	Oil	F
-0010188 (/...	LEE	RT 102	0...	LAUREL MILL	120...	02/01/...	RAO	08...		B1	Ha...	F

Previous() 1() Next()

200/Page

1 - 7 of 7 items

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PREVIOUS

Proposal No. 607597 - 132402

EXPORT TO EXCEL

RTN	City/Town	Release Address	Zip Code	Site Name Location Aid	Reporting Category	Notification Date	Regulatory Status	Regulatory Date	Phase	RAO Class	Chemical Type
1-0019092	LEE	40 WILLOW STREET	01260	ONYX SPECIALTY PAPERS INC.	TWO HR	05/21/2013	RAO	09/18/2013	A2	Hazardous Material	
1-0016009	LEE	190 MEADOW ST	01260	SILVERLEAF RESORT	72 HR	11/29/2005	RAO	12/06/2006	A2	Oil	
1-0014675	LEE	1140 PLEASANT ST	01260	LIPTON MART	TWO HR	12/11/2002	RAO	02/07/2003	A1	Oil	
1-0011170	LEE	RTE 102	01260	AGWAY ENERGY PRODUCTS	TWO HR	12/12/1995	RAO	04/09/1996	A1	Oil	
1-0011050	LEE	40 WILLOW ST	01260	MEAD SPECIALTY PAPER - WILLOW MILL	TWO HR	09/21/1995	RAO	11/14/1995	A2	Oil	
1-0010671	LEE	1600 PLEASANT ST	01260	CAHALAN RESIDENCE	TWO HR	12/24/1994	RAO	10/25/1995	A2	Oil	
1-0010188	LEE	RT 102	01260	LAUREL MILL	120 DY	02/01/1994	RAO	08/29/1996	B1	Hazardous Material	

Proposal No. 607597 - 132402

Energy & Environmental Affairs Data Portal

Waste Site & Reportable Releases Information

Related links

Supporting Documents(/portal/dep/wastesite/viewer/1-0016009)
LSP Lookup(https://eeaonline.eea.state.ma.us/Portal/#!/search/lsp)

Site Number
1-0016009

Category
72 HR

Site Name
SILVERLEAF RESORT

AUL Info

Regulatory Status
RAO

Address
190 MEADOW ST

Regulatory Date
12/06/2006

Town
LEE

Phase

Zip Code
01260

RAO Class
A2

Official Notification Date
11/29/2005

Location Type
COMMERCIAL

Initial Status Date
11/29/2006

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Proposal No. 607597 - 132402

Source

UST

PIP Received

Response Action Information

RESPONSE ACTION TYPE	STATUS	SUBMITTAL DATE	RAO CLASS	ACTIVITY & USE LIMITATION DATE
RAO Response Action Outcome - RAO	TSAUD Level I - Technical Screen Audit	12/28/2006	A2	
IRA Immediate Response Action	CSRCVD Completion Statement Received	12/06/2006		
RAO Response Action Outcome - RAO	RAORCD RAO Statement Received	12/06/2006		
IRA Immediate Response Action	STRCVD Status or Interim Report Received	10/19/2006		
NOR Notice of Responsibility	ALSENT Anniversary Letter Sent	10/10/2006		
IRA Immediate Response Action	STRCVD Status or Interim Report Received	04/03/2006		
IRA Immediate Response Action	TSAUD Level I - Technical Screen Audit	04/03/2006		
RLFA RLFA - Site Visit or Compliance Inspection	FOLOFF Follow-up Office Response	02/03/2006		
IRA Immediate Response Action	TSAUD Level I - Technical Screen Audit	02/03/2006		
RNF Release Notification Form Received	REPORT Reportable Release or Threat of Release	02/01/2006		
IRA Immediate Response Action	PLANWR Written Plan Received	02/01/2006		
RLFA RLFA - Site Visit or Compliance Inspection	FOLOFF Follow-up Office Response	12/06/2005		
IRA Immediate Response Action	APORMD Oral Approval of a Modified Plan	12/06/2005		
RLFA RLFA - Site Visit or Compliance Inspection	FOLOFF Follow-up Office Response	12/05/2005		
RLFA RLFA - Site Visit or Compliance Inspection	FOLOFF Follow-up Office Response	12/01/2005		
IRA Immediate Response Action	APORMD Oral Approval of a Modified Plan	12/01/2005		
NOR Notice of Responsibility	ISSUED Correspondence Issued	12/01/2005		
REL Potential Release or Threat of Release	REPORT Reportable Release or Threat of Release	11/29/2005		
IRA Immediate Response Action	APORAL Oral Approval of Plan or Action	11/29/2005		

Chemicals

CHEMICAL	AMOUNT	UNITS
FUEL OIL #2	325.000	PPM

LSPs

LSP	LSP NUMBER
MACLEAN, ROBERT F	5367(https://eeaonline.eea.state.ma.us/Portal/#!/lsp/5367)

RAO Detail

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CLASS	METHOD	GW CATEGORY	SOIL CATEGORY
A2	3		1

Proposal No: 607597 - 132402

Location



Open Sites Closed Sites Closed Sites with Use Limitation

PREVIOUS

SEARCH AGAIN

ATTACHMENT 17

Stormwater Management Memo for Bridges

Gill Engineering Associates, Inc.
63 Kendrick Street
Needham, MA 02494
www.gill-eng.com
781-355-7100

STORMWATER SUMMARY

This Stormwater Management Memorandum has been prepared to show compliance with the Massachusetts Stormwater Management Standards in accordance with the Massachusetts Water Quality Certification Regulations (314 CMR 9.00) to support the Project's Section 401 Water Quality Certificate Application.

MassDOT proposes to replace the structurally insufficient bridge L-05-004 (059) with a pre-stressed concrete NEXT F Beam bridge supported on integral abutments with a span length of 64 feet, and an out-to-out width of 27 feet 9 inches. The proposed roadway will be slightly adjusted to improve the existing irregular roadway layout at the bridge and the vertical profile will be raised to accommodate the proposed bridge structure while maintaining the existing hydraulic opening and freeboard for the Beartown Brook. In addition to the bridge and roadway approach work, boulder/stone weirs will be placed upstream of the proposed bridge for additional scour mitigation. The dredging impacts are proposed in order to restore the streambed when the bridge is replaced, and to restore the upstream bank as a betterment to the existing condition of the resource area. The proposed work will permanently impact the Waters of the U.S. (WOTUS) associated with Beartown Brook and will temporarily impact a Vegetated Wetlands adjacent to the brook. The proposed impacts and subsequent restoration are intended to meet the Massachusetts Stream Crossing Standards. This project will include Special Provisions for native plantings, invasive plant management, seasonal construction limitations during low flow months, sedimentation controls, and natural streambed and bank restoration. Vegetated Wetlands impacts adjacent to the existing bridge abutment will be restored 1:1 at the same elevation as existing, which will not alter drainage patterns and will mimic the pre-existing conditions. Meadow Street currently utilizes country drainage and stormwater flow to existing depression points along the roadway. The proposed impervious surface is minimal and can be accommodated by the country drainage described herein.

The work proposed is within the jurisdiction of the Massachusetts Department of Environmental Protection, U.S. Army Corps of Engineers, Massachusetts Division of Fisheries and Wildlife, and NHESP. As part of the Joint 401/404 application submission, stormwater mitigation must be addressed. This summary is being submitted to address the project in relation to the ten standards outlined in the MassDEP Stormwater Handbook (the Handbook), last revised February 2008.

The project is being considered a redevelopment as it relates to compliance with the guidelines provided in the Handbook. As such, strict adherence with the Handbook is limited to Standards 1, 8, 9 and 10. A MassDEP Checklist for Stormwater Report is attached hereto.

With regard to Construction Period Pollution Prevention and Long-Term Operation and Maintenance, Standards 8 and 9 respectively, standard construction practices and elements of a typical erosion and sedimentation control plan will mitigate the proposed incremental runoff increase resulting from the project. No new illicit discharges are proposed as part of this project, therefore it will comply with Standard 10 of the Handbook.

PROJECT COMPLIANCE WITH MASSACHUSETTS STORMWATER STANDARDS

1. **No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the commonwealth.**

The proposed project will not result in new untreated discharges. The proposed project will not alter existing drainage patterns. Runoff under proposed conditions will continue to discharge similar to existing by way of country drainage. At low points of the roadway, drainage runoff will be directed to stone drainage channels at the low point of the roadway profile. The stone drainage channels are expected to pretreat and infiltrate stormwater at the low point of the roadway into existing granular soils.

2. **Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04.**

The increase in impervious pavement area is about 2,188 S.F. (see table below). Using an approximate rational method computation for a 10-year precipitation event of 4.5"/24 hours, the change in runoff rate from impervious area is fractional and only represents a potential change of 0.009 cfs from existing to proposed as shown in the table below.

Existing Impervious Area	Proposed Impervious Area	Increase in Impervious Area
8,690 SF = 0.20 acres	10,878 SF = 0.25 acres	2, 188 SF = 0.05 acres
Q = CiA = 0.9 * 0.1875 in/hr * 0.20 acres = 0.033 cfs	Q = CiA = 0.9 * 0.1875 in/hr * 0.25 acres = 0.042 cfs	0.009 cfs increase in flow

The proposed Meadow Street cross section increases impervious paved area only relative to the existing alternating one-way roadway that was installed over the bridge in 2013. The proposed cross-section has been minimized for a two-lane roadway. The increase in impervious pavement area is generally occurring in previously disturbed area and embankment placed to construct Meadow Street. The post-development stormwater system is intended to function as currently constituted and further stormwater management mitigation is not proposed beyond stone drainage channels installed at profile low points. The existing roadway does not have any closed stormwater management systems and drains by country drainage throughout the project. The proposed design improves upon existing by reconstructing roadway cross slopes to properly drain and by managing stormwater at the roadway low points with stone drainage channels. Stormwater is expected to be treated via the constructed stone drainage channels and the existing granular soils provide an opportunity for recharge and water quality treatment.

3. **Loss of annual recharge to groundwater shall be eliminated or minimized through the use of infiltration measures including environmentally sensitive site design, low impact development techniques, stormwater best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.**

This project is a redevelopment project and meets Standard 3 to the maximum extent practicable. This project results in minimal increase of impervious area. There will be no loss of annual recharge to groundwater.

4. **Stormwater management systems shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). This Standard is met when:**

    a. **Suitable practices for source control and pollution prevention are identified in a long- term pollution prevention plan, and thereafter are implemented and maintained;**
    b. **Structural stormwater best management practices are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and**
    c. **Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook.**

Long-term operation and maintenance activities will be performed by the Town of Lee. MassDOT Special Provisions are provided in the contract for Contractor stormwater pollution prevention and sedimentation controls.

Stormwater best management practices considered for this project were deep sump catch basins, pre-treatment basins, stormwater treatment swales, and natural infiltration. Deep-sump catch basins were determined not feasible because there is not an existing closed drainage system on Meadow Street to tie into. Installation of detention ponds with overflow swales would further impact the resource areas immediately adjacent to the project with the grading required to create detention areas. Closed pre-treatment structures are impractical in this location with the maintenance required and the rural nature of the site. Extensive right of way acquisitions would be required for the installation of drainage structures or retention ponds on land adjacent to the site which is part of Beartown State Forest. The project minimized impacts to the adjacent State Park properties to not require Section 4F park acquisitions. Stone drainage swales have been proposed at project low points to pre-treat and reduce runoff velocity compared to existing. Outside of the low-points this project has country drainage on the remainder of the roadway to mimic existing roadway drainage patterns. We are proposing natural infiltration and providing two stone drainage swales at the low points east of the bridge for better runoff management. Soil boring samples and streambed samples all indicate the presence of mostly granular soils suitable for country drainage. The project also proposes to re-establish roadway embankments with suitable native roadside seed mixes, wetland seed mixes, and tree plantings which are an improvement upon existing sand and invasive plant groundcover.

5. **For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable.**

    If through source control and/or pollution prevention all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts

Clean Waters Act, M.G.L. c. 21, §§ 26-53 and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

The project site is not considered a Land Use with Higher Potential Pollutant Loads (LUHPPL) therefore this Standard does apply.

6. **Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area, require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, taking into account site- specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters shall be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A "storm water discharge" as defined in 314 CMR 3.04(2)(a)1 or (b) to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of a public water supply.**

The site is within Coldwater Fisheries Habitat and Stormwater best management were considered for this project by evaluating options for deep sump catch basins, pre-treatment structures, stormwater treatment swales, and natural infiltration. Deep-sump catch basins were determined not feasible since there is no closed drainage system in the area. Pre-treatment structures present maintenance and cost challenges in this location for the municipality of Lee to maintain due to its rural nature. Detention ponds and pretreatment systems would require right of way acquisition from adjacent parkland for drainage easements under section 4F. Stone drainage swales have been proposed at project low points to pre-treat and reduce runoff velocity compared to the existing roadway. Outside of the low-points this project has country drainage on the remainder of the roadway to mimic existing roadway drainage patterns. We are proposing natural infiltration and providing two stone drainage swales at the low points east of the bridge for better runoff management. Soil boring samples and streambed samples all indicate the presence of mostly granular soils suitable for country drainage in filtration. The project also proposes to re-establish roadway embankments with suitable native roadside seed mixes, wetland seed mixes, and tree plantings which are an improvement upon existing sand and invasive plant groundcover.

7. **A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.**

The project is a Redevelopment, full compliance with the guidelines provided in the Handbook is limited to Standards 1, 8, 9, and 10. Stormwater Standards 2, 3, 4, 6, and 7 have been met to the maximum extent practicable within the existing drainage pattern of the roadway and improve upon the existing stormwater runoff conditions. Standard 5 is not applicable to this project.

8. A plan to control construction-related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented.

Sediment controls shall be installed prior to the commencement of any work. Sediment barriers and erosion control are addressed in MassDOT's standard specifications and special provisions included in this project. Further details about construction controls are described in the 401-404 joint permit application.

9. A long-term operation and maintenance plan shall be developed and implemented to ensure that stormwater management systems function as designed.

A long-term operation and maintenance plan is generally maintained by the Town of Lee. Due to limited resources, a written O&M plan does not exist for the Town. The Town's DPW maintains roadways on a typical bi-annual maintenance schedule with Spring and Fall cleanup and right of way maintenance.

10. All illicit discharges to the stormwater management system are prohibited.

There are no new illicit discharges proposed as part of this project. This project complies with pre-treatment requirements via infiltration.

Massachusetts Department of Environmental Protection
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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.

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Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

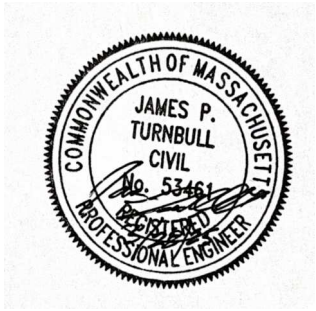
Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature



James P. Turnbull

Digitally signed by James P. Turnbull
DN: C=US, E=jturnbull@gill-eng.com, O=Gill Engineering, OU=Gill Engineering, CN=James P. Turnbull
Date: 2025.03.28 19:26:27-04'00'

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

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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.

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Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☐ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

☐ 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.

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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

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.

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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)

☐ 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.

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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.

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Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☐ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☐ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☐ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☐ Name of the stormwater management system owners;
- ☐ Party responsible for operation and maintenance;
- ☐ Schedule for implementation of routine and non-routine maintenance tasks;
- ☐ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ☐ Estimated operation and maintenance budget; and
- ☐ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

☐ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☒ An Illicit Discharge Compliance Statement is attached;

☐ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

ATTACHMENT 18

Alternative Analysis

MassDEP Wetlands Program: Sample 310 CMR 10.24(10) and 10.53(8) Replacement Stream Crossing Evaluation Worksheet

Evaluation Criteria	Alternative 1: Replace in-kind Single span steel stringer bridge with a concrete deck supported on concrete gravity type abutments with retaining wall 32 ft (width) x 8.2 ft (height)[3]	Alternative 2: Meet General Performance Standards for Bank and LUWW[1] Single span NEXT F beam bridge supported on integral abutments with bendway weirs and a gabion wall 64 ft (width) x 9.5 ft (height)[3]	Alternative 3: Meet minimum applicable Stream Crossing Standards[2] Single span NEXT F beam bridge supported on integral abutments with bendway weirs and a gabion wall 64 ft (width) x 12.5 ft (height)[3]
1) potential for downstream flooding	Roadway overtopping occurs due to undersized hydraulic opening as the bridge constricts the flow at the crossing.	According to hydraulics performed, water surface elevations downstream will decrease from the existing condition. Therefore, an increased opening will affect and reduce downstream flooding.	See Alternative 2 response.
2) upstream and downstream habitat	An in-kind replacement will constrict the natural stream opening which may affect the habitat in crossing the structure.	The larger opening will allow a natural crossing for habitat.	See Alternative 2 response.
3) potential for erosion and head-cutting	As shown in the existing condition, any attempt to match the existing opening may create erosion due to the abrupt change in channel direction through the structure. The hydraulic analysis showed occurrence of pressure flow due to total bridge inundation for storm events as frequent at the 10-yr storm.	The larger opening will reduce the occurrence of pressure flow due to total bridge inundation to the 100-yr storm event. Bendway weirs will also divert the stream flow back toward the center of the channel to aid in minimizing erosion around the crossing.	See Alternative 2 response. A higher profile may avoid pressure flow in extreme flow events, but the overall effect is comparable to Alternative 2.

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Proposal No. 607597 - 132402

A00840 - 205

Evaluation Criteria	**Alternative 1: Replace in-kind** **Single span steel stringer bridge with a concrete deck supported on concrete gravity type abutments with retaining wall** **32 ft (width) x 8.2 ft (height)[3]**	**Alternative 2: Meet General Performance Standards for Bank and LUWW[1]** **Single span NEXT F beam bridge supported on integral abutments with bendway weirs and a gabion wall** **64 ft (width) x 9.5 ft (height)[3]**	**Alternative 3: Meet minimum applicable Stream Crossing Standards[2]** **Single span NEXT F beam bridge supported on integral abutments with bendway weirs and a gabion wall** **64 ft (width) x 12.5 ft (height)[3]**
4) stream stability	An in-kind replacement will constrict the natural stream opening which may cause continued scour within the stream channel and the adjacent banks.	The larger opening in combination with the upstream bendway weirs will reduce the water surface elevations and divert the flow away from the banks and thus reduce the scour potential.	See Alternative 2 response.
5) habitat fragmentation caused by the crossing	There may be habitat fragmentation at low flow conditions due to steam bed scour created during an extreme flow event.	The proposed opening along with streambed restoration will allow continuous movement of aquatic wildlife during low flows.	See Alternative 2 response.
6) amount of stream mileage made accessible	An in-kind structure may create an inaccessible for aquatic wildlife during low flows.	The proposed condition will match the natural stream mileage.	See Alternative 2 response.
7) storm flow conveyance	168.52 square feet for a 10-year event.[3]	281.17 square feet for a 10-year event. Larger opening will reduce the occurrence of road overflow.[3]	See Alternative 2 response.
8) engineering design constraints	An opening that creates scour will affect the stability of the foundation of the proposed structure. In-kind is very undersized.	The proposed opening, gabion wall, bendway weirs, and rip-rap will provide scour protection. The low chord is at the highest feasible elevation.	The proposed opening, gabion wall, bendway weirs, and rip-rap will provide scour protection. The low chord meets Stream Crossing Standards.

Proposal No. 607597 - 132402

A00840 - 206

Evaluation Criteria	**Alternative 1: Replace in-kind** **Single span steel stringer bridge with a concrete deck supported on concrete gravity type abutments with retaining wall** **32 ft (width) x 8.2 ft (height)[3]**	**Alternative 2: Meet General Performance Standards for Bank and LUWW[1]** **Single span NEXT F beam bridge supported on integral abutments with bendway weirs and a gabion wall** **64 ft (width) x 9.5 ft (height)[3]**	**Alternative 3: Meet minimum applicable Stream Crossing Standards[2]** **Single span NEXT F beam bridge supported on integral abutments with bendway weirs and a gabion wall** **64 ft (width) x 12.5 ft (height)[3]**
9) hydrologic constraints	An in-kind opening will not be able to withstand high flow events due to the constricted opening.	The proposed opening may restrict flow during high flow events. A Design Waiver has been approved to not meet the low chord elevation requirement.	The proposed opening will be able to convey high flow events.
10) impacts to wetlands that would occur	Minimal impact	Minimal impact	Requires work within stream to meet all Stream Crossing Standards. The increased height will have adverse effects to the adjacent wetland areas and other resource areas.
11) potential to affect property and infrastructure	Infrastructure may be impacted with erosion and scour.	Minimal impact.	See Alternative 2 response.
12) cost of replacement	Low cost $	Medium cost $$	High cost $$$

[1] Bank Standards at 310 CMR 10.54 and LUWW Standards at 310 CMR 10.56 (LUWW = Land Under Water Bodies & Waterways)

[2] Per the *Massachusetts River & Stream Crossing Standards* (March 1, 2011, Revised March 8, 2012), Page 18, Item #2 - If it is not possible to meet all of the applicable standards, replacement crossings should be designed to avoid or mitigate the following problems: (1) Inlet drops; (2) Outlet drops; (3) Flow contraction that produces significant turbulence; (4) Tailwater armoring; (5) Tailwater scour pools; (6) Physical barriers to fish and wildlife passage.

[3] Flow areas and water surface elevations are taken from river station 427.5 BR U which represents the bridge opening upstream. The "height" represents the approximate height of the structure plus the maximum open channel height at the upstream bridge cross section. The approved 2022 Hydraulic Memorandum can be provided upon request.

Proposal No. 607597 - 132402

A00840 - 207

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Gill Engineering Associates, Inc.
63 Kendrick Street
Needham, MA 02494
www.gill-eng.com
781-355-7100

MEMORANDUM

To: Heidi M. Davis, Jaime Iannelli - MassDEP

From: James Turnbull, Keith Nelson - GEA

CC: Dan Vasconcelos, Kevin Newton - USACE
Michael McHugh - MassDEP WERO
Lee Conservation Commission
Joshua Bartus, Courtney Walker, Michael Joa - MassDOT

Date: 6/20/2025

Re: Lee - Meadow Street over Beartown Brook - Responses to Comments
401 Water Quality Certification: Administrative Completeness & Technical Deficiency Review
401 WQC Transmittal No: 25-WW26-0008-APP (Minor Fill and Minor Dredging)

In response to the letter received April 24, 2025 Gill Engineering has prepared the following responses to Technical Review comments:

General

1. Comments 1, 2, and 3 in the email from the U.S. Army Corps of Engineers (USACE) to the Massachusetts Department of Transportation (MassDOT) dated April 10, 2025, are hereby incorporated by reference. Please revise the plans and update impact calculations as needed.

   Emailed Comments from Army Corps of Engineers:

   a) Can you please add a detail of the bendway weir to the plans?

      Bendway weir details have been added to the Permitting Plans.

   b) There are two wetland impact areas at the eastern project limits, one with 60 square feet of temporary impact and one with 1,105 square feet of temporary impact. Are impacts in both of these areas limited to the selective tree limb removal mentioned in the narrative? If so, this is not considered a discharge of fill, so should not be depicted as an impact on the plans (Corps authority in this location is limited to discharges of fill pursuant to Section 404 of the Clean Water Act).

      Yes, impacts in these areas are limited to the proposed selective tree trimming. Tree trimming areas have been removed from Vegetated Wetland impacts because there is no discharge of fill in these areas. The temporary impacts to Vegetated wetlands have been revised from 1,505 S.F. to 125 S.F.

   c) Following on 2 above, the narrative mentions that no earthwork is proposed in the two tree limb removal areas, and that the tree work can be done from the road. However, these areas

are shown inside the limits of the erosion controls, which could lead to them being inadvertently impacted by sediment, vehicles, etc. There is also a third wetland area within the erosion controls, with no tree trimming or other work proposed. Since it sounds like there is no need to enter these areas, can the erosion controls be relocated around the wetlands to ensure there are no inadvertent discharges within these areas during construction? I attached a sketch to clarify, showing three areas of wetland that are not proposed to be impacted but are currently within the erosion control barrier, with a potential re-routing of the erosion controls sketched in blue.

Yes, we have adjusted the location of the sediment control barrier to an offset from the flagged wetland line, similar to the provided ACOE sketch. See revised permit plans.

2. As observed in the field by MassDEP and shown in the Wetland Delineation Report photos, the brook diverts around a vegetated sediment island approximately 35 feet downstream of the bridge, causing the downstream right bank to undercut. How will the proposed hydraulic changes affect the sediment island and downstream banks following construction?

   The bendway weirs are intended to redirect flow to the center of the stream versus directing at the edge of the stream bend where a scour hole has occurred. A natural thalweg has been detailed to also redirect the flow to the center of the stream. This will reduce scour along the right bank and have a positive effect downstream. Widening the bridge opening will result in less frequent bank undercutting and sedimentation. The downstream vegetated sediment island is likely a result of these types of deposits from the 90-degree bend in Beartown Brook. The downstream channel is expected to naturalize to a thalweg shape over time, similar to reference reaches further downstream.

3. Section 7.0, Resource Area Mitigation, describes the vegetated wetland denoted by flags 1G-1, 1A-18 to 1A-19 as an "isolated depression in the floodplain" and explains the grade of the proposed bank armoring will match the "functional equivalent" of this wetland. Please provide a detail showing the profile of the bank armoring to ensure the adjacent wetland is not isolated from the brook.

   The Vegetated Wetland denoted by flags 1G-1, 1A-18 to 1A-19 will be restored to its existing elevation to remain hydraulically connected to Beartown Brook. A detail showing the grading and restoration of the wetland has been added to the permit plans on Sheet 9 – Environmental Details.

4. Email correspondence from the Natural Heritage Endangered Species Program (NHESP) to Gill Engineering, dated August 24, 2022, requests additional information to complete their review. Please provide updated correspondence from NHESP, including any issued permits or other conditions, as they will be incorporated into the WQC.

   See attached correspondence with NHESP on TOY restrictions.

5. Please provide the specifications for a Wood Turtle Protection Plan.

   Please see the Wood Turtle Protection Plan provided by MassDOT Wildlife Unit.

6. The regulations at 314 CMR 9.07(3)(d) require consultation with the Massachusetts Division of Fisheries and Wildlife (DFW) regarding potential Time of Year restrictions and/or in-water sediment management for the species listed in the regulation. Please provide a consultation letter or email from DFW.

   Please see the attached confirmation email from DFW about TOY restrictions and in-water sediment best management practices.

7. Laydown and dewatering areas will need to be identified in the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan (CP/PP) and Control of Water Plan that will be conditioned in the WQC. Given the space constraints at this site, MassDEP recommends identifying these areas during the design phase. Soil stockpiles should be located at least 50 feet away from resource areas, catch basins, or other drainage conveyances that discharge to resource areas.

   Conceptual stockpiling areas have been added to the Permitting Plans. Conceptual control of water is shown on the permitting plans. The Contractor will submit the (CP/PP) and Control of Water Plan developed per the concept and special provisions in the contract.

Streambed Restoration

8. Please confirm the proposed scour protection was designed based on the 25-year flood per MassDOT's Hydraulic Design, Scour Design and Scour Check Flood Selection Guidelines for Rural Minor Collectors.

   Please see excerpts below from the approved hydraulic report. Confirm the scour protection was designed for 25-year flood scour depth.

(2) NCHRP 24-10 abutment scour was computed for the 10-year design flow which represented the highest flow before pressure flow occurs. This method is not applicable for a pressure scour condition.
(3) Contraction pressure flow scour per HEC 18- 6.10 was computed for the 25- and 50-year events and then compared to the 10-year abutment scour for determining the scour design and check values. See Table 2 for a summary of the results and Appendix D for the detailed computations.

Table 2-Estimated Scour Depths

Flow Event	Abutment	Pressure Flow
10-year	0.00 ft.	N/A
25-year	N/A	1.22 ft.
50-year	N/A	1.09 ft.

DESIGN AND CHECK SCOUR DATA

DESIGN SCOUR FLOOD EVENT RETURN FREQUENCY (YEARS)	25
DESIGN FLOOD SCOUR DEPTH (FEET)	1.22
DESIGN FLOOD PEIR SCOUR DEPTH (FEET)	N/A
CHECK SCOUR FLOOD EVENT RETURN FREQUENCY (YEARS)	50
CHECK FLOOD SCOUR DEPTH (FEET)	1.09

9. Section 6.0 Resource Area Impacts, under Stream Channel and Bank Impacts heading states: "Existing stream soil consists of mostly granular sand, cobbles, and boulders, which may be partially reused to restore the streambed, if suitable, by the Contractor." Please confirm the Project's Resident Engineer and fluvial geomorphologist will also review and approve the streambed material prior to use per Specification Item 984.1 "Natural Streambed Restoration Material" in Attachment 15 of the application.

    Yes, MassDOT standard specifications require the Project Resident Engineer to approve the reuse of all suitable backfill material. Contractor is required to submit gradation and testing which MassDOT's fluvial geomorphologist and the Engineer will review and approve before reuse as natural streambed material.

Stormwater

10. Relevant calculations for Stormwater Management Standards 2 and 3 are required including pre- and post-construction peak discharge flow rates in cubic feet per second (cfs) for the 2-year and 100-year 24-hour storm and groundwater recharge volume calculation from the net increase in impervious surface.

    Stormwater Standard 2:
    The Project has been designed to comply with Standard 2 to the maximum extent practicable. The existing site is constrained by the stream itself parallel to Meadow Street and the presence of conservation land on all four corners of the bridge. The proposed improvements are intended to be Low Impact Development by reducing the roadway and bridge cross-sections as much as possible. Swale connections to sediment basins were considered but deemed impractical due to the need for right of way and limitations of acquisition on Section 4f public parkland for Beartown State Forest and private lands under conservation and recreational trust. A closed drainage system and curbing were considered, but country drainage appears to be infiltrating properly at the project site.

    The existing roadway sheet flows to the shoulder and infiltrates into poorly graded gravel with sand. The project improves the existing drainage conditions by constructing roadway features that further separate stormwater runoff from resources areas. The roadway shoulder will be constructed wider with a more level area, which will provide further runoff separation from the stream. The roadway shoulder will be stabilized with native seeding and plantings which will reduce sedimentation runoff potential to the stream relative to existing conditions. Stormwater runoff at low points will be directed to vegetated swales with check dams to reduce flow rates and sedimentation to the resource

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area, improving upon the existing roadway low points that are eroding. There is no flooding concern from stormwater runoff with this project because the precipitation that may previously have fallen directly on Beartown Brook is now falling on the bridge first but is now pretreated and discharged to the same waterbody.

Table 1 provides a summary of peak discharge rates for the project area under existing and proposed conditions.

Table 1 Peak Discharge Rates for Project

	Existing Impervious Area	**Proposed Impervious Area**	**Delta Δ**
	8,690 SF = 0.20 acres	10,878 SF = 0.25 acres	2, 188 SF = 0.05 acres
2-yr storm (i = 2.9"/24-hr) ***TR-55 Fig. B-3***	Q = CiA = 0.9 * 0.1208 in/hr * 0.20 acres = 0.022 cfs	Q = CiA = 0.9 * 0.1208 in/hr * 0.25 acres = 0.027 cfs	0.005 cfs increase
10-yr storm (i – 4.5"/24-hr) ***TR-55 Fig. B-5***	Q = CiA = 0.9 * 0.1875 in/hr * 0.20 acres = 0.034 cfs	Q = CiA = 0.9 * 0.1875 in/hr * 0.25 acres = 0.042 cfs	0.008 cfs increase
100-yr storm (i –6.5"/24-hr) ***TR-55 Fig. B-8***	Q = CiA = 0.9 * 0.2708 in/hr * 0.20 acres = 0.049 cfs	Q = CiA = 0.9 * 0.2708 in/hr * 0.25 acres = 0.061 cfs	0.012 cfs increase

Note: Rainfall Intensities taken from latest edition of TR-55.

Stormwater Standard 3:
The Project has been designed to comply with Standard 3 to the maximum extent practicable. Loss of annual recharge to groundwater is eliminated with the bridge replacement design. The proposed additional impervious area is being directed to vegetated drainage swales and is further disconnected from the resource area by stabilized and seeded upland.

Stormwater Management Standard 3 best practices have been followed to disconnect the additional impervious area from the resource. The annual recharge from the post-development site approximates the annual recharge from pre-development conditions. The bridge replacement project improves upon the existing condition to the most extent practical by directing stormwater runoff to a location away from the stream to allow stormwater to be treated before entering adjacent Resource Areas.

Table 2 shows required and proposed recharge volumes for the project site, all observed to be within Hydrologic Soil Group A.

Table 2 Required Recharge Volume for Project

	HSG A
Existing Impervious (sq. ft.)	***8,690***
Proposed Impervious (sq. ft.)	***10,878***
Net Impervious Area (sq. ft.)	***10,878***
Target depth, F (in)	**0.60**
Required Recharge Volume, ReV (cf)	***544***
Proposed Recharge Volume, V (cf)	***554.5***

Stormwater from the additional impervious area created by the bridge replacement is directed to vegetated swales. The vegetated swales will include jute mesh, loam, and wetland seeding. Drainage swales will run off to a check dam then into group A soils. The check damns will consist of 1-1/2" inch crushed stone and 4" diameter modified rock fill. Stabilizing the roadway shoulders and re-seeding with native roadside mix over group A soils will also provide a disconnection of impervious pavement from the Resource Areas. The reconstructed shoulder of the roadway does not fully meet standards for a Qualifying Pervious Area or Vegetated Filter Strip but is intended to provide further drainage separation from Resource Areas.

Table 11 Provided Recharge Volumes at Each Design Point

	HSG A
DP-1	
Net Impervious Area (sf)	5,439
Required Recharge Volume, ReV (cf)	272
Provided Recharge Volume (cf)	278
DP-2	
Net Impervious Area (sf)	5,439
Required Recharge Volume, ReV (cf)	272
Provided Recharge Volume (cf)	276.5

DP-1 and DP-2 are assumed to be at the bottom of each swale. Each swale drains half of a crowned two-lane roadway. Therefore, contributing impervious area is divided by two (2).

The proposed design mitigates impervious runoff from the roadway to the most extent practical. The profile of the roadway has been graded such that run-off from the proposed bridge is managed by curbing and directed to the vegetated swales.

The cross-sectional area of the proposed vegetated swale is 0.75 cu. ft. discounting side slopes.

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At DP-1 on the north side of the roadway, the vegetated swale provides an additional 6 cu ft. of potential recharge volume. This has been added to the existing roadway condition's ability to provide recharge completely into HSG A soils.

DP-2 on the south side of the roadway, the vegetated swale provides an additional 4.5 cu. ft. of potential recharge volume. This has been added to the existing roadway condition's ability to provide recharge completely into HSG A soils.

Static Approach:
The typical detention basin required for each side of the roadway would require installation of curbing throughout the project limits and construction of two detention basins at least 272 cu. ft. to satisfy the Required Recharge Volume (ReV).

For the typical detention basin this would represent a 10'x10'x3' detention pond (discounting side slopes) on either side of the roadway at the low points. The typical roadside drainage swale would be about 70'x2'x2' (discounting side slopes.)

Installing stormwater detention measures of this size is not practical at the site. The wetland flagged 3A-1 to 3A-12 would be significantly affected by the grading required to construct a detention pond or stormwater storage swale on the north side of the roadway. The south side of the roadway is currently accessed for recreational use also. Installation of a detention pond or stormwater storage swale in this area would adversely impact public access to recreation land and the wetland flagged 2A-1 to 2A-5, which is connected to a larger wetland system south of Meadow Street.

Therefore, vegetated swales are proposed to direct stormwater away from the stream and disconnect the impervious roadway runoff prior to discharging to the resource area. The existing roadway has country drainage, with the construction of Structural BMP's like detention basins and ponds being ruled out for wetlands impacts, the best management practice is to reduce site impacts with Low Impact Design. The proposed improvements are capable of storing and recharging the ReV in under 72 hours. See drawdown calculations below for the proposed vegetated swales.

Drawdown Calculations:

$$Time_{drawdown} = \frac{Rv}{(K)(Bottom\ Area)}$$

Where K = 8.3 inches/hr for Category A Sand.

T $_{drawdown}$ **DP-1** = (272cf)/ (8.3 inches/hour) * (1 ft/12 inches) * (8 ft x1.5 ft)
T $_{drawdown}$ **DP-1** = 32 hours

T $_{drawdown}$ **DP-2** = (272cf)/ (8.3 inches/hour) * (1 ft/12 inches) * (6 ft x 1.5 ft)
T $_{drawdown}$ **DP-2** = 44 hours

Both vegetated swales drain the Required Volume (ReV) in under 72 hours so results for potential recharge provided by the project are satisfactory.

11. In Section 10.0, Stormwater, it states: "The project will install two water quality swales…to provide potential pre-treatment." However, the Environmental Permit Plans and Stormwater Management Memo refer to these features as stone drainage channels. Please clarify which feature is proposed.

    These features have been updated to vegetated swales with stone check dams to provide further infiltration. Please see updated swale and check dam details on Sheet 9 of the permitting plans.

12. Per 314 CMR 9.06(6)(a)6., stormwater discharges near or to any critical area, such as coldwater fisheries, require the use of specific control and pollution prevention measures and structural stormwater control measures (SCMs) determined by MassDEP to be suitable for managing discharges to such areas as provided in the Massachusetts Stormwater Handbook. Redevelopment projects are required to comply with the pretreatment and structural SCM requirements in Stormwater Standard 6 to the maximum extent practicable. If the proposal is for stone drainage channels, please evaluate the feasibility of converting these to water quality swales or other SCMs per Volume 2, Chapter 2 of the Handbook. This would assist in providing water quality treatment in accordance with Stormwater Management Standard 4.

    W**e have updated the details of the proposed swales to a vegetated swale with a stone check dam. This design will provide further pre-treatment to satisfy Stormwater Standard 4 for Infiltration and Standard 6 for Critical Areas to the Maximum Extent Practical. Please see the details provided on Sheet 9 of the permitting plans.**

Additional Bridge Maintenance Work at Bridge L-05-002:
Willow Street over the Housatonic River

To facilitate truck access to the Onyx Specialty Papers Inc. Paper Mill during the closure and detour period, the existing closed bridge L-05-002 (057) Willow Street over the Housatonic River, shall be repaired and reopened to traffic prior to closing the Meadow Street bridge L-05-049 (059) to traffic. Willow Street must be used by overweight vehicles detouring around the Meadow Street closure.

The repairs shall consist of structural steel repairs to existing truss gusset plates, localized structural steel cleaning and painting, and limited reinforced concrete deck repairs. During structural steel and deck repairs, an 8-foot walkway will be maintained at roadway level for pedestrian access. Following repairs, the bridge will be reopened to vehicle and pedestrian traffic. Staging and shielding for repair work will be self-supported from the bridge structure. This activity is not expected to cause any additional impacts to resource areas as there will be no in-water work.

MASSWILDLIFE

DIVISION OF
FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

May 21, 2025

Lindsey Forg
10 Park Plaza
Boston, MA 02116

RE: Applicant: Lindsey Forg
Project Location: Meadow Street over Powder Mill Brook, Lee (73.2694284°W 42.2731474°N)
Project Description: Bridge Replacement
NHESP File No.: 25-19537

Dear Applicant:

The Natural Heritage & Endangered Species Program of the Massachusetts Division of Fisheries & Wildlife (the "Division") received the MESA Project Review Checklist and supporting documentation for review pursuant to the Massachusetts Endangered Species Act (MGL. c. 131A) and its implementing regulations (321 CMR 10.00) (MESA).

STATE-LISTED SPECIES

The Project as currently proposed will occur within Priority Habitat of the following state-listed species:

Scientific Name	Common Name	Taxonomic Group	State Status
Glyptemys insculpta	Wood Turtle	Reptile	Special Concern

State-listed species and their habitats are protected in accordance with the MESA.

PROJECT DESCRIPTION (the "Project")

The project, as currently proposed, includes the replacement of the Meadow Street Bridge over Powder Mill Brook (a.k.a. Beartown Brook) in Lee, MA, as shown on the Project Plan.

MASSACHUSETTS ENDANGERED SPECIES ACT (MESA)

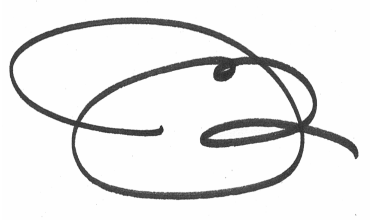
The MESA is administered by the Division and prohibits the Take of state-listed species, which includes actions that "in reference to animals, means to harass, harm, pursue, hunt, shoot, hound, kill, trap, capture, collect, process, disrupt the nesting, breeding, feeding or migratory activity or attempt to engage in any such conduct, or to assist such conduct, and in reference to plants, means to collect, pick, kill, transplant, cut or process or attempt to engage or to assist in any such conduct. Disruption of nesting, breeding, feeding or migratory activity may result from, but is not limited to, the modification, degradation or destruction of habitat of state-listed wildlife species" (321 CMR 10.02). The purpose of the Division's review under the MESA regulations is to determine whether a Take of state-listed species will result from the proposed project.

Based on the information provided and the information contained in our database, the Division finds that the Project **must be conditioned** to avoid a prohibited Take of state-listed species (321 CMR 10.18(2)(a)). **To avoid a prohibited Take of state-listed species, the conditions attached to this letter must be met.**

Provided the attached conditions are fully implemented and there are no changes to the project plans, this project will not result in a Take of state-listed species. We note that all work is subject to the anti-segmentation provisions (321 CMR 10.16) of the MESA. This determination is a final decision of the Division of Fisheries and Wildlife pursuant to 321 CMR 10.18. Any changes to the proposed project or any additional work beyond that shown on the site plans may require an additional filing with the Division pursuant to the MESA. This project may be subject to further review if no physical work is commenced within five years from the date of issuance of this determination, or if there is a change to the project.

If you have any questions regarding this letter please contact Tim McGuire Endangered Species Review Biologist, at timothy.mcguire2@mass.gov, (508) 389-6366

Sincerely,



Jesse Leddick
Assistant Director

cc: David Paulson

Attachment: List of Conditions

List of Conditions

Applicant: Lindsey Forg
Project Location: Meadow Street over Powder Mill Brook, Lee (73.2694284°W 42.2731474°N)
Project Description: Bridge Replacement
NHESP File No.: 25-19537
Heritage Hub Form ID: RC-94497
Approved Plan: Town of Lee Meadow Street Over Powder Mill Brook (a.k.a. Beartown Brook) Bridge L-05-004
Plan date: 3/28/25

To avoid a prohibited Take of state-listed species, the following condition(s) must be met:

1. **Turtle Protection Plan:** Prior to the start of work (including vegetation clearing or soil disturbance), the Applicant shall submit a Wood Turtle Protection Plan to the Division for review and written approval. Said Plan shall detail procedures for protecting state-listed turtles during construction, and be prepared and implemented by a qualified, Division-approved wildlife biologist. The Division is available for consultation on Plan development and can provide contact information for qualified biologists. The Division-approved Plan shall be implemented as written; any proposed changes to the Plan must be submitted to the Division for review and written approval prior to implementation of said changes. By December 31st of any year in which work occurs, the qualified biologist shall submit: a) a summary report to the Division detailing project status and compliance with the Plan; and b) any observations of state-listed turtles at https://www.mass.gov/how-to/report-rare-species-vernal-pool-observations.

WOOD TURTLE (*Glyptemys insculpta*) PROTECTION PLAN

General

This section outlines the requirements of the Natural Heritage and Endangered Species Program (NHESP) of the Division of Fisheries and Wildlife (DFW) for projects that occur in the vicinity of high-priority wood turtle (*Glypemys insculpta*) populations. The requirements consist of monitoring and protecting turtles during the replacement of the Meadow Street Bridge over Powder Mill Brook in the Town of Lee, Massachusetts.

One Time Sweeps – Prior to Vegetation Clearing and In-water Cofferdam Installation

The Turtle Monitor (the Monitor) shall be a MassDOT biologist (David J. Paulson, (857) 262-3378, david.j.paulson@dot.state.ma.us; or a representative from MassDOT Wildlife and Endangered Species Unit) approved by the Natural Heritage and Endangered Species Program (NHESP). The Monitor shall obtain a scientific collecting permit from the NHESP to handle wood turtles. The Monitor shall visit the site prior to the start of work, and the Contractor and/or Resident Engineer shall coordinate this site visit with the Monitor at least 60 days prior to construction commencement. The Monitor shall sweep the site prior to any site clearing, grubbing, earth disturbance, or site preparations. The Monitor shall inspect vegetation within 200' of the stream, prior to the establishment of the limit of work line and Turtle Exclusion Fence Barrier.

In addition, the Monitor shall provide a sweep of the site prior to any work in within the river. The Monitor shall inspect all areas of Land Under Water (LUW) where temporary or permanent impacts will occur, such as where cofferdams are to be installed and/or stream regrading or streambed restoration will occur, paying close attention to overhanging banks and in water coarse woody debris.

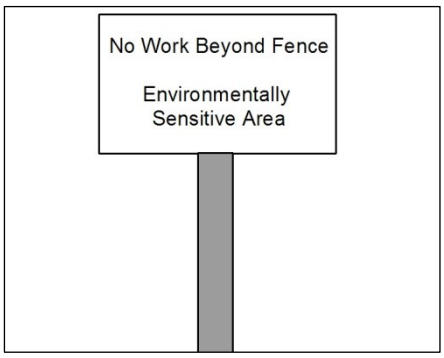
The Monitor shall visually sweep the described areas immediately before machines enter the area and relocate any turtles to suitable habitat immediately beyond the construction site. The Monitor shall provide contact information to the project supervisor in the event a wood turtle is discovered on-site. The Monitor may visit the site on only one day if the vegetation clearing and in-water work are initiated on the same day. Upon completion of the monitoring, the Monitor shall provide the NHESP with a summary of activities at the construction site. This report shall include the number and duration of visits and rare species observation forms for all state-listed species encountered. In the event of finding an injured turtle, the turtle shall be transported to a suitable veterinarian. In the event of finding a turtle with a radio transmitter, the NHESP and the contact on the transmitter shall be alerted immediately.

All state-listed species encountered in or near the project shall be reported to the NHESP through a Rare Animal/Plan Observation Report with the required supporting materials within 10 days of the observation. No state-listed species may be removed from the project site unless under the direct supervision of the Monitor or the NHESP.

Establishment of a Limit of Work Barrier

Following the sweep of the work site, a limit of work barrier shall be installed. This line shall consist of staked compost filter tubes and Turtle Exclusion Fence Barrier (silt fence as the outer

boundary) and shall contain signage clearly identifying it as the limits of work in all four quadrants. Refer to the attached sketch for the approximate location of the Turtle Exclusion Fence Barrier.



Example limit of work sign.

Installation of the barrier must be conducted using methods that result in a minimum of disturbance (i.e., hand-dug, "2-man" trencher or auger). It is not appropriate to clear large access paths prior to sweeps for turtle. No clearing may occur outside the limit of work approved by the NHESP without additional review and approval by the NHESP.

1. The barrier must be composed of at least 2 1/2 feet of vertical barrier above ground and an additional 4-6 inches buried below ground.
2. The face of the material must be relatively smooth. Materials commonly used are staked at 6 - 10 foot intervals and include tightly woven geotextile, aluminum flashing, or other such materials stapled or tacked to stakes. Loosely woven geotextile fabrics, hay/straw bales, wattles or tubular materials are not generally sufficient.
3. The bottom of the silt fencing must be carefully buried in a 4-6 inch deep trench. The trench must be backfilled and compacted. If it is not possible to dig a trench, then the bottom of the barrier must be affixed to the surface.
4. If project phasing and the traffic management plan allow, the barrier shall only include a single gap at each limit of the project large enough for vehicle passage to access the construction area. These gaps must be closed each night during the turtle active season (March 15 – October 31) with a gate and/or silt fence barrier, and the bottom of the silt barrier weighted down with a solid wood post or sand bags. A solid wooden, plastic or metal turtle barrier gate may be furnished by the contractor in order to close the gap locations. The turtle barrier gate must be keyed into the barrier so that turtles cannot enter the construction area.
5. If hay or straw bales are to be used with silt fencing, they shall be installed on the work-side of the silt fence to avoid turtles using these to breach the barrier.
6. Once installed, the barrier shall be taut between the stakes. Slumps or loose materials will undermine the effectiveness of the barrier. In some circumstances, geotextile fabrics may need to be reinforced with backer material to ensure integrity. Backer material is typically similar to hardware cloth.

Once per week, a person familiar with silt barrier maintenance and installation shall inspect the barrier and facilitate any repairs or alterations. The limit of work barrier should remain taut between stakes and any holes along the bottom repaired. MassDOT shall provide the NHESP with

the name and contact information of the Resident Engineer responsible for coordinating necessary sweeps and maintaining appropriate barriers.

Construction Worker Training:
The Monitor shall provide to the construction foreperson wood turtle identification and handling pamphlets. All construction, landscaping, and other sub-contractors associated with the Project shall be informed in writing of the likely presence of State-listed Species on the Property and what measures (observation and injury protection) should be implemented to minimize direct harm to State-listed Species.

Further, no wildlife shall be removed from the Property without approval of a qualified wildlife biologist or the Division except as necessary to receive veterinary treatment in the case of harm during construction.

This protocol may require only one to three days of labor, including field surveys and correspondence with the NHESP.

Basis of Payment:
There will be no payment for the work conducted by the Turtle Monitor, as the Monitor will be provided to the Contractor as a free service by MassDOT.

Installation of a limit of work barrier, turtle barrier gates, and limit of work signage shall be considered incidental under ITEM 767.121 SEDIMENT CONTROL BARRIER.

756.1 CONSTRUCTION PERIOD POLLUTION PREVENTION AND EROSION AND SEDIMENTATION CONTROL PLAN **LUMP SUM**

- *This Item is for projects that involve less than one acre of disturbance but the preparation of a Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan is required by way of a Special Condition associated with a permit issued under the Wetlands Protection Act, or Section 401of the Clean Water Act and their implementing Regulations. For projects that involve an acre or more of disturbance, Item 756 should be used.

The work under this item shall consist of the preparation and implementation of a Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan (CP/PP) as required by a regulatory agency. This Item is applicable to projects that are not subject to the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) required by the National Pollutant Discharge Elimination System (NPDES) and applicable Construction General Permit (CGP) issued by the U.S. Environmental Protection Agency (EPA).

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 CP/PP.

The CP/PP, at a minimum, shall include the following:

- Project & Site Description
- Project Site Contact Information
    - This shall include the phone number for the Contractor Site Superintendent, Project Manager and CP/PP Inspector(s).
- Qualifications of the CP/PP Inspector and documentation of qualifications
    - At a minimum, relevant personnel responsible for erosion and sedimentation control inspections shall have completed the EPA's construction inspection training course and obtained a certificate confirming completion of the training module, or have completed a third-party stormwater course which covers the minimum topics listed in Part 6.3.b of the CGP.
- Reference to and information to address permit Special Conditions relevant to the CP/PP contents
    - These include but are not limited to, [*Special Provision Preparer to list permits, permit special conditions and documents that contain language relevant to CPPP requirements]*
- Construction Sequencing/Phasing
- Erosion Prevention, Sediment Control, and Best Management Practices (BMP s) to be

implemented

- Maintenance measures and intended timeline to address maintenance and corrective actions for implemented Erosion Prevention Measures, Sediment Control Devices, and BMPs
- Anticipated inspection schedule and sample inspection report form
    - Use the EPA's Site Inspection Report Template found on the EPA's website.
- Site Plans
    - This shall depict, at minimum, the project limits, locations of construction phase erosion prevention measures, construction phase sedimentation control measures, limits of disturbance, staging and laydown areas, proposed dewatering locations and proposed stockpile locations. Depict existing jurisdictional wetland resource areas, drainage conveyances and stormwater treatment features.

The Contractor shall prepare the CP/PP, and update/revise as needed upon changes in site conditions, relevant project personnel, construction phase controls, schedule changes, revised work, regulations, and construction methodologies. The Contractor shall submit the CP/PP to the Engineer for approval at least thirty (30) days prior to prior to commencement of any project related activity that disturbs land, including clearing and grubbing. Submission of the CP/PP to a regulatory agency for review and approval may also be required by a Special Condition associated with a permit issued under the Wetlands Protection Act, or Section 401of the Clean Water Act and their implementing Regulations. It is the responsibility of the Contractor to ensure the CP/PP is submitted to reviewers in a timely manner to support the construction schedule.

It is the responsibility of the Contractor to comply with the conditions of any state Wetlands Protection Act Order, Water Quality Certification, Army Corps of Engineers Section 404 Permit and other environmental permits applicable to the project, and to include in the CP/PP the methods and means necessary to comply with applicable conditions of said permits.

Inspection frequency shall be [*Special Provision Preparer shall insert frequency listed in permit*]. The inspections shall be performed by an individual that meets the qualifications specified in the permits and proof of the inspector's qualifications shall be included as an Appendix in the CP/PP. CP/PP inspection reports shall be completed and distributed to the Resident Engineer within 24-hours of each inspection. Special conditions associated with permits may also require submittal of reports to regulators at a certain frequency. Reports shall be maintained throughout the duration of the project. In addition, if the Engineer determines at any time that the inspector's performance is inadequate, the Contractor shall provide an alternate inspector.

The Contractor is responsible for preparation of the CP/PP, inspections, and associated reports. The Standard Specifications require adequate erosion and sedimentation control for the duration of the Contract. All control measures must be properly selected, installed, and maintained in

accordance with manufacturer specifications, good engineering practices, and MassDOT standard specifications and special provisions. Contractor must maintain all control measures and other protective measures in effective operating conditions in accordance with the additional Special Provisions herein. 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.

Method of Measurement and Basis of Payment

Item 756.1 will be measured at the contract unit price, lump sum, which shall include all work detailed above, including CP/PP and Flood Contingency Plan preparation, required revisions, revisions/addenda during construction, inspections and reports.

Work under this item shall include acceptable completion of the CP/PP, Flood Contingency Plan, site inspections, and revisions/amendments required during construction. In addition, any erosion prevention or sediment control measures beyond those specified in bid items that are selected by the Contractor to facilitate and/or address the Contractor's schedule, methods and execution of the work shall be considered incidental to this item.

Payment of thirty (30) % of the contract price shall be made upon acceptance of the CP/PP and Flood Contingency Plan. Payment of forty (40) % of the contract price shall be made in equal installments over the expected duration of stormwater pollution prevention measures. Payment of the final thirty (30) % of the contract price shall be paid when final stabilization has been achieved (minimum of 75% total cover of disturbed vegetated areas with perennial ground cover).

GILL ENGINEERING

James Turnbull <jturnbull@gill-eng.com>

FW: 607597 Lee Powder Mill Brook

Walker, Courtney L. (DOT) <Courtney.L.Walker@dot.state.ma.us> Wed, Feb 12, 2025 at 10:33 AM
To: James Turnbull <jturnbull@gill-eng.com>, knelson <knelson@gill-eng.com>
Cc: "Joa, Michael A. (DOT)" <Michael.A.Joa@dot.state.ma.us>, "Bartus, Joshua D. (DOT)" <Joshua.Bartus@dot.state.ma.us>

Hi James,

Here is the coordination on the coldwater fishery from Trevor.

Courtney Walker

Wetlands and Water Resources Coordinator

MassDOT – Highway Division

10 Park Plaza, Boston MA 02116

857-262-0757 | courtney.l.walker@dot.state.ma.us

From: Burns, Trevor B. (DOT) <Trevor.B.Burns@dot.state.ma.us>
Sent: Thursday, February 6, 2025 3:41 PM
To: Walker, Courtney L. (DOT) <Courtney.L.Walker@dot.state.ma.us>; Joa, Michael A. (DOT) <Michael.A.Joa@dot.state.ma.us>
Subject: FW: 607597 Lee Powder Mill Brook

Hello,

Attached is our correspondence with Mass wildlife. We did get a TOY for the Coldwater Fishery on this project (Oct 1- April 30). This did not overlap with our work in water sequence we proposed in the draft 401 (July 1- Sept 30). Please attach this to the 401 so it can be adopted into the conditions to ensure the contractor does not change the plans.

Thanks!

Trevor

From: Kautza, Adam (FWE) <adam.kautza@mass.gov>
Sent: Thursday, February 6, 2025 11:42 AM

To: Burns, Trevor B. (DOT) <Trevor.B.Burns@dot.state.ma.us>
Subject: Re: 607597 Lee Powder Mill Brook

So you should be all set with the TOY if in-water work is only expected July-Sept.

Adam Kautza PhD | Coldwater Fisheries Project Leader

Massachusetts Division of Fisheries and Wildlife

1 Rabbit Hill Road

Westborough, MA 01581

(857) 275-6961

adam.kautza@mass.gov

From: Burns, Trevor B. (DOT) <Trevor.B.Burns@dot.state.ma.us>
Sent: Thursday, February 6, 2025 10:17 AM
To: Kautza, Adam (FWE) <adam.kautza@mass.gov>
Subject: RE: 607597 Lee Powder Mill Brook

Hi Adam,

The Wingwall is being reconstructed with a new precast concrete block retaining wall. Since we are widening the structure to meet the stream crossing standards, the existing wingwall will not be aligned with the new bridge abutment.

I am still looking for a complete construction schedule. But for the work in water, within our 401 application we state:

Dewatering for excavations will take place in stages as described above during summer months. Control of water will begin and be maintained in various stages beginning July 1, 2026, and ending September 30,

2026. Control of water is proposed during these months so that sandbags may be used for channelizing low stream flow.

Trevor

From: Kautza, Adam (FWE) <adam.kautza@mass.gov>
Sent: Thursday, February 6, 2025 8:08 AM
To: Burns, Trevor B. (DOT) <Trevor.B.Burns@dot.state.ma.us>
Subject: Re: 607597 Lee Powder Mill Brook

Hi Trevor,

TOY restrictions for CFRs preclude work from Oct-April in most cases. Any idea how long this project might take? Are you also removing the retaining wall? Reading blueprints is like reading a foreign language for me...

Adam Kautza PhD | Coldwater Fisheries Project Leader

Massachusetts Division of Fisheries and Wildlife

1 Rabbit Hill Road

Westborough, MA 01581

(857) 275-6961

adam.kautza@mass.gov

From: Burns, Trevor B. (DOT) <Trevor.B.Burns@dot.state.ma.us>
Sent: Tuesday, February 4, 2025 10:34 AM
To: Kautza, Adam (FWE) <adam.kautza@mass.gov>
Subject: RE: 607597 Lee Powder Mill Brook

Hi Adam,

I attached some photos of the steam from my site visit this summer to help jog your memory. What would a TOY date range be in this location?

Trevor

From: Kautza, Adam (FWE) <adam.kautza@mass.gov>
Sent: Tuesday, February 4, 2025 10:11 AM
To: Burns, Trevor B. (DOT) <Trevor.B.Burns@dot.state.ma.us>
Subject: Re: 607597 Lee Powder Mill Brook

Hi Trevor,

Beartown Brook is a CFR and so we would be asking for a TOY restriction in this case. If I remember correctly this road crossing is completely passable for fish. We sometimes consider waiving the TOY restriction to facilitate a project if it is going to provide obvious long-term benefits for the resource. I'm not sure that is the case here so I think we'd keep the restriction in place. There have been wild trout surveyed in the immediate vicinity of this road crossing so be sure to follow the standard sediment management BMPs, etc.

Thanks

Adam Kautza PhD | Coldwater Fisheries Project Leader

Massachusetts Division of Fisheries and Wildlife

1 Rabbit Hill Road

Westborough, MA 01581

(857) 275-6961

adam.kautza@mass.gov

From: Burns, Trevor B. (DOT) <Trevor.B.Burns@dot.state.ma.us>
Sent: Monday, February 3, 2025 1:07 PM
To: Kautza, Adam (FWE) <adam.kautza@mass.gov>
Cc: Hoogeboom, Julia A. (DOT) <Julia.A.Hoogeboom@dot.state.ma.us>; Richards, Todd (FWE) <todd.richards@mass.gov>
Subject: 607597 Lee Powder Mill Brook

Hi Adam,

MassDOT is proposing a bridge replacement on Meadow Street Over Powder Mill Brook (Beartown Brook) in Lee (42°16'23.7"N 73°16'09.8"W).

MassDOT is reaching out to the Massachusetts Division of Fisheries and Wildlife regarding potential Time of Year restrictions and/or in-water sediment management for the species listed in the regulation. We are aware the project intersects NHESP habitat for Wood turtle and will being consultation with NHESP staff soon.

Please let us know if you have any comments or need more information.

Thanks,

Trevor Burns

Wildlife Biologist

Environmental Services

MassDOT Highway Division

Re_ 607597 Lee Powder Mill Brook.pdf
194K

TOWN OF LEE

MEADOW STREET OVER
POWDER MILL BROOK (a.k.a. BEARTOWN BROOK)
BRIDGE L–05–004

IN THE TOWN OF

LEE, MA
BERKSHIRE COUNTY

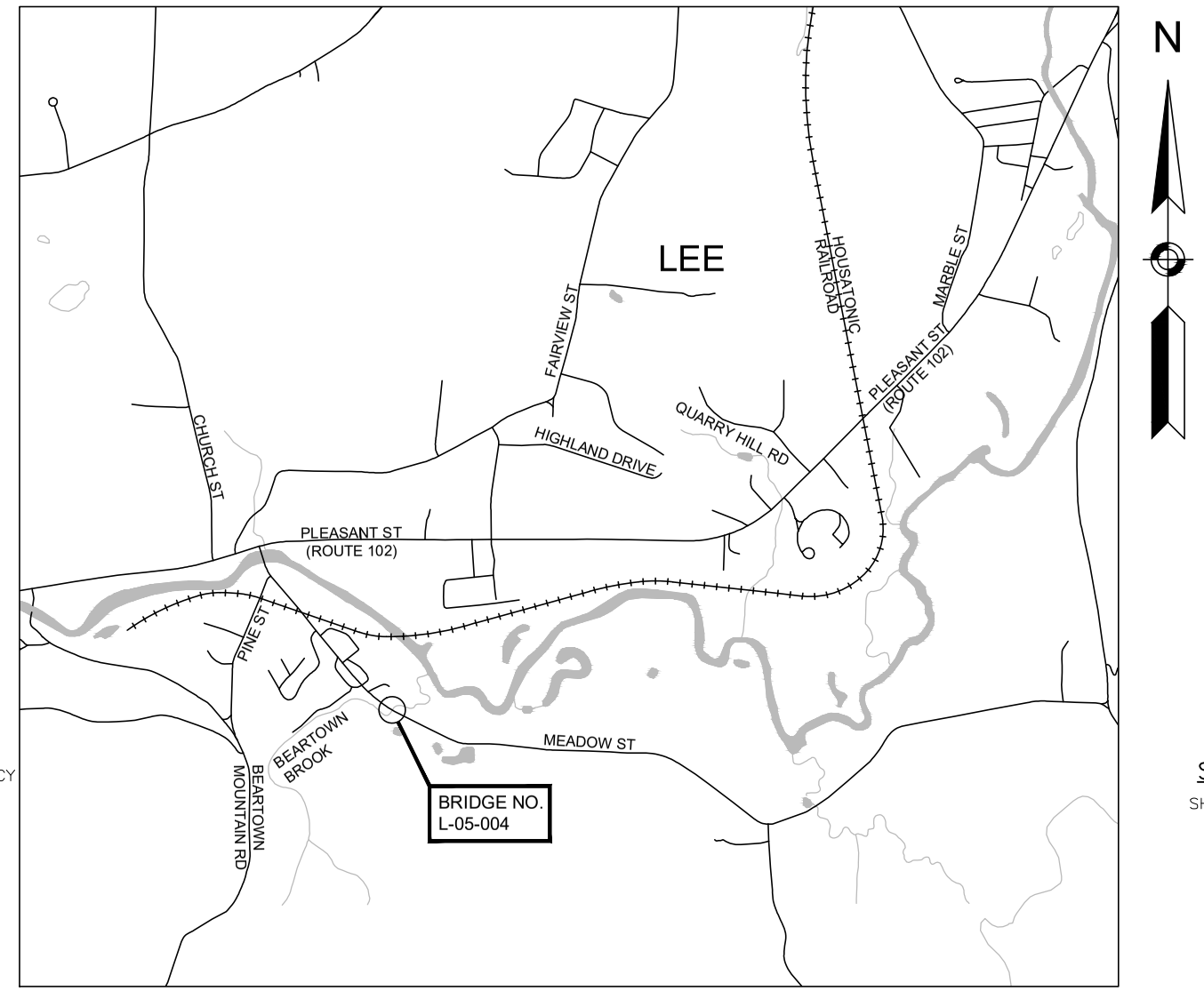
ENVIRONMENTAL PERMIT PLANS

SURVEY NOTES:

1. COORDINATES IN U.S. SURVEY FEET, ARE REFERENCED TO THE MASSACHUSETTS COORDINATE SYSTEM, MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983

2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988

3. BENCHMARK:
   DISK
   N: 2929556.362
   E: 177348.962
   EL. 850.04



LIST OF RESOURCE ABBREVIATIONS

VW = VEGETATED WETLAND
WOTUS = WATERWAYS OF THE UNITED STATES
OHW = ORDINARY HIGH WATER

RESOURCE IMPACTS:

LAND UNDER WATERWAYS/WOTUS EXISTING AREA DREDGED (PERMANENT) = 3,441 SF, 630 CY
LAND UNDER WATERWAYS/WOTUS PROPOSED AREA (PERMANENT) = 4,988 SF
MATERIAL DISCHARGED (FILL) TO WOTUS (PERMANENT) = 3,441 SF, 508 CY
VEGETATED WETLAND (TEMPORARY) = 340 SF
BANKS (PERMANENT) = 208 LF
BANKS (TEMPORARY) = 100 LF

SHEET LIST TABLE

SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	EXISTING CONDITIONS PLAN 1
3	EXISTING CONDITIONS PLAN 2
4	PROPOSED CONDITIONS PLAN 1
5	PROPOSED CONDITIONS PLAN 2
6	EXISTING AND PROPOSED LONGITUDINAL SECTIONS
7	ENVIRONMENTAL IMPACT PLAN 1
8	ENVIRONMENTAL IMPACT PLAN 2
9	ENVIRONMENTAL DETAILS
10	DEMOLITION PLAN
11	CONTROL OF WATER PLAN

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BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

TITLE SHEET

SHEET 1 OF 11

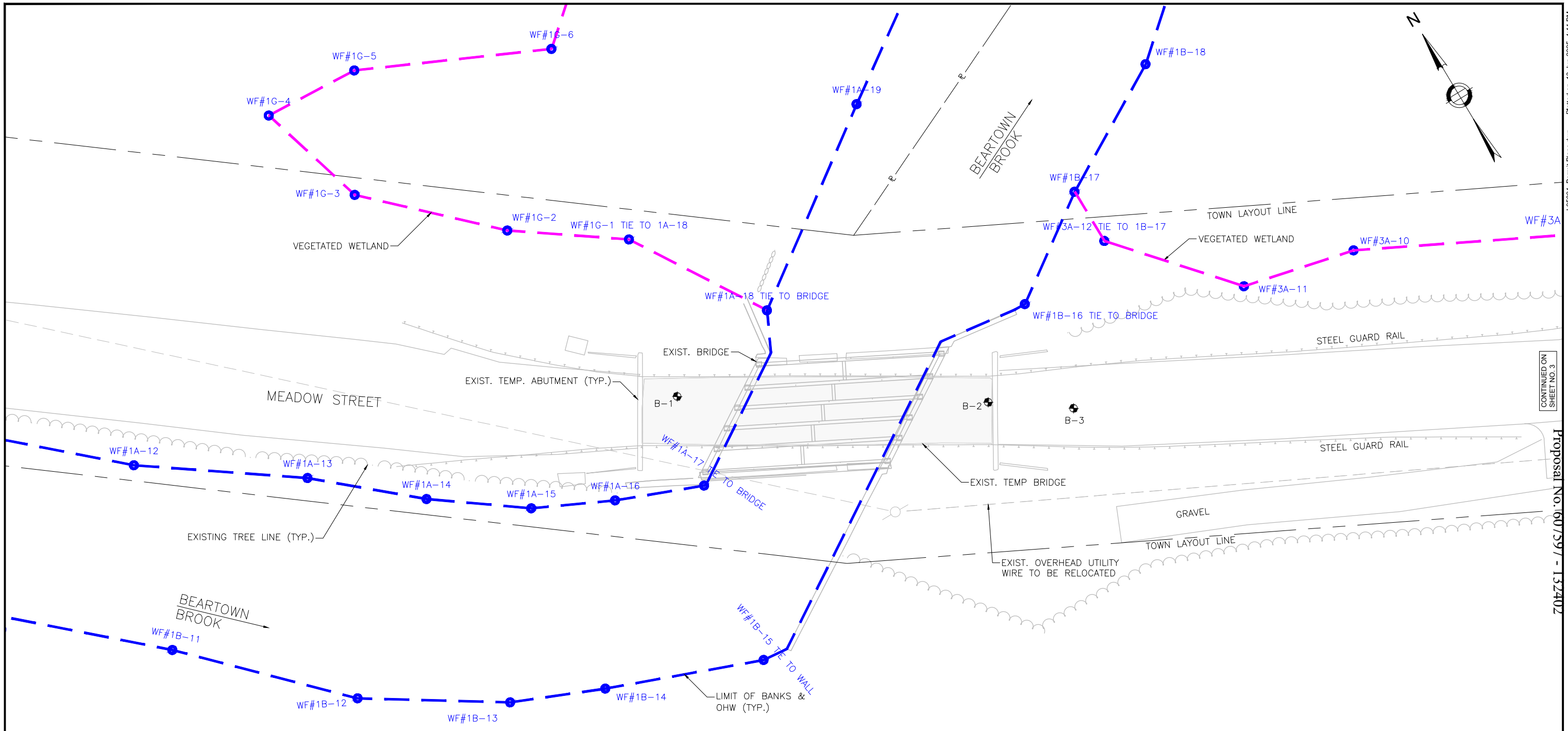
Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

L05004_Permit Plans (Title Sheet).dwg Plotted on 13-Jun-2025 4:44 PM
Proposal No. 60759 - 132402
A00840 - 230

A00840 - 231

L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:44 PM

Proposal No. 60/59/ - 132402



EXISTING PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

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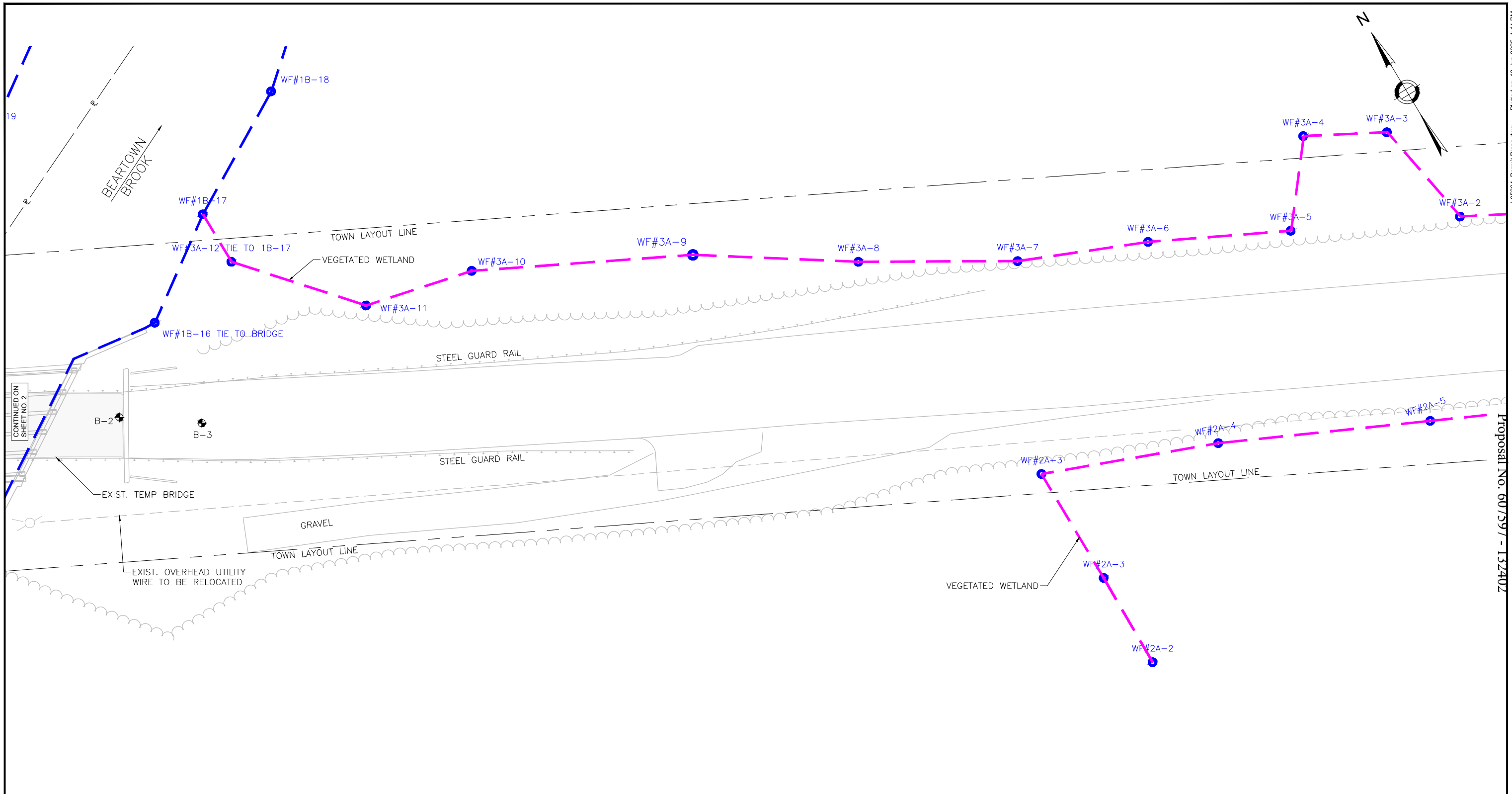
BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

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EXISTING CONDITIONS PLAN 1

SHEET 2 OF 11



EXISTING PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

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BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

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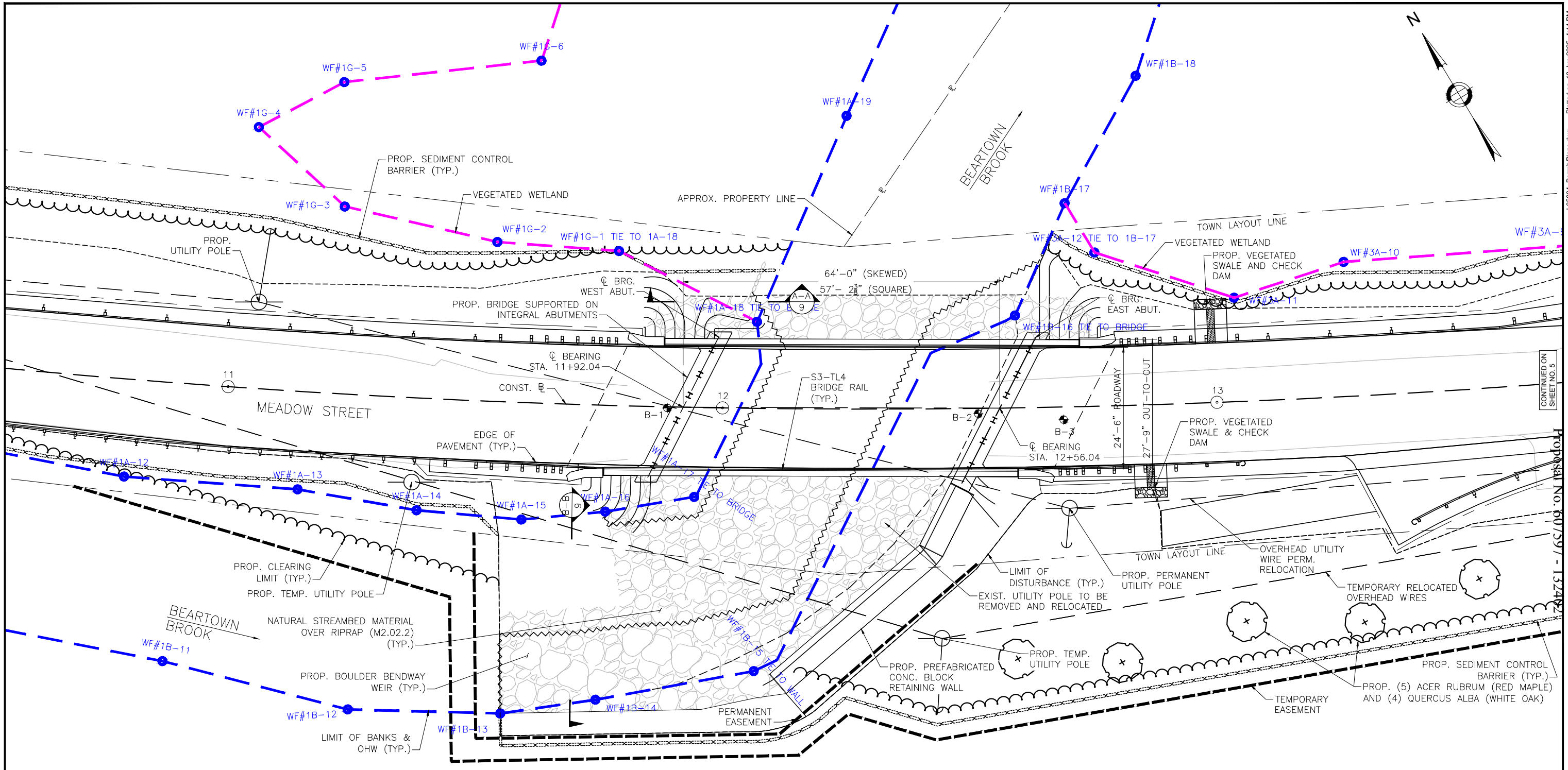
EXISTING CONDITIONS PLAN 2

SHEET 3 OF 11

Proposal No. 607597 - 132402

L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:44 PM

A00840 - 232



PROPOSED PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

PROPOSED CONDITIONS PLAN 1

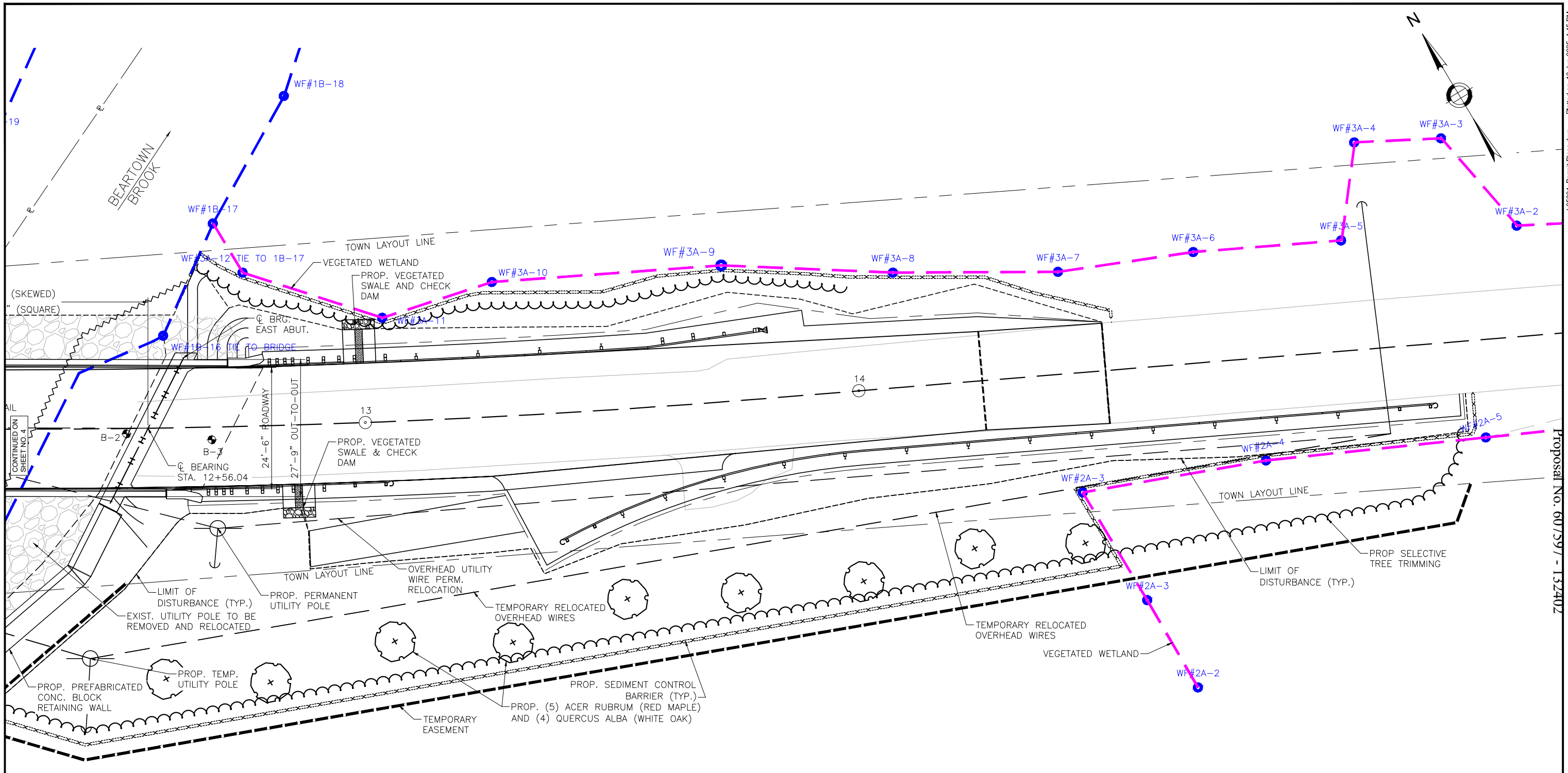
SHEET 4 OF 11

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A00840 - 234

L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:45 PM

Proposs No. 607597 - 1527402



PROPOSED PLAN

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SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

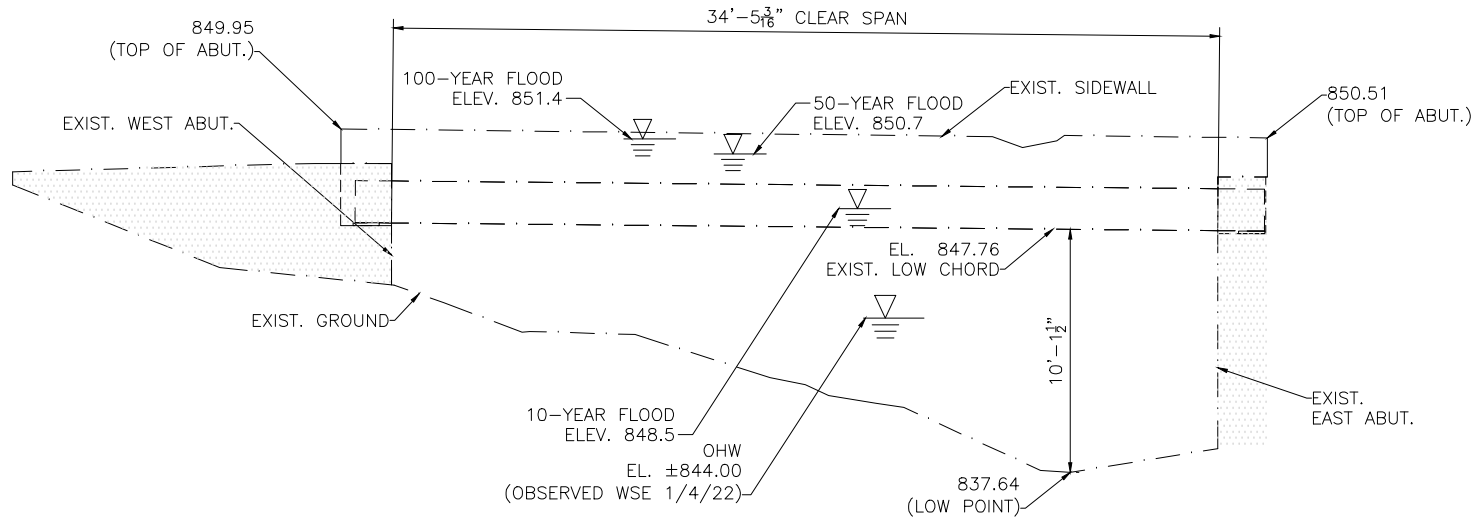
BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

PROPOSED CONDITIONS PLAN 2

SHEET 5 OF 11

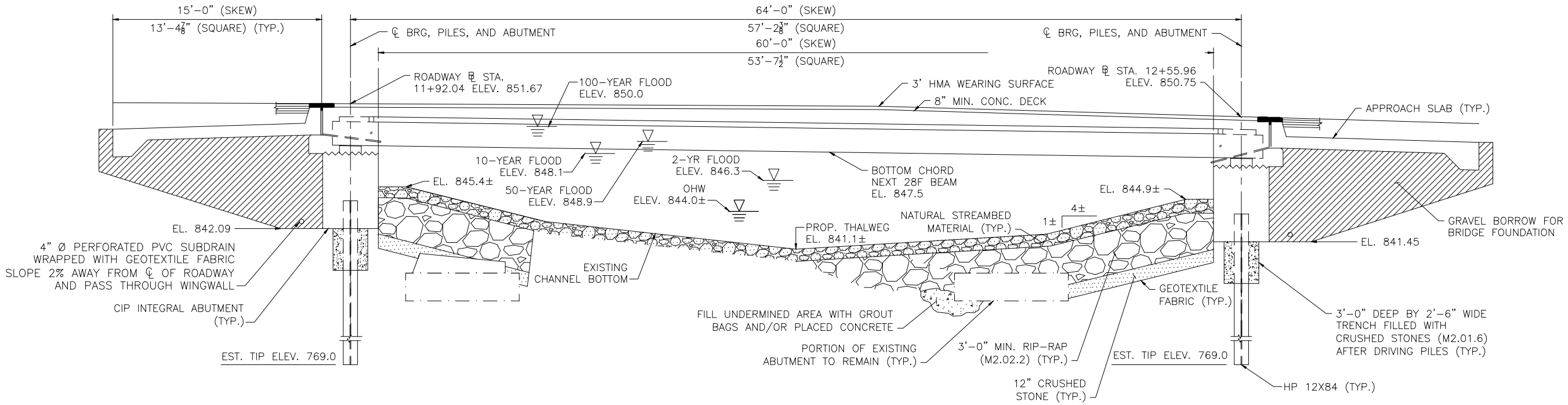
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EXISTING LONGITUDINAL SECTION

0 8 16 24 32

SCALE: 1" = 8'



PROPOSED LONGITUDINAL SECTION

0 8 16 24 32

SCALE: 1" = 8'

DATUM
NAVD 88

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

EXISTING AND PROPOSED LONGITUDINAL SECTIONS

SHEET 6 OF 11

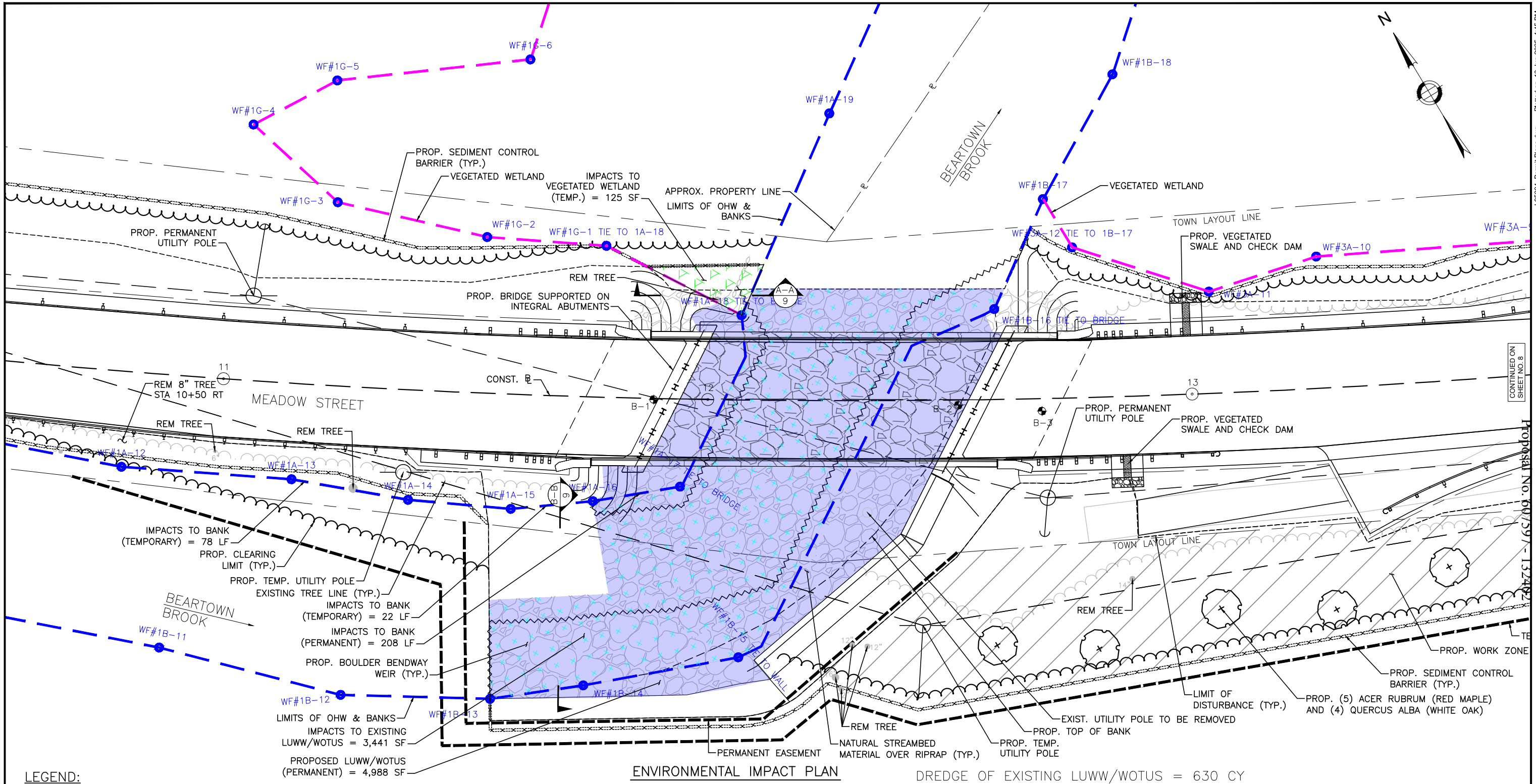
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A00840 - 235

Proposal No. 607597 - 132402

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L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:45 PM



ENVIRONMENTAL IMPACT PLAN

LEGEND:

IMPACT TO EXISTING LAND UNDER WATERWAYS/WOTUS (PERMANENT) = 3,441 SF

PROPOSED LAND UNDER WATERWAYS/WOTUS CONSTRUCTED (PERMANENT) = 4,988 SF

IMPACT TO VEGETATED WETLAND (TEMPORARY) = 125 SF

DREDGE OF EXISTING LUWW/WOTUS = 630 CY

DISCHARGE TO EXISTING LUWW/WOTUS = 508 CY

IMPACTS TO BANK (PERMANENT) = 208 LF

IMPACTS TO BANK (TEMPORARY) = 100 LF

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

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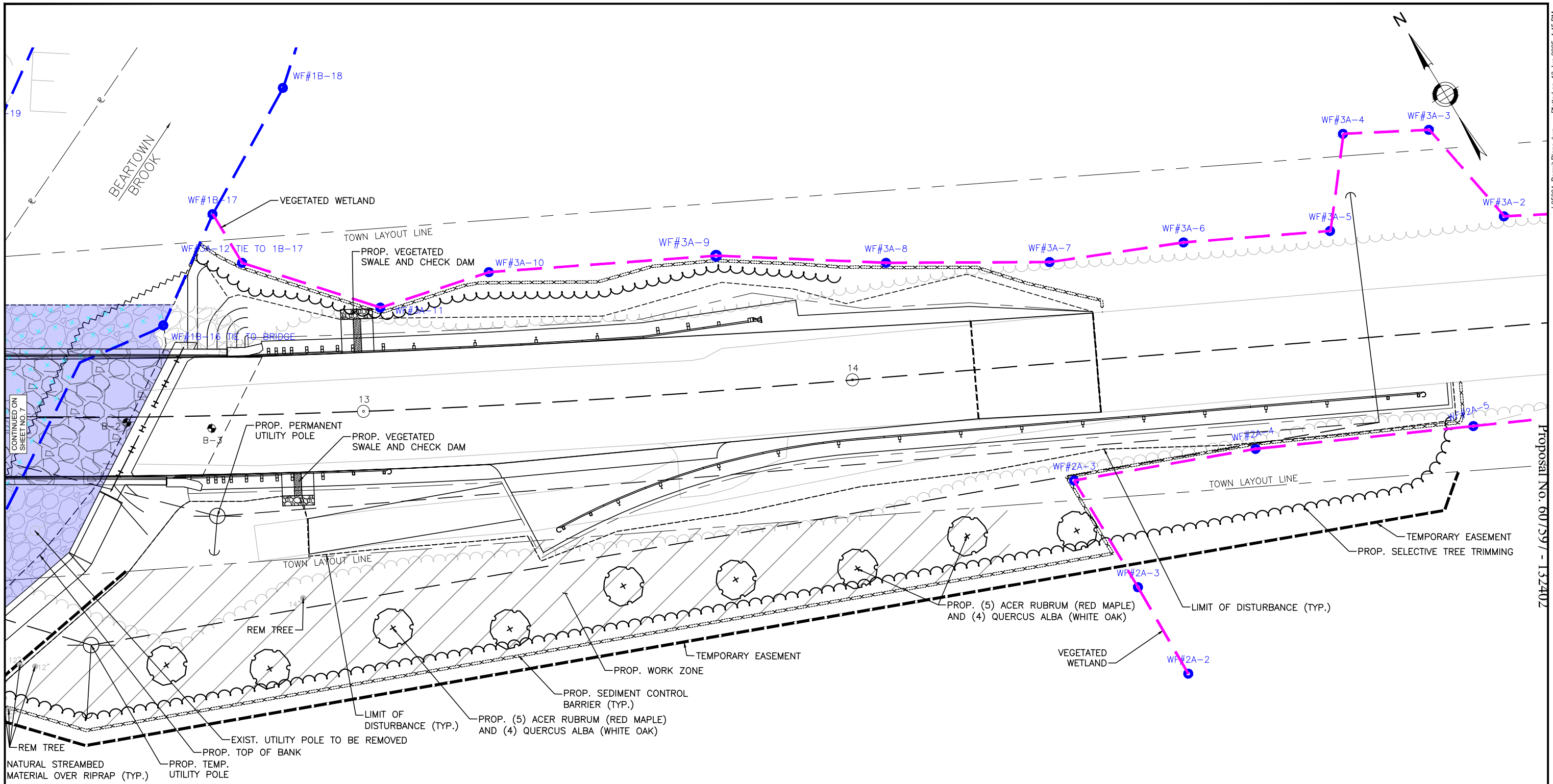
BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

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ENVIRONMENTAL IMPACT PLAN 1

SHEET 7 OF 11



ENVIRONMENTAL IMPACT PLAN

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SCALE: 1" = 20'

DATUM
NAD 83

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BRIDGE REPLACEMENT
TOWN OF LEE

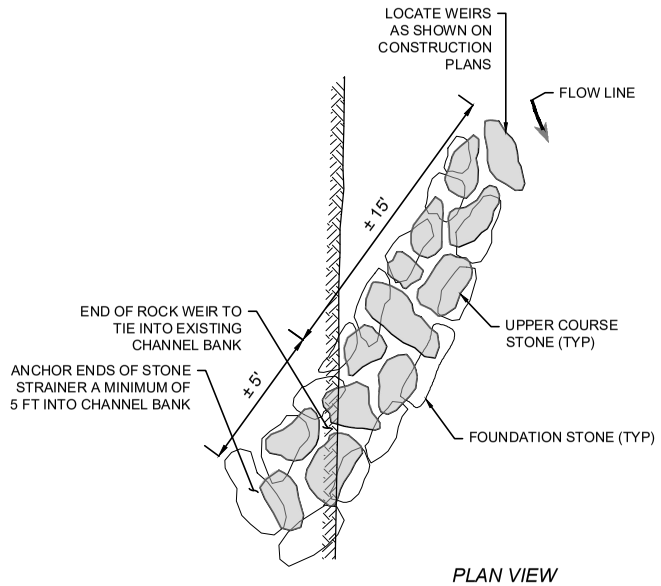
BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

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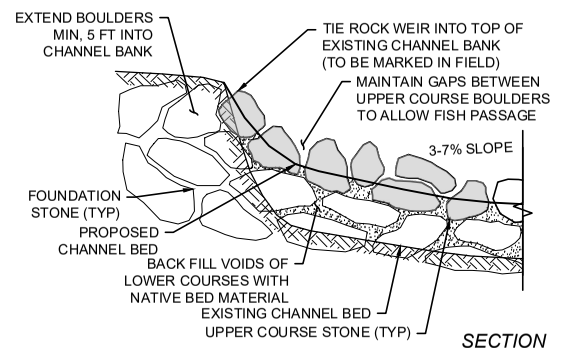
ENVIRONMENTAL IMPACT PLAN 2

SHEET 8 OF 11

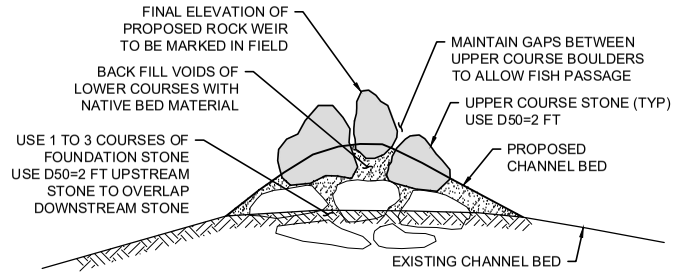
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Proposal No. 607697 - 132402



PLAN VIEW



SECTION

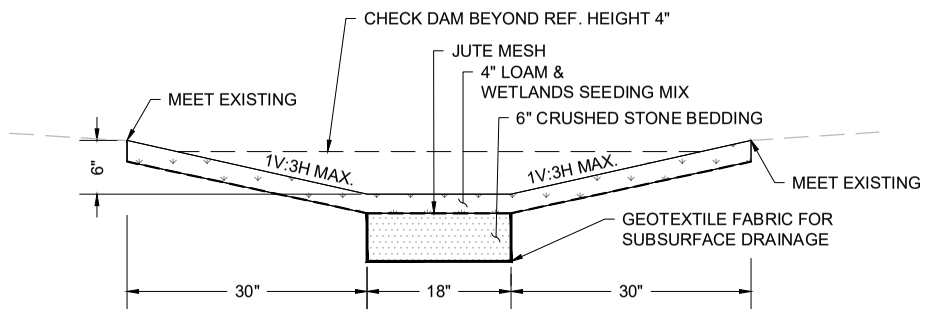


PROFILE VIEW

NOTES:
1. SOURCE OR SALVAGE UPPER COURSE BOULDERS FROM WITHIN THE CHANNEL AND ADJACENT FLOODPLAIN AREAS DURING CONSTRUCTION IF POSSIBLE. IF IMPORTED, USE WEATHERED NATURALLY-FORMED BOULDERS FOR UPPER COURSE.
2. USE FOUNDATION STONES SALVAGED FROM WITHIN THE CHANNEL AND ADJACENT FLOOD PLAIN AREAS TO INTERLOCK TOGETHER. IF EXISTING MATERIAL IS NOT SUITABLE, USE RIPRAP FOR LOWER COURSES OF FOUNDATION STONES.
3. OVERLAP UPSTREAM STONES OVER DOWNSTREAM STONES.
4. PLACE UPPER COURSE STONES SUCH THAT THEY INTERLOCK WITH FOUNDATION STONES.
5. FINISHED ELEVATION AND PLACEMENT OF BOULDERS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
6. ADJUSTMENT OF FINAL LOCATION AND PLACEMENT OF UPPER COURSE STONES MAY BE REQUIRED AT THE DIRECTION OF THE ENGINEER.
7. SEE SPECIAL PROVISION FOR ITEM 984.2 BOULDER BENDWAY WEIR FOR ADDITIONAL INFORMATION.
8. STONE BOULDERS SHOWN IN DETAILS ARE NOT DRAWN TO SCALE AND ARE FOR ILLUSTRATION PURPOSES ONLY.

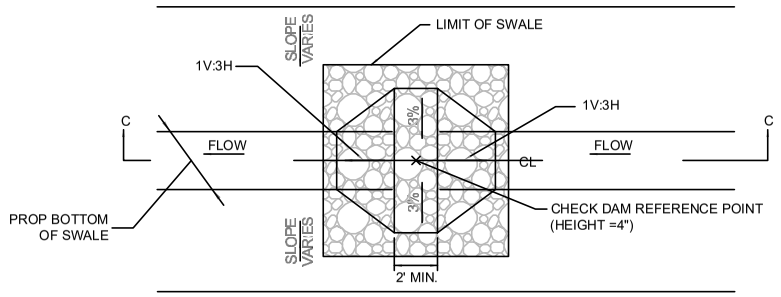
BOULDER BENDWAY WEIR

NOT TO SCALE



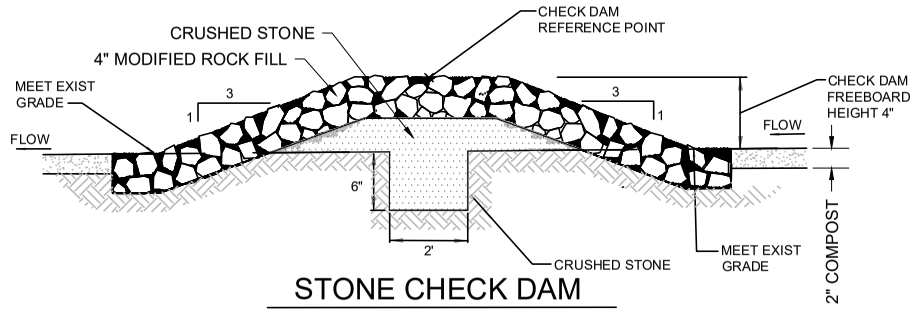
VEGETATED SWALE

NOT TO SCALE



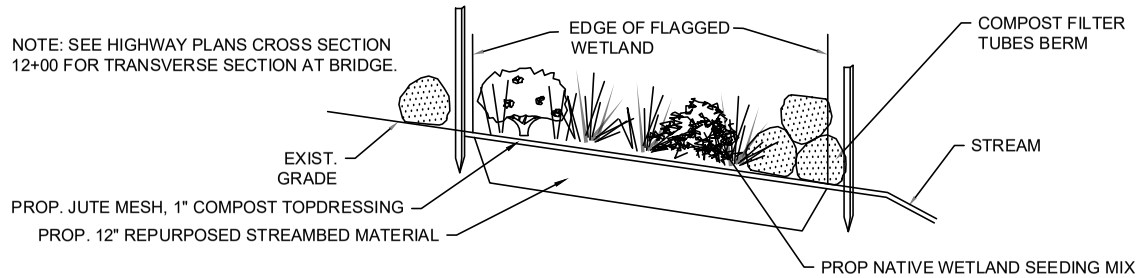
STONE CHECK DAM

NOT TO SCALE



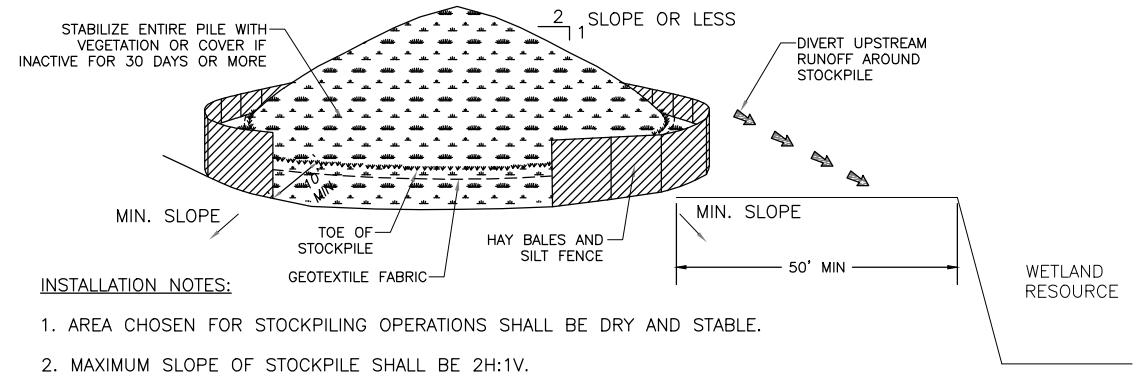
STONE CHECK DAM SECTION C-C

NOT TO SCALE



TYPICAL WETLAND RESTORATION

SECTION A–A
SCALE: N.T.S.
7

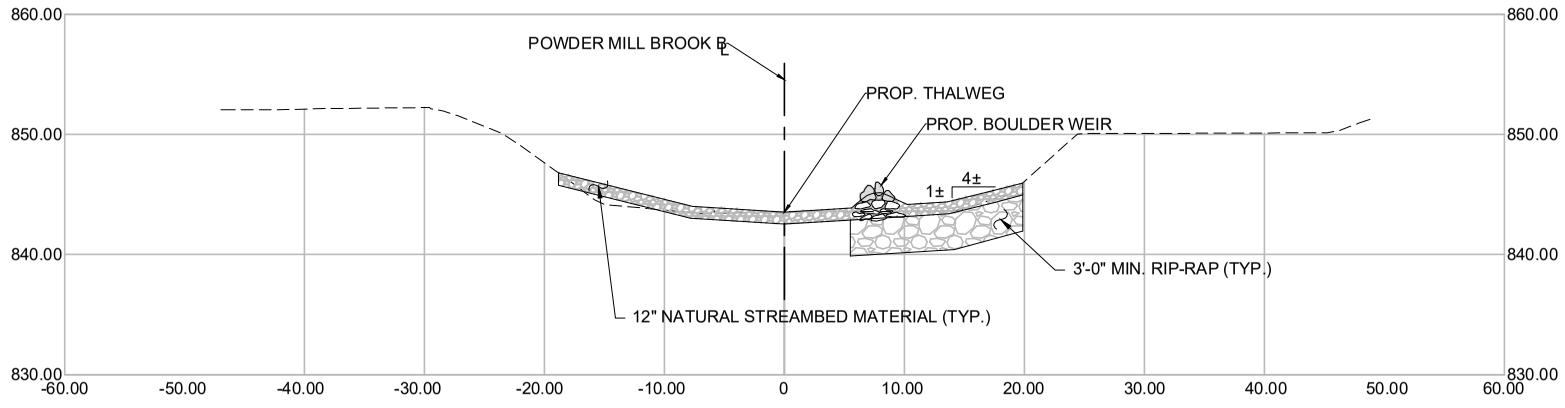


INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING AND HAYBALES, THEN STABILIZED WITH VEGETATION OR COVERED.

SOIL STOCKPILING

NOT TO SCALE



SECTION B–B
SCALE: 1" = 8'
7

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

ENVIRONMENTAL DETAILS

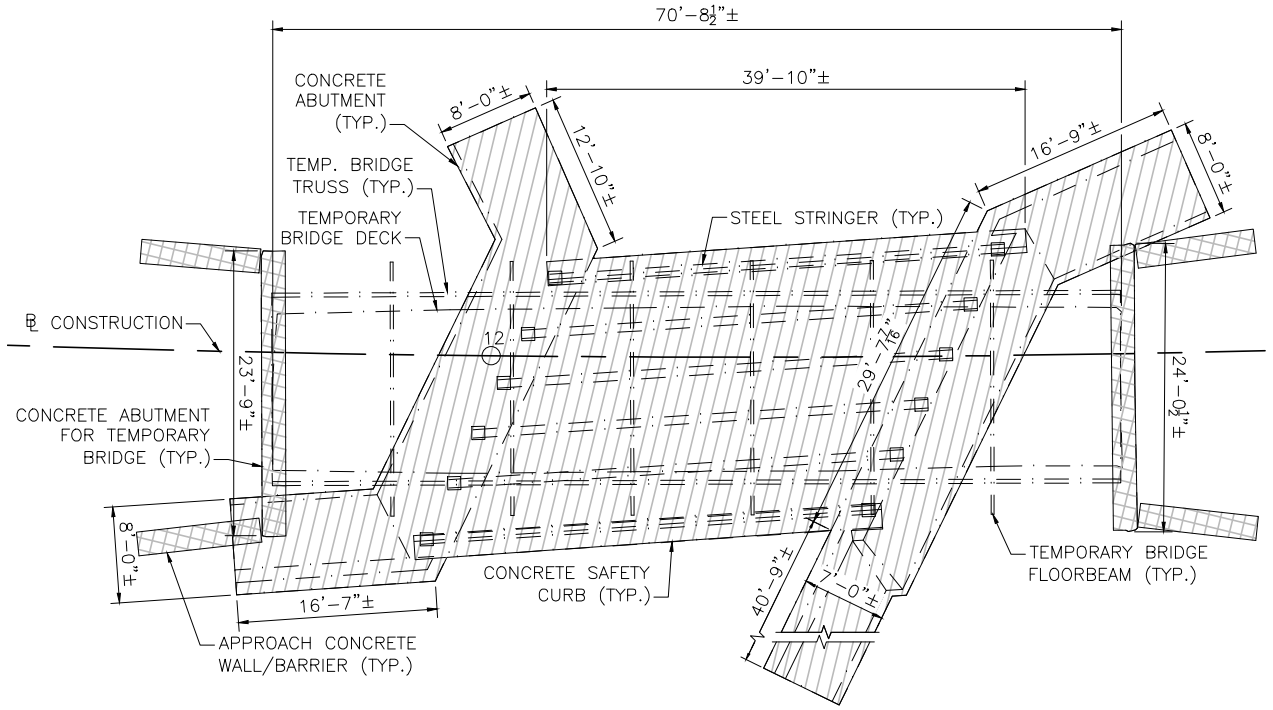
SHEET 9 OF 11

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L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:45 PM

Proposal No. 607597 - 132402

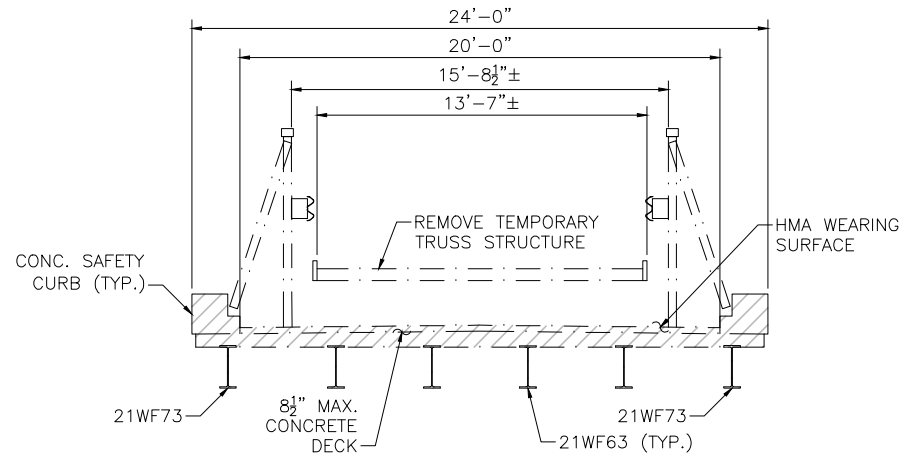
A00840 - 238



DEMOLITION PLAN

0 16 32 48

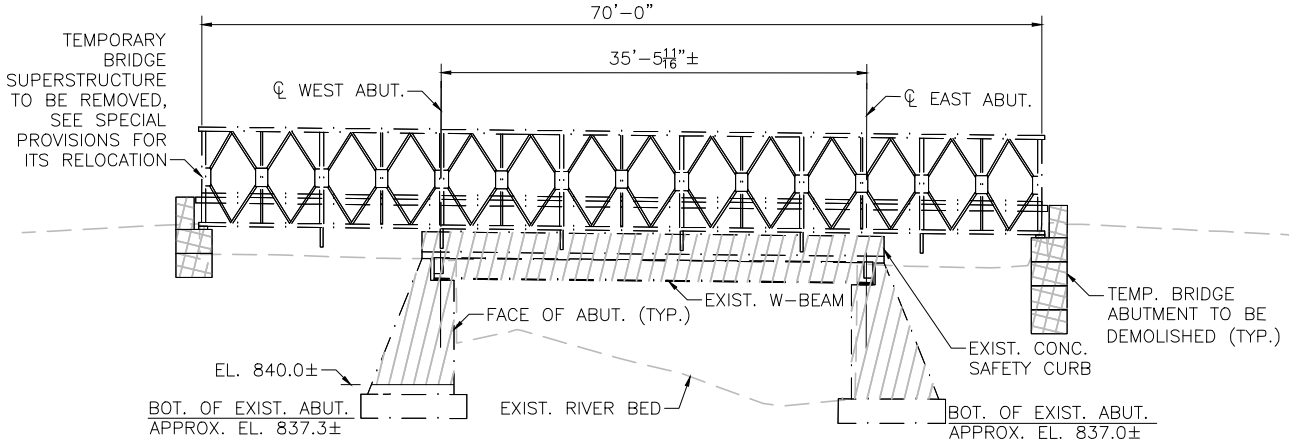
SCALE: 1" = 16'



DEMOLITION – EXISTING BRIDGE TRANSVERSE SECTION

0 8 16 24

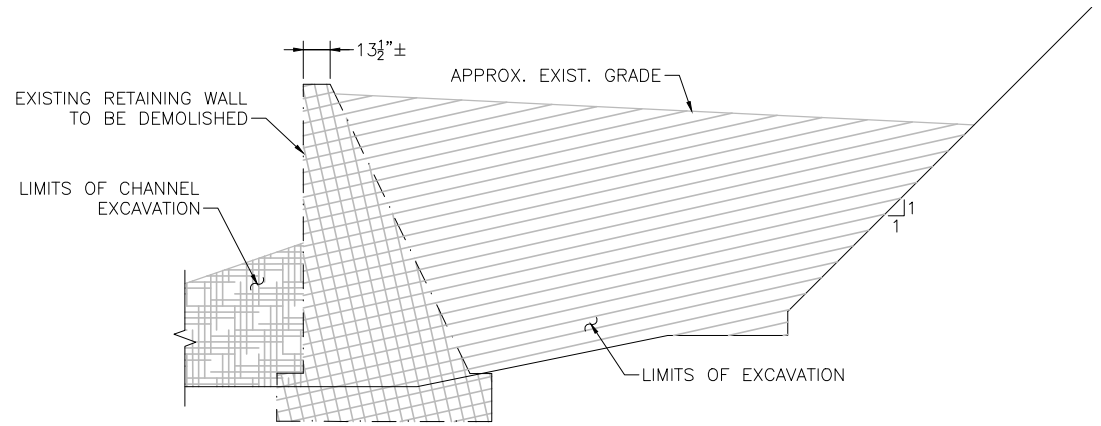
SCALE: 1" = 8'



DEMOLITION – EXISTING BRIDGE SECTION

0 16 32 48

SCALE: 1" = 16'



WALL DEMOLITION AND EXCAVATION SECTION

0 8 16 24

SCALE: 1" = 8'

DEMOLITION NOTES

1. EXISTING BRIDGE STRUCTURES SHOWN ARE PER RECORD PLANS AND SURVEY.
2. TEMPORARY TRUSS STRUCTURE TO BE REMOVED CAREFULLY WITHOUT DAMAGE.
3. SEE SHEET 6 FOR STAGE DEMOLITION DETAILS.

DEMOLITION LEGEND

- LIMITS OF DEMOLITION OF EXISTING BRIDGE
- LIMITS OF DEMOLITION OF TEMPORARY BRIDGE ABUTMENTS

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BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

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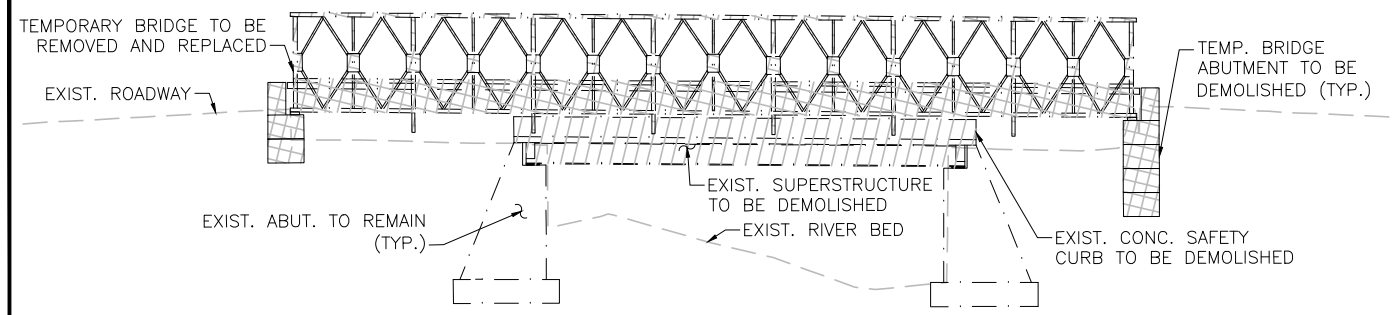
DEMOLITION PLAN

SHEET 10 OF 11

L05004_Permit Plans (Demo & Control of Water).dwg Plotted on 13-Jun-2025 4:45 PM

Proposal No. 60759 - 132402

A00840 - 239

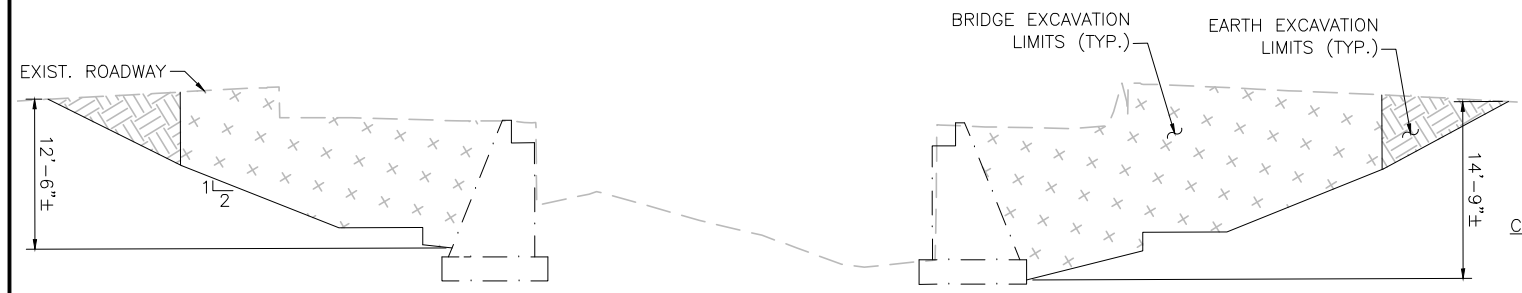


STAGE 1 – DEMOLITION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. REMOVE AND STACK TEMPORARY BRIDGE SUPERSTRUCTURE.
2. DEMOLISH TEMPORARY BRIDGE ABUTMENTS.
3. DEMOLISH EXISTING SUPERSTRUCTURE.

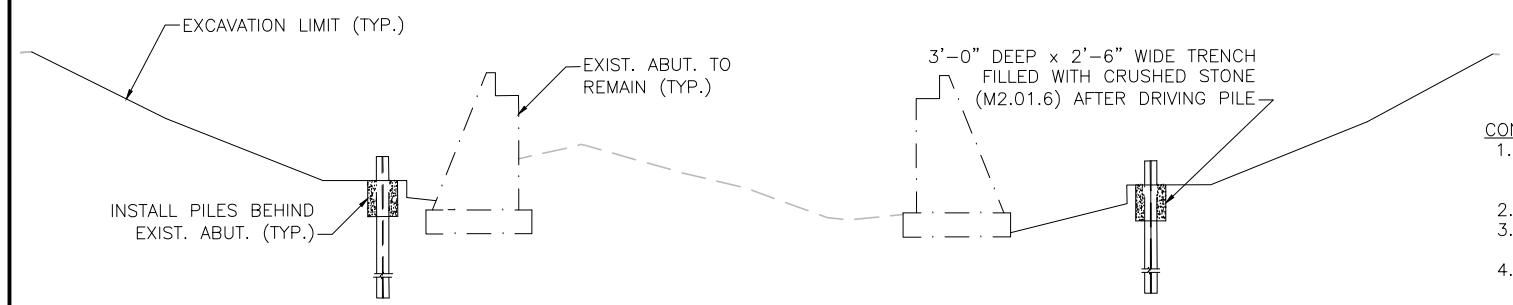


STAGE 2 – EXCAVATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. EXCAVATE TO LIMITS SHOWN. EXCAVATED MATERIAL MAY BE USED FOR BACKFILLING IF IT MEETS THE SPECIFICATIONS FOR M1.03.0, TYPE A.

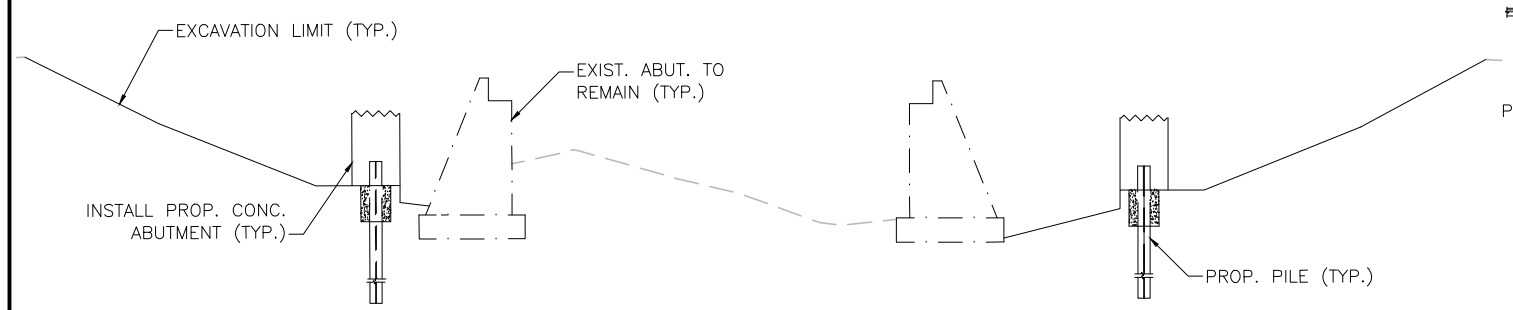


STAGE 3 – PILE INSTALLATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. DIG 3'–0" x 2'–6" TRENCH AS SHOWN.
2. INSTALL PILES.
3. FILL TRENCH WITH CRUSHED STONE.

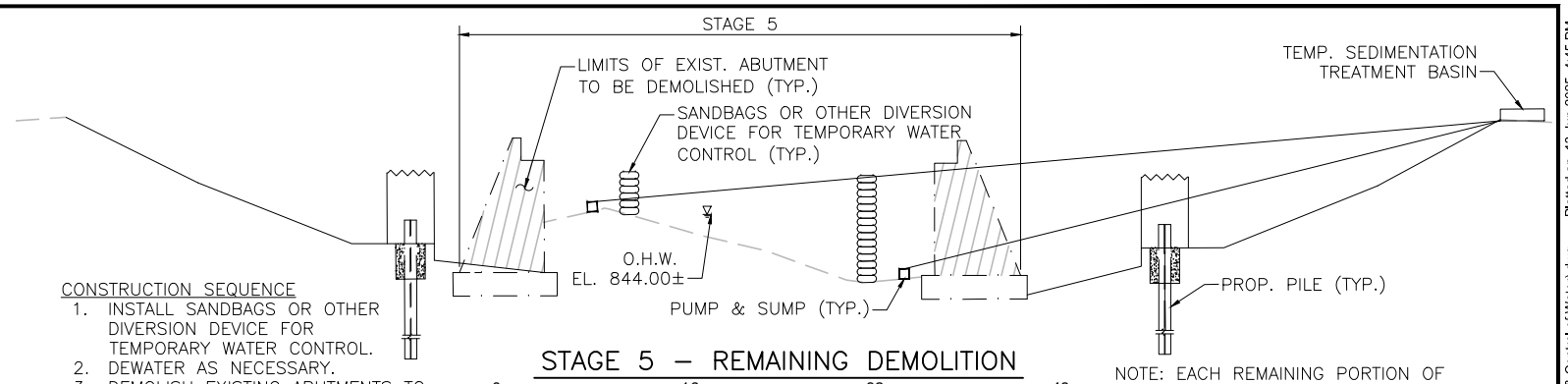


STAGE 4 – ABUTMENT INSTALLATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. INSTALL CONCRETE ABUTMENTS.



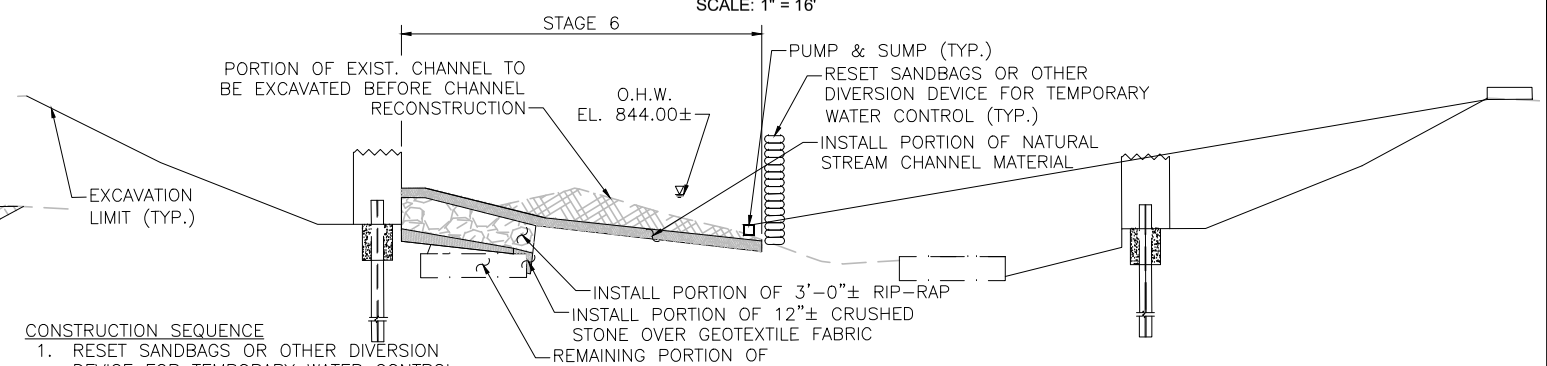
CONSTRUCTION SEQUENCE
1. INSTALL SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. DEMOLISH EXISTING ABUTMENTS TO LIMITS SHOWN.

STAGE 5 – REMAINING DEMOLITION

0 16 32 48

SCALE: 1" = 16'

NOTE: EACH REMAINING PORTION OF ABUTMENT DEMOLITION MAY BE DONE WITH EACH PHASE OF CHANNEL RECONSTRUCTION.

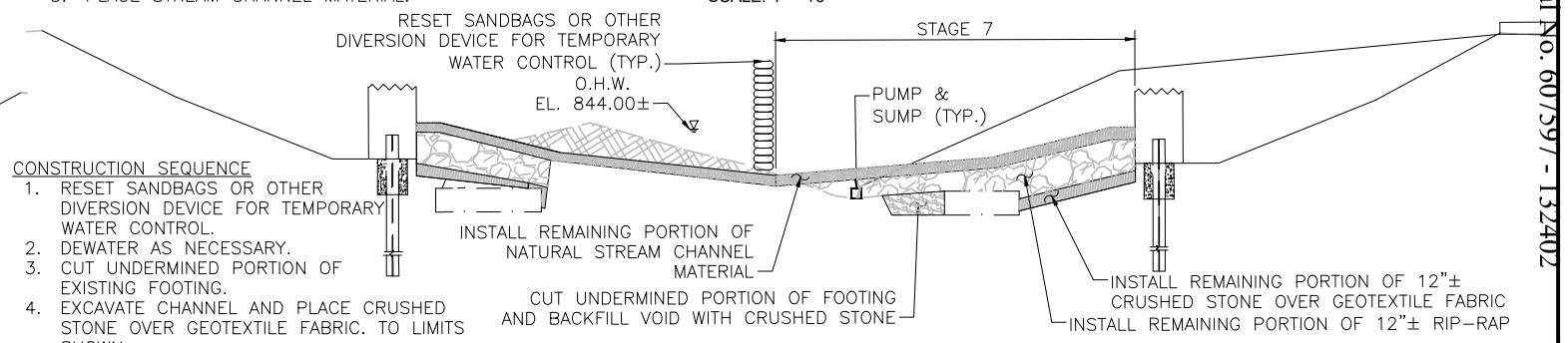


CONSTRUCTION SEQUENCE
1. RESET SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. EXCAVATE CHANNEL AND PLACE CRUSHED STONE OVER GEOTEXTILE FABRIC TO LIMITS SHOWN.
4. PLACE RIP–RAP.
5. PLACE STREAM CHANNEL MATERIAL.

STAGE 6 – CHANNEL RECONSTRUCTION PHASE 1

0 16 32 48

SCALE: 1" = 16'

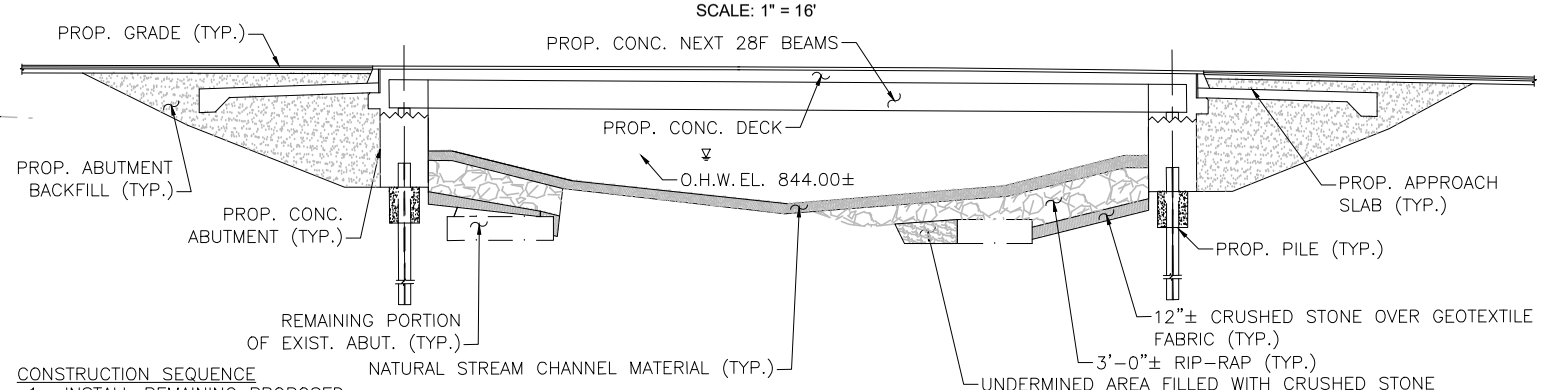


CONSTRUCTION SEQUENCE
1. RESET SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. CUT UNDERMINED PORTION OF EXISTING FOOTING.
4. EXCAVATE CHANNEL AND PLACE CRUSHED STONE OVER GEOTEXTILE FABRIC. TO LIMITS SHOWN.
5. PLACE RIP–RAP.
6. PLACE STREAM CHANNEL MATERIAL.

STAGE 7 – CHANNEL RECONSTRUCTION PHASE 2

0 16 32 48

SCALE: 1" = 16'



CONSTRUCTION SEQUENCE
1. INSTALL REMAINING PROPOSED COMPONENTS OF SUBSTRUCTURE.
2. INSTALL PROPOSED SUPERSTRUCTURE.
3. BACKFILL ABUTMENTS.
4. PLACE HMA PAVEMENT.

PROPOSED LONGITUDINAL SECTION

0 16 32 48

SCALE: 1" = 16'

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

CONTROL OF WATER PLAN

SHEET 11 OF 11

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Proposal No. 00759 - 1324012

A00840 - 240

From:	James Turnbull
To:	Davis, Heidi (DEP); Iannelli, Jaime (DEP); Huckabee, Preston (EXT); knelson; Joa, Michael A. (DOT); Walker, Courtney L. (DOT); Bartus, Joshua D. (DOT)
Subject:	Lee-Meadow Street 607597 - Combined 401/404 Permit
Date:	Monday, July 21, 2025 4:56:04 PM
Attachments:	FW 607597 Lee Turtle Protection Plan approval.pdf

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Heidi,

In response to DEP's comments emailed to massDOT July 8, 2025 we are kindly submitting the responses below for your use and clarification.

1. The response to MassDEP's Comment #10 states that half of the runoff from the proposed impervious area (10,878 sf) will be directed toward a vegetated swale east of the bridge to the north and the other half will drain to a vegetated swale east of the bridge to the south. In addition, it states that "DP-1" and "DP-2"are assumed to be at the bottom of each swale. However, the extent of the project area that will drain to each vegetated swale is unclear, as well as the limits of DP-1 and DP-2. Furthermore, it is unclear if the remaining portions of the project area (northern and southern approaches) will also be directed toward the vegetated swales or if the use of country drainage will be maintained. Please clarify and/or provide a map or plan showing the proposed watershed with each subcatchment delineated.

Meadow St will continue to drain by country drainage similar to existing conditions, except for the area of the bridge where curbing is required with the bridge railing that is being installed. This area is about 1,577 SF directed to DP-1 and about 1,566 SF directed to DP-2. The memorandum uses the entire impervious area of the project limits to provide a more conservative discharge calculation of the volume being discharged to each design point. The proposed vegetated swales and check dams provide a drainage point off the bridge, away from the resource, to drain only the curbed area on the bridge structure. The rest of the roadway will remain "country drainage." Please see attached plan for reference.

2. Thank you for the additional information regarding the bridge repairs at L-05-002 (057) Willow Street over the Housatonic River. Please note that this work is not included in the 401 WQC to be issued for the replacement of L-05-049 (059) Meadow Street over Beartown Brook.

Understood.

3. Please note that proof of NHESP's approval of the turtle protection plan (TPP) must

be provided to MassDEP prior to construction. A condition will be included in the WQC if proof is not available before issuance of the Certification.

NHESP has approved the turtle protection plan (TPP), please see attached email correspondence.

Please feel free to contact me if you have any further questions, thanks.

James P. Turnbull
Senior Project Manager | **Gill Engineering**
We've Moved! Please Note Our New Address:
1234 Chestnut Street, Suite 207 | Newton, MA 02464
o 781-355-7100 | c 617-721-7694

HIGHWAY GUARD DETAILS

TRAILING ANCHORAGE: STA 8+26, 23.4' RT TO STA 8+36, 21.3' RT
GUARDRAIL, DEEP POST (SINGLE FACED): STA 8+36, 21.3' RT TO STA 11+41, 12.2' RT
TRANSITION TO BRIDGE RAIL: STA 11+41, 12.2' RT TO STA 11+75, 12.8' RT
TRAILING ANCHORAGE: STA 9+28, 10.8' LT TO STA 9+38, 10.7' LT
GUARDRAIL, TL-2 (SINGLE FACED): STA 9+38, 10.7' LT TO STA 11+53, 12.0' LT
TRANSITION TO BRIDGE RAIL: STA 11+53, 12.0' LT TO STA 11+87, 12.0' LT
TRANSITION TO BRIDGE RAIL: STA 12+74, 12.0' LT TO STA 13+08, 12.0' LT
GUARDRAIL, TL-2 (SINGLE FACED): STA 13+08, 12.0' LT TO STA 13+30, 12.0' LT
GUARDRAIL TANGENT END TREATMENT, TL-2: STA 13+30, 12.0' LT TO STA 13+83, 13.8' LT
TRANSITION TO BRIDGE RAIL: STA 12+61, 12.3' RT TO STA 12+95, 12.0' RT
TRAILING ANCHORAGE: STA 12+95, 12.0' RT TO STA 13+05, 12.0' RT
TRAILING ANCHORAGE: STA 13+39, 25.2' RT TO STA 13+48, 21.6' RT
GUARDRAIL, TL-2 (SINGLE FACED): STA 13+48, 21.6' RT TO STA 15+06, 12.0' RT
TRAILING ANCHORAGE: STA 15+06, 12.0' RT TO STA 15+16, 12.0' RT

NOTE: ALL DEEP GUARDRAIL POST SPACING SHALL BE ESTABLISHED AT 6'-3"

TRAFFIC SIGNAL CONDUIT

NONE

WATER SUPPLY ALTERATIONS

NONE

DRAINAGE DETAILS

SEE BELOW

LEE
MEADOW STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	----	6	50
PROJECT FILE NO.	607597		

CONSTRUCTION PLAN

N/F
SILVERLEAF RESORTS, INC.
BK/PG 1586/644
137 MEADOW STREET
MAP 35.0/BLOCK 0/LOT 1

N/F
SILVERLEAF RESORTS, INC.
BK/PG 1586/644
11 BEARTOWN MOUNTAIN ROAD
MAP 34.0/BLOCK 0/LOT 11

CONSERVATION RESTRICTION
BERKSHIRE NATURAL RESOURCES COUNCIL, INC.
AND LEE LAND TRUST, INC.
BK/PG 3098/52

N/F
COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF CONSERVATION AND RECREATION
BK/PG 1375/977
381 MEADOW STREET
MAP 35.0/BLOCK 0/LOT 01A

POWDER MILL BROOK
(BEARTOWN BROOK)

MEADOW STREET
(PUBLIC COUNTY ROAD – 66–FOOT WIDTH)

1983 TOWN LAYOUT LINE

RET EXIST "X-WALK AHEAD" SIGN
RET OVERHEAD WIRE(S) AND PROTECT THROUGHOUT CONSTRUCTION
LIMIT OF WORK
MATCH EXISTING
PROP UPL (BO)
REM EXIST UPL (BO)
PROP SELECTIVE CLEARING AND THINNING AND TREE TRIMMING LIMIT
PROP CLEARING AND GRUBBING LIMIT
PROP SEDIMENT CONTROL BARRIER
PROP COMPOST BLANKET & SEED
PROP SLOPE LIMIT
PROP GRADE BREAK
PAVEMENT MILLING MULCH
PROP HWY GUARD
SLACK SPAN (BO)
RET UPL
PROP MILL & OVERLAY
BANK (ORDINARY HIGH WATER)
PROP DEWATERING TO BE COMPLETED IN TWO STAGES
PROP CURB
R&S GUARDRAIL
BORDERING VEGETATED WETLAND
BANK TO BE RESTORED WITH JUTE MESH & WETLANDS SEED OVER COMPOST BLANKET & SEED
WEST ABUTMENT BEARING ℄ 11+92.04
R&S TEMP ABUTMENTS
PROP TREE AND PLANT PROTECTION - VISIBILITY STAKES
PROP APPROACH SLAB
PROP FULL DEPTH CONSTRUCTION
R&S TEMP STEEL BRIDGE
REM EXIST BRIDGE L-05-004-059
REM TREE (TYP)
PROP BRIDGE L-05-004 (CEB)
R&R USGS DISK
LAND UNDER WATER
BANK (ORDINARY HIGH WATER)
PROP STONE COBBLE STREAMBED RESTORATION AND BOULDER WEIRS
PROP CONCRETE MODULAR BLOCK RETAINING WALL (SEE DETAIL SHEET 9)
REM EXIST UPL (BO)
REM EXIST CONC WINGWALL
LENGTHEN & RELOCATE OVERHEAD WIRES TO FACILITATE ROAD AND BRIDGE CONSTRUCTION (SEE UTILITY PLAN SHEET) (BO)
PROP VEGETATED SWALE AND CHECK DAM
PROP GRAVEL DRIVEWAY
PROP FIVE RED MAPLE TREES (TYP)
PROP HMA DRIVEWAY APRON
REM EXIST HMA DRIVEWAY APRON
PROP TEMP GUY POLE (BO)
R&S EXIST R1-2
R&S EXIST R1-1
PROP MILL & OVERLAY
PROP FOUR WHITE OAK TREES (TYP)
MATCHLINE
CONTINUED BELOW
CONTINUED ABOVE

END OF CURB
A = 1,577 SF
A = 1,566 SF
DP-1
A = 13 SF
DP-2
A = 13 SF
Δ=24°34'15"
R=1850.00'
L=793.36'
T=402.87'
R=159'
PT +81.21
+25.00
+45.95
OFFSET: 15.14
+39.67
OFFSET: 27.58
+10.05
OFFSET: 53.72

PROJECT BEGIN
STA 9+75
N2929699.5241
E177122.6742

PROJECT END
STA 14+50
N2929450.7716
E177525.9573

NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE MASSDOT DISTRICT ONE SURVEY ENGINEER AT LEAST TWO WEEKS IN ADVANCE OF DEMOLISHING THE BRIDGE, SO ARRANGEMENTS CAN BE MADE TO TEMPORARILY TRANSFER THE ELEVATION OF THE USGS BENCHMARK DISK TT 15 TDA LOCATED ON THE NORTHEAST WINGWALL OF THE EXISTING BRIDGE. ALL EFFORTS SHOULD BE MADE TO PRESERVE THE DISK SO IT CAN BE RESET INTO THE WINGWALL OF THE PROPOSED BRIDGE.
2. CONTRACTOR TO PERFORM ALL CLEARING AND GRUBBING, SELECTIVE CLEARING AND THINNING, AND TREE TRIMMING REQUIRED TO ACCOMMODATE OVERHEAD WIRE RELOCATIONS.
3. FOR ALL PROPOSED UTILITY WORK, SEE UTILITY RELOCATION PLAN SHEET 17.
4. FOR CRANE SWING PLAN SEE BRIDGE PLANS CONCEPTUAL BEAM ERECTION DETAILS SHEET 15.
5. FOR CONCRETE BLOCK RETAINING WALL DETAILS SEE SHEET 9.
6. CLEARING AND GRUBBING LIMITS TO EXTEND 5 FT BEYOND SLOPE LIMITS PER ITEM 102.

SCALE: 1" = 20'

SEE PROFILE SHEET 7

WORK WITHIN RESOURCE AREAS

LOCATION	APPROX. AREA (S.F.)	RF (S.F.)	LUWW (S.F.)	WETLAND TYPE	DESCRIPTION OF WORK
STA 10+82 RT TO STA 11+56 RT	540	-	-	BANKS	SELECTIVE CLEARING AND THINNING AND TREE TRIMMING FOR OVERHEAD WIRES
STA 11+56 RT TO STA 12+60 LT	-	-	4,988	PERENNIAL STREAM	STREAMBED WORK
STA 11+62 LT TO STA 12+14 LT	340	-	-	BORDERING VEGETATED WETLAND	GRADING, CLEARING AND GRUBBING, SELECTIVE CLEARING AND THINNING, AND TREE TRIMMING
STA 12+88 LT TO STA 13+20 LT	60	-	-	BORDERING VEGETATED WETLAND	CLEARING AND GRUBBING AND TREE TRIMMING
STA 14+43 RT TO STA 15+22 RT	1505	-	-	BORDERING VEGETATED WETLAND	SELECTIVE CLEARING AND THINNING AND TREE TRIMMING FOR OVERHEAD WIRES

607597_HD(CONST PLANS).DWG Plotted on 27-Jun-2025 12:56 PM
Proposal No. 607597 - 123402
AM8340 7-23

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Gill Engineering Associates, Inc.
63 Kendrick Street
Needham, MA 02494
www.gill-eng.com
781-355-7100

MEMORANDUM

To: Dan Vasconcelos, Kevin Newton - USACE

From: James Turnbull, Keith Nelson - GEA

CC: Heidi M. Davis, Jaime Iannelli – MassDEP
Michael McHugh - MassDEP WERO
Lee Conservation Commission
Joshua Bartus, Courtney Walker, Michael Joa - MassDOT

Date: 6/20/2025

Re: Lee Meadow Street over Beartown Brook - Responses to Comments
PCN Review under MA GP 23

We are providing the following response to comments received from the Army Corps of Engineers on April 10, 2025 for review of the subject project, please see the following responses.

General
Comments 1, 2, and 3 in the email from the U.S. Army Corps of Engineers (USACE) to the Massachusetts Department of Transportation (MassDOT) dated April 10, 2025, are shown below for reference, responses are shown in bold.

Emailed Comments from Army Corps of Engineers:

1. Can you please add a detail of the bendway weir to the plans?

   Bendway weir details have been added to the Permitting Plans.

2. There are two wetland impact areas at the eastern project limits, one with 60 square feet of temporary impact and one with 1,105 square feet of temporary impact. Are impacts in both of these areas limited to the selective tree limb removal mentioned in the narrative? If so, this is not considered a discharge of fill, so should not be depicted as an impact on the plans (Corps authority in this location is limited to discharges of fill pursuant to Section 404 of the Clean Water Act).

   Yes, impacts in these areas are limited to the proposed selective tree trimming. Tree trimming areas have been removed from Vegetated Wetland impacts because there is no discharge of fill in these areas. The temporary impacts to Vegetated wetlands have been revised from 1,505 S.F. to 125 S.F.

3. Following on 2 above, the narrative mentions that no earthwork is proposed in the two tree limb removal areas, and that the tree work can be done from the road. However, these areas are shown inside the limits of the erosion controls, which could lead to them being

inadvertently impacted by sediment, vehicles, etc. There is also a third wetland area within the erosion controls, with no tree trimming or other work proposed. Since it sounds like there is no need to enter these areas, can the erosion controls be relocated around the wetlands to ensure there are no inadvertent discharges within these areas during construction? I attached a sketch to clarify, showing three areas of wetland that are not proposed to be impacted but are currently within the erosion control barrier, with a potential re-routing of the erosion controls sketched in blue.

Yes, we have adjusted the location of the sediment control barrier to an offset from the flagged wetland line, similar to the provided ACOE sketch. See revised permit plans.

TOWN OF LEE

MEADOW STREET OVER
POWDER MILL BROOK (a.k.a. BEARTOWN BROOK)
BRIDGE L–05–004

IN THE TOWN OF

LEE, MA
BERKSHIRE COUNTY

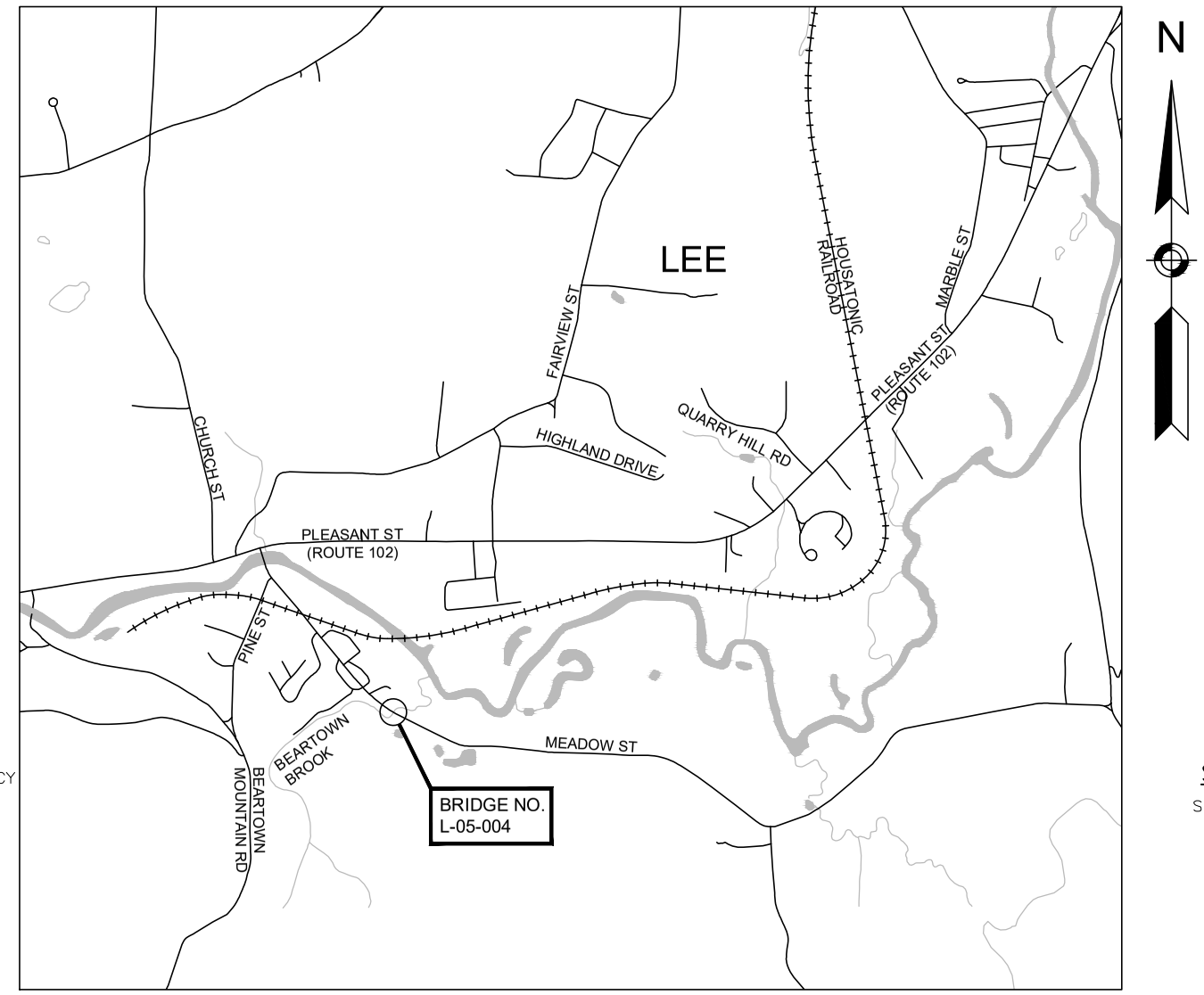
ENVIRONMENTAL PERMIT PLANS

SURVEY NOTES:

1. COORDINATES IN U.S. SURVEY FEET, ARE REFERENCED TO THE MASSACHUSETTS COORDINATE SYSTEM, MAINLAND ZONE, REFERENCED TO THE NORTH AMERICAN DATUM OF 1983

2. ELEVATIONS, IN U.S. SURVEY FEET, ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988

3. BENCHMARK:
   DISK
   N: 2929556.362
   E: 177348.962
   EL. 850.04



LIST OF RESOURCE ABBREVIATIONS

VW = VEGETATED WETLAND
WOTUS = WATERWAYS OF THE UNITED STATES
OHW = ORDINARY HIGH WATER

RESOURCE IMPACTS:

LAND UNDER WATERWAYS/WOTUS EXISTING AREA DREDGED (PERMANENT) = 3,441 SF, 630 CY
LAND UNDER WATERWAYS/WOTUS PROPOSED AREA (PERMANENT) = 4,988 SF
MATERIAL DISCHARGED (FILL) TO WOTUS (PERMANENT) = 3,441 SF, 508 CY
VEGETATED WETLAND (TEMPORARY) = 340 SF
BANKS (PERMANENT) = 208 LF
BANKS (TEMPORARY) = 100 LF

SHEET LIST TABLE

SHEET NO.	SHEET TITLE
1	TITLE SHEET
2	EXISTING CONDITIONS PLAN 1
3	EXISTING CONDITIONS PLAN 2
4	PROPOSED CONDITIONS PLAN 1
5	PROPOSED CONDITIONS PLAN 2
6	EXISTING AND PROPOSED LONGITUDINAL SECTIONS
7	ENVIRONMENTAL IMPACT PLAN 1
8	ENVIRONMENTAL IMPACT PLAN 2
9	ENVIRONMENTAL DETAILS
10	DEMOLITION PLAN
11	CONTROL OF WATER PLAN

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

TITLE SHEET

SHEET 1 OF 11

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L05004_Permit Plans (Title Sheet).dwg Plotted on 13-Jun-2025 4:44 PM

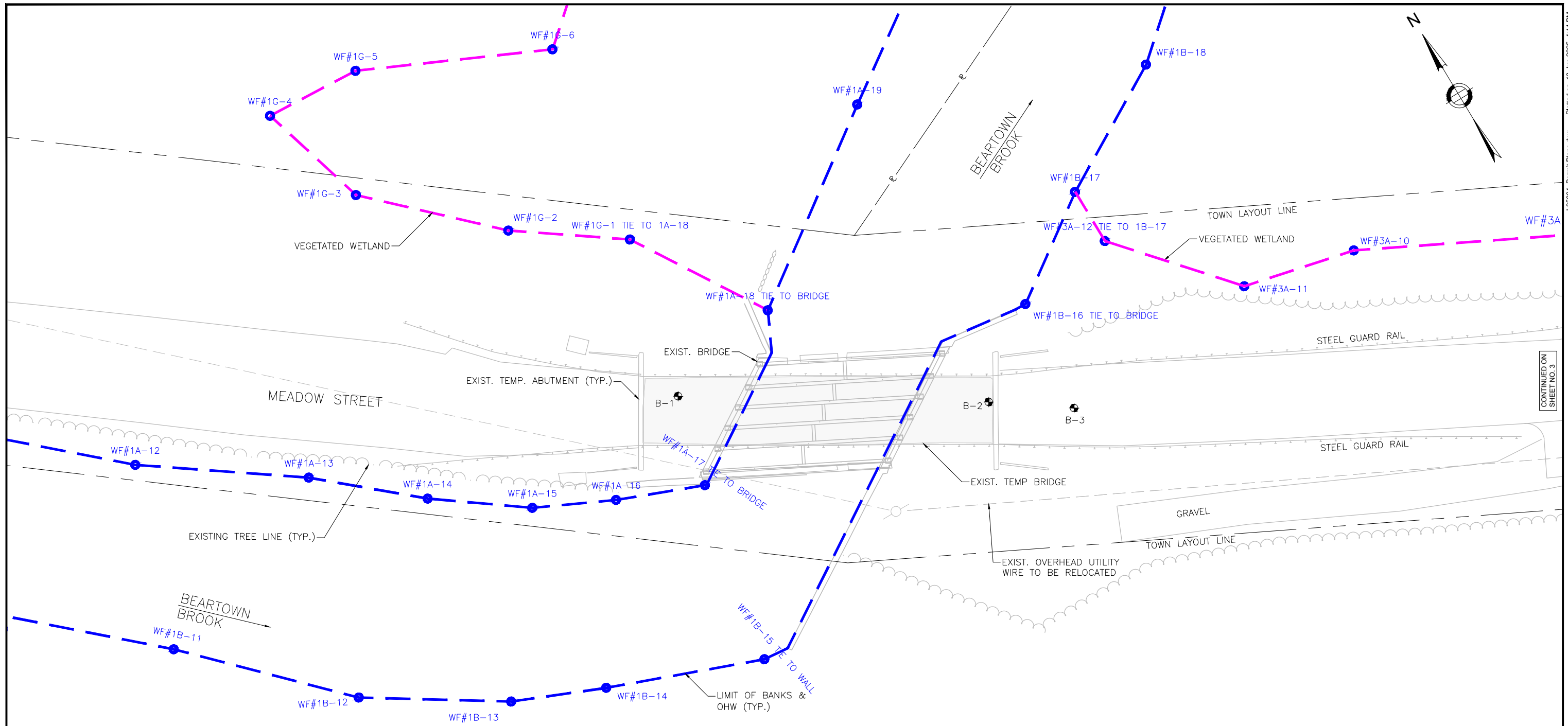
Proposal No. 607597 - 132402

A00840 - 247

A00840 - 248

Proposal No. 607597 - 132402

L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:44 PM



EXISTING PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

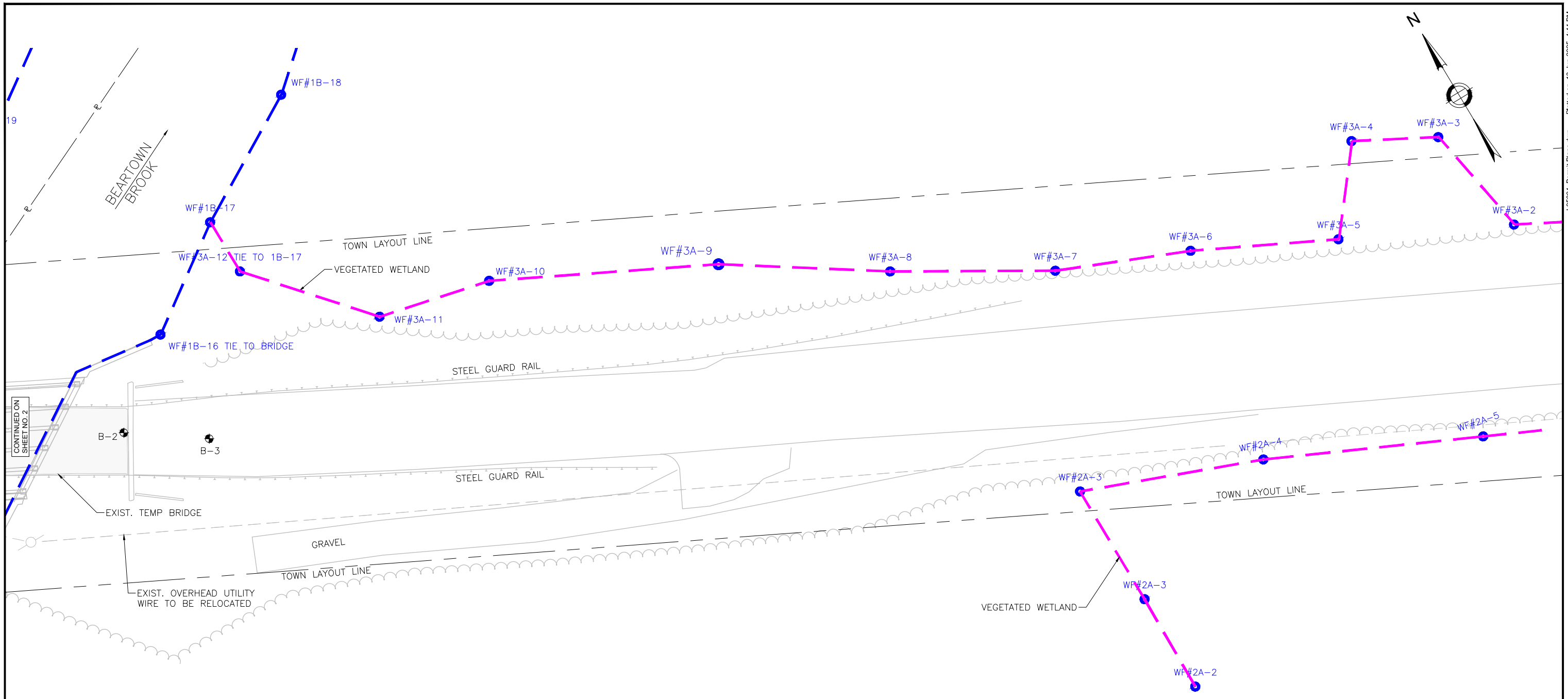
BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

EXISTING CONDITIONS PLAN 1

SHEET 2 OF 11

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EXISTING PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

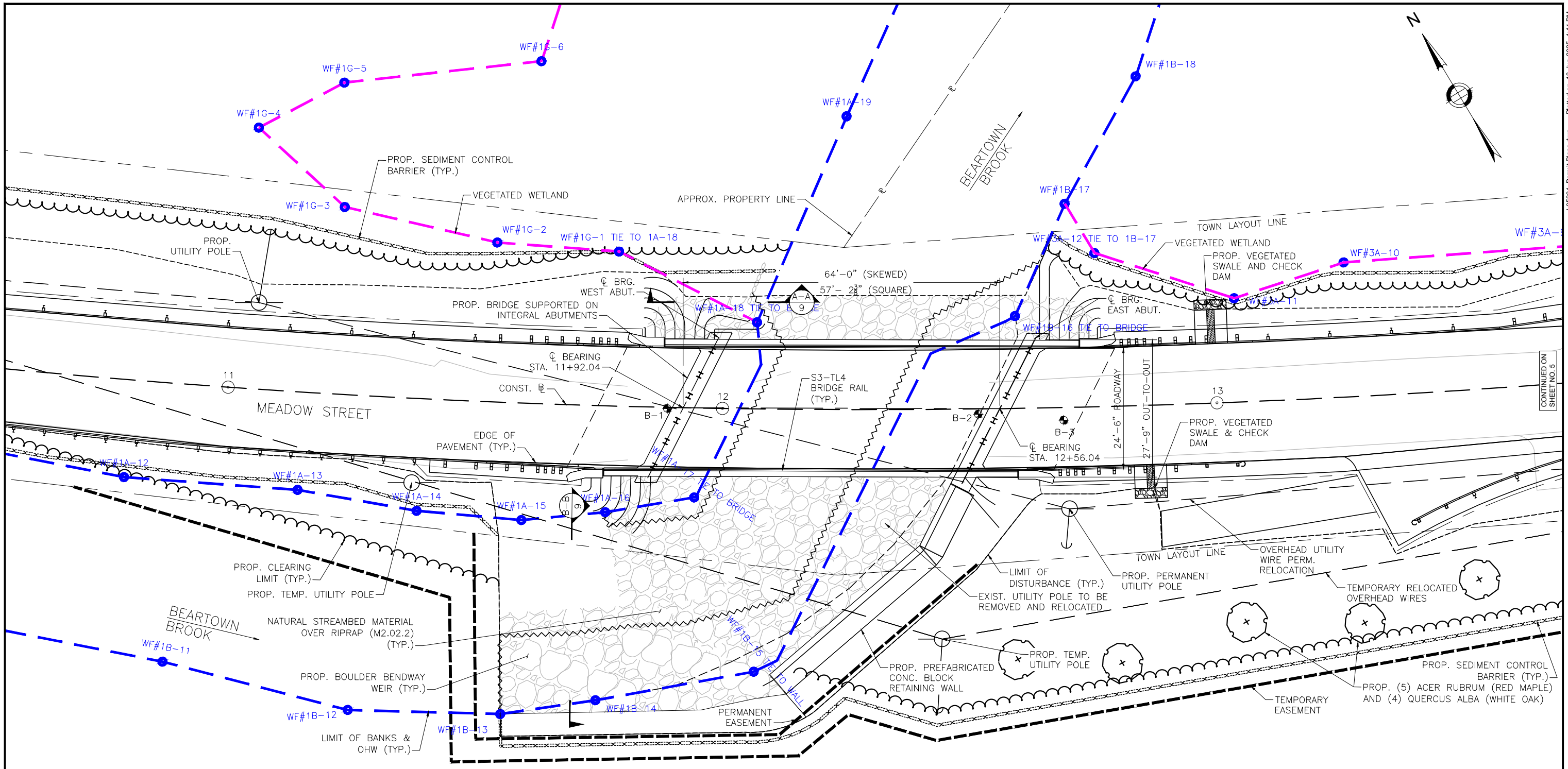
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EXISTING CONDITIONS PLAN 2

SHEET 3 OF 11

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L05004_Permit Plans.dwg
Proposal No. 607597 - 132402
A00840 - 249

L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:44 PM



PROPOSED PLAN

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

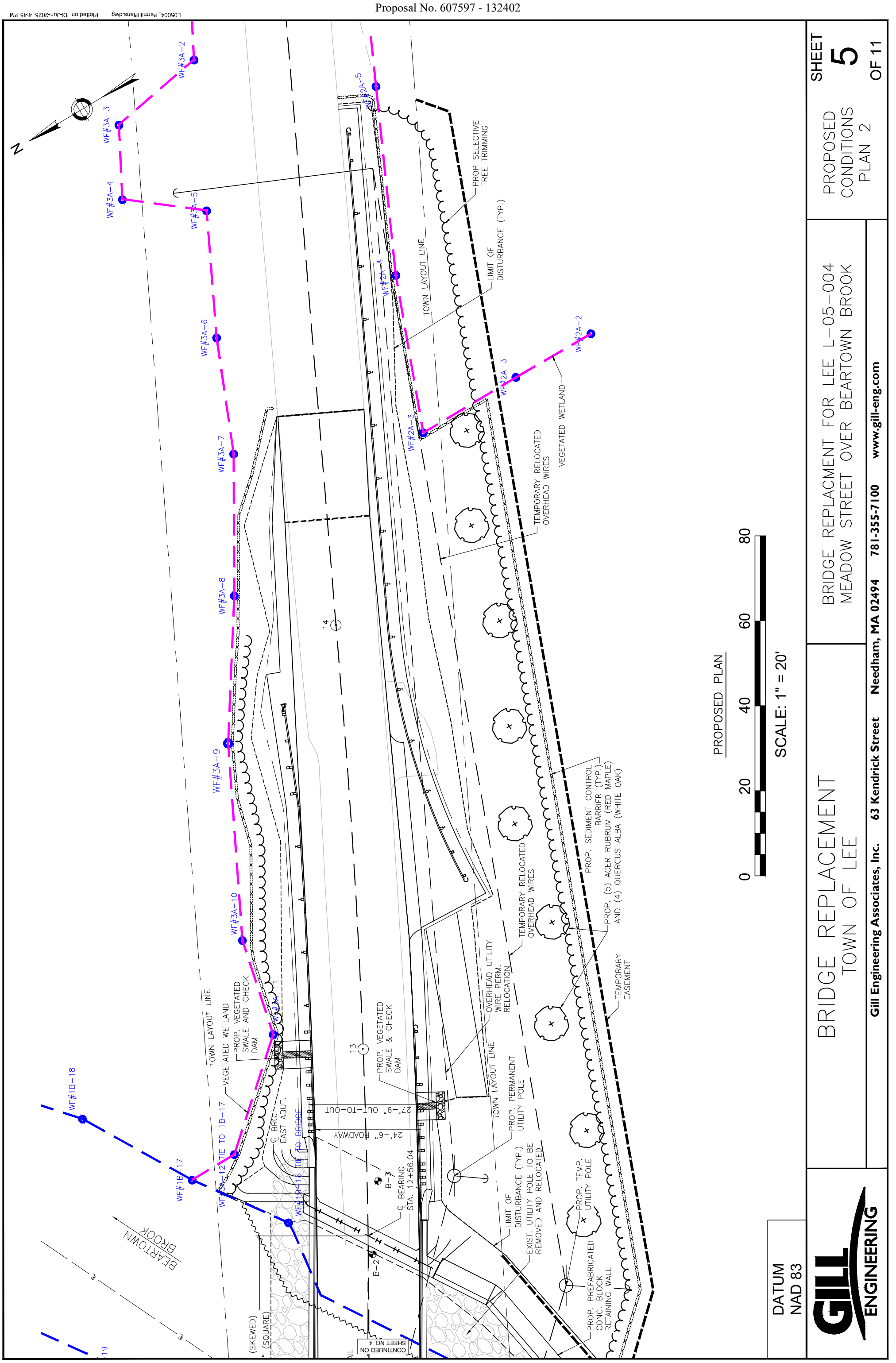
BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

PROPOSED CONDITIONS PLAN 1

SHEET 4 OF 11

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L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:45 PM



SHEET 5 OF 11

PROPOSED CONDITIONS PLAN 2

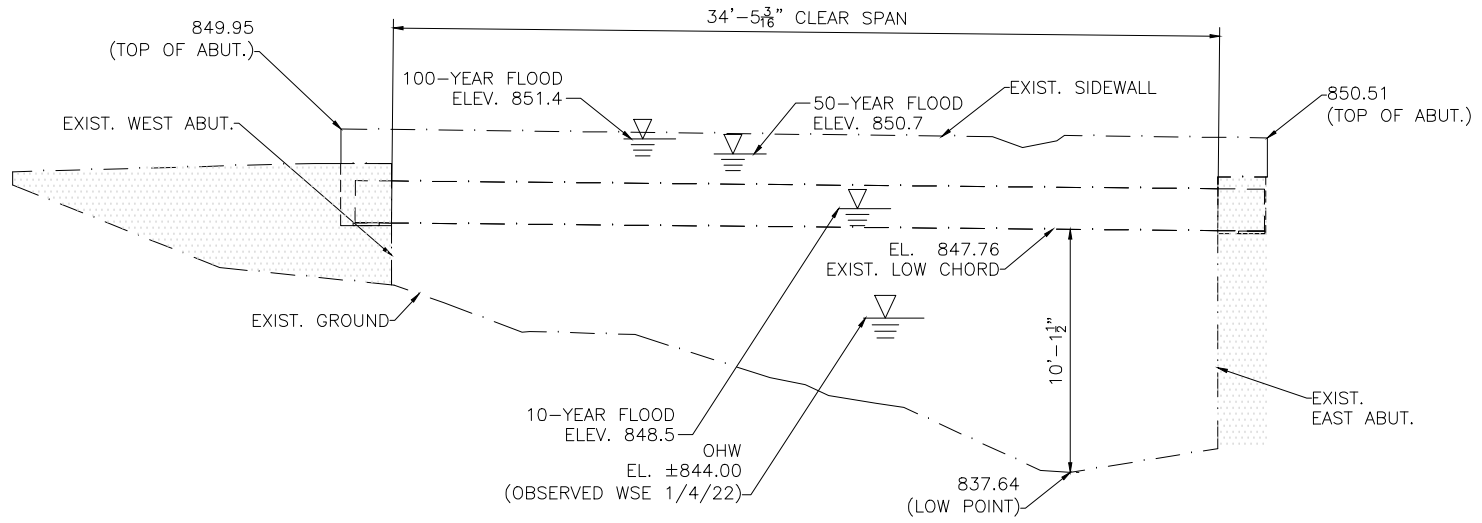
BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

BRIDGE REPLACEMENT
TOWN OF LEE

DATUM
NAD 83

GILL ENGINEERING

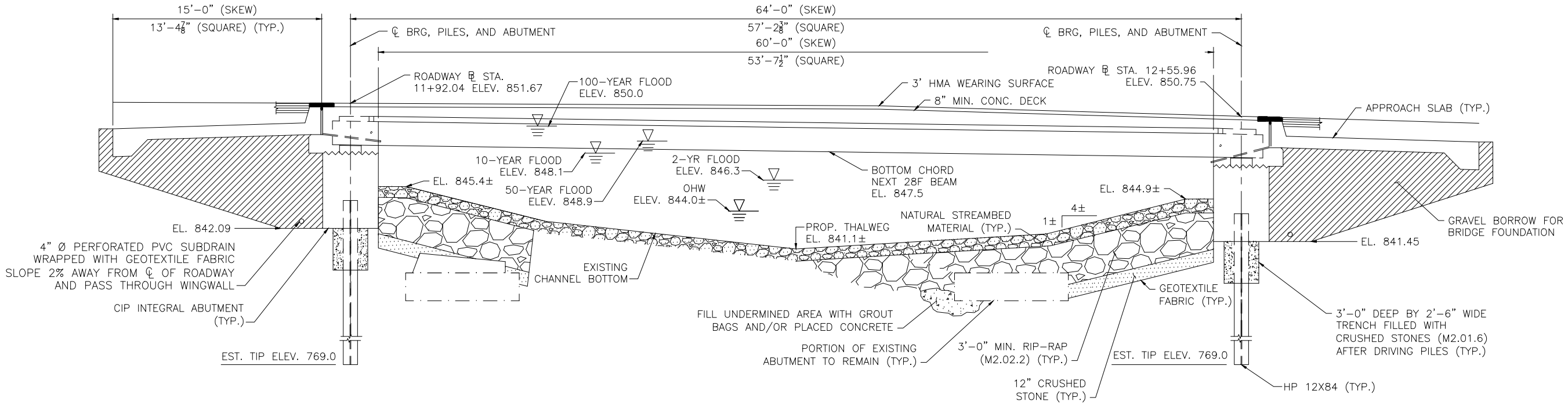
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EXISTING LONGITUDINAL SECTION

0 8 16 24 32

SCALE: 1" = 8'



PROPOSED LONGITUDINAL SECTION

0 8 16 24 32

SCALE: 1" = 8'

DATUM
NAVD 88

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

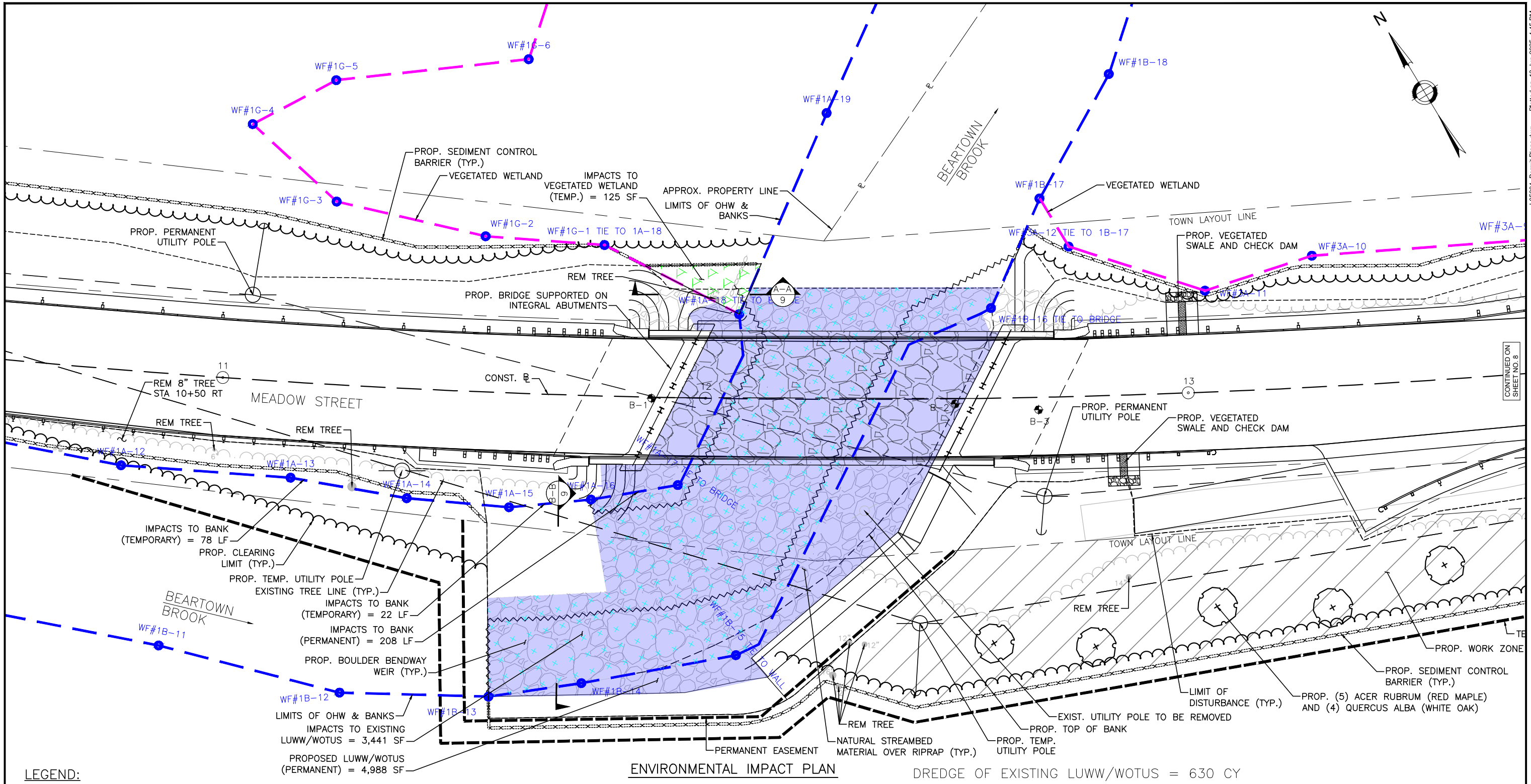
BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

EXISTING AND PROPOSED LONGITUDINAL SECTIONS

SHEET 6 OF 11

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A00840 - 252
Proposal No. 607597 - 132402
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ENVIRONMENTAL IMPACT PLAN

LEGEND:

IMPACT TO EXISTING LAND UNDER WATERWAYS/WOTUS (PERMANENT) = 3,441 SF

PROPOSED LAND UNDER WATERWAYS/WOTUS CONSTRUCTED (PERMANENT) = 4,988 SF

IMPACT TO VEGETATED WETLAND (TEMPORARY) = 125 SF

DREDGE OF EXISTING LUWW/WOTUS = 630 CY

DISCHARGE TO EXISTING LUWW/WOTUS = 508 CY

IMPACTS TO BANK (PERMANENT) = 208 LF

IMPACTS TO BANK (TEMPORARY) = 100 LF

0 20 40 60 80

SCALE: 1" = 20'

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

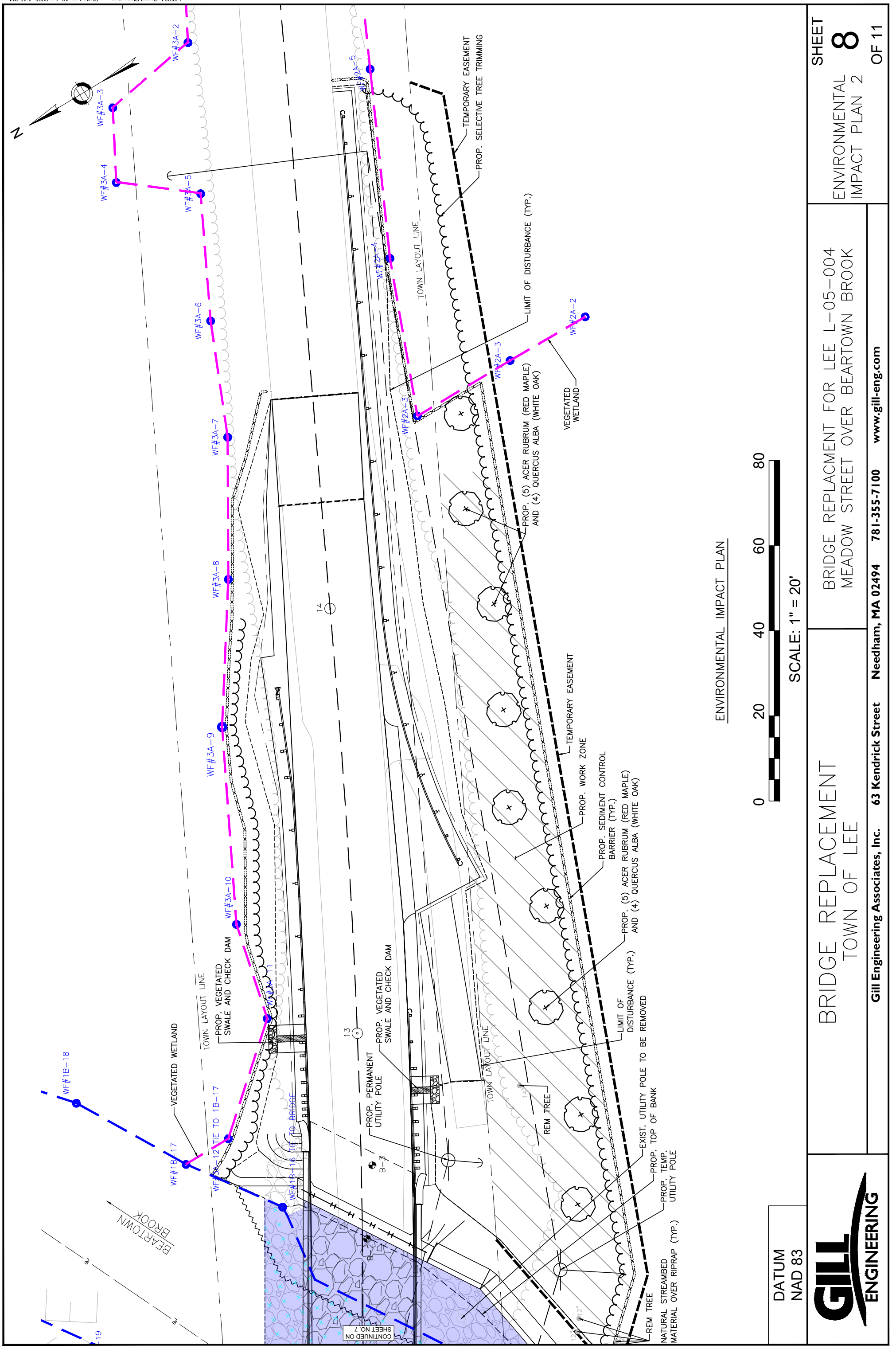
BRIDGE REPLACMENT FOR LEE L-05-004
MEADOW STREET OVER BEARTOWN BROOK

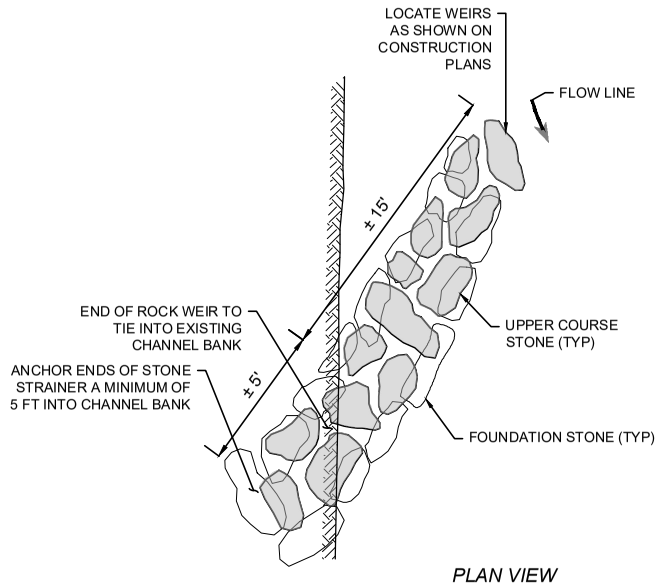
ENVIRONMENTAL IMPACT PLAN 1

SHEET 7 OF 11

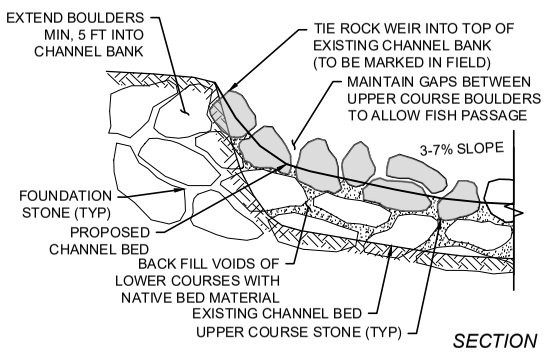
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L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:45 PM

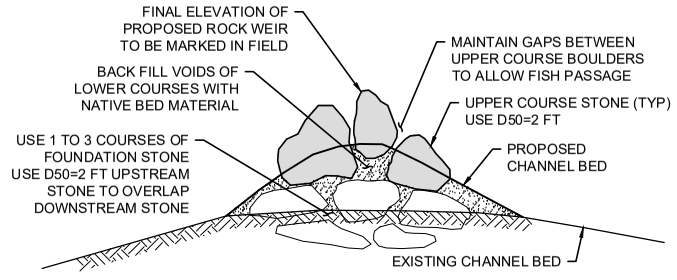




PLAN VIEW



SECTION

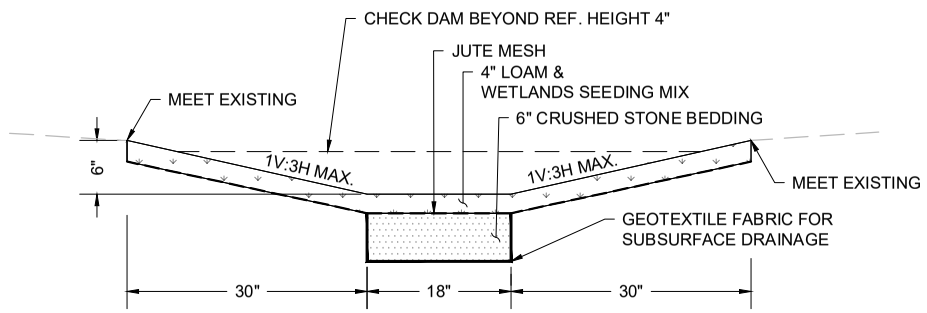


PROFILE VIEW

NOTES:
1. SOURCE OR SALVAGE UPPER COURSE BOULDERS FROM WITHIN THE CHANNEL AND ADJACENT FLOODPLAIN AREAS DURING CONSTRUCTION IF POSSIBLE. IF IMPORTED, USE WEATHERED NATURALLY-FORMED BOULDERS FOR UPPER COURSE.
2. USE FOUNDATION STONES SALVAGED FROM WITHIN THE CHANNEL AND ADJACENT FLOOD PLAIN AREAS TO INTERLOCK TOGETHER. IF EXISTING MATERIAL IS NOT SUITABLE, USE RIPRAP FOR LOWER COURSES OF FOUNDATION STONES.
3. OVERLAP UPSTREAM STONES OVER DOWNSTREAM STONES.
4. PLACE UPPER COURSE STONES SUCH THAT THEY INTERLOCK WITH FOUNDATION STONES.
5. FINISHED ELEVATION AND PLACEMENT OF BOULDERS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
6. ADJUSTMENT OF FINAL LOCATION AND PLACEMENT OF UPPER COURSE STONES MAY BE REQUIRED AT THE DIRECTION OF THE ENGINEER.
7. SEE SPECIAL PROVISION FOR ITEM 984.2 BOULDER BENDWAY WEIR FOR ADDITIONAL INFORMATION.
8. STONE BOULDERS SHOWN IN DETAILS ARE NOT DRAWN TO SCALE AND ARE FOR ILLUSTRATION PURPOSES ONLY.

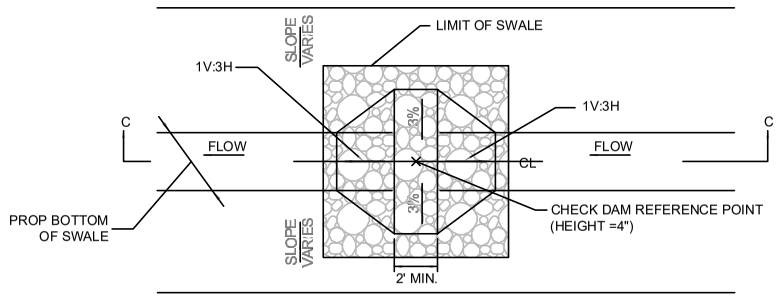
BOULDER BENDWAY WEIR

NOT TO SCALE



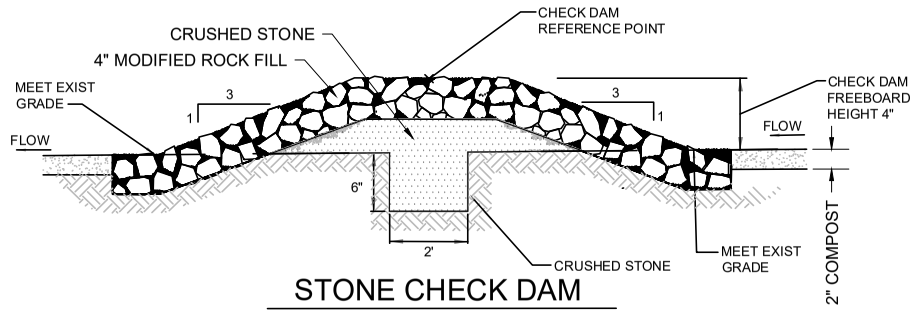
VEGETATED SWALE

NOT TO SCALE



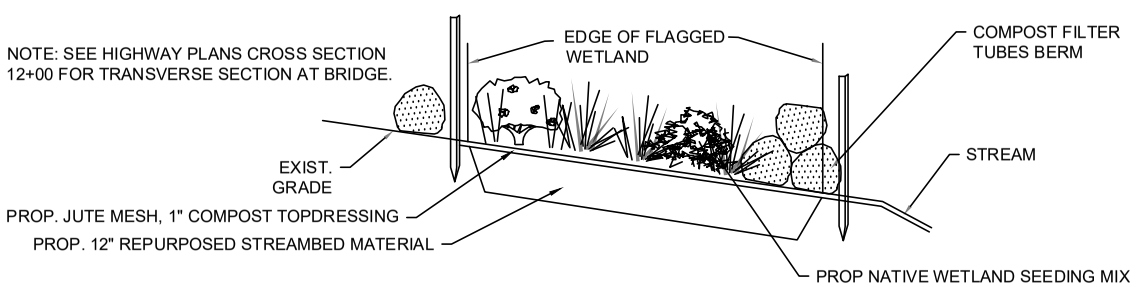
STONE CHECK DAM

NOT TO SCALE



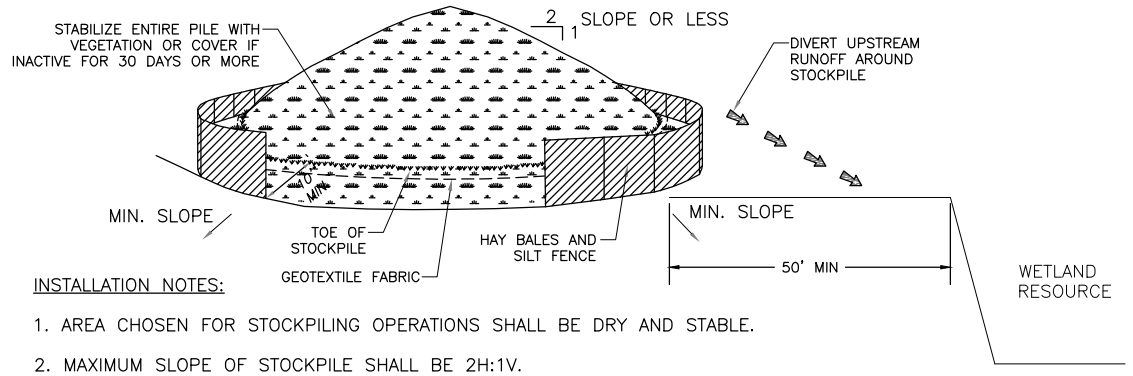
STONE CHECK DAM
SECTION C-C

NOT TO SCALE



TYPICAL WETLAND RESTORATION
SECTION A–A

SCALE: N.T.S. 7

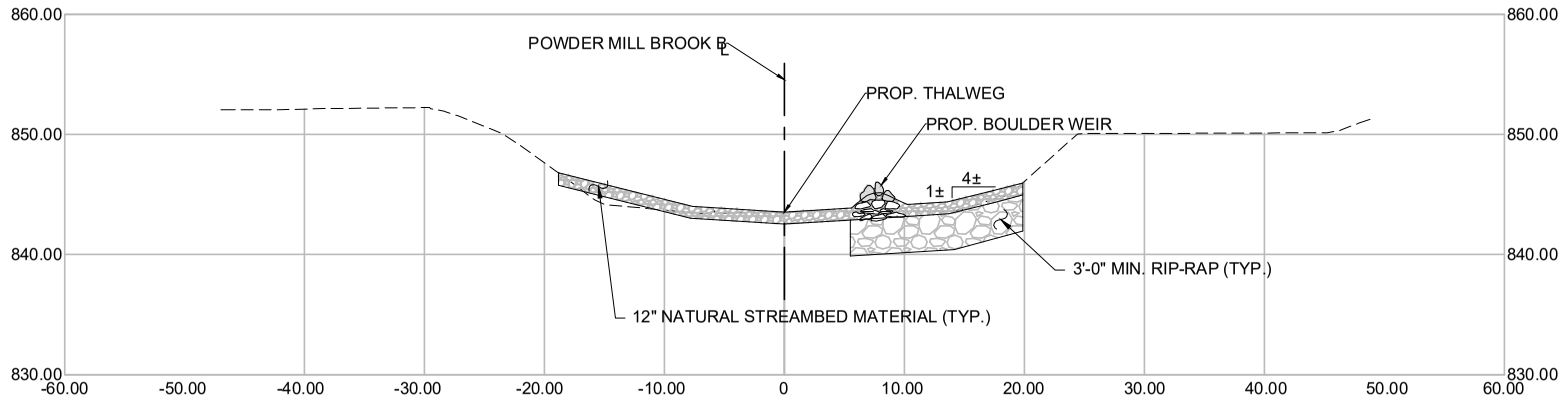


INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING AND HAYBALES, THEN STABILIZED WITH VEGETATION OR COVERED.

SOIL STOCKPILING

NOT TO SCALE



SECTION B–B

SCALE: 1" = 8' 7

DATUM
NAD 83

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

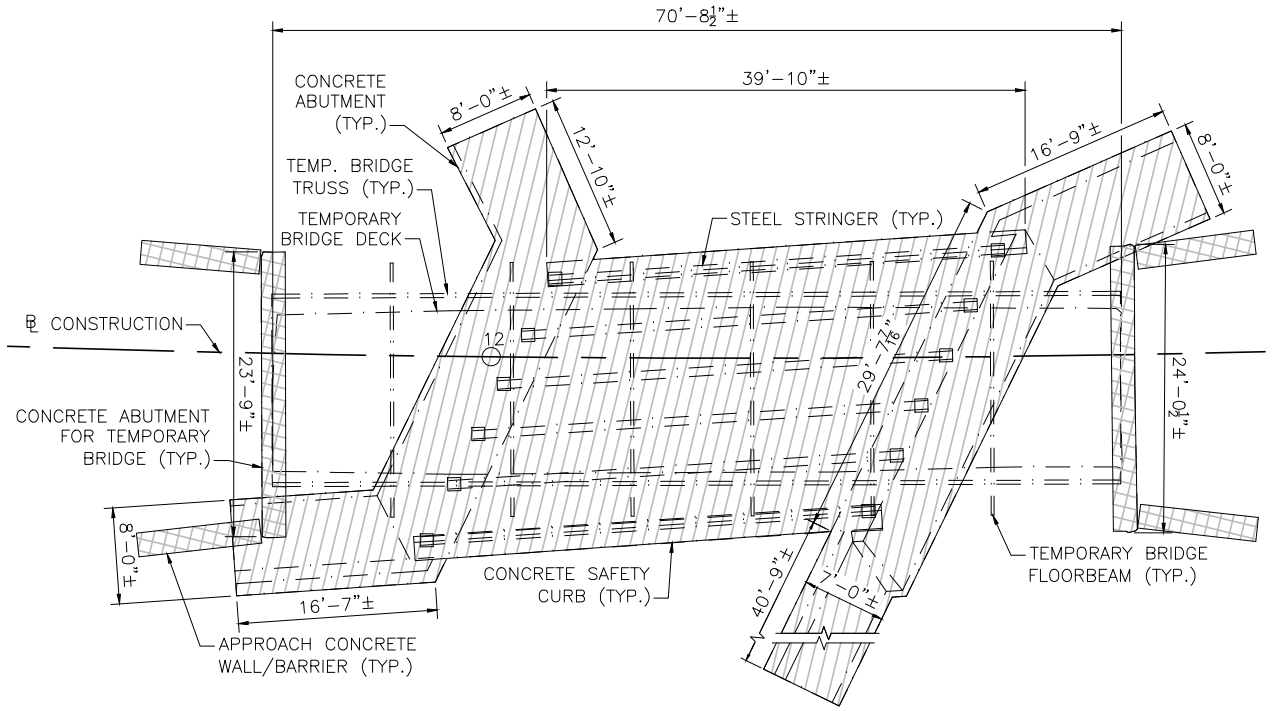
BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

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ENVIRONMENTAL DETAILS

SHEET 9 OF 11

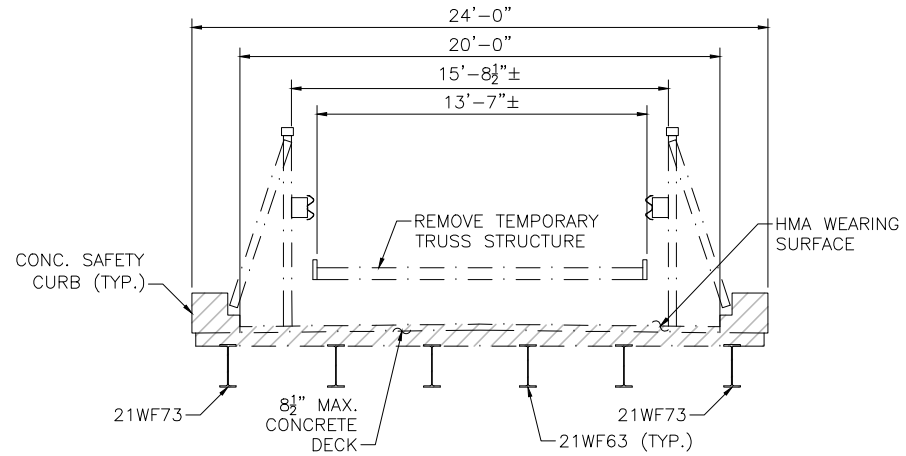
A00840 - 255
Proposal No. 607597 - 132402
L05004_Permit Plans.dwg Plotted on 13-Jun-2025 4:45 PM



DEMOLITION PLAN

0 16 32 48

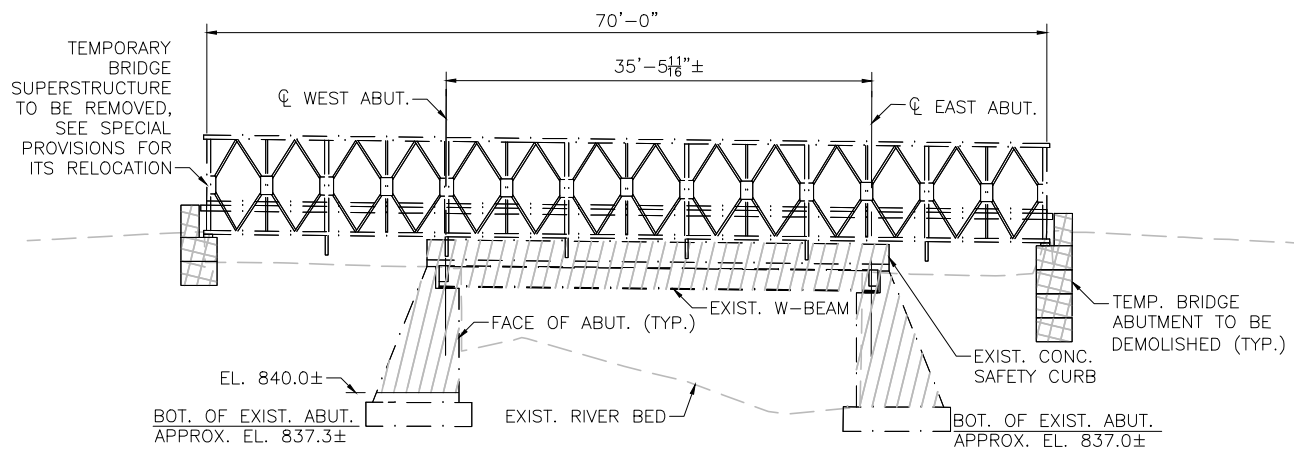
SCALE: 1" = 16'



DEMOLITION – EXISTING BRIDGE TRANSVERSE SECTION

0 8 16 24

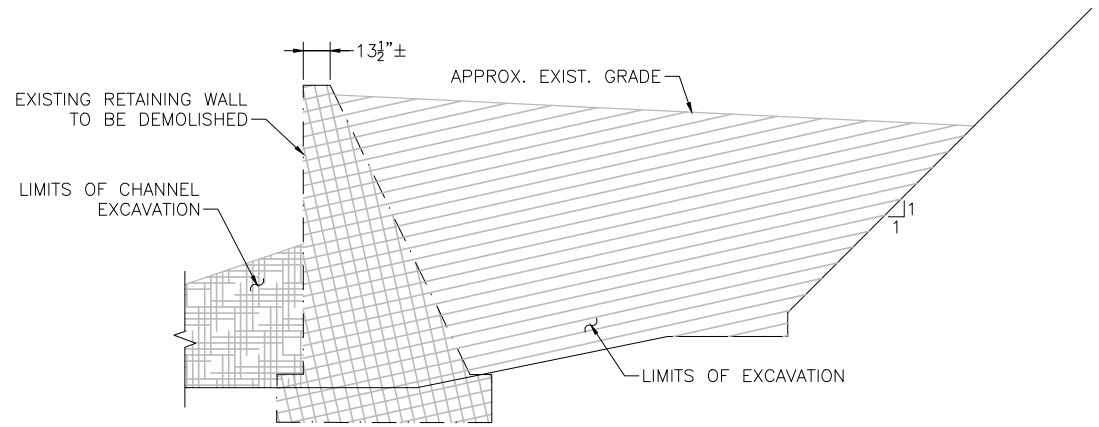
SCALE: 1" = 8'



DEMOLITION – EXISTING BRIDGE SECTION

0 16 32 48

SCALE: 1" = 16'



WALL DEMOLITION AND EXCAVATION SECTION

0 8 16 24

SCALE: 1" = 8'

DEMOLITION NOTES

1. EXISTING BRIDGE STRUCTURES SHOWN ARE PER RECORD PLANS AND SURVEY.
2. TEMPORARY TRUSS STRUCTURE TO BE REMOVED CAREFULLY WITHOUT DAMAGE.
3. SEE SHEET 6 FOR STAGE DEMOLITION DETAILS.

DEMOLITION LEGEND

- LIMITS OF DEMOLITION OF EXISTING BRIDGE
- LIMITS OF DEMOLITION OF TEMPORARY BRIDGE ABUTMENTS

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

DEMOLITION PLAN

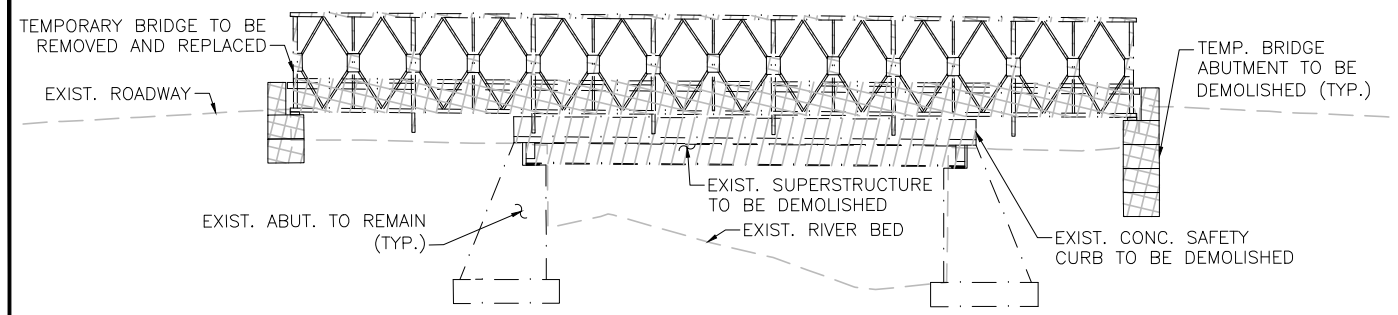
SHEET 10 OF 11

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A00840 - 256

L05004_Permit Plans (Demo & Control of Water).dwg Plotted on 13-Jun-2025 4:45 PM

Proposal No. 607597 - 132402

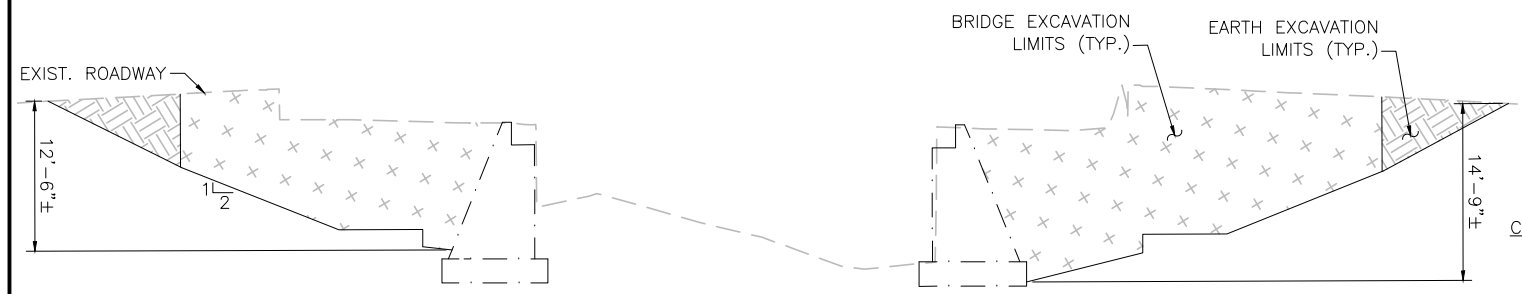


STAGE 1 – DEMOLITION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. REMOVE AND STACK TEMPORARY BRIDGE SUPERSTRUCTURE.
2. DEMOLISH TEMPORARY BRIDGE ABUTMENTS.
3. DEMOLISH EXISTING SUPERSTRUCTURE.

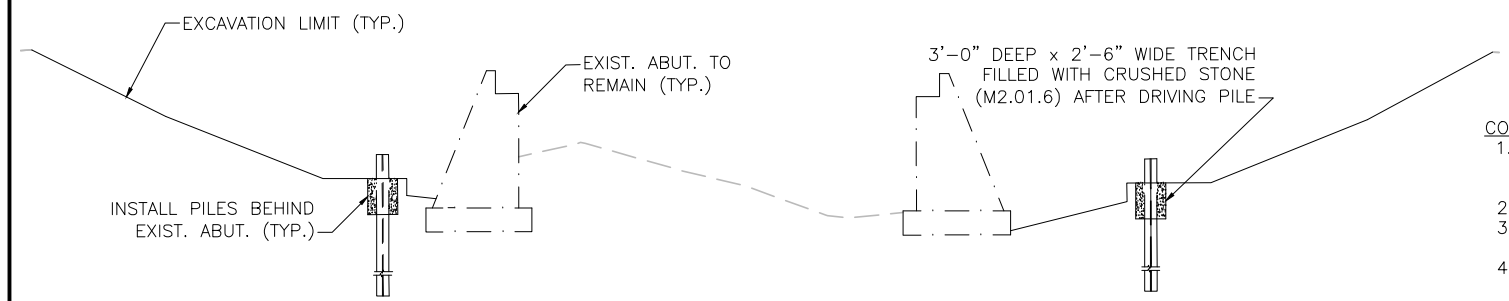


STAGE 2 – EXCAVATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. EXCAVATE TO LIMITS SHOWN. EXCAVATED MATERIAL MAY BE USED FOR BACKFILLING IF IT MEETS THE SPECIFICATIONS FOR M1.03.0, TYPE A.

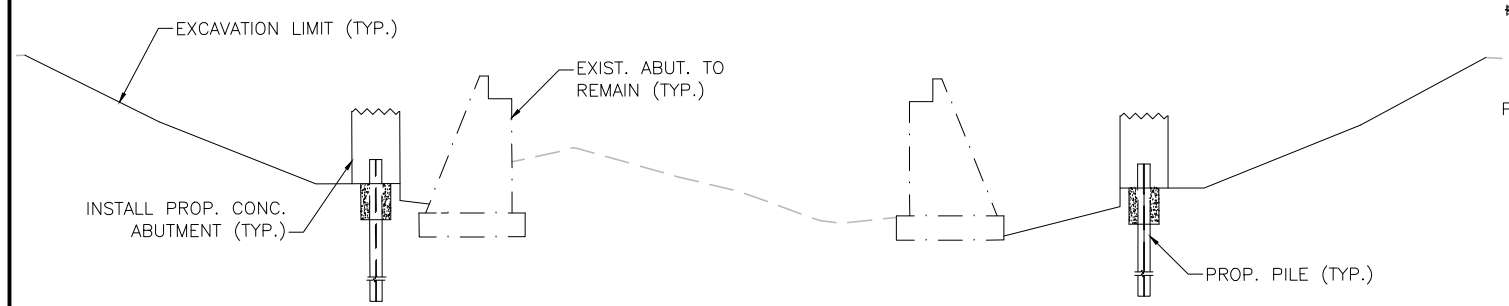


STAGE 3 – PILE INSTALLATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. DIG 3'–0" x 2'–6" TRENCH AS SHOWN.
2. INSTALL PILES.
3. FILL TRENCH WITH CRUSHED STONE.

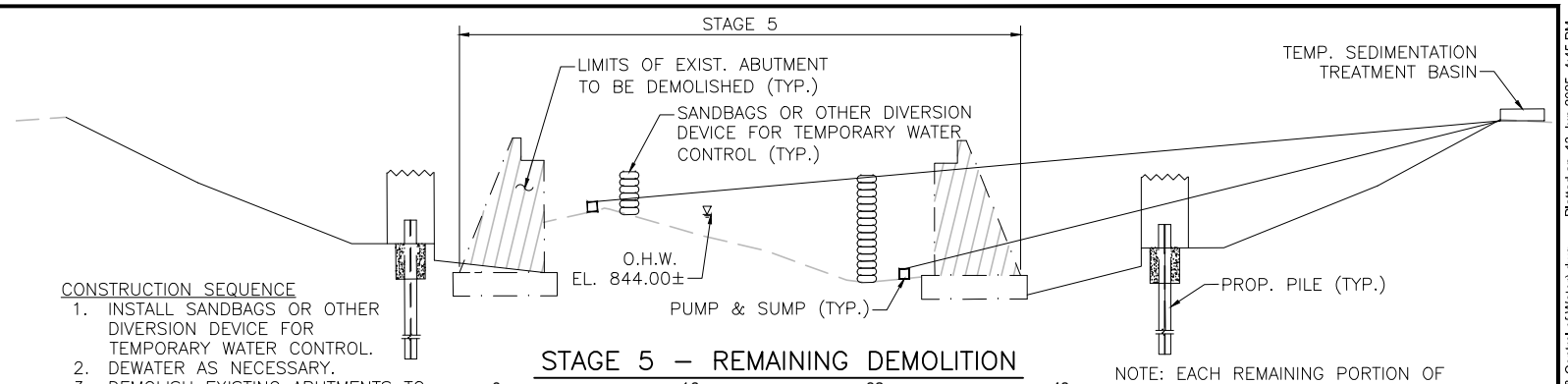


STAGE 4 – ABUTMENT INSTALLATION

0 16 32 48

SCALE: 1" = 16'

CONSTRUCTION SEQUENCE
1. INSTALL CONCRETE ABUTMENTS.



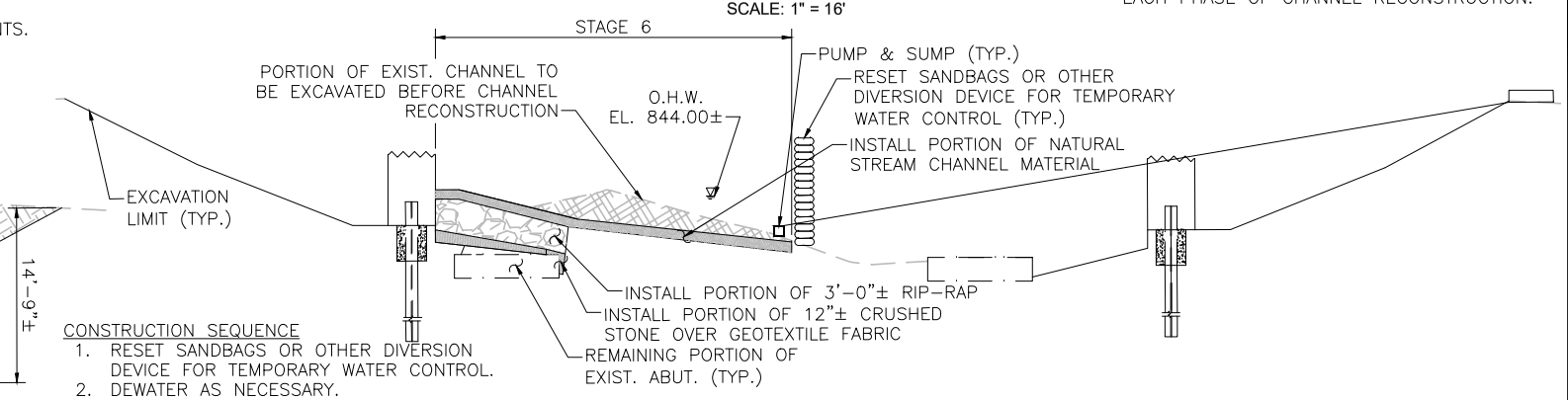
CONSTRUCTION SEQUENCE
1. INSTALL SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. DEMOLISH EXISTING ABUTMENTS TO LIMITS SHOWN.

STAGE 5 – REMAINING DEMOLITION

0 16 32 48

SCALE: 1" = 16'

NOTE: EACH REMAINING PORTION OF ABUTMENT DEMOLITION MAY BE DONE WITH EACH PHASE OF CHANNEL RECONSTRUCTION.

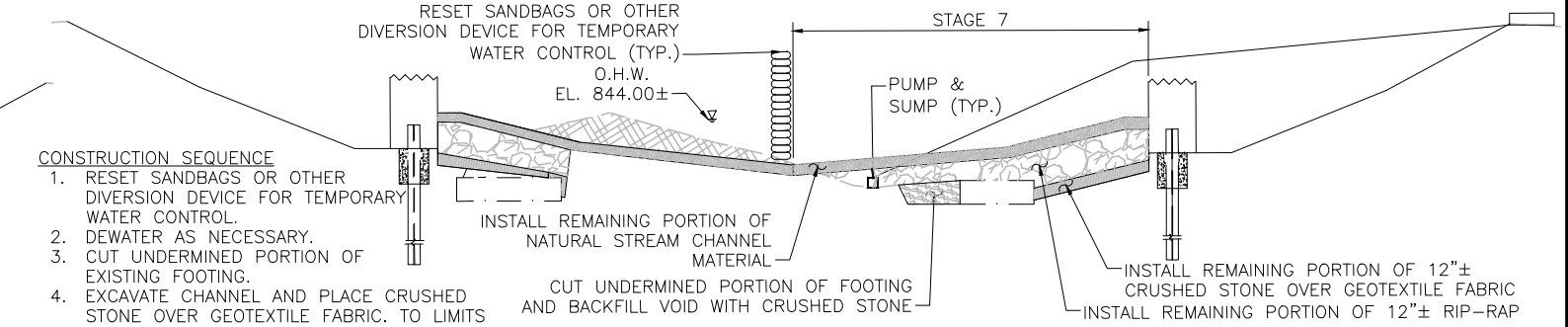


CONSTRUCTION SEQUENCE
1. RESET SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. EXCAVATE CHANNEL AND PLACE CRUSHED STONE OVER GEOTEXTILE FABRIC TO LIMITS SHOWN.
4. PLACE RIP–RAP.
5. PLACE STREAM CHANNEL MATERIAL.

STAGE 6 – CHANNEL RECONSTRUCTION PHASE 1

0 16 32 48

SCALE: 1" = 16'

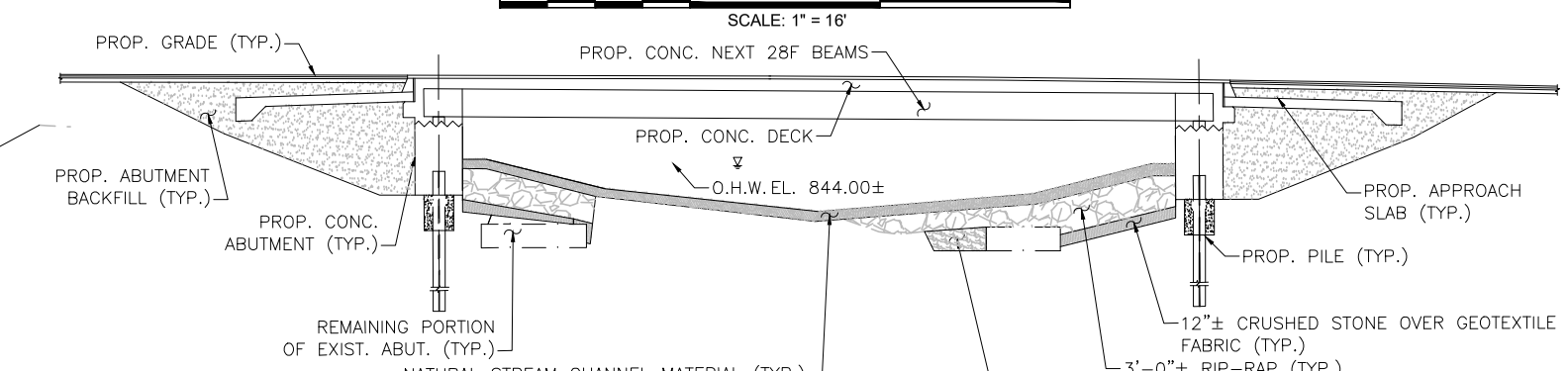


CONSTRUCTION SEQUENCE
1. RESET SANDBAGS OR OTHER DIVERSION DEVICE FOR TEMPORARY WATER CONTROL.
2. DEWATER AS NECESSARY.
3. CUT UNDERMINED PORTION OF EXISTING FOOTING.
4. EXCAVATE CHANNEL AND PLACE CRUSHED STONE OVER GEOTEXTILE FABRIC. TO LIMITS SHOWN.
5. PLACE RIP–RAP.
6. PLACE STREAM CHANNEL MATERIAL.

STAGE 7 – CHANNEL RECONSTRUCTION PHASE 2

0 16 32 48

SCALE: 1" = 16'



CONSTRUCTION SEQUENCE
1. INSTALL REMAINING PROPOSED COMPONENTS OF SUBSTRUCTURE.
2. INSTALL PROPOSED SUPERSTRUCTURE.
3. BACKFILL ABUTMENTS.
4. PLACE HMA PAVEMENT.

PROPOSED LONGITUDINAL SECTION

0 16 32 48

SCALE: 1" = 16'

GILL ENGINEERING

BRIDGE REPLACEMENT
TOWN OF LEE

BRIDGE REPLACMENT FOR LEE L–05–004
MEADOW STREET OVER BEARTOWN BROOK

CONTROL OF WATER PLAN

SHEET 11 OF 11

Gill Engineering Associates, Inc. 63 Kendrick Street Needham, MA 02494 781-355-7100 www.gill-eng.com

L05004_Permit Plans (Demo & Control of Water).dwg Plotted on 13-Jun-2025 4:45 PM
Proposal No. 607597 - 132402
A00840 - 257

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dcr
Massachusetts

CHAPTER 253 PERMIT APPLICATIONS

1. COVER SHEET (check application being submitted)

[X] PART A – JURISDICTIONAL DETERMINATION/PERMIT EXEMPTION APPLICATION
(Submit Part A pages of form with narrative for minor dam maintenance)

[__] PART B – FULL PERMIT APPLICATION AND DESIGN REPORT
(Part A not required if submitting Part B for major dam work)

Dam
Name: Hurlbut Dam **Date:** 7/2/2025
Location (City or Town)**:** Lee **Dam ID Number**: MA 00262
Hazard Classification: Significant Hazard **Size Classification:** Privately Owned, Not Available

Owner(s)
Name: Onyx Specialty Papers Inc.
Address: P.O. Box 188
South Lee, MA 01260
Telephone: 413-243-1231 **E-mail:** Info@onyxpapers.com

Any person(s), who proposes to construct, repair, materially alter, breach or remove a dam, pursuant to M.G.L. Chapter 253, as amended by Chapter 330 of the Acts of 2002, must file with the Commissioner a Chapter 253 Dam Safety Permit application **(Part B)**. Minor maintenance-related work does not require a Chapter 253 Dam Safety Permit; however, the owner(s) must file for a determination / exemption for other than routine activities that may affect safety conditions using the **Part A** application. No work is to commence either before a determination is made by the Commissioner for minor work or before a permit is issued for major work. If the Commissioner determines that the proposed work falls within the jurisdiction of M.G.L. Chapter 253 the Owner(s) must apply for a permit using the **Part B** application. If an owner believes that the proposed work is major, they may submit the **Part B** application without prior submittal of Part A.

The application and notices shall be sent by certified mail to DCR, Office of Dam Safety, Permits. All permit applications must comply with design and construction criteria as specified in 302 CMR 10.00: Dam Safety Rules and Regulations effective November 4, 2005.

Certain dams and reservoirs as defined in 302 CMR 10.00 are excluded from filing. Also, the approval of the Commissioner shall not apply to small dams or embankments constructed for irrigation, detention, storage tanks, or other purposes that impounds less than 15 acre-feet, regardless of height and is not in excess of 6 feet in height, regardless of storage capacity provide that any discharge(s) shall not materially affect property. However, the Commissioner shall make the final determination by taking into consideration factors such as height, type of structure, condition of structure, volume of impoundment, extent of downstream development, and other factors deemed appropriate by the Commissioner.

Any action taken by the Commissioner in regard to this application does not release the owner(s) from the requirements of any other law or regulatory authority.

PART A – JURISDICTIONAL DETERMINATION/PERMIT EXEMPTION APPLICATION

(for routine maintenance)

Part A Instructions: If an exemption from Chapter 253 permit requirements is requested, provide the information described below:

1. Cover Sheet (page 1 of form)
2. Signature Section (page 3 of form)
3. Completed Checklist (page 4 of form)
4. Narrative Description with supporting drawings, sketches and photographs

---

2. SIGNATURE SECTION PART A

The proposed work described in this application is believed to be minor maintenance by the undersigned. The proposed minor maintenance will be performed in a manner that will maintain or enhance the safety of the dam without changing the dam hazard classification or altering (other than to repair) the permitted features of the dam.

Applicant(s) Is Applicant also the Owner? Yes( ) No(X)

Name(s) MassDOT Highway Division - District 1 - Mark Devylder
Street: 270 Main Street
City/Town: Lenox State: MA Zip: 02048
Telephone: 857-368-1000 Fax: 413-637-0309 Email Address: Mark.Devylder@dot.state.ma.us

Signature and Title Mark Devylder MassDOT District 1 Bridge Engineer Date: 7/11/25

Owner(s) (complete only if the Applicant is not the Owner)

Name(s)
Street:
City/Town: State: Zip:
Telephone: Fax: Email Address:

Signature and Title Date:

Licensed professional civil engineer registered in Massachusetts (optional but recommended)

Name: James P. Turnbull, P.E.
Company: Gill Engineering Associates, Inc.
Street: 1234 Chestnut Street, Suite 207
City/Town: Newton State: MA Zip: 02464
Telephone: 617-721-7694 Fax: Email Address: jturnbull@gill-eng.com

Signature: Date: 7/2/2025

Massachusetts Professional Engineer Stamp and License Number: N/A. Stamp not required for anything on Form A.

(PART A cont.) **3. CHECKLIST PART A**

No application, either Part A or Part B, is required for routine maintenance (e.g. mowing of grass and brush clearing, painting, valve exercise or lubrication) or permitted water adjustments for pond maintenance and flood operation. Submit Part A form if in doubt about the need for DCR review of an activity.

Typical minor maintenance activities for which a Part A application is appropriate include, but are not limited to, the following items.

1. Minor Earthwork/masonry maintenance and repair? Yes( ) No(X)
2. Riprap maintenance and repair? Yes( ) No(X)
3. Vegetation and tree maintenance? (larger than brush, less 6"diameter) Yes( ) No(X)
4. Rodent damage control? Yes( ) No(X)
5. Traffic damage controls and erosion? Yes( ) No(X)
6. Mechanical maintenance to outlets? Yes( ) No(X)
7. Electrical maintenance? Yes( ) No(X)
8. Cleaning? Yes( ) No(X)
9. Concrete maintenance? Yes(X) No( )
10. Metal component maintenance? Yes(X) No( )
11. Other as specified: Yes( ) No(X)

4. NARRATIVE DESCRIPTION (attach to this form)

Describe the proposed minor maintenance in sufficient detail to provide a clear understanding of the proposed work. Describe all activities noted above and any work not covered by the checklist. Provide drawings, sketches and photographs showing the locations and features affected by the routine maintenance. See attached narrative.

STOP HERE if requesting a jurisdictional determination / exemption.
If applying for a Permit, proceed to PART B.

PART B – CHAPTER 253 PERMIT APPLICATION AND DESIGN REPORT

Part B Instructions: Any person(s), who proposes to construct, repair, materially alter, breach or remove a dam, pursuant to M.G.L. Chapter 253, as amended by Chapter 330 of the Acts of 2002, must file with the Commissioner a Chapter 253 Dam Safety Permit application, as included in this Part B Design Report. The Part B Chapter 253 Permit Application / Design Report shall include the following sections*:

1. Cover Sheet

Table of Contents (applicant's format, listing items 1, 2, 3, 4, and applicable sections of 5)

2. Chapter 253 Application Fee and Permit Fees Documentation
3. Signature Section
4. Data Forms
   a. General Information
   b. Hazard Potential Changes
   c. Hydrologic, Hydraulic and Structural Considerations
   d. Design Data
5. Design Report with Typically Required Supporting Information and Documents (see Section 5 for typically required supporting information and documents)

*If an applicant is proposing a limited alteration to the dam, sections that are not applicable because of the alteration limits may be omitted.

An applicant is strongly encouraged to submit a preliminary report or analyses containing enough of the information listed above so that the Commissioner can provide preliminary concurrence with hazard classification, site investigation, and design concept for the proposed project, especially for new dams or projects where the hazard classification may change or design concepts are non-routine.

Approval or denial of a permit will be issued within 60 days from the time the final design report and permit application is received.

Permitting of this application does not release the applicant from the requirements of any other related regulatory authority authorization, notification, and permitting. Such authorization, notification, and permitting may include but are not limited to:

Local Conservation Commission: M.G.L. Chapter 131 License and Town/City Wetlands Protection by-laws (Wetlands Protection Act).

Mass. Department of Environmental Protection (DEP): M.G.L. Chapter 131 License and M.G.L. Chapter 91, 401 Water Quality Certification. Required if an Individual Section 404 permit is required by The U.S. Army Corps of Engineers.

Mass. Executive Office of Energy and Environmental Affairs (EOEEA), 100 Cambridge St., Suite 900, Boston, MA 02114. Mass. Environmental Policy Act (MEPA): Environmental Notification Form (ENF) and Environmental Impact Report (EIR). **Note: If MEPA Certificate is required, the Office of Dam Safety requires a copy of the Certificate before M.G.L. Chapter 253 Dam Safety Permit can be issued.**

Coastal Zone Federal Consistency Review.
Massachusetts Coastal Zone Management Office (CZM). presence of dams in the coastal zone, in conjunction with Section 404 permit.

Mass. Department of Fish and Game (DFG), 251 Causeway St., Suite 400, Boston, MA 02114 and your local Town/City Board of Health. M.G.L. Chapter 139 of The Acts of 2000 - Control of beaver population and removal of beaver dams.

DFG Field Headquarters, 1 Rabbit Hill Rd., Westborough, MA 01581 – Emergency drawdowns, controlled flows, and fish ladders.

Mass. Historical Commission, 220 Morrissey Boulevard, Boston, MA 02125. Phone: 617-727-8470. M.G.L. Chapter 9, Sections 26 through 27C and regulations 950 CMR 71.00, Section 106 National Historic Preservation Act.

Mass. Highway Department (MHD), 10 Park Plaza, Boston MA 02116 and/or the local Highway Department. Presence of road over dam and/or bridge over/behind dam.

U.S. Department of the Army Corps of Engineers. New England District Regulatory Branch, 696 Virginia Rd., Concord, MA 01742-2751 Phone: 978-318-8111 - Section 404 of the Clean Water Act Permit.

(PART B cont.)

2. CHAPTER 253 APPLICATION FEE AND PERMIT FEES DOCUMENTATION

(a) The fee to apply for a Chapter 253 Dam Safety Permit to construct, materially alter, perform major repairs, breach or remove a dam is $50.00

(b) The fee for review and issuance of a Chapter 253 Dam Safety Permit is based on the size and cost of the proposed project (construction and engineering) as follows:

1. For a dam construction project costing up to $100,000.00 the fee will be $250.00
2. For a dam construction project costing from $100,000.00 to $500,000.00 the fee will be $500.00
3. For a dam construction project costing between $500,000.00 and $1,000,000.00 the fee will be $750.00
4. For any dam project over $1,000,000.00, the fee will be $1,000.00

The estimated cost of the proposed project:

(a) The estimated cost of engineering: $_____
(b) The estimated cost of construction: $_____

The total estimated cost: $_____

Please enclosed check or money order payable to: The Commonwealth of Massachusetts, Office of Dam Safety – Permits Section

Exclusions: The Commonwealth, its agencies, authorities and political sub-divisions, including municipalities, are exempt from the payment of fees.

Minimum Submission Requirements:

With this application submit one set of bounded (utilizing plastic comb bindings) final design report with 11”x 17” design drawings. An electronic copy of the design report and drawings in PDF (compatible with Adobe Reader Version 6.0 or later) format presented on compact disc (CD-R media, closed for future recording). CD’s shall be protected by jewel case and contain a label indicating the dam project name, NID ID #, the Town in which the dam is located, and the date of the design report.

All required submittals shall be sent by certified mail to:

Department of Conservation and Recreation
Office of Dam Safety, Permits
John Augustus Hall
180 Beaman Street
West Boylston, MA01583

(PART B cont.)

3. SIGNATURE SECTION

This application describes proposed construction, repair, material alterations, breaches, and/or removal of a dam, pursuant to M.G.L. Chapter 253, as amended by Chapter 330 of the Acts of 2002. The information included in this application is believed to be accurate and to address the requirements of the application and 302 CMR 10.00.

Applicant(s) Is Applicant also the Owner? Yes ( ) No( )

Name(s)_____
Street:_____
City/Town:_____ State:____ Zip:_____
Telephone:_____ Fax:_____ Email Address:_____

Signature and Title_____ Date:_____

Owner(s) (complete only if the Applicant is not the Owner)

Name(s)_____
Street:_____
City/Town:_____ State:____ Zip:_____
Telephone:_____ Fax:_____ Email Address:_____

Signature and Title_____ Date:_____

Licensed professional civil engineer registered in Massachusetts

Name:_____
Company:_____
Street:_____
City/Town:_____ State:____ Zip:_____
Telephone:_____ Fax:_____ Email Address:_____

Signature:_____ Date:_____

Massachusetts Professional Engineer Stamp and License Number:

(PART B cont.)

4. DATA FORMS

a**. General Information:**

1. Dam location (City/Town); attach locus map and local access to the dam.
2. Dam Name(s):_____
3. Impoundment Name(s):_____
4. Assessor's Information (city or town tax assessors office):

   Map Number:_____
   Section Number:_____
   Lot(s) Number:_____
   Record Owner(s) and Address:_____
   _____
5. Registry Location:_____

   Book and Page:_____

   Present and/or Prospective owner(s):

   Name:_____

   Address:_____

   Telephone:_____
6. Name of US Geological Survey map quadrangle:_____
7. Name of reservoir or waterway:_____
8. Purpose of the dam structure:_____
9. Nature of work to be performed:
   a. New dam? Yes ( ) No ( )
   b. Alteration or major repair of existing dam? Yes ( ) No ( )
   c. Other nearby repair, pond, bridge, highway, or other work effecting dam? Yes ( ) No ( )
   d. Summary description of dam and other work:

(PART B cont.)

4. DATA FORMS (cont.)

b. Hazard Potential Changes

HAZARD POTENTIAL CLASSIFICATION TABLE

Hazard Classification	Description
High Hazard (Class I)	Dams located where failure will likely cause loss of life and serious damage to home(s), industrial or commercial facilities, important public utilities, main highway(s) or railroad(s).
Significant Hazard (Class II)	Dams located where failure may cause loss of life and damage home(s), industrial or commercial facilities, secondary highway(s) or railroad(s) or cause interruption of use or service of relatively important facilities.
Low Hazard (Class III)	Dams located where failure may cause minimal property damage to others. Loss of life is not expected.

1. For repairs or alterations of existing dams, will the proposed work alter the hazard classification of the dam? Yes ( ) No ( )

   If yes, use the above table to determine the new hazard classification. Provide supporting documentation in the design report that describes the basis of the classification (investigations, analyses to determine inundation areas, evaluations, etc.) and the areas, people, structures, properties, transit facilities, and other features that would be affected by a failure of the dam.

2. For new dams, use the above table to determine the hazard classification. Provide supporting documentation in the design report that describes the basis of the classification (investigations, analyses to determine inundation areas, evaluations, etc.) and the areas, people, structures, properties, transit facilities, and other features that would be affected by a failure of the dam. Note: Approval to construct a new significant hazard potential dam or high hazard potential dam will be contingent upon the submission of a suitable Emergency Action Plan to the Commissioner.

4. DATA FORMS (cont.)

c. Hydrologic, Hydraulic And Structural Considerations

SPILLWAY DESIGN FLOOD (SDF) DESIGN CRITERIA

Provide SDF criteria for size, hazard class and whether existing or new dam, see 302 CMR 10.14 (6) Spillway Design

Hydrologic, hydraulic and structural design procedures should be used, as established by one of the following: The U.S Army Corps of Engineers, the U.S. Bureau of Reclamation, the U.S. Soil Conservation Service and other procedures universally accepted as sound engineering practice.

1. Contributory drainage area (sq. mi.):_____
   (Attach topographic map with outline of drainage area)
2. Design storm duration:_____
   Rainfall Intensity (inches/hour)_____
3. Runoff (%)_____ Inches:_____
4. Peak Outflow (cfs):_____
5. Previous known flood of record
   (month/year):_____
6. Maximum SDF level elevation:_____
7. Is maximum SDF level above dam crest? Yes ( ) No ( )
   (If yes, describe overtopping protection:_____)
8. Addition information:_____

d. Design Data

1. Datum used: MSL of 1929_____ NAVD 88_____Assumed_____Other_____
2. Type of structure (earth, concrete, etc.):_____
3. Maximum structural height of the dam (feet):_____
4. Crest length (ft):_____ Crest width (ft):_____
5. Top elevation of dam:_____
6. Present river or channel elevation at dam (ft):_____

4. DATA FORMS (cont.)

7. Normal pool elevation (ft):_____
8. Normal pool surface area (acre):_____
9. Normal impoundment (acre-ft):_____
10. Maximum pool elevation (ft):_____
11. Maximum pool surface area (acre):_____
12. Maximum impoundment (acre-ft):_____
13. Freeboard, as measured from the SDF pool elevation to the crest of dam (ft):_____
14. Slope protection description:_____
15. Primary Spillway information:

    Spillway type:_____

    Top elevation:_____

    Dimensions (ft):_____

    Capacity (cfs):_____

    Percentage of design flood:_____
16. Emergency Spillway information:

    Spillway type:_____

    Top elevation:_____

    Dimensions (ft):_____

    Capacity (cfs):_____

    Percentage of design flood:_____
17. Low Level Outlet (s):

    Type(s):_____

    Invert elevation(s):_____

    Dimension(s) (ft):_____

    Capacity (cfs):_____

    Percentage of design flood:_____

(PART B cont.)

5. DESIGN REPORT WITH SUPPORTING INFORMATION AND DOCUMENTS

The Design Report is formatted by the applicant and includes sections from the outline list given below that are applicable to the proposed dam project. See Dam Safety Regulations, 302 CMR 10.09 and 10.14 for technical analyses and level of detail required. If an applicant is proposing a limited alteration to the dam, sections that are not applicable because of the alteration limits may be omitted.

A. Project Description
    1. Existing Conditions
    2. Proposed Modifications
B. Investigations, Analyses, Designs
    1. Geotechnical (subsurface investigations and descriptions, stability evaluations and analyses, borrow investigations, related designs, etc.)
    2. Seepage (investigations, stability evaluations and analyses, related designs, etc.)
    3. Hydrologic and Hydraulic (investigations and analyses for hazard classification, SDF, freeboard, outlets, wave run up, related designs, etc.)
    4. Structural (investigations, analyses, designs, etc.)
C. Construction Considerations
    1. Proposed Construction Schedule
    2. Control of Water Requirements
        a. General Description - Draining/Lowering, Maintaining, and Monitoring Pool (Note: Construction with full pool should be avoided)
        b. Cofferdam Requirements
    3. Other Hazards and Mitigation (e.g. deep excavations, earth support, slope stability)
    4. Critical Activities Requiring Engineering Monitoring
    5. Construction Emergency Action Plan Considerations
D. Proposed Reservoir Filling Schedule and Monitoring during Filling
E. References
F. Figures and Photographs (as needed to describe location, conditions, and proposed modifications)
G. Contract Plans (can be a separate attachment)
H. Contract Specifications (can be a separate attachment)
I. Maintenance and Operation Plan (can be a separate attachment)
J. Emergency Action Plans (required for all high and significant hazard dams; can be a separate attachment)
    1. Emergency Action Plan During Construction
    2. Emergency Action Plan After Completion of Construction

Gill Engineering Associates, Inc.
63 Kendrick Street
Needham, MA 02494
www.gill-eng.com
781-355-7100

July 2, 2025

Office of Dam Safety
180 Beaman Street
West Boylston, MA 01583
Cc: Mark Devylder, MassDOT District 1 Bridge Engineer

RE: MassDOT Project File No. 607597
Repairs to L-05-002 (057) Willow Street over Housatonic River
Hurlbut Dam MA 00262 Form A – Jurisdictional Determination

To whom it may concern,

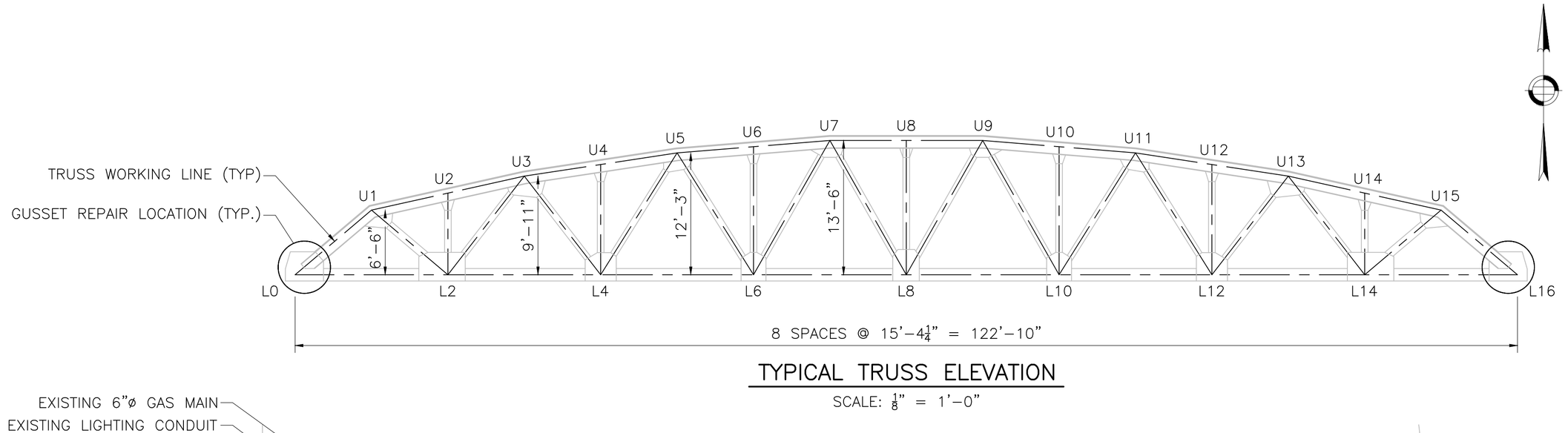
On behalf of MassDOT Highway Division, we are submitting the attached project narrative, plans, and an Office of Dam Safety Chapter 253 Form A for the agencies review of jurisdiction. The attached plans are for specific repairs to Bridge No. L-05-002 (057) Willow Street over Housatonic River within the public roadway right of way for maintenance. Work will be performed from on top of the bridge structure. Shielding and work platforms will be mounted to the bridge; there will be no in-water work for the bridge repairs to be completed. We anticipate this project to not have any affect on the

To facilitate truck access to the Onyx Specialty Papers Inc. paper mill during the detour period, the existing closed bridge L-05-002 (057) Willow Street over the Housatonic River, shall be repaired and reopened to traffic prior to closing the Meadow Street bridge L-05-049 (059) to traffic for the bridge replacement in this project. The repairs to bridge L-05-002 (057) shall consist of structural steel repairs to existing truss gusset plates, localized structural steel cleaning and painting, and limited reinforced concrete deck repairs.

Please contact me at jturnbull@gill-eng.com if you have any questions.

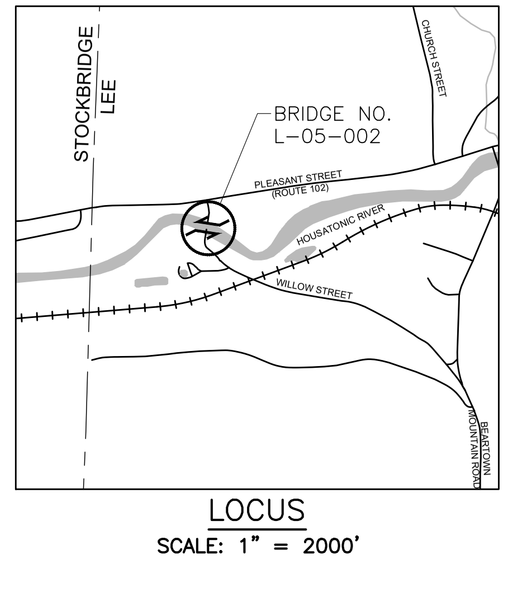
Sincerely,
Gill Engineering Associates, Inc.

James Turnbull, PE
Senior Project Manager



TYPICAL TRUSS ELEVATION

SCALE: ⅛" = 1'-0"



LOCUS

SCALE: 1" = 2000'

LEE
WILLOW STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	35	50
PROJECT FILE NO.	607597		

GENERAL PLAN, INDEX, AND LOCUS

GENERAL NOTES:

DESIGN:

IN ACCORDANCE WITH THE 2002 DESIGN SPECIFICATIONS OF THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) FOR HS-20 LOADING.

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION 2025 STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES AND THE PROJECT SPECIAL PROVISIONS.

EXISTING PLANS:

PLANS FOR THE EXISTING BRIDGE ARE AVAILABLE THROUGH THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION ELECTRONICALLY FROM PLANS AND RECORDS.

SCALES:

SCALES NOTED ON THE PLANS ARE NOT APPLICABLE TO REDUCED SIZE PRINTS. DIVIDE SCALES BY 2 FOR HALF SIZE PRINTS (A3).

UTILITIES:

THE CONTRACTOR SHALL LOCATE AND PROTECT FROM DAMAGE ALL UTILITIES.

TRAFFIC CONTROL:

TEMPORARY TRAFFIC CONTROL SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED TTCP PROVIDED ON SHEET 6.

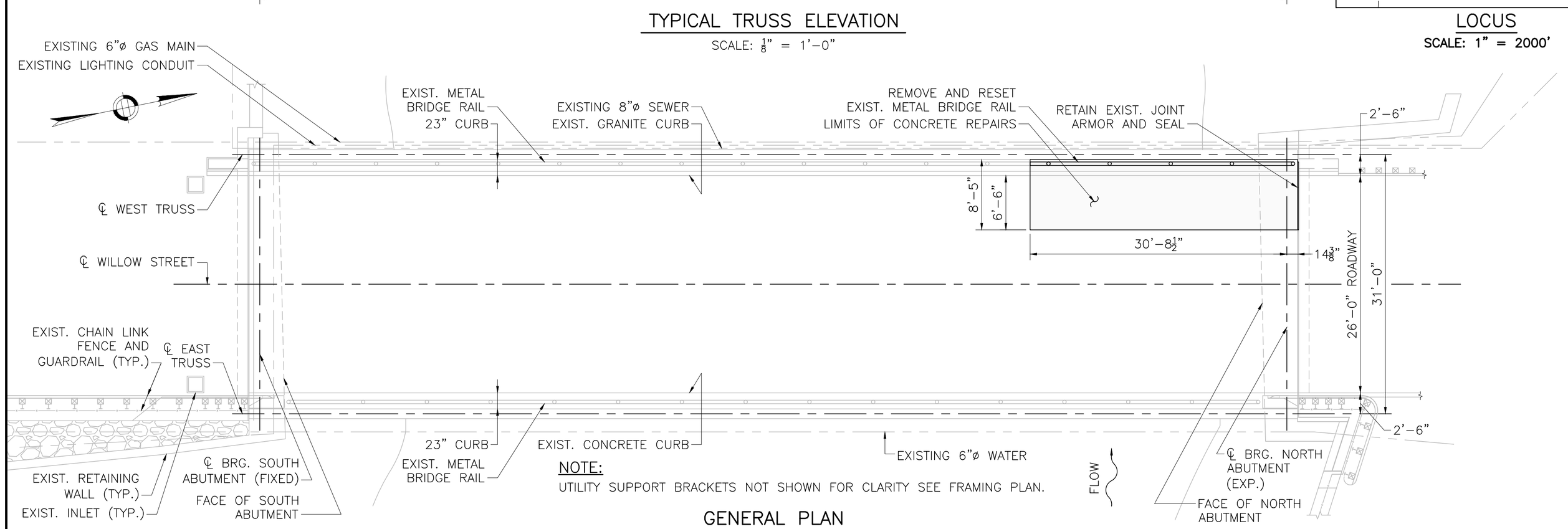
ESTIMATED QUANTITIES

NOT GUARANTEED

ITEM NO.	DESCRIPTION	QUANTITY	UNITS
127.42	REINFORCED CONCRETE DECK EXCAVATION BRIDGE L-05-002(057)	8	CY
904.01	4000 PSI, 3/4 INCH, 610 CEMENT CONCRETE BRIDGE L-05-002(057)	8	CY
910.11	STEEL REINFORCEMENT FOR STRUCTURES EPOXY COATED BRIDGE L-05-002(057)	700	LB
960.01	STRUCTURAL STEEL MODIFICATIONS BRIDGE L-05-002(057)	2000	LB
961.301	CLEAN (FULL REMOVAL) AND PAINT SELECT STEEL ELEMENTS OF BRIDGE NO. L-05-002(057)	1	LS

SHEET INDEX

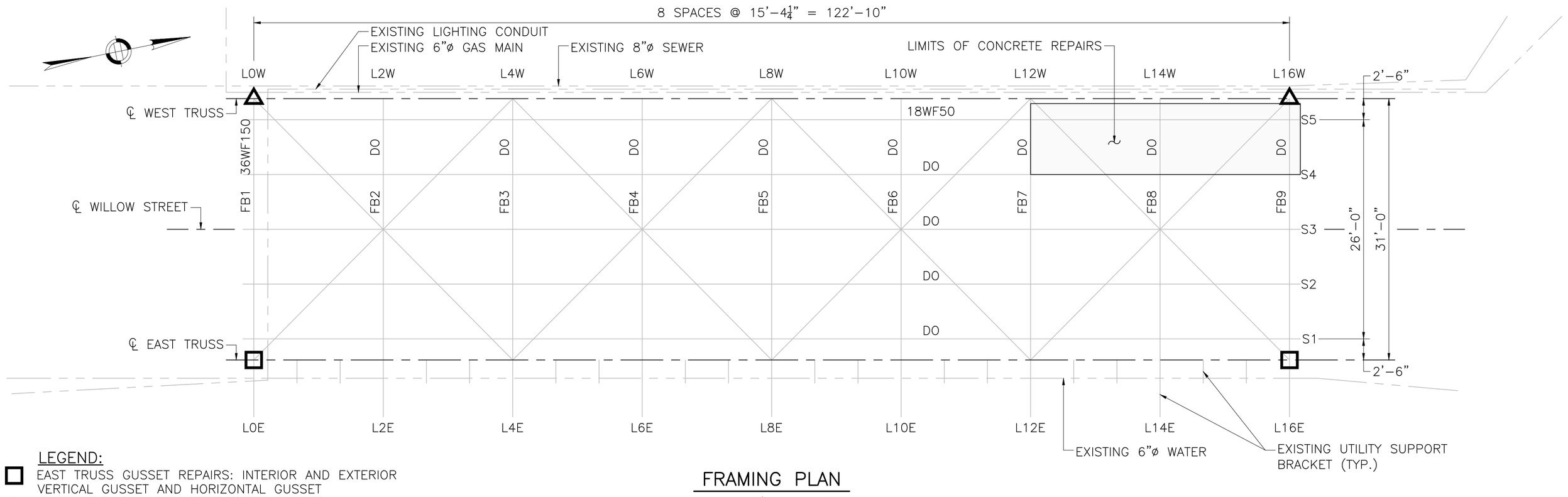
Sheet Number	Sheet Title
1	GENERAL PLAN, INDEX, AND LOCUS
2	GUSSET PLATE REPAIR DETAILS (1 OF 3)
3	GUSSET PLATE REPAIR DETAILS (2 OF 3)
4	GUSSET PLATE REPAIR DETAILS (3 OF 3)
5	CONCRETE REPAIR DETAILS
6	TEMPORARY TRAFFIC CONTROL PLAN



NOTE:
UTILITY SUPPORT BRACKETS NOT SHOWN FOR CLARITY SEE FRAMING PLAN.

GENERAL PLAN

SCALE: ⅛" = 1'-0"



LEGEND:
- □ EAST TRUSS GUSSET REPAIRS: INTERIOR AND EXTERIOR VERTICAL GUSSET AND HORIZONTAL GUSSET
- △ WEST TRUSS GUSSET REPAIRS: INTERIOR VERTICAL GUSSET

FRAMING PLAN

SCALE: ⅛" = 1'-0"

GILL ENGINEERING
63 KENDRICK STREET, NEEDHAM, MA 02494

MONTH DD, YYYY | ISSUED FOR CONSTRUCTION

massDOT Massachusetts Department of Transportation Highway Division

PROPOSED BRIDGE REPAIRS
LEE
WILLOW STREET
OVER HOUSATONIC RIVER

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION
10 PARK PLAZA BOSTON, MASS

STATE BRIDGE ENGINEER | CHIEF ENGINEER

SHEET 1 OF 6 SHEETS BRIDGE NO. L-05-002 (057)

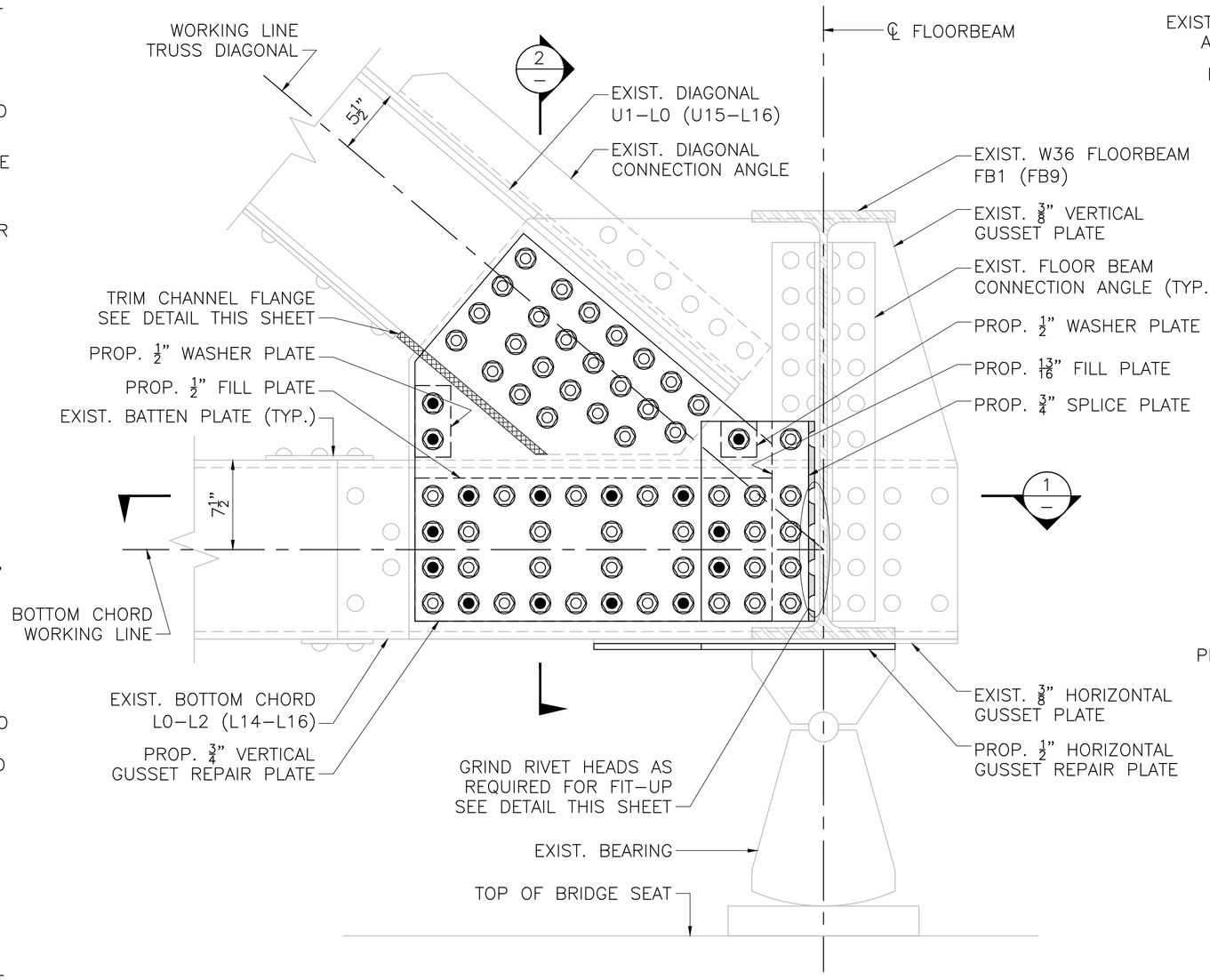
A00840 - 273
Proposal No. 607597 - 132402
L05002 (057) - GENERAL PLAN, INDEX, AND LOCUS.DWG Plotted on 27-Jun-2025 2:50 PM
Final Structural Submittal (SF) 27-June-2025

GUSSET REPAIR NOTES:

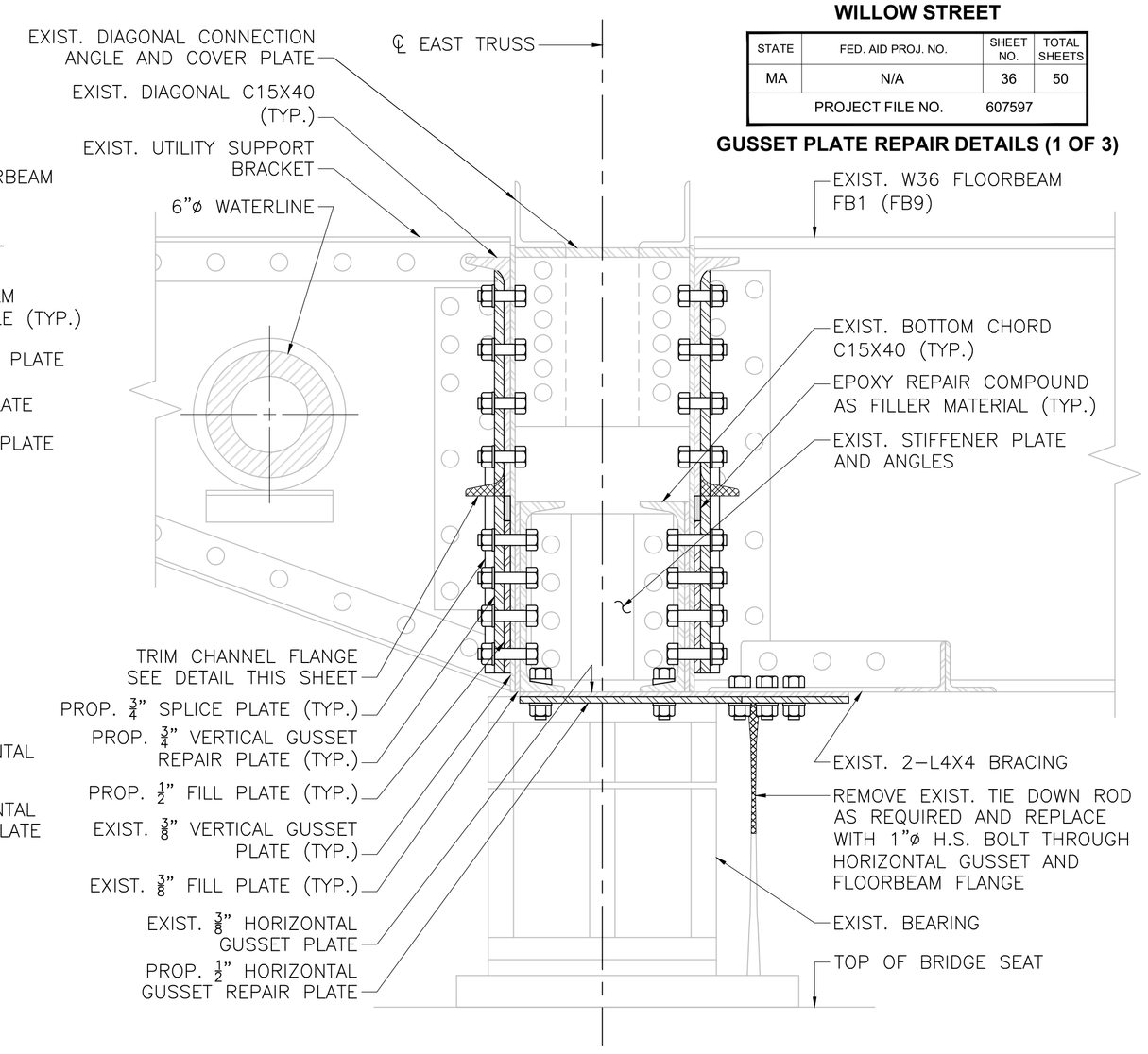
1. THE DETAILS DEPICTED HEREIN ARE BASED UPON THE 1951 BRIDGE RECORD PLANS, 1988 BRIDGE REHABILITATION PLANS, THE 2014 BRIDGE REPAIR PLANS AND SOME FIELD MEASUREMENTS. THE EXISTING PITCH AND GAGE OF THE RIVETS IS NOT GUARANTEED. THE CONTRACTOR WILL BE REQUIRED TO CONDUCT A FIELD SURVEY TAKING ALL NECESSARY MEASUREMENTS AND IDENTIFYING ALL DETAILS REQUIRED FOR THE COMPLETION OF WORK PRIOR TO THE PREPARATION OF SHOP DRAWINGS.
2. PRIOR TO THE INSTALLATION OF ANY NEW STEEL, THE EXISTING STEEL SHALL BE THOROUGHLY CLEANED TO SSPC–SP10 CONDITION AND ONE COAT OF NEPCOAT APPROVED PRIMER SHALL BE APPLIED (SEE CLEANING AND PAINTING NOTES SHEET 4).
3. AT ALL LOCATIONS WHERE NEW STEEL WILL BE BOLTED USING EXISTING RIVET HOLES, THE CONTRACTOR SHALL MAKE TEMPLATES TO TRANSFER THE EXACT BOLT SPACING TO THE NEW STEEL.
4. ALL PROPOSED STEEL SHALL CONFORM TO AASHTO M270, GRADE 50. ALL GUSSET REPAIR PLATES AND SPLICE PLATES ARE MAIN MEMBERS AND ARE SUBJECT TO THE REQUIREMENTS OF FRACTURE CRITICAL MEMBERS (FCM). ALL FILL AND WASHER PLATES ARE SECONDARY COMPONENTS. ALL NEW STEEL SHALL BE BROUGHT TO THE JOB SITE WITH ONE COAT OF A NEPCOAT APPROVED PRIMER. THE SURFACE CONDITION SHALL BE CLASS B WITH A SLIP COEFFICIENT OF 0.50.
5. ALL EXISTING RIVETS ARE ASSUMED TO BE 7/8" DIA. IN 15/16" DIA. HOLES.
6. HIGH STRENGTH BOLTS SHALL CONFORM TO SUBSECTION M8.04.3 OF THE STANDARD SPECIFICATIONS FOR ASTM F3125 GRADE A325 TYPE 1 AND SHALL BE MECHANICALLY GALVANIZED WITH COMPATIBLE NUTS AND WASHERS. ALL NEW BOLTS SHALL BE 7/8" DIA. HIGH STRENGTH BOLTS IN 15/16" DIA. HOLES.
7. ALL HOLES IN THE NEW STEEL SHALL BE SUB DRILLED TO $\frac{13}{16}$ INCH DIA. UNLESS NOTED OTHERWISE AND FIELD REAMED TO $\frac{15}{16}$ INCH DIA.
8. REMOVE EXISTING STEEL AS INDICATED THAT WILL INTERFERE WITH THE STRENGTHENING MEMBERS (SEE CUTTING EXISTING STEEL NOTES). ANY UNEXPECTED STEEL DETERIORATION, MATERIAL LOSS, AND/OR CRACKS REVEALED DURING THE REPAIR PROCESS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER WHO WILL EXAMINE AND ASSESS THE DETERIORATION.
9. NO REPAIRS SHALL COMMENCE UNTIL ALL MATERIALS ARE ON HAND.
10. ONCE ALL PROPOSED STEEL FOR A PARTICULAR LOCATION IS ON HAND AND THE CONTRACTOR IS READY FOR INSTALLATION, THEY SHALL CAREFULLY REMOVE THE RIVET HEADS WHICH INTERFERE WITH THE INSTALLATION OF THE NEW PLATES. IT IS INTENDED TO MAINTAIN THE REMAINING PORTION OF THE RIVETS (SHANK AND FAR SIDE HEAD). ANY RIVETS WHICH ARE FOUND TO BE LOOSE SHALL BE REMOVED AND IMMEDIATELY REPLACED WITH A FULL BODY DRIFT PIN. THE DIAMETER OF THE MAIN BODY OF THE DRIFT PIN SHALL COMPLETELY FILL THE EXISTING HOLE TO ENSURE GOOD FIT. THE HOLE SHALL BE REAMED TO A UNIFORM DIAMETER IF NECESSARY. THE LEADING–EDGE TAPER SHALL BE SUFFICIENT TO ALLOW REASONABLE DRIVING INTO PLACE AND THE BACK END SHALL BE TURNED TO A DIMENSION WHICH ALLOWS THE NEW PLATE TO BE PLACED OVER IT.
11. RIVET HEAD REMOVAL SHALL UTILIZE A LIGHT CHIPPING HAMMER WITH AN APPROPRIATE ATTACHMENT OR GRINDING, BURNING WILL NOT BE ALLOWED. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE THE EXISTING STEEL TO REMAIN. ANY DAMAGE SHALL BE REPAIRED USING A PROCEDURE APPROVED BY THE ENGINEER.
12. IN LOCATIONS WHERE AN EXISTING RIVET IS TO BE REPLACED, NO MORE THAN ONE RIVET MAY BE REMOVED AT ANY ONE TIME. THE HOLES SHALL BE REAMED TO FULL SIZE, $\frac{15}{16}$ INCH DIA., AND A $\frac{7}{8}$ INCH DIA. H.S. BOLT INSTALLED. THE REMOVAL OF THE RIVET SHALL BE ACCOMPLISHED BY PUNCHING THE BODY OF THE SHANK OUT. IF THE RIVET CANNOT BE REMOVED IN THIS MANNER IT SHALL BE REMOVED BY DRILLING A $\frac{13}{16}$ INCH DIA. HOLE AND REAMING TO FULL SIZE. CUTTING AND BURNING WILL NOT BE ALLOWED.
13. WHERE A NEW $\frac{15}{16}$ INCH DIA. HOLE IS CALLED FOR, USING THE PROPOSED STEEL IN PLACE AS A TEMPLATE, HOLES IN THE EXISTING STEEL SHALL BE SUB DRILLED TO $\frac{13}{16}$ INCH DIA. THEN BOTH HOLES IN PROPOSED STEEL AND HOLES IN EXISTING STEEL SHALL BE REAMED TO FULL SIZE, $\frac{15}{16}$ INCH DIA., AND A $\frac{7}{8}$ INCH DIA. H.S. BOLT INSTALLED.
14. THE PROPOSED STEEL SHALL BE PROPERLY POSITIONED OVER ANY PINS AND SECURED IN PLACE WITH CLAMPS OR OTHER MECHANICAL MEANS. WELDING WILL NOT BE ALLOWED.
15. THE INSTALLATION OF NEW BOLTS SHALL BE PERFORMED ONE AT A TIME.
16. AT LOCATIONS WHERE A DRIFT PIN IS TO BE REPLACED WITH A NEW BOLT THE PIN SHALL BE DRIVEN OUT AND A NEW BOLT INSTALLED.
17. ALL BOLTS SHALL BE TIGHTENED IN ACCORDANCE WITH THE REQUIREMENTS OF M8.04.3. AFTER ALL BOLTS ARE INSTALLED, A FINAL TENSIONING PASS SHALL BE PERFORMED ON THE ENTIRE REPAIR TO ENSURE PROPER TENSIONING OF ALL BOLTS.
18. AFTER REPAIRS AT EACH GUSSET LOCATION ARE COMPLETE, APPLY SILICONE SEALER TO THE PLATE EDGE SEAMS BETWEEN LAMINATES AND APPLY 2 COATS OF PAINT (SEE CLEANING AND PAINTING NOTES SHEET 4).

CUTTING EXISTING STEEL NOTES:

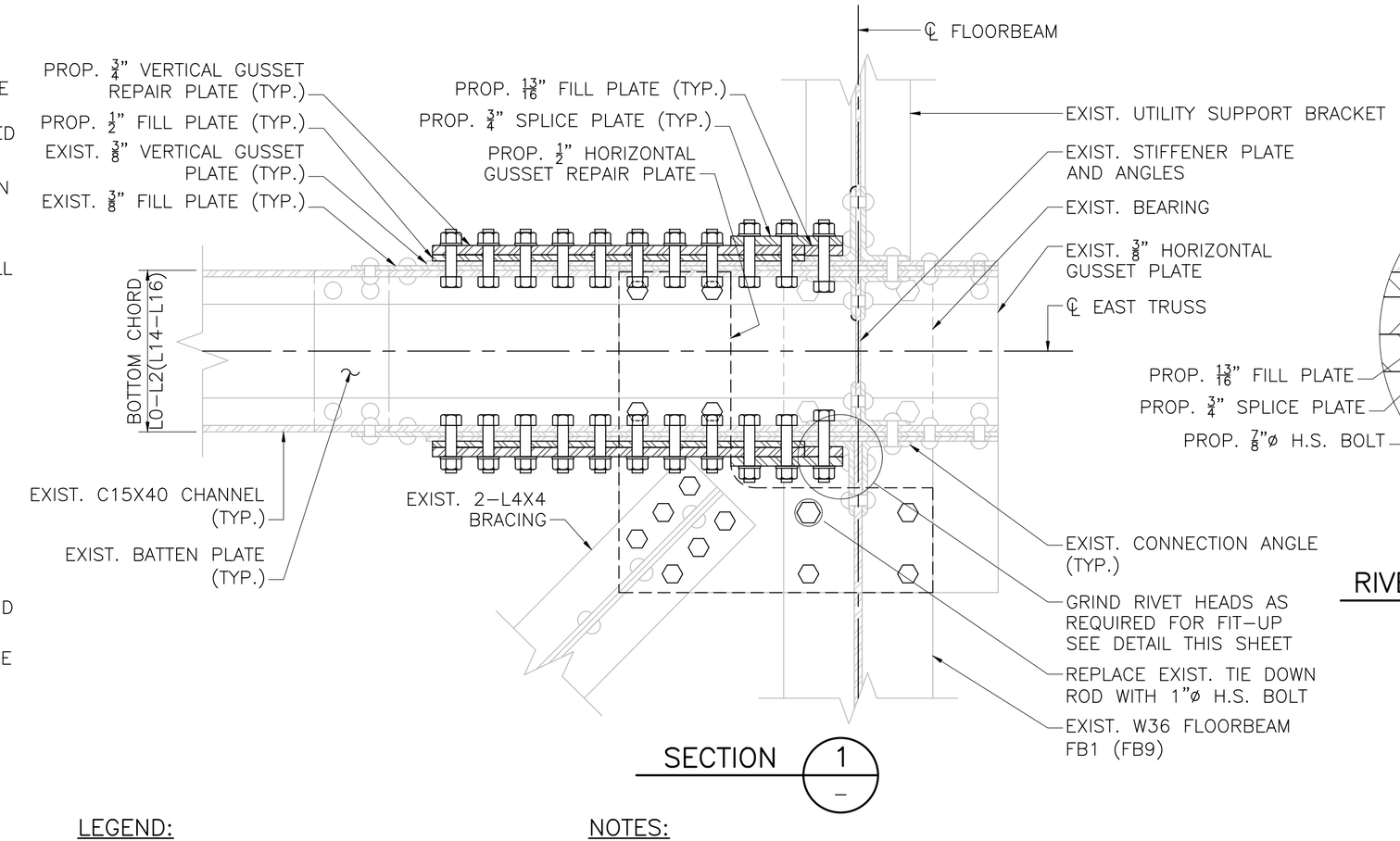
1. PRIOR TO CUTTING ANY PAINTED STEEL SURFACES, THE CONTRACTOR SHALL CHEMICALLY OR MECHANICALLY REMOVE THE ENTIRE COATING DOWN TO BARE METAL. THE PAINT COATING MUST BE REMOVED IN AN AREA CONSISTENT WITH THE SPECIAL PROVISIONS GENERAL REQUIREMENTS FOR DEMOLITION AND WORK INVOLVING PAINTED STEEL.
2. CUTTING MAY BE PERFORMED BY CARBON AIR ARC CUTTING, PLASMA CUTTING, OR BY MECHANICAL MEANS. THERMAL CUTS SHALL BE MADE INSIDE THE LIMITS OF THE CUTS AND GROUND TO THE FINAL PROFILE. FLAME CUTTING SHALL NOT BE ALLOWED.
3. THERMAL CUTTING SHALL BE DONE IN A MANNER TO NOT CREATE EXCESSIVE HEAT IN THE STEEL TO REMAIN. THE CONTRACTOR SHALL USE TEMP–STICK INDICATING CRAYONS FOR 275°F TO 300°F OR INFRARED THERMOMETERS TO MONITOR THE TEMPERATURE IN THE STEEL. TEMPERATURES SHALL BE MONITORED ON THE STEEL TO REMAIN 3 INCHES AWAY FROM THE LINE BEING CUT. IF THE TEMPERATURE OF THE BASE STEEL EXCEEDS 275°F, CUTTING SHALL BE TEMPORARILY DISCONTINUED TO ALLOW THE STEEL TO COOL. IF THE TEMPERATURE EXCEEDS 300°F IN THE BASE STEEL, THEN THAT CUTTING PROCESS SHALL BE DISCONTINUED, AND OTHER METHODS SHALL BE EMPLOYED TO CUT WITHIN THE SAME TEMPERATURE RESTRICTIONS.
4. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL DETAILED PROCEDURES DEMONSTRATING HOW THE STEEL WILL BE CUT, REMOVED AND PREPARED FOR INSTALLATION OF THE NEW STEEL. ALL PERSONNEL INVOLVED IN CUTTING AND WELD REMOVAL SHALL BE MASSDOT CERTIFIED WELDERS.
5. IN THE EVENT THE CONTRACTOR DAMAGES MATERIALS TO REMAIN DURING CUTTING OPERATIONS, THE CONTRACTOR SHALL REPLACE, REPAIR, OR REINFORCE THE DAMAGED AREA AS MAY BE REQUIRED TO RESTORE THE AREA TO THE ORIGINAL CONDITION OR BETTER PRIOR TO DAMAGE.



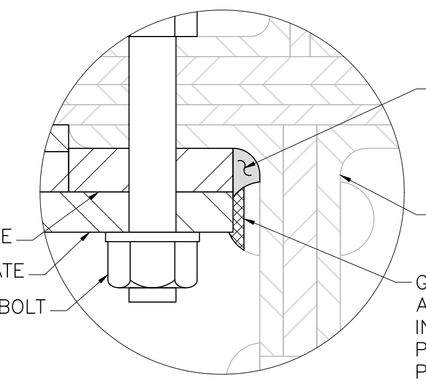
ELEVATION (INTERIOR)



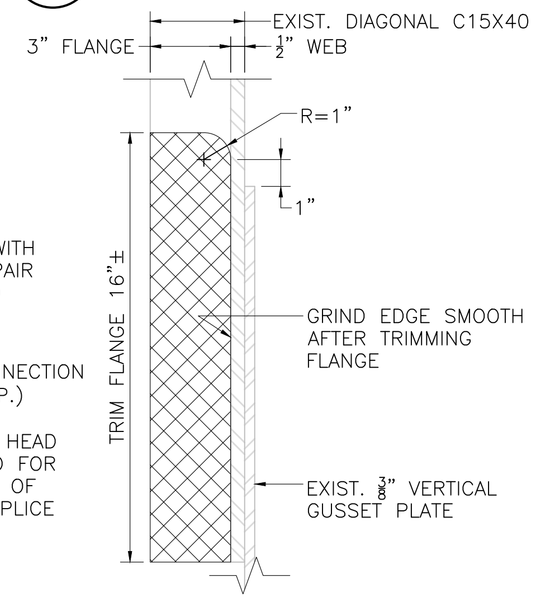
SECTION 2



SECTION 1



RIVET INTERFERENCE DETAIL
NOT TO SCALE



CHANNEL COPING DETAIL
SCALE: 3" = 1'–0"

LEGEND:

- ○ ○ EXISTING RIVET OR BOLT TO REMAIN
- ◯ ◎ PROPOSED H.S. BOLT IN EXISTING RIVET HOLE
- ● ◉ PROPOSED H.S. BOLT IN NEW HOLE

NOTES:

1. GUSSET PLATE AT PANEL POINT L0E SHOWN, REPAIR AT L16E SIMILAR AS NOTED BY PARENTHESIS AND OPPOSITE HAND.
2. SEE SHEET 3 FOR ALL PLATE DETAILS AND PACK RUST REMOVAL NOTES AND DETAILS.
3. SEE SHEET 4 FOR LIMITS OF EPOXY REPAIR COMPOUND AND CLEANING AND PAINTING NOTES AND DETAILS.

EAST TRUSS GUSSET PLATE REPAIR

SCALE: 1½" = 1'–0"

LEE
WILLOW STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	36	50
PROJECT FILE NO.	607597		

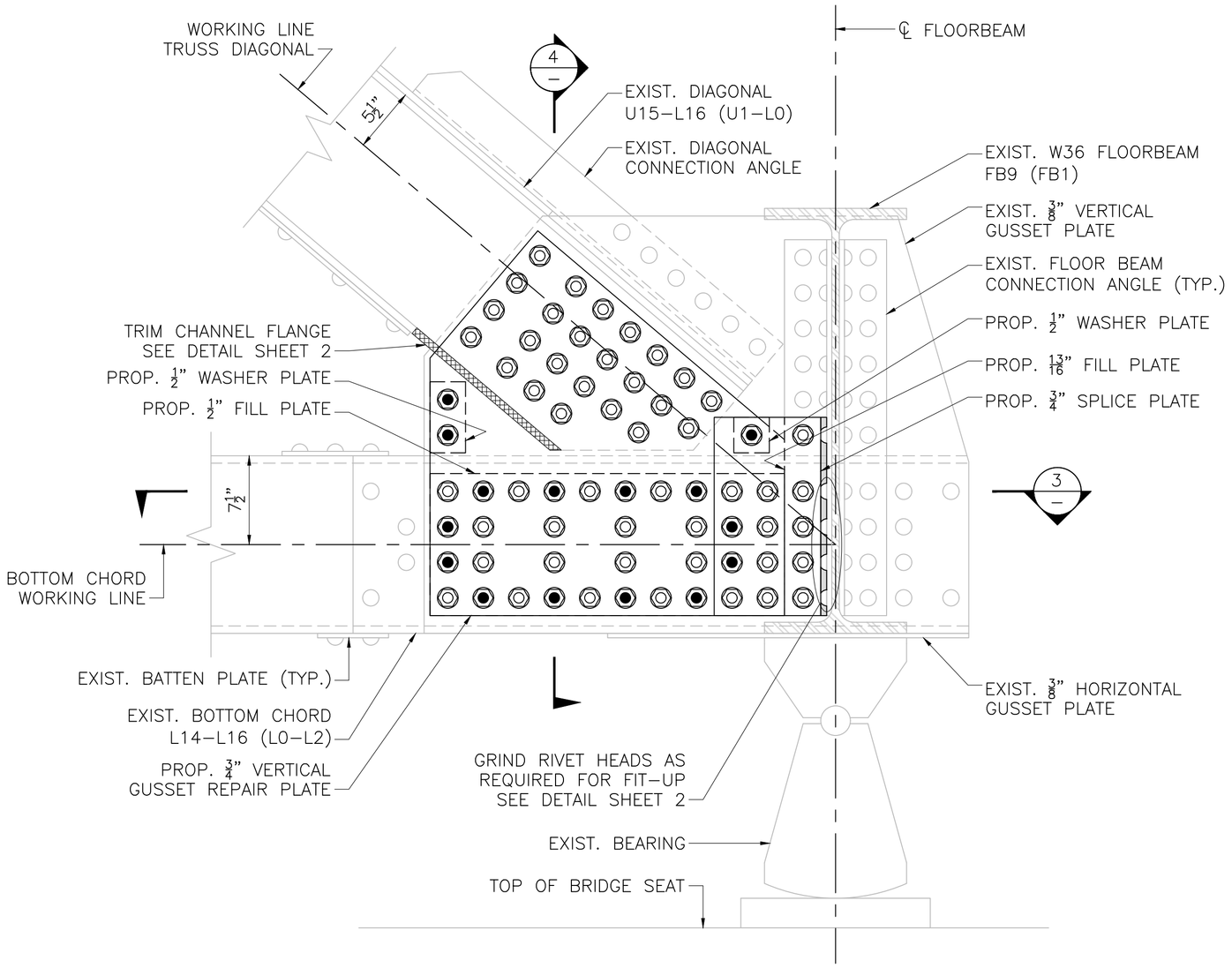
GUSSET PLATE REPAIR DETAILS (1 OF 3)

MONTH DD, YYYY	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

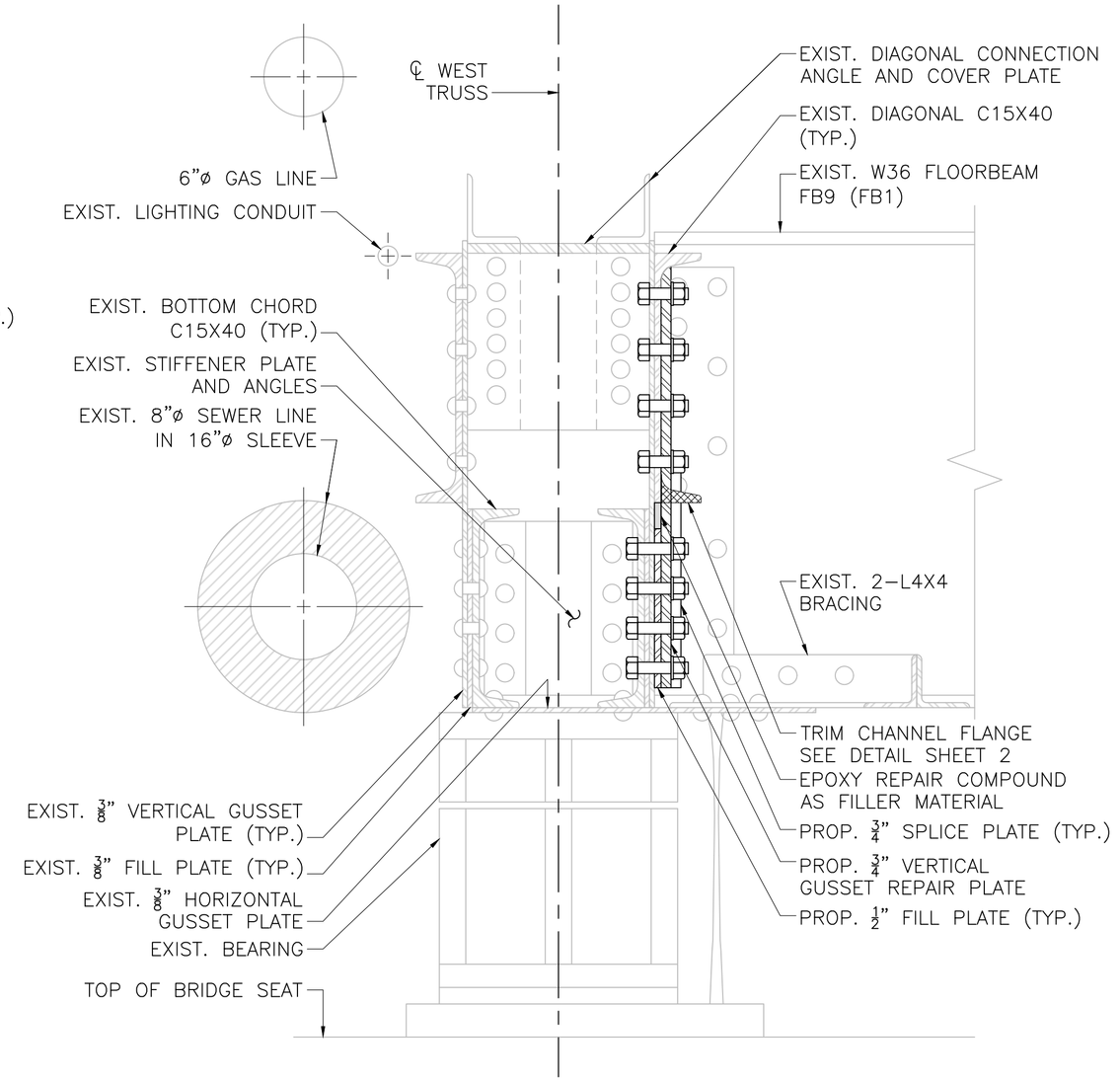
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

SHEET 2 OF 6 SHEETS BRIDGE NO. L–05–002 (057)

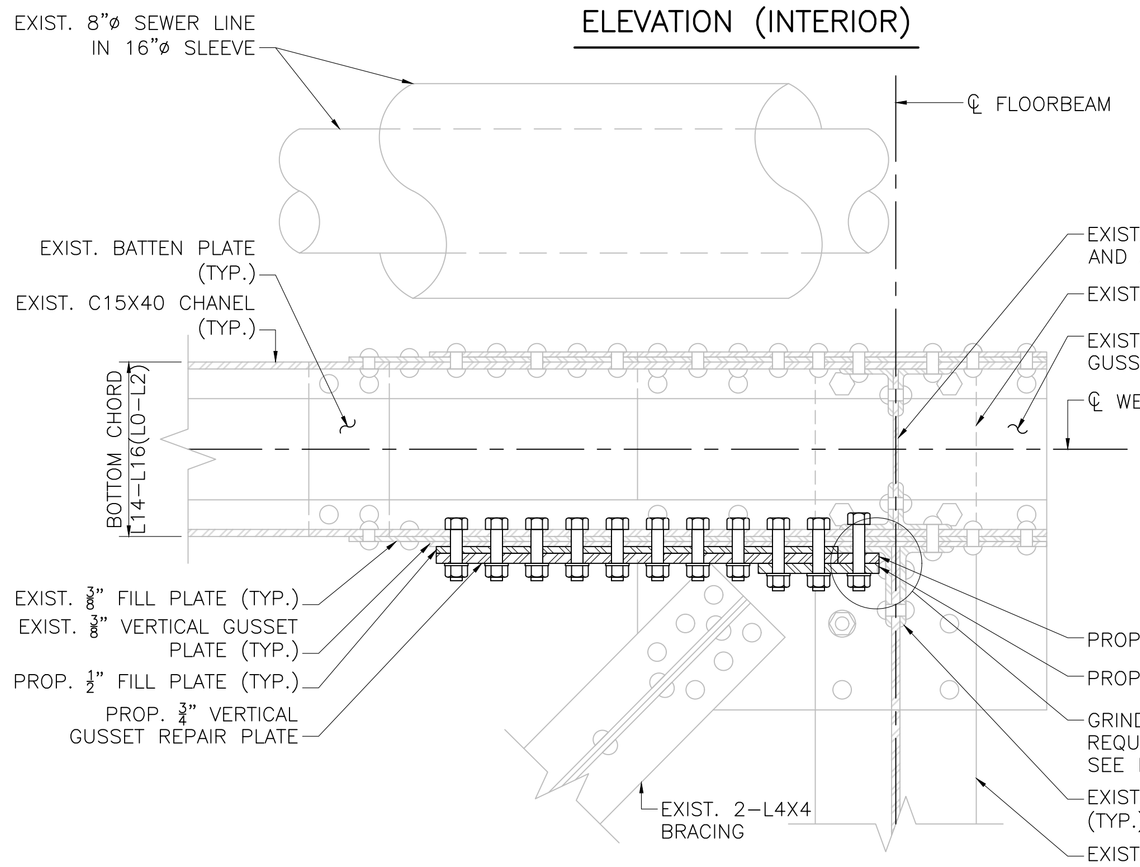
L05002 (057) - GUSSET PLATE REPAIRS DETAILS.DWG Plotted on 27-Jun-2025 2:50 PM
Final Structural Submittal (SF) 27-June-2025
Proposal No. 607597 - 132402
A00840 - 274



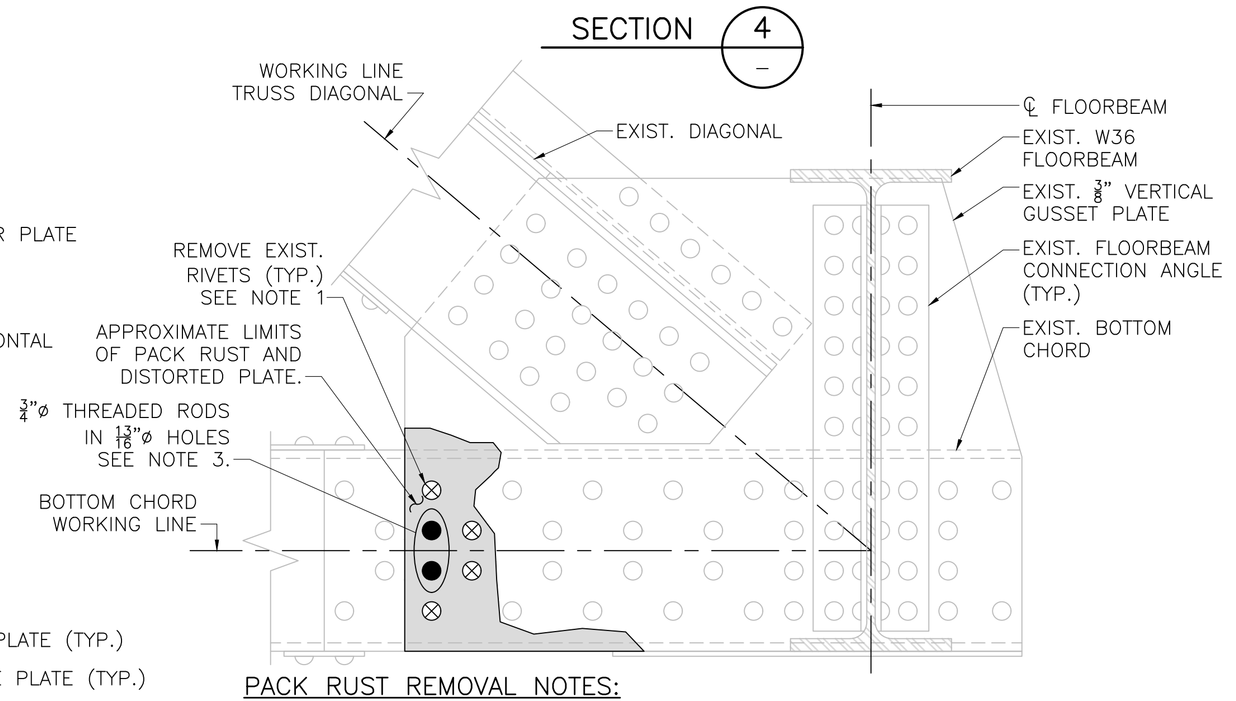
ELEVATION (INTERIOR)



SECTION 4



SECTION 3



PACK RUST REMOVAL NOTES:

1. REMOVE ONLY THE EXISTING RIVETS SHOWN, NO ADDITIONAL RIVETS SHALL BE REMOVED.
2. PRY BACK EXISTING VERTICAL GUSSET PLATE AND REMOVE PACK RUST IN ACCORDANCE WITH SUBSECTION 961.61 OF THE STANDARD SPECIFICATIONS TO THE EXTENT PRACTICAL.
3. AFTER CLEANING, INSTALL ¾" DIA. A449 THREADED RODS IN 1 3/16" DIA. HOLES AND ⅞" DIA. RIVET HOLES AND DRAW GUSSET PLATE TIGHT TO BOTTOM CHORD TO REMOVE THE PLATE BUCKLE TO THE EXTENT PRACTICABLE.
4. ONCE THE PLATE HAS BEEN FLATTENED THE RODS MAY BE REMOVED AND THE REPAIR PLATE INSTALLED. REINSTALL THE THREADED ROD AS REQUIRED TO DRAW THE NEW STEEL TO EXISTING. REPLACE THE THREADED RODS ONE AT A TIME BY REAMING HOLES TO FULL SIZE AND FILLING WITH H.S. BOLTS.
5. THE REMAINING OPEN HOLES SHALL BE REAMED AND FILLED WITH H.S. BOLTS THEN THE CONTRACTOR SHALL FOLLOW THE GUSSET PLATE REPAIR PROCEDURE ON SHEET 2.

TYPICAL PACK RUST REMOVAL

LEGEND:

- ○ ○ EXISTING RIVET OR BOLT TO REMAIN
- ⬡ ◎ PROPOSED H.S. BOLT IN EXISTING RIVET HOLE
- ⬢ ◉ PROPOSED H.S. BOLT IN NEW HOLE

NOTES:

1. GUSSET PLATE AT PANEL POINT L16W SHOWN, REPAIR AT LOW SIMILAR AS NOTED BY PARENTHESIS AND OPPOSITE HAND.
2. SEE SHEET 4 FOR LIMITS OF EPOXY REPAIR COMPOUND AND CLEANING AND PAINTING NOTES AND DETAILS.

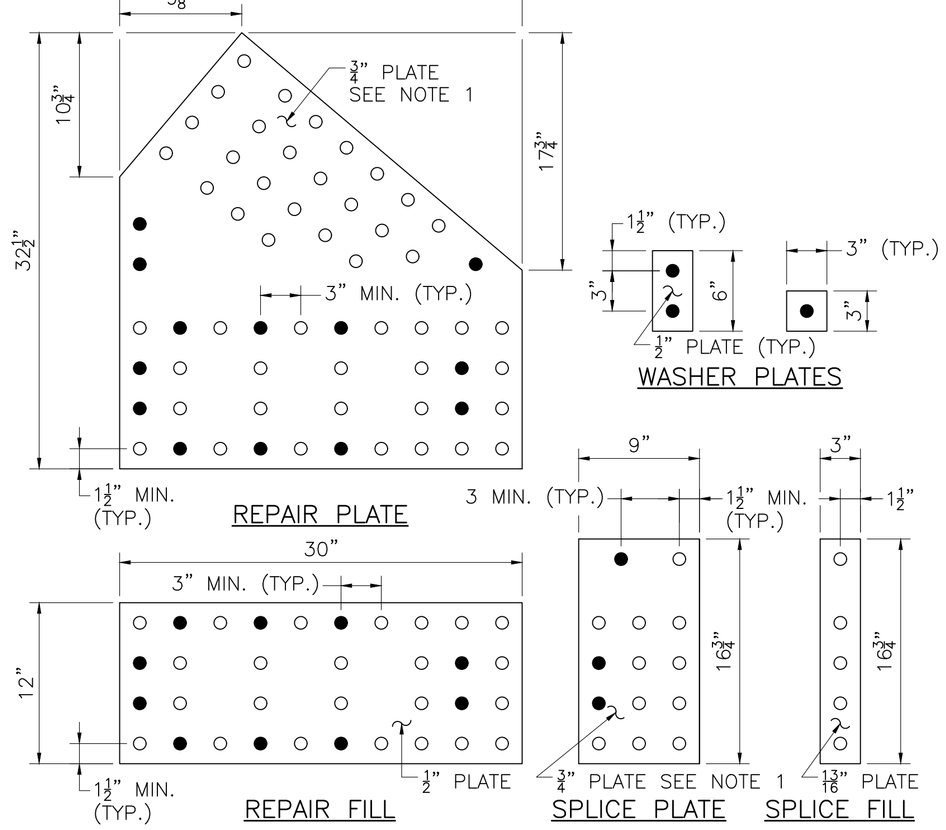
WEST TRUSS GUSSET PLATE REPAIR

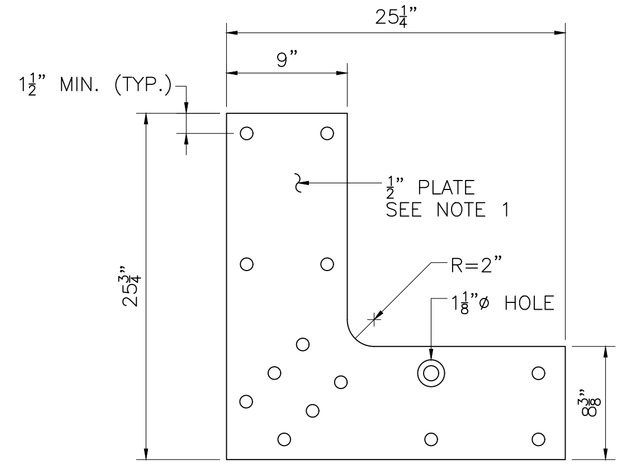
SCALE: 1½" = 1'–0"

LEE
WILLOW STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	37	50
PROJECT FILE NO.	607597		

GUSSET PLATE REPAIR DETAILS (2 OF 3)





LEGEND:

- ○ HOLE TO MATCH EXISTING RIVET HOLES
- ● HOLE FOR NEW BOLT

NOTES:

1. GUSSET REPAIR PLATES AND SPLICE PLATES ARE MAIN MEMBER, SEE GUSSET PLATE REPAIR NOTES SHEET 2.
2. PLATE DIMENSIONS PROVIDED ARE APPROXIMATE AND NEED TO BE VERIFIED BY THE CONTRACTOR, SEE GUSSET REPAIR NOTES SHEET 2.

REPAIR PLATE DETAILS

SCALE: 1½" = 1'–0"

MONTH DD, YYYY	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: _____ STATE BRIDGE ENGINEER

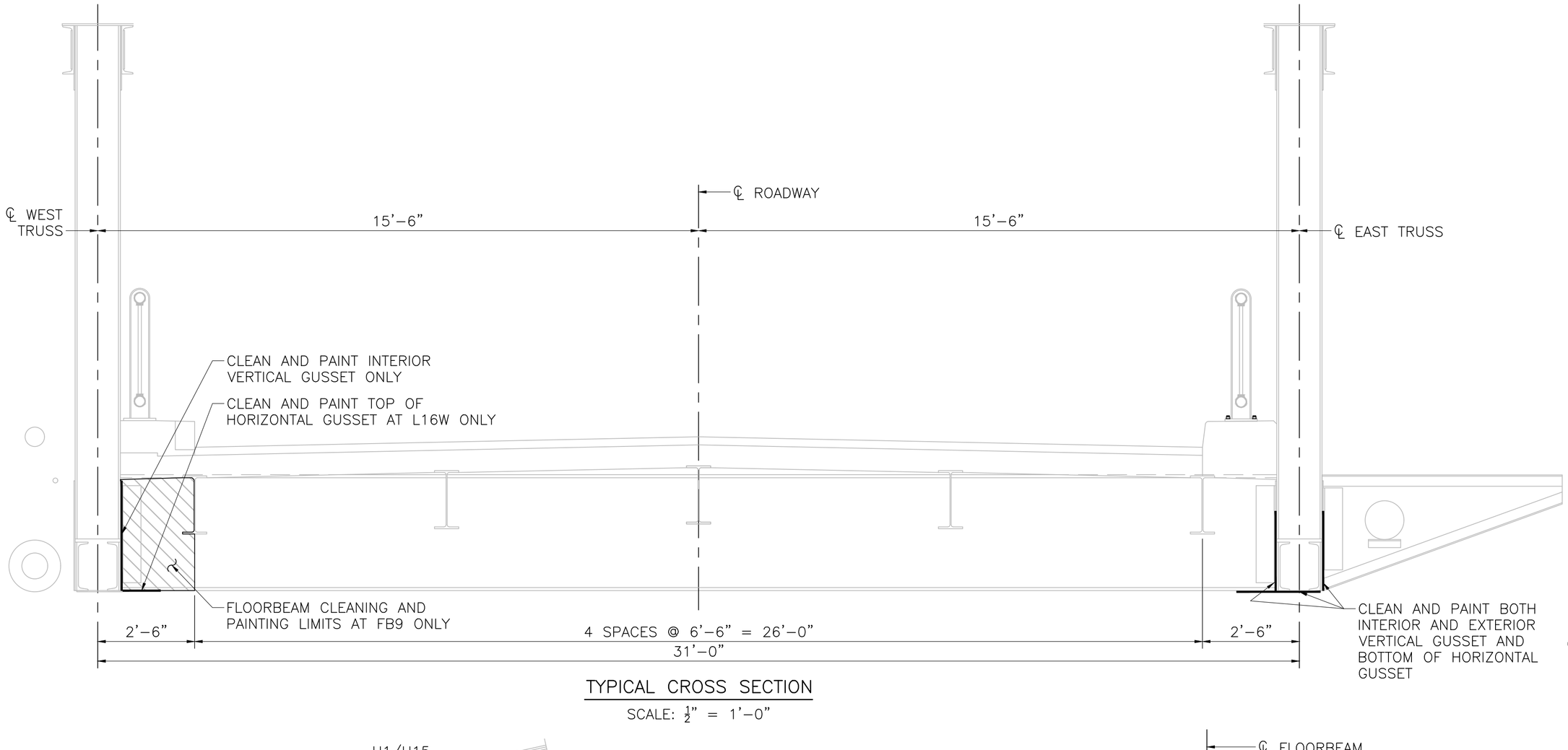
USE ONLY PRINTS OF LATEST DATE

SHEET 3 OF 6 SHEETS BRIDGE NO. L–05–002 (057)

L05002 (057) - GUSSET PLATE REPAIRS DETAILS.DWG Plotted on 27-Jun-2025 2:50 PM
Proposal No. 607597 - 132402
Final Structural Submittal (SF) 27-June-2025

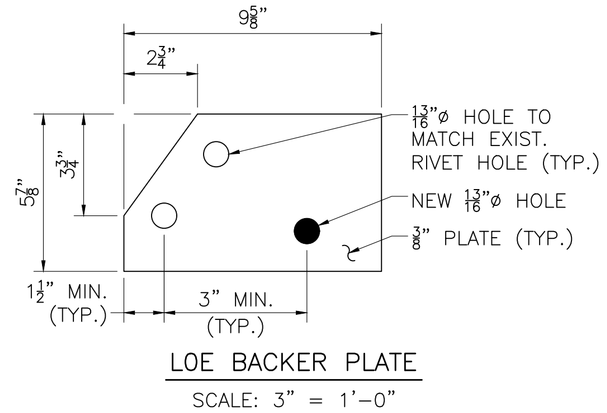
STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	38	50
PROJECT FILE NO.	607597		

GUSSET PLATE REPAIR DETAILS (3 OF 3)



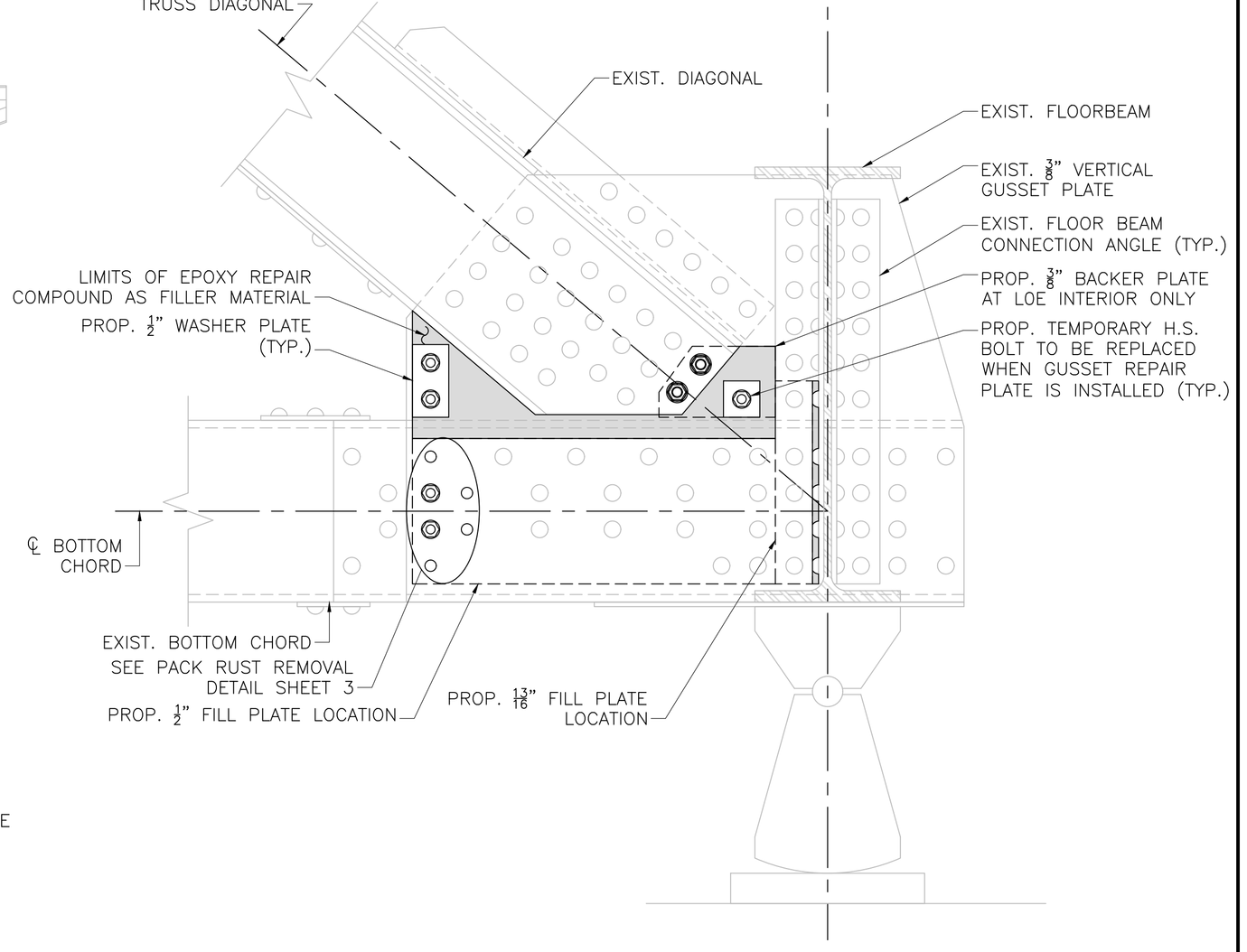
TYPICAL CROSS SECTION

SCALE: $\frac{1}{2}$" = 1'–0"



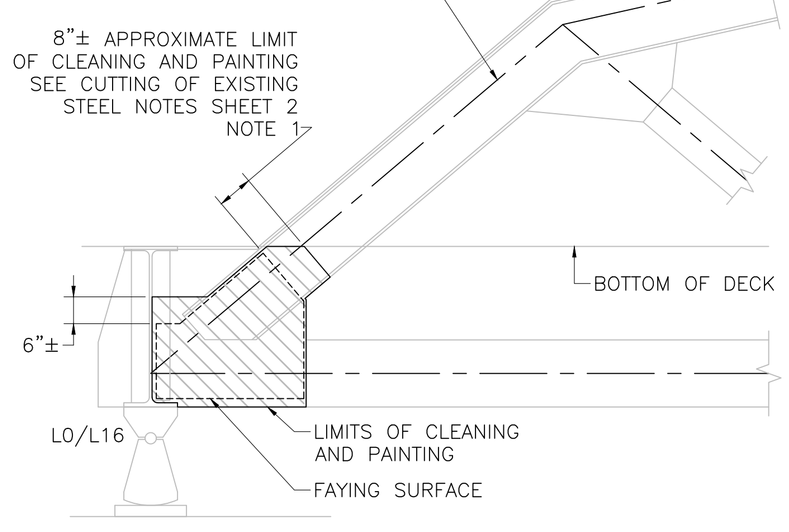
L0E BACKER PLATE

SCALE: 3" = 1'–0"



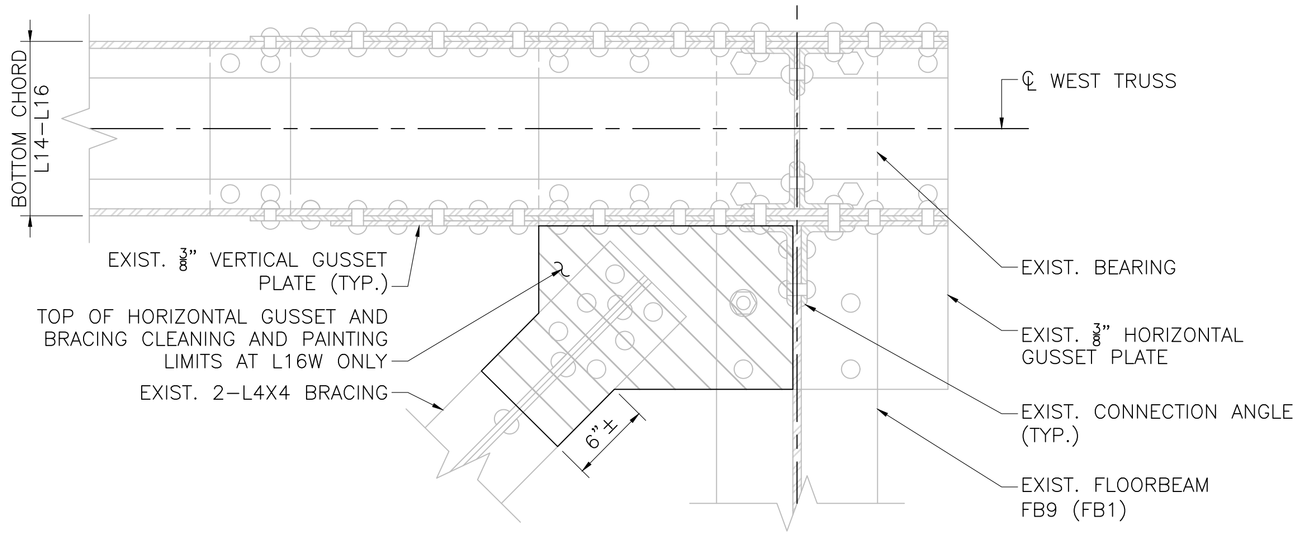
EPOXY REPAIR COMPOUND DETAIL

SCALE: 1½" = 1'–0"



VERTICAL GUSSET AND TRUSS MEMBERS

SCALE: ½" = 1'–0"



L16W HORIZONTAL GUSSET

SCALE: 1½" = 1'–0"

LIMITS OF CLEANING AND PAINTING

CLEANING AND PAINTING NOTES:

1. THE CONTRACTOR SHALL ASSUME ALL EXISTING COATINGS CONTAIN LEAD UNLESS OTHERWISE DETERMINED BY TESTING. LOCAL CONTAINMENT SHALL BE PROVIDED FOR ALL DEBRIS CREATED BY CLEANING AND PAINTING OPERATIONS.
2. PRIOR TO THE INSTALLATION OF ANY NEW STEEL, THE EXISTING STEEL SHALL BE THOROUGHLY CLEANED TO SSPC–SP10 CONDITION TO THE LIMITS SHOWN AND A PRIME OF PAINT SHALL BE APPLIED. THE PRIME COAT PAINT SYSTEM SHALL BE IN ACCORDANCE WITH SUBSECTION 961.64 OF THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES AND SHALL BE COMPATIBLE WITH THE PAINT SYSTEM BEING EMPLOYED BY THE CONTRACTOR.
3. AFTER REPAIRS AT EACH LOCATION ARE COMPLETE, APPLY PAINTABLE SEALER TO THE EDGE SEAMS BETWEEN STEEL LAMINATES BEFORE PAINTING.
4. ALL STRUCTURAL STEEL ELEMENTS AND HIGH STRENGTH BOLTS SHALL BE PAINTED IN ACCORDANCE WITH SUBSECTION 961.64 OF THE MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES. CLEANING AND PAINTING SHALL EXTEND A MINIMUM OF 6 INCHES BEYOND THE PERIMETER OF THE PROPOSED REPAIRS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
5. THE FINISH COAT SHALL BE FEDERAL STANDARD COLOR #14223 GREEN.

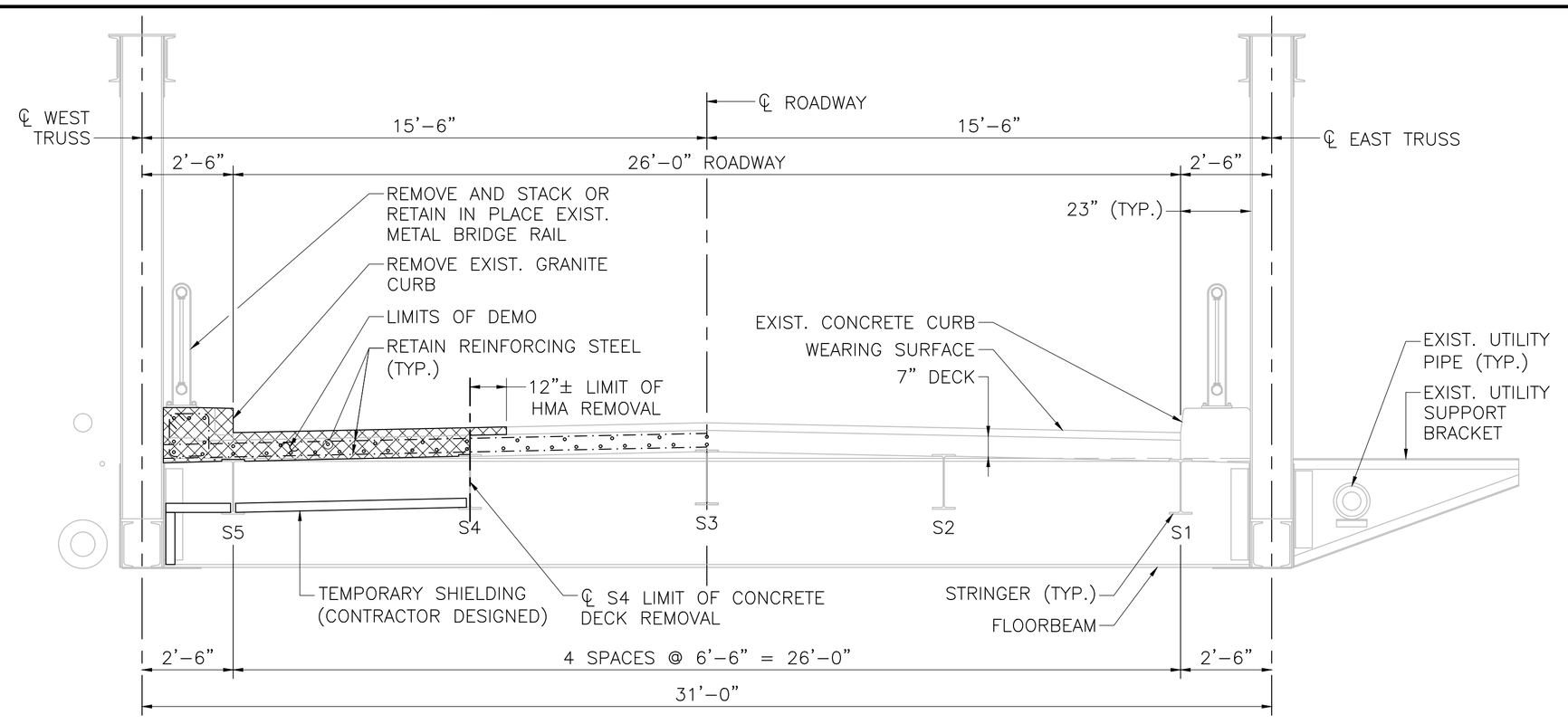
EPOXY REPAIR COMPOUND NOTES:

IN LOCATIONS WHERE HEAVY DETERIORATION HAS OCCURRED OR AS DIRECTED BY THE ENGINEER, EPOXY REPAIR COMPOUND SHALL BE APPLIED IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND AS FOLLOWS:

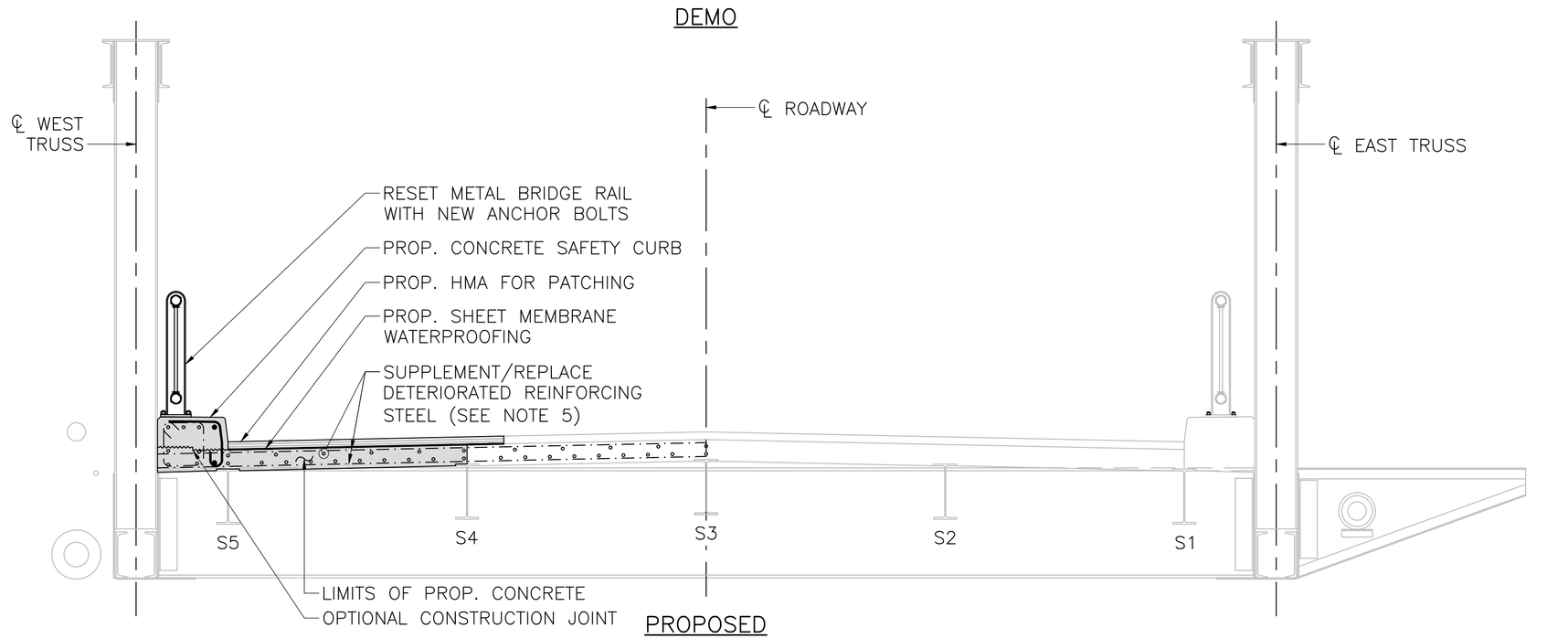
1. THE EPOXY REPAIR COMPOUND SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND APPROVAL THE METHODS, PROCEDURES, AND MATERIALS TO BE USED FOR THE WORK.
2. THE REPAIR COMPOUND SHALL BE USED AS A FILLER MATERIAL BETWEEN NEW AND EXISTING STEEL AS SHOWN IN THESE DETAILS. ADDITIONALLY THE REPAIR COMPOUND SHALL BE APPLIED TO AREAS OF THE EXISTING STEEL THAT EXHIBIT SEVERE SECTION LOSS TO COMPLETELY FILL THE IRREGULARITIES IN THE EXISTING PLATE SUCH THAT NO VOIDS REMAIN BETWEEN THE PLIES OF THE EXISTING STEEL AND THE PROPOSED STRENGTHENING STEEL IN THE FINAL REPAIRED CONDITION. ALSO, ANY VOIDS ADJACENT TO OR COVERED BY REPAIR STEEL SHALL BE FILLED WITH THE EPOXY REPAIR COMPOUND SO MOISTURE DOES NOT COLLECT
3. THE PROPOSED REPAIR STEEL SHALL BE PROPERLY POSITIONED AND BROUGHT INTO FIRM CONTACT WITHIN THE WORKING TIME LIMITS OF THE EPOXY REPAIR COMPOUND. THE REPAIR STEEL SHALL BE SECURED IN PLACE USING CLAMPS BY OR OTHER MECHANICAL MEANS TO BRING THE PLIES OF THE EXISTING STEEL AND NEW STEEL INTO FIRM CONTACT. WELDING IS NOT ALLOWED.
4. ONCE THE PROPOSED STEEL HAS BEEN SECURED INTO POSITION WITH THE POSITIONING BOLTS, AND THE EPOXY COMPOUND HAS CURED, THE CONTRACTOR MAY CONTINUE WITH THE REPAIR PROCEDURE OUTLINED IN THE GUSSET PLATE REPAIR NOTES ON SHEET 2.
5. EPOXY COMPOUND FOR STRUCTURAL STEEL REPAIRS SHALL BE A SOLVENT FREE, MOISTURE TOLERANT, EPOXY PASTE ADHESIVE SYSTEM. THE EPOXY PASTE SHALL BE DEVELOPED SPECIFICALLY FOR FILLING, SMOOTHING, SEALING, OR FAIRING APPLICATIONS ON METALS. THE PASTE SHALL BE APPLIED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S LATEST WRITTEN INSTRUCTIONS.

MONTH DD, YYYY	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

A00840 - 276
Proposal No. 607597 - 132402
L05002 (057) - GUSSET PLATE REPAIRS DETAILS.DWG Plotted on 27-Jun-2025 2:50 PM
Final Structural Submittal (SF) 27-June-2025



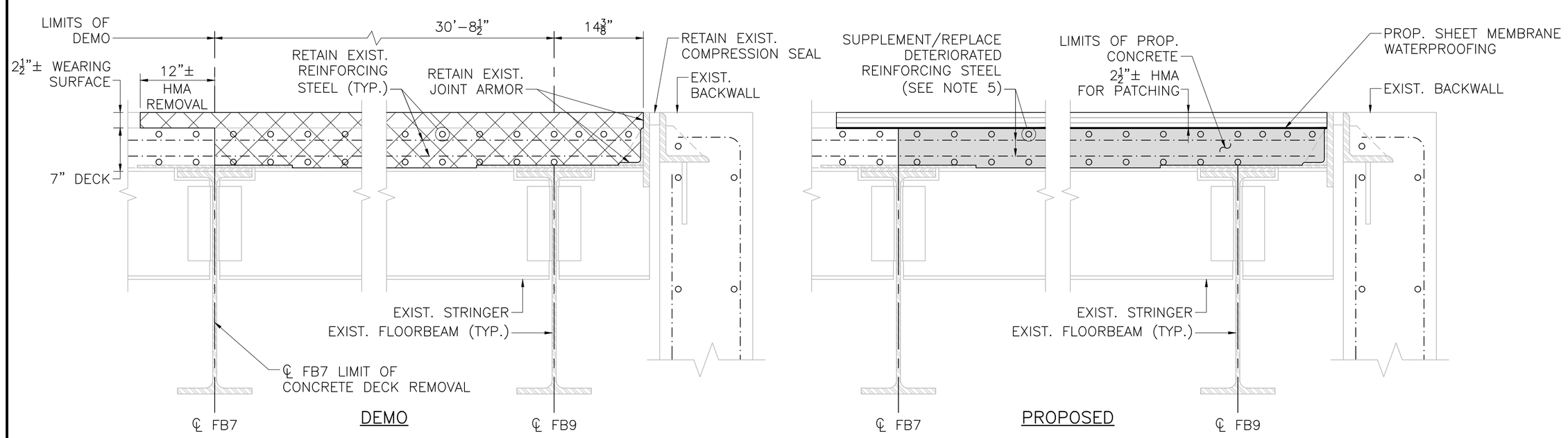
DEMO



PROPOSED

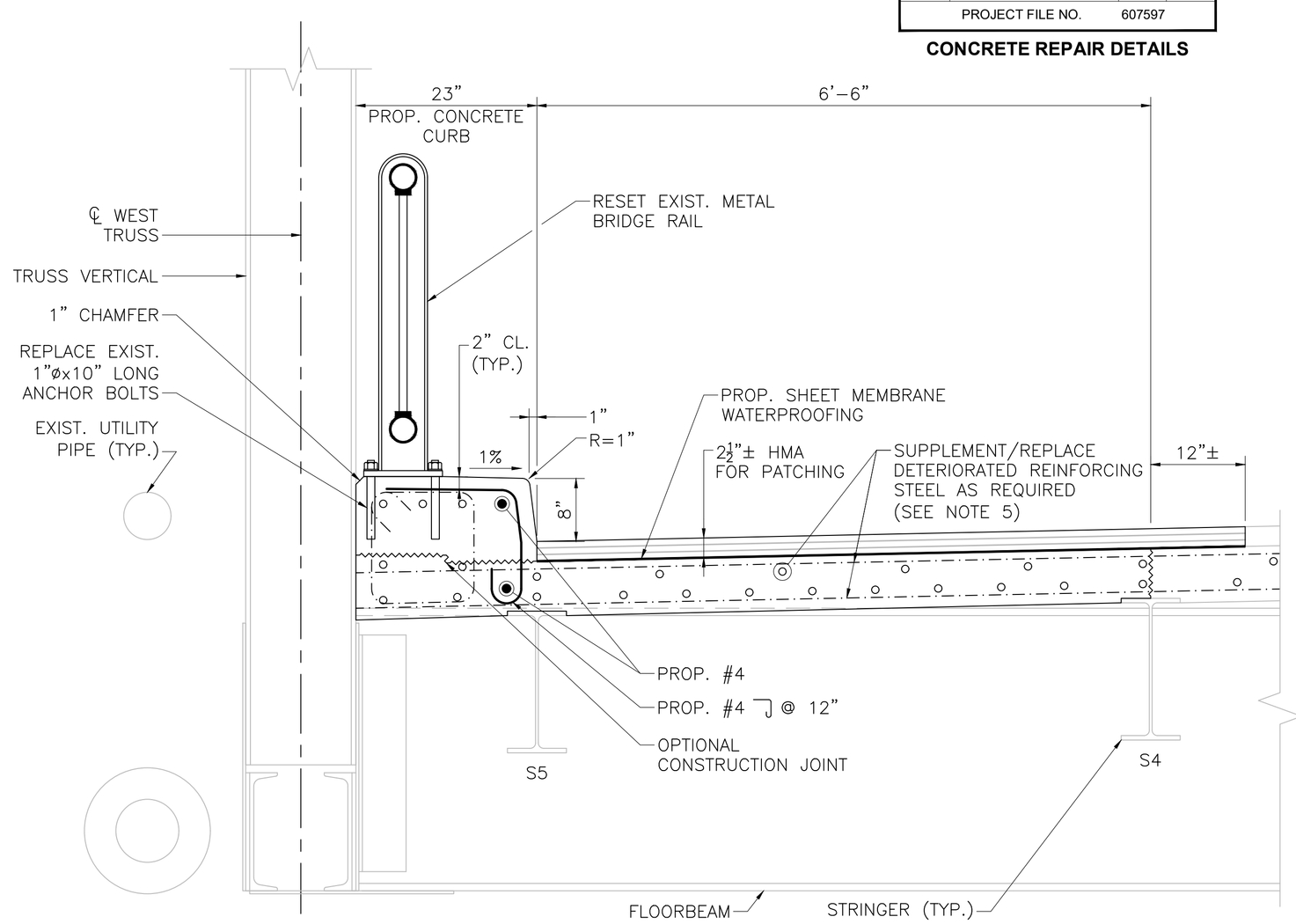
CONCRETE REPAIR LIMITS – TYPICAL CROSS SECTION

SCALE: $\frac{3}{8}$" = 1'–0"



CONCRETE REPAIR LIMITS – AT BRIDGE JOINT

SCALE: 1" = 1'–0"



CONCRETE REPAIR DETAIL

SCALE: 1" = 1'–0"

CONCRETE REPAIR NOTES:

1. PROPOSED CONCRETE SHALL BE 4000 PSI, ¾", 610 CEMENT CONCRETE.
2. REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M31 GRADE 60, EPOXY COATED.
3. ANCHOR BOLTS SHALL BE ASTM F1554 GRADE 105 TYPE 2A WITH COMPATIBLE NUTS AND WASHERS.
4. THE LIMITS OF THE REPAIRS SHALL BE SAWCUT ALONG NEAT LINES TO A DEPTH OF ¾" TO PRODUCE A CLEAN EDGE.
5. ALL EXISTING REINFORCEMENT SHALL BE RETAINED. NEW REINFORCING STEEL SHALL BE PLACED TO SUPPLEMENT EXISTING REINFORCEMENT THAT HAS SECTION LOSS OF 25% OR MORE OF THE ORIGINAL CROSS SECTION AREA OR HAS BROKEN, AS DETERMINED BY THE ENGINEER. ANY EXISTING STEEL DEEMED UNSUITABLE FOR REUSE BY THE ENGINEER SHALL BE REPLACED. ALL NEW REINFORCEMENT SHALL EXTEND PAST THE LIMITS OF DETERIORATION TO THE LENGTHS REQUIRED FOR NON–CONTACT LAP SPLICES. WELDING OF STEEL REINFORCEMENT SHALL NOT BE ALLOWED. NEW SUPPLEMENTAL REINFORCEMENT SHALL BE PLACED AT THE SAME LEVEL ALONGSIDE THE EXISTING DETERIORATED OR BROKEN REINFORCING STEEL.
6. CONCRETE SURFACES THAT ARE TO BE IN CONTACT WITH REPAIR CONCRETE SHALL BE ABRASIVELY BLAST CLEANED OR CLEANED WITH HIGH PRESSURE WASHING IN ORDER TO REMOVE ALL RUST, OIL, AND DEBRIS THAT IS NOT TIGHTLY ADHERED. EXISTING REINFORCING STEEL SHALL BE CLEANED BY MECHANICAL MEANS AND HIGH PRESSURE WASHING. ALL HIGH PRESSURE WASHING SHALL BE DONE WITH WATER THAT DOES NOT CONTAIN DETERGENTS OR ANY BOND INHIBITING CHEMICALS.
7. PRIOR TO CONCRETE PLACEMENT, THE EXCAVATED SURFACES SHALL RECEIVE A THOROUGH APPLICATION OF WATER FROM A PRESSURE WASHER CAPABLE OF DELIVERING 1500 PSI AT THE NOZZLE FOR A MINIMUM OF 10 MINUTES. AFTER PRESSURE WASHING, ANY STANDING WATER SHOULD BE BLOWN OUT TO PRODUCE A SATURATED SURFACE DRY (SSD) CONDITION USING OIL FREE COMPRESSED AIR.

MONTH DD, YYYY	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION

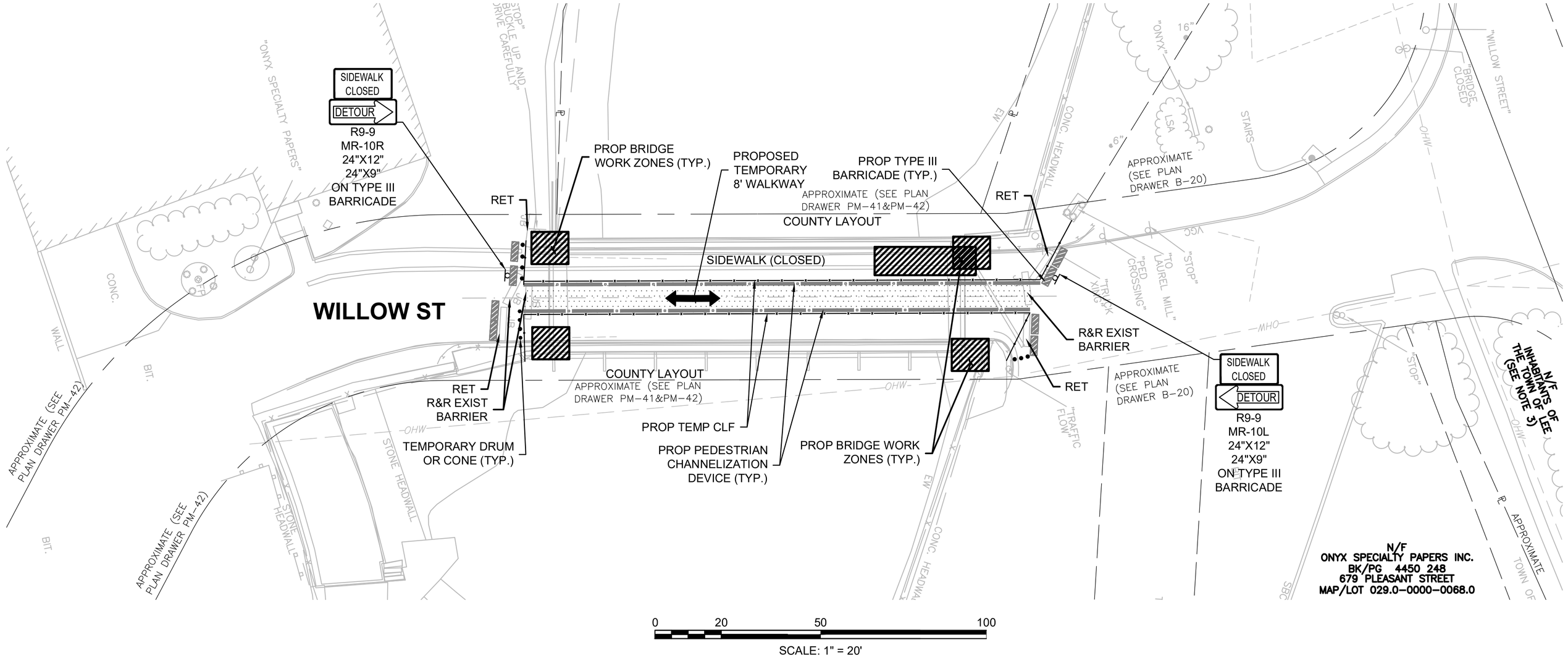
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT
AUTHORIZED SIGNATORY: _____ STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE

L05002 (057) - CONCRETE REPAIR DETAILS.DWG Plotted on 27-Jun-2025 2:50 PM
Final Structural Submittal (SF) 27-June-2025
Proposal No. 607597 - 132402
A00840 - 277

LEE
WILLOW STREET

STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
MA	N/A	40	50
PROJECT FILE NO.	607597		

TEMPORARY TRAFFIC CONTROL PLAN



0 20 50 100

SCALE: 1" = 20'

LEGEND:

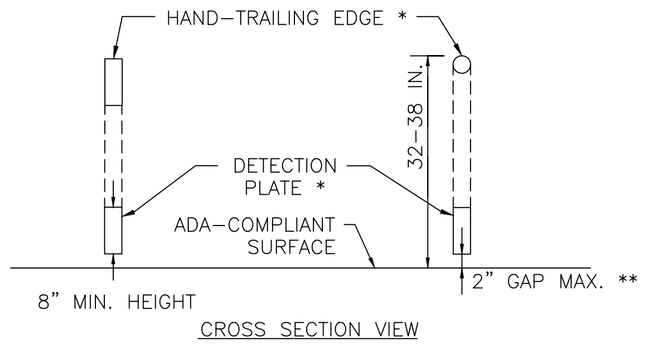
- TYPE III BARRICADE
- DIRECTION OF TRAFFIC
- WORK ZONE
- HMA OVERLAY
- SIGN
- TEMPORARY BARRIER
- TEMPORARY CHAIN LINK FENCE
- CONSTRUCTION FENCE GATE
- TEMPORARY DRUM OR CONE
- PEDESTRIAN BARRICADE WITH PEDESTRIAN CHANNELIZING DEVICES

CONSTRUCTION SIGN SUMMARY

IDENTIFI-CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA (S.F.)	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER			
MR-10L	24	9	DETOUR	SEE LATEST M.U.T.C.D			1	BLACK/ ORANGE	BLACK	BLACK	-	1.5	1.5
MR-10R	24	9	DETOUR				1	BLACK/ ORANGE	BLACK	BLACK	-	1.5	1.5
R9-9	24	12	SIDEWALK CLOSED				2	WHITE	BLACK	BLACK	-	2	4
											TOTAL		7

NOTES:

1. ALL 'ORANGE' SIGNS SHALL BE 'FLUORESCENT ORANGE'



CROSS SECTION VIEW

PEDESTRIAN CHANNELIZNG DEVICE

NOTES:

* THE HAND TRAILING EDGE AND DETECTION PLATE SHALL BE CONTINUOUS THROUGHOUT THE LENGTH OF THE PATH SUCH THAT A PEDESTRIAN USER WITH A LONG CANE CAN FOLLOW IT.

** A MAXIMUM 2-INCH GAP BETWEEN THE BOTTOM OF CONTINUOUS DETECTION PLATE AND THE WALKWAY SURFACE MAY BE USED TO PROVIDE DRAINAGE.

MONTH DD, YYYY	ISSUED FOR CONSTRUCTION
DATE	DESCRIPTION
THIS SHEET IS APPROVED FOR CONSTRUCTION BY MASSDOT AUTHORIZED SIGNATORY:	STATE BRIDGE ENGINEER
USE ONLY PRINTS OF LATEST DATE	

L05002(057)_HD(PLAN).DWG Plotted on 27-Jun-2025 2:50 PM
Proposal No. 607597 - 132402
A00840 - 278
Final Structural Submittal (SF) 27-June-2025

DOCUMENT A00841

MASSACHUSETTS
Department of Environmental Protection

Water Quality Certificate

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Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
100 Cambridge Street Suite 900 Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

August 8, 2025

Massachusetts Department of Transportation, Highway Division
10 Park Plaza, Suite 7360
Boston, Massachusetts 02116
Attn: Courtney Walker

RE: 401 WATER QUALITY CERTIFICATION
BRP WW 11, Minor Fill Project
BRP WW 08, Minor Dredge Project
Bridge (L-05-004) Replacement, Meadow Street over Beartown Brook
Lee, Massachusetts

401 WQC Filing Number: 25-WW26-0008-APP
USACE Application No. NAE-2025-00930
MassDOT File Number: 607597

Dear Ms. Walker:

The Massachusetts Department of Environmental Protection (MassDEP) has reviewed your application for a Water Quality Certification (WQC), as referenced above. This application was deemed complete on July 22, 2025. In accordance with the provisions of MGL Ch. 21, §§26-53 and Section 401 of the Federal Clean Water Act as amended (33 U.S.C. §1251 et seq.), it has been determined there is reasonable assurance the proposed project will be conducted in a manner which will not violate applicable water quality standards (314 CMR 4.00) and other applicable requirements of state law.

The proposed project will replace a structurally deficient bridge, Bridge No. L-05-004, that carries Meadow Street in a northwest/southeast orientation over Beartown Brook in Lee (the Project). The Project will also include stormwater improvements, scour protection installation, full-depth reconstruction of the approaches, vegetation removal, and streambed and wetland restoration.

The existing steel stringer bridge was built in 1939 and a temporary bridge was placed over the existing bridge deck in 2013. The bridge has a span of 34.5 feet and an average width of approximately 26.5 feet with no sidewalks. Stormwater currently sheet flows from the roadway via country drainage, eventually entering Beartown Brook. There are no existing drainage structures.

Beartown Brook flows from south to north to its confluence with the Housatonic River approximately 0.25 miles downstream. Bordering Vegetated Wetlands (BVWs) are present in the northeast, northwest,

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and far southeast quadrants of the Project area. The bridge is located within a mapped 1% annual chance of flooding. Beartown Brook is designated as a Coldwater Fishery, with evidence of wild trout in the Project area per the Division of Fisheries and Wildlife (DFW). In addition, the Project is located within Natural Heritage and Endangered Species Program (NHESP) Priority Habitat for Wood Turtle (*Glyptemys insculpta*).

A new precast concrete bridge with two 12-foot travel lanes will replace the existing bridge. The position of the bridge will be slightly realigned, and the span will increase from 34.5 feet to 64 feet to allow for a wider stream channel with defined banks. The existing abutments and wingwalls, including a deteriorating 40-foot-long section to the southeast, will be replaced. Access to the proposed northwest bridge abutment will require 125 square feet (sf) of temporary impact to BVW, which will be restored upon construction completion.

Following construction of the new substructure, the existing abutments will be demolished with the footings left in place below the stream bed to provide scour protection. Portions of the channel will then be dredged to restore the natural channel and install additional scour protection measures including a layer of geotextile fabric, 12-inches of crushed stone, 3-feet of riprap, and 12-inches of natural streambed material. In addition, two boulder weirs will be installed upstream of the bridge to direct flows away from the new concrete block retaining wall. These activities will result in a total of 3,441 sf of permanent fill and 630 cubic yards (cy) of dredging to existing Land Under Water (LUW). An additional 1,577 sf of permanent fill will be discharged for the creation of LUW due to the increased hydraulic opening.

The Project meets or exceeds all MA Stream Crossing Standards. The increased bridge span will allow for the 1.2 times bankfull width of 52.8 feet required under Stream Crossing Standard 3, as well as the establishment of terrestrial bank habitat. Regarding Stream Crossing Standards 4 through 7, natural streambed materials will be reused throughout LUW restoration area and water depth and velocity of the proposed channel will be comparable to the native channel upstream and downstream of the bridge. In addition, the height from the riverbed to the bottom of the proposed superstructure will be approximately 7 feet, creating an openness ratio of 11.58 feet.

The Project meets the MA Stormwater Management Standards to the maximum extent practicable per 314 CMR 9.06(6). The proposed road widening and realignment will increase impervious surfaces in the Project area by 2,188 sf. Structural Stormwater Control Measures (SCMs) were determined to be infeasible due to the proximity of adjacent resource areas and bordering conservation land at all four corners of the bridge. Country drainage will be maintained along the approaches to avoid creating point source discharges. During the course of project review, two vegetated swales with check dams were added to the proposed project. The profile of the roadway will be graded to direct run-off from the proposed bridge towards curbing and the vegetated swales. The swales, along with planting and seeding in adjacent upland areas, will slow flow velocities and promote infiltration prior to discharging overland toward Beartown Brook. As such, Stormwater Management Standards 2, 3, and 4 will be met to the maximum extent practicable.

Sediment sampling, analysis, and due diligence were completed in accordance with 314 CMR 9.07(2). The sediment sieve analysis found the proposed dredged sediment to contain less than 10% of fines, passing the No. 200 U.S. Standard Series Testing Sieve. The due diligence demonstrated the low

potential for contamination in the Project area given the primary land use within the Beartown Brook Watershed as conservation land and absence of Activity and Use Limitation sites. Given the sediment sampling analysis and due diligence results, the Department has determined chemical analysis is not required per 314 CMR 9.07(2)(a) and dredged sediment may be reused onsite.

In an email dated February 6, 2025, the DFW stated a time of year (TOY) restriction between October 1st to April 30th, as well as standard Best Management Practices (BMPs) for sedimentation control, are required to protect Coldwater Fisheries. In addition, NHESP issued a Conditional No-Take Determination for the Project on May 21, 2025. The Project is required to incorporate a NHESP-approved construction-period Wood Turtle Protection Plan (TPP) to avoid a prohibited Take, as conditioned herein.

Based on a review of information provided by the applicant, MassDEP finds that this project complies with the standards described under 314 CMR 9.06 and 9.07. Public notice was provided in the Berkshire Eagle on April 3, 2025. No comment letters were received during the public comment period.

Therefore, based on information currently in the record, MassDEP grants a WQC for this project subject to the following conditions to maintain water quality, to minimize impact on waters and wetlands, and to ensure compliance with appropriate state law. The Department further certifies in accordance with 314 CMR 9.00 that there is reasonable assurance the project or activity will be conducted in a manner which will not violate applicable water quality standards (314 CMR 4.00) and other applicable requirements of state law. Finally, the Department has determined that upon satisfying the conditions and mitigation requirements of this approval, the project provides a level of water quality necessary to protect existing uses and accordingly finds that the project to be implemented satisfies the Surface Water Quality Standards at 314 CMR 4.00. The WQC is for all federal permits and licenses pursuant to 40 CFR Part 121.

Pursuant to 314 CMR 9.09(1)(d); 314 CMR 9.06(6)(a); 310 CMR 9.06(2); 314 CMR 9.07; 314 CMR 9.07(1); 314 CMR 9.09(7)(5)(c); 314 CMR 9.11; and 314 CMR 9.09(1)(e), the following Special Conditions are necessary to ensure that construction practices and stormwater controls are implemented in such a manner as to prevent degradation to wetlands and waters; ensure that practicable steps have been taken which will avoid and minimize impacts to wetlands and waters; minimize turbidity and sediment caused by construction activities; ensure that water quality is not degraded, and that biology of the waters are not negatively impacted by potential discharges; and/or maintain a record of the dredged material for reference and to ensure accountability in its transportation.

Those Special Conditions that require direct submittals to MassDEP for either review, or review and approval, are denoted by the following notation (Submittal) at the end of the condition and are summarized in Attachment A. In addition, those conditions with the (Submittal) designation shall be included in the Special Provisions and, as applicable, reviewed at the Pre-Construction Meeting.

1. All work shall be performed in accordance with the following documents and plans:

    - Application for Water Quality Certification. Prepared by Gill Engineering on behalf of MassDOT, dated March 31, 2025, with cover letter and attachments. 401 WQC Filing Number: 25-WW26-008-APP.

- Plans entitled: “Town of Lee Meadow Street over Powder Mill Brook (aka Beartown Brook) Bridge L-05-004, Environmental Permit Plans”. Sheets 1 through 11. Prepared by Gill Engineering. Dated March 28, 2005, last revised June 13, 2025.
- MassDEP Administrative Completeness and Technical Deficiency Review. 401 Water Quality Certification Transmittal No: 25-WW26-0008-APP (Minor Fill and Minor Dredging). Bridge Replacement Project (L-05-004), Meadow Street over Powder Mill Brook (Beartown Brook), Lee, Massachusetts. Dated April 24, 2025.
- MassDOT Responses to MassDEP Technical Deficiency Review. Prepared by Gill Engineering on behalf of MassDOT. Memorandum, Lee - Meadow Street over Beartown Brook - Responses to Comments, 401 Water Quality Certification Transmittal No: 25-WW26-0008-APP (Minor Fill and Minor Dredging). Dated June 20, 2025.
- NHESP Conditional No-Take Determination. NHESP File No. 25-19537. Dated March 28, 2025.
- NHESP Approval of the TPP via email. NHESP File No. 25-19537. Dated May 28, 2025.
- DFW Comments via email. RE: 607597 Lee Powder Mill Brook. Dated February 6, 2025.

Pre-Construction

2. A qualified **Fluvial Geomorphologist** (FGM) with a minimum of five years of relevant professional experience in stream replacement and restoration projects shall be employed to oversee all LUW replacement and restoration activities as proposed in the application. The name, contact information, and qualifications of the FGM shall be provided to MassDEP for approval with a copy to the Lee Conservation Commission prior to the Pre-Construction Meeting required in Condition 4. **(Submittal)**

3. Prior to the Pre-Construction Meeting required in Condition 4, the applicant shall provide MassDEP with the name and contact information of the Resident Engineer (RE) responsible for ensuring that all work complies with the conditions of this WQC. **(Submittal)**

4. A minimum of 21 days prior to the start of vegetation clearing, MassDOT shall contact MassDEP to schedule an onsite Pre-Construction Meeting to review the approved plans and terms and conditions of this WQC. The RE, the construction contractor, a representative from the MassDOT Environmental Section and/or the District Environmental Engineer shall attend the Pre-Construction Meeting. **No work shall commence prior to the Pre-Construction Meeting.**

5. MassDEP shall be copied on applicable submittals to the U.S. Army Corps of Engineers (USACE). These include but are not limited to: Self-Verification Notification Form (SVNF); Pre-Construction Notification (PCN); Work-Start Notification Form; Mitigation Work-Start Notification Form; and Compliance Certification Form. The Work-Start Notification Form shall be submitted at least 14 days before the anticipated start of work and the Compliance Certification Form shall be submitted within 30 days following the completion of the authorized work. **(Submittal)**

6. A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan (CP/PP) shall be developed and implemented as required by 314 CMR 9.06(6)(a)8. A minimum of 14 days prior to the start of work, MassDOT shall submit the CP/PP for review and approval. If the

U.S. Environmental Protection Agency (EPA) Construction General Permit (CGP) applies, the Stormwater Pollution Prevention Plan (SWPPP) may serve as the CP/PP, providing it includes the measures required to be in the CP/PP per these Special Conditions, in addition to the measures specifically required by the CGP. Any subsequent changes to the Final CP/PP (defined herein as including the construction period SWPPP if applicable) must be approved by MassDEP. **(Submittal)**

7. Training regarding erosion and sedimentation controls is required. The CP/PP Inspector and any other relevant personnel responsible for erosion and sedimentation controls shall complete the EPA CGP Inspector Training, or other training that meets the CGP requirements, as well as a comprehensive review of the Final CP/PP. Proof of completion of the training shall be submitted to MassDEP prior to the start of work. **(Submittal)**

8. The CP/PP shall identify, but shall not be limited to, staging and laydown areas in relation to BVWs and LUW, proposed dewatering methods and locations, proposed stockpile locations and their proximity to catch basins or other drainage conveyances that discharge to wetland resource areas, and the location of construction-period erosion and sedimentation controls. Stockpiles shall be located no less than 50 feet from BVWs, IVWs, LUW, catch basins, or other drainage conveyances that discharge to BVWs, IVWs, or LUW.

9. A minimum of 14 days prior to the start of work, MassDOT shall submit a Control of Water Plan for review and approval. The Plan shall include a description of proposed methods to isolate and dewater work areas within streams while maintaining stream flow, including but not limited to the method of isolation (e.g., steel sheeting or sandbag cofferdam), dewatering methods and locations and specifications for stream bypass systems as applicable. The Control of Water Plan shall include a plan depicting BVW and LUW boundaries, and the location of all relevant methods and materials which shall be located within the BVW and LUW impact areas approved herein. The plan shall meet requirements of the CP/PP and be specific to the Project. Dewatering and stream bypasses shall be conducted under the supervision of the RE or other project staff with knowledge of these practices and comply with the applicable conditions identified herein. **(Submittal)**

10. Prior to the start of work, approved erosion and sedimentation control measures shall be installed per the approved CP/PP and as applicable, the manufacturer specifications. Erosion and sedimentation control measures may consist of, but are not limited to, silt fence, staked straw bales, silt/turbidity curtains, compost filter tubes, etc.

11. Prior to the Pre-Construction Meeting, the boundaries of BVWs and LUW shall be re-flagged where they are within 50 feet of the limits of work. In the event BVWs and LUW boundaries overlap, the outermost boundary (i.e., closest to the proposed work) shall be flagged. All boundary markers, once in place, shall remain in place throughout construction until all disturbed surfaces have been permanently stabilized. Boundary markers shall be fully evaluated annually and refreshed where needed. Implementation of and compliance with this requirement shall be documented by the RE. All construction personnel shall be made aware of these markers.

12. Prior to any work within the 1% annual chance of flooding zone within Project limits, including mobilization or storage of equipment and materials, a Flood Contingency Plan shall be submitted to MassDEP for review and approval that includes at a minimum the following information and provisions: **(Submittal)**

    a. The RE and/or Contractor shall monitor the National Weather Service forecast daily, and upon issuance of a flood watch or flood warning for the Project area, the Flood Contingency Plan shall be implemented.

    b. Upon implementation of the Flood Contingency Plan, all construction equipment and materials located below the Base Flood Elevation (BFE) shall be removed and placed in an upland location above the BFE and outside of BVW and/or LUW.

    c. Anchored stationary equipment may remain below the BFE if demonstrated to be required and upon written approval from MassDEP. In the event semi-stationary equipment cannot be feasibly removed before the arrival of the storm, they shall be adequately secured and MassDEP shall be notified prior to the storm.

    d. A requirement to inspect and maintain all erosion and sedimentation controls, and stabilize all exposed soils as needed below the BFE prior to the storm shall be included.

    e. A plan depicting at a minimum, but not limited to, BVW and/or LUW boundaries, the Project limits, and the BFE boundary based on ground elevations shall be included.

    f. Staff and materials must be available 24 hours per day, seven days per week to implement the Flood Contingency Plan. The name, affiliation, title, email address, and phone number of each person responsible for implementing the Flood Contingency Plan shall be included.

    g. No work shall commence until the flood watch or flood warning has ended, all areas below the BFE have been inspected, and erosion and sedimentation controls are maintained as needed.

Construction Period

13. No more than **0 sf** of permanent and **125 sf** of temporary impacts to BVW shall occur. No more than **3,441 sf** of permanent and **0 sf** of temporary impacts to LUW shall occur. No more than **630 cy** of dredging in LUW shall occur. All work shall avoid unapproved impacts to BVW and LUW.

14. The Project shall identify one individual with at least three years of experience with construction period erosion and sedimentation control to be responsible for erosion and sedimentation control inspections (CP/PP Inspector). Under the direction of the CP/PP Inspector, inspection and maintenance of erosion and sediment controls in active work areas may be performed by both the Contractor and RE or other MassDOT project staff. Maintenance is the responsibility of the Contractor; however, the permittee shall be ultimately responsible for erosion and

sedimentation control failure. The RE and/or contractor shall immediately notify MassDEP and the Lee Conservation Commission if any unauthorized discharges to BVWs or LUW occur.

15. CP/PP inspections shall occur at least once every seven calendar days and within 24 hours of a storm event that produces 0.5 inches or more of rain within a 24-hour period, or at a more stringent frequency if the CP/PP requires.

16. Copies of CP/PP Inspection and Maintenance Log Forms shall be submitted to MassDEP within 14 days upon request.

17. Disturbed areas shall be stabilized immediately after activities have permanently ceased or will be temporarily inactive for 14 or more calendar days. The installation of stabilization measures shall be implemented as soon as practicable, but no later than 14 calendar days after stabilization has been initiated.

18. Work within LUW shall be conducted in low or no-flow conditions to the extent practicable. Notice shall be provided to MassDEP and the Lee Conservation Commission within 24 hours prior to the commencement of dewatering. Dewatering methods and location(s) shall be approved by the RE or other project staff with knowledge of these practices prior to use to ensure consistency with the approved Control of Water Plan, and shall be documented in the CP/PP. There shall be no discharge of untreated dewatered stormwater or groundwater to BVWs or LUW. Any discharges shall be visibly free of sediment.

19. Additional erosion and sedimentation control materials shall be stored on-site at all times for emergency and routine replacement. Materials shall be kept covered, dry, and accessible at all times. The CP/PP Inspector shall be responsible for anticipating the need for and installation of additional erosion and sedimentation controls and shall have the authority to require additional erosion control measures to protect wetland resource areas beyond what is shown on the plans if field conditions or professional judgment dictate that additional protection is necessary.

20. The Contractor shall monitor the National Weather Service forecast for updates, and upon issuance of a flood watch for the 1% annual chance of flooding zone, shall implement the flood contingency plan referenced in Condition 12.

21. Any storm drains with potential to receive discharge from stockpiled materials or construction operations shall be managed to inhibit the inflow of sediment while not increasing the likelihood of roadway flooding during periods of precipitation. The CP/PP shall specify measures to implement this. Filter fabric stretched under storm drain inlet grates are not acceptable for this purpose.

22. Stockpiles shall be located no less than 50 feet from BVWs, LUW, catch basins, or other drainage conveyances that discharge to BVWs or LUW.

23. The contractor shall have designated washout areas for concrete equipment that will be comprised of impermeable material and sized to contain project concrete wastes and wash water. Concrete wash out areas shall be located no less than 50 feet from BVWs, LUW, and

catch basins or other drainage conveyances that discharge directly or indirectly to BVWs or LUW.

24. Refueling, washing, and cleaning of vehicles and other construction equipment shall not take place within 50 feet of BVWs or LUW and any wash water shall be contained such that it does not drain toward BVWs or LUW. MassDEP shall explicitly approve in writing any deviation to this condition for oversized stationary vehicles.

25. The contractor shall have spill containment kits on site. In the event of a release of fuels and/or oils, the local fire department, MassDEP Emergency Response and MassDEP Wetlands Program Highway Unit shall be contacted, and in addition, the MassDEP Bureau of Waste Site Cleanup shall be notified per the requirements of the Massachusetts Contingency Plan, 310 CMR 40.0000.

26. The Turtle Protection Plan shall be implemented as approved by NHESP on May 28, 2025.

27. Construction vehicles and equipment shall not enter BVWs or LUW unless authorization is provided by way of this permit or amendment. The Contractor shall use equipment with boom reach capabilities and other measures to avoid inadvertent impacts to jurisdictional resource areas as a result of excavation, riprap placement, and/or bridge/pier demolition materials.

28. To protect Coldwater Fisheries, no in-water, silt-producing work shall occur during the Time of Year (TOY) restriction between the dates of October 1 to April 30. Work may proceed behind dewatered cofferdams at any time, provided they are installed and removed outside of the TOY restriction.

29. If applicable, sheet piles shall be fully removed from wetland resource areas upon stabilization of the area as required. No portion of sheet piles shall remain unless approved by MassDEP in writing prior to installation. A request to leave sheet piles shall include, but not be limited to, demonstration that full removal of the sheet piles is not feasible or practicable, and an alternatives analysis demonstrating alternative methods to isolate the work area(s) are not feasible or practicable. At no time shall sheet piles be allowed to remain in LUW of a waterway that provides aquatic organism passage.

30. A temporary shielding or containment system shall be in place beneath the bridge structure prior to removal and concrete excavation to prevent debris from falling into the water below. In the event that any debris accidentally enters Beartown Brook, it shall be immediately retrieved. Notice shall be provided to MassDEP if debris enters the river and that it has been removed with photo-documentation (if practicable) submitted by email.

Dredging

31. MassDEP shall be notified one week prior to the start of dredging so that staff may inspect the work for compliance throughout the project.

32. No later than 21 days prior to commencement of dredging activity, a Dredged Material Dewatering Plan shall be submitted to MassDEP for review and approval. At a minimum, the

Plan shall include but not be limited to the type of containment, method of dewatering (i.e. mechanical or by gravity), method of collecting the dewatered effluent and method of disposal. **(Submittal)**

33. Best Management Practices (BMPs) shall be employed by the contractor to protect resource areas located adjacent to the proposed staging/temporary dredged material stockpiling and dewatering areas. Sediment stockpiles shall be constructed in accordance with the MassDEP approved project plans, stabilized, bottom-lined if not placed on paved surfaces and securely covered with wind tear resistance tarpaulin, polyethylene sheeting or similar impermeable material at all times, and properly labeled. Stockpile covers shall be securely weighed down. Stockpiles shall also be secured to restrict access by the public and shall be set back at least 10 feet from temporary construction access roads or other areas and activities which could disturb the stockpiles and associated erosion controls; if the 10-foot setback cannot be met, then a MassDEP-approved barrier shall be provided. Inspection of the sediment containment and dewatering location and associated erosion controls shall be conducted daily and within 24 hours of a storm that produces 0.5 inches or more of rain. Any observed deficiency shall be corrected or repaired in a timely manner.

34. In the event of a precipitation or storm event, the site shall be secured beforehand in such a way as to protect resource areas and waters on site and downstream of the site, including covering of stockpiles of dredged material. Sediment stockpile areas shall be inspected in line with the frequency of the CP/PP required in Condition 15. Any observed deficiency shall be corrected or repaired in a timely manner to prevent discharge from the stockpiled material. If stormwater runoff and erosion is observed from stockpiled dredged material, additional erosion and/or damage prevention controls measures shall be implemented.

35. Measures shall be in place to prevent turbid waters, due to dredging, demolition, or debris removal activities, from extending past the limits of work into Beartown Brook. These measures can be items such as turbidity curtains and/or sheet piles.

36. If visual turbidity escapes the controls in place, as described in Condition 35, work shall stop immediately and MassDEP shall be notified within 24 hours. Work shall not resume until the issue is corrected and to the satisfaction of MassDEP.

37. All turbidity controls shall be inspected daily by the RE or a designated MassDOT Project Staff. If any damage is observed the controls in place will be replaced or repaired immediately.

38. If excavated sediment is disposed of off-site, MassDEP shall be notified in writing of the name and location of the upland licensed facilities accepting the dredged material for disposal or reuse for review and approval. If the licensed facility is located out of state, documentation shall be provided to MassDEP that the dredged material disposal/reuse has been approved and will be accepted by the receiving State. The dredged material shall not be transported to the facility without concurrence of MassDEP.

39. If excavated sediment is disposed of off-site, BMPs shall be implemented during transportation of the dredged material to the licensed receiving facility. At a minimum, when transported upon public roadways, all dredged material shall have no free liquid as determined by the Paint Filter

Test or other suitably analogous methodology acceptable to MassDEP, and a tarpaulin or other means shall be used to cover the dredged material during transport.

Stream Mitigation and Wetland Restoration

40. The FGM shall oversee all LUW restoration and replication. Placement of streambed materials shall take place in no- or low-flow conditions. The Control of Water Plan required in Condition 9 shall include measures to create no-flow conditions for this work such as a pump bypass system or other dewatering method, if needed. Placement of streambed materials during greater than low-flow conditions shall require a placement plan, with a narrative describing turbidity control measures, submitted to MassDEP for review and approval.

41. A minimum of 14 days prior to installation of the streambed materials, the FGM shall meet with the contractor to determine the suitability of stockpiled streambed material for reuse and whether there are sufficient stockpiled materials to complete streambed restoration.

42. Water shall be slowly introduced back into the restored and dewatered LUW work areas as to not cause erosion and sedimentation. The FGM will provide final approval of the streambed restoration upon re-wetting of banks and removal of water controls (photographs will suffice unless otherwise determined by the FGM).

43. Upon completion of the LUW restoration and replication, the FGM shall provide photographs and a summary of the completed work to MassDEP and the Lee Conservation Commission. **(Submittal)**

44. MassDEP reserves the right to determine the success or failure of the LUW restoration and replication areas and reserves the right to require additional measures deemed necessary to promote success.

45. The 125 square feet of temporarily impacted wetland shall be restored with a native wetland seed mix. MassDEP reserves the right to determine the success or failure of the BVW restoration area, and reserves the right to require additional seeding or other measures deemed necessary to promote success

Post-Construction

46. All temporary erosion controls shall be removed at the conclusion of work once the surrounding area has achieved final stabilization.

General Conditions

47. Any proposed alterations, minor plan changes, or amendment requests, as well as any required submittals shall be sent by email for review and approval to heidi.davis@mass.gov and jaime.iannelli@mass.gov. **(Submittal)**

48. This WQC remains in effect for the same duration as the Section 404 permit that requires it.

49. No Special Condition set forth herein shall be construed or operate to prohibit MassDEP from taking enforcement against MassDOT or its contractors for any failure to comply with the terms and requirements of this WQC.

50. No activity authorized by this WQC may begin prior to expiration of the 21-day appeal period, or until a final decision is issued by MassDEP in the event of an appeal.

Failure to comply with this Certification is grounds for enforcement, including civil and criminal penalties, under MGL Ch. 21 §42, MGL Ch. 21A §16, or other possible actions/penalties as authorized by the General Laws of the Commonwealth.

This Certification does not relieve the applicant of the obligation to comply with other appropriate state or federal statutes or regulations.

NOTICE OF APPEAL RIGHTS

a.) Appeal Rights and Time Limits

Certain persons shall have a right to request an adjudicatory hearing concerning certifications by MassDEP when an application is required: (a) the applicant or property owner; (b) any person aggrieved by the decision who has submitted written comments during the public comment period; (c) any ten (10) persons of the Commonwealth pursuant to M.G.L. c.30A where a group member has submitted written comments during the public comment period; or (d) any governmental body or private organization with a mandate to protect the environment which has submitted written comments during the public comment period. Any person aggrieved, any ten (10) persons of the Commonwealth, or a governmental body or private organization with a mandate to protect the environment may appeal without having submitted written comments during the public comment period only when the claim is based on new substantive issues arising from material changes to the scope or impact of the activity and not apparent at the time of public notice. To request an adjudicatory hearing pursuant to M.G.L. c.30A, § 10, a Notice of Claim must be made in writing, provided that the request is made by certified mail or hand delivery to MassDEP, with the appropriate filing fee specified within 310 CMR 4.10 along with a DEP Fee Transmittal Form within twenty-one (21) days from the date of issuance of this Certificate, and addressed to:

Case Administrator
Department of Environmental Protection
100 Cambridge Street, 9th Floor
Boston, MA 02114

A copy of the request shall at the same time be sent by certified mail or hand delivery to the Department of Environmental Protection at:

Department of Environmental Protection
Commissioner's Office
100 Cambridge Street, Suite 900
Boston, MA 02114

b.) Contents of Hearing Request

A Notice of Claim for Adjudicatory Hearing shall comply with MassDEP's Rules for Adjudicatory Proceedings, 310 CMR 1.01(6), and shall contain the following information pursuant to 314 CMR 9.10(3):

1. the 401 Certification Transmittal Number;
2. the complete name of the applicant and address of the project;
3. the complete name, address, and fax and telephone numbers of the party filing the request, and, if represented by counsel or other representative, the name, fax and telephone numbers, and address of the attorney;
4. if claiming to be a party aggrieved, the specific facts that demonstrate that the party satisfies the definition of "aggrieved person" found at 314 CMR 9.02;
5. a clear and concise statement that an adjudicatory hearing is being requested;
6. a clear and concise statement of (1) the facts which are grounds for the proceedings, (2) the objections to this Certificate, including specifically the manner in which it is alleged to be inconsistent with the MassDEP's Water Quality Regulations, 314 CMR 9.00, and (3) the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written Certification; and
7. a statement that a copy of the request has been sent by certified mail or hand delivery to the applicant, the owner (if different from the applicant), the conservation commission of the city or town where the activity will occur, the Department of Conservation and Recreation (when the certificate concerns projects in Areas of Critical Environmental Concern), the public or private water supplier where the project is located (when the certificate concerns projects in Outstanding Resource Waters), and any other entity with responsibility for the resource where the project is located.

c.) Filing Fee and Address

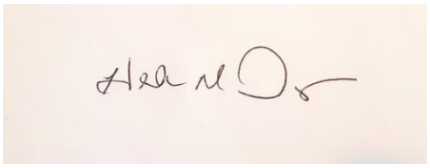
The hearing request along with a DEP Fee Transmittal Form and a valid check or money order payable to the Commonwealth of Massachusetts in the amount of one hundred dollars ($100) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
Commonwealth Master Lockbox
PO Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. MassDEP may waive the adjudicatory hearing filing fee pursuant to 310 CMR 4.06(2) for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file an affidavit setting forth the facts believed to support the claim of undue financial hardship together with the hearing request as provided above.

Should you have any questions relative to this permit, please contact myself or Jaime Iannelli at heidi.davis@mass.gov and jaime.iannelli@mass.gov.

Very truly yours,



Heidi M. Davis
Highway Unit Supervisor

Ecc: DEP WERO – Michael McHugh
USACE – Dan Vasconcelos
USACE – Kevin Newton
Lee Conservation Commission
MassDOT – Melissa Lenker
MassDOT – Michael Joa
MassDOT – Joshua Bartus
Gill Engineering Associates, Inc. – James Turnbull

ATTACHMENT A
PRE-CONSTRUCTION SUBMITTAL CHECKLIST

Bridge (L-05-004) Replacement, Meadow Street over Powder Mill Brook
Lee, Massachusetts

THIS CHECKLIST MUST BE COMPLETED PRIOR TO THE START OF WORK. NOTE THAT SOME CONDITIONS REQUIRE THAT INFORMATION BE SUBMITTED A SPECIFIC NUMBER OF DAYS PRIOR TO THE START OF WORK OR THE PRE-CONSTRUCTION MEETING.

Pre-Construction Meeting Date: _____

Condition	Required Submittal	Due Date	Date Submitted	Date Approved
PRE-CONSTRUCTION SUBMITTAL REQUIREMENTS				
2	Name, contact information, and qualifications of the FGM, including specific experience and years to meet requirement	Prior to Pre-Construction Meeting		
3	Name and contact information of the RE	Prior to Pre-Construction Meeting		
5	USACE Work-Start Notification Form	14 days prior to work start		
6	CP/PP	14 days prior to work start		
7	Verification of SWPPP Training	Prior to work start		
9	Control of Water Plan	14 days prior to work start		
12	Flood Contingency Plan	Prior to any work within 1% annual chance of flooding zone		

重要 महत्वपूर्ण σημαντικός
Important
կարեւոր quan trọng مهم

Communication for Non-English-Speaking Parties

This document is important and should be translated immediately.

If you need this document translated, please contact MassDEP's Director of Environmental Justice at the telephone number listed below.

Español Spanish

Este documento es importante y debe ser traducido inmediatamente. Si necesita traducir este documento, póngase en contacto con el Director de Justicia Ambiental de MassDEP (*MassDEP's Director of Environmental Justice*) en el número de teléfono que figura más abajo.

Português Portuguese

Este documento é importante e deve ser traduzido imediatamente. Se você precisar traduzir este documento, entre em contato com o Diretor de Justiça Ambiental do MassDEP no número de telefone listado abaixo.

繁體中文 Chinese Traditional

本文檔很重要，需要即刻進行翻譯。
如需對本文檔進行翻譯，請透過如下列示電話號碼與 MassDEP 的環境司法總監聯絡。

简体中文 Chinese Simplified

这份文件非常重要，需要立即翻译。
如果您需要翻译这份文件，请通过下方电话与 MassDEP 环境司法主任联系。

Ayisyen Kreyòl Haitian Creole

Dokiman sa a enpòtan epi yo ta dwe tradui l imedyatman. Si w bezwen tradui dokiman sa a, tanpri kontakte Direktè. Jistis Anviwònmantal MassDEP a nan nimewo telefòn ki endike anba a.

Việt Vietnamese

Tài liệu này và quan trọng và phải được dịch ngay. Nếu quý vị cần bản dịch của tài liệu này, vui lòng liên hệ với Giám Đốc Phòng Công Lý Môi Trường của MassDEP theo số điện thoại được liệt kê bên dưới.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះមានសារៈសំខាន់
ហើយគប្បីត្រូវត្រូវបានបកប្រែភ្លាមៗ។.
ប្រសិនបើអ្នកត្រូវការអោយឯកសារនេះបកប្រែ
សូមទាក់ទងនាយកផ្នែកយុត្តិធម៌បរិស្ថានរបស់
MassDEPតាមរយៈលេខទូរស័ព្ទដែលបានរាយដូចខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Es dokumentu sta important i tenki ser tradusidu immediatamenti. Se nho ta presisa ke es dokumentu sta tradisidu, por favor kontata O Diretor di Justisia di Environman di DEP ku es numero di telifoni menxionadu di baixo.

Contact Deneen Simpson 857-406-0738
Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114
TTY# MassRelay Service 1-800-439-2370 • https://www.mass.gov/environmental-justice
(Version revised 8.2.2023) 310 CMR 1.03(5)(a)

Русский Russian

Это чрезвычайно важный документ, и он должен быть немедленно переведен. Если вам нужен перевод этого документа, обратитесь к директору Департамента экологического правосудия MassDEP (MassDEP's Director of Environmental Justice) по телефону, указанному ниже.

العربية Arabic

هذه الوثيقة مهمة وتجب ترجمتها على الفور.

إذا كنت بحاجة إلى ترجمة هذه الوثيقة، فيرجى الاتصال بمدير العدالة البيئية في MassDEP على رقم الهاتف المذكور أدناه.

한국어 Korean

이 문서는 중대하므로 즉시 번역되어야 합니다.
본 문서 번역이 필요하신 경우, 매사추세츠 환경보호부의 "환경정의" 담당자 분께 문의하십시오. 전화번호는 아래와 같습니다.

հայերեն Armenian

Այս փաստաթուղթը կարևոր է, և պետք է անհապաղ թարգմանել այն:
Եթե Ձեզ անհրաժեշտ է թարգմանել այս փաստաթուղթը, դիմեք Մասաչուսեթսի շրջակա միջավայրի պահպանության նախարարության (MassDEP) Բնապահպանական հարցերով արդարադատության ղեկավարին (Director of Environmental Justice)՝ ստորև նշված հեռախոսահամարով

فارسی Farsi Persian

این نوشتار بسیار مهمی است و باید فوراً ترجمه شود.
اگر نیاز به ترجمه این نوشتار دارید لطفاً با مدیر عدالت محیط زیستی MassDEP در شماره تلفن ذکر شده زیر تماس بگیرید.

Français French

Ce document est important et doit être traduit immédiatement. Si vous avez besoin d'une traduction de ce document, veuillez contacter le directeur de la justice environnementale du MassDEP au numéro de téléphone indiqué ci-dessous.

Deutsch German

Dieses Dokument ist wichtig und muss sofort übersetzt werden. Wenn Sie eine Übersetzung dieses Dokuments benötigen, wenden Sie sich bitte an MassDEP's Director of Environmental Justice *(Direktor für Umweltgerechtigkeit in Massachusetts)* unter der unten angegebenen Telefonnummer.

Ελληνική Greek

Το έγγραφο αυτό είναι πολύ σημαντικό και πρέπει να μεταφραστεί αμέσως. Αν χρειάζεστε μετάφραση του εγγράφου αυτού, παρακαλώ επικοινωνήστε με τον Διευθυντή του Τμήματος Περιβαλλοντικής Δικαιοσύνης της Μασαχουσέτης στον αριθμό τηλεφώνου που αναγράφεται παρακάτω

Italiano Italian

Questo documento è importante e deve essere tradotto immediatamente. Se hai bisogno di tradurre questo documento, contatta il Direttore della Giustizia Ambientale di MassDEP al numero di telefono sotto indicato.

Język Polski Polish

Ten dokument jest ważny i powinien zostać niezwłocznie przetłumaczony. Jeśli potrzebne jest tłumaczenie tego dokumentu, należy skontaktować się z dyrektorem ds. sprawiedliwości środowiskowej MassDEP pod numerem telefonu podanym poniżej.

हिन्दी Hindi

यह दस्तावेज महत्वपूर्ण है और इसका अनुवाद तुरंत किया जाना चाहिए। यदि आपको इस दस्तावेज का अनुवाद कराने की जरूरत है, तो कृपया नीचे दिए गए टेलीफोन नंबर पर MassDEP के पर्यावरणीय न्याय निदेशक से संपर्क करें।

Contact Deneen Simpson 857-406-0738
Massachusetts Department of Environmental Protection
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TTY# MassRelay Service 1-800-439-2370 • https://www.mass.gov/environmental-justice
(Version revised 8.2.2023) 310 CMR 1.03(5)(a)

DOCUMENT A00870

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

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: 04/02/2025 14:53:55 UTC
Project code: 2023-0033599
Project Name: 607597 - LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK

Federal Nexus: yes
Federal Action Agency (if applicable): Federal Highway Administration

Subject: Federal agency coordination under the Endangered Species Act, Section 7 for '607597 - LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK'

Dear Hana Isihara:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on April 02, 2025, for '607597 - LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK' (here forward, Project). This project has been assigned Project Code 2023-0033599 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements may not be complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (DKey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid. Note that conservation measures for northern long-eared bat and tricolored bat may differ. If both bat species are present in the action area and the key suggests more conservative measures for one of the species for your Project, the Project may need to apply***

the most conservative measures in order to avoid adverse effects. If unsure which conservation measures should be applied, please contact the appropriate Ecological Services Field Office.

Determination for the Northern Long-Eared Bat and Tricolored Bat

Based on your IPaC submission and a standing analysis completed by the Service, you determined the proposed Project will have the following effect determinations:

Species	**Listing Status**	**Determination**
Northern Long-eared Bat (*Myotis septentrionalis*)	Endangered	NLAA
Tricolored Bat (*Perimyotis subflavus*)	Proposed Endangered	NLAA

Federal agencies must consult with U.S. Fish and Wildlife Service under section 7(a)(2) of the Endangered Species Act (ESA) when an action *may affect* a listed species. Tricolored bat is proposed for listing as endangered under the ESA, but not yet listed. For actions that may affect a proposed species, agencies cannot consult, but they can *confer* under the authority of section 7(a)(4) of the ESA. Such conferences can follow the procedures for a consultation and be adopted as such if and when the proposed species is listed. Should the tricolored bat be listed, agencies must review projects that are not yet complete, or projects with ongoing effects within the tricolored bat range that previously received a NE or NLAA determination from the key to confirm that the determination is still accurate.

Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that consultation on the Action is complete for northern long-eared bat and/or tricolored bat and no further action is necessary unless either of the following occurs:

- new information reveals effects of the action that may affect the northern long-eared bat or tricolored bat in a manner or to an extent not previously considered; or,
- the identified action is subsequently modified in a manner that causes an effect to the northern long-eared bat or tricolored bat that was not considered when completing the determination key.

15-Day Review Period

As indicated above, the Service will notify you within 15 calendar days if we determine that this proposed Action does not meet the criteria for a “may affect, not likely to adversely affect” (NLAA) determination for the northern long-eared bat and/or tricolored bat. If we do not notify you within that timeframe, you may proceed with the Action under the terms of the NLAA concurrence provided here. This verification period allows the identified Ecological Services Field Office to apply local knowledge to evaluation of the Action, as we may identify a small subset of actions having impacts that we did not anticipate when developing the key. In such cases, the identified Ecological Services Field Office may request additional information to verify the effects determination reached through the Northern Long-eared Bat and Tricolored Bat DKey.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Proposed Threatened

You may coordinate with our Office to determine whether the Action may affect the species and/or critical habitat listed above. Note that reinitiation of consultation would be necessary if a new species is listed or critical habitat designated that may be affected by the identified action before it is complete.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference Project Code 2023-0033599 associated with this Project.

Action Description
You provided to IPaC the following name and description for the subject Action.

1. Name

607597 - LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK

2. Description

The following description was provided for the project '607597 - LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK':

> 607597 - LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK
> This project will provide a replacement bridge for the existing deteriorated steel stringer bridge. The replacement structure will most likely consist of a multi-beam steel stringer, or a pre-cast concrete butted box beam bridge with reinforced concrete deck, founded on pile-supported integral abutments located behind the existing abutments. Sheet pile scour protection will be placed in front of existing abutments, wing walls and retaining wall. Space between the sheet pile wall and front of footing will be filled with concrete, along with all scour voids below the footings.
> Monarch Butterfly: Proposed Threatened Species only. The project action will not jeopardize the continued existence of the proposed species.

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.27324525,-73.2693565,14z



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for a least one species covered by this determination key.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

   Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

   No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

   Automatically answered
   No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

   Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

   No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

   Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

   Yes

7. FHWA, FRA, and FTA have completed a range-wide programmatic consultation for transportation- related actions within the range of the Indiana bat, northern long-eared bat and tricolored bat.

   Does your proposed action fall within the scope of this programmatic consultation?

   Note: If you are unsure, but your action is transportation related, please select "Yes" and use the FHWA, FRA, FTA Assisted Determination Key (FHWA DKey) in IPaC to determine if the programmatic consultation is applicable to your action. Return to this key and answer ‘no’ to this question if it is not.

   No

8. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

   Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

   Yes

9. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

   No

10. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

    No

11. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

12. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

    No

13. Does the action area contain (1) talus or (2) anthropogenic or naturally formed rock shelters or crevices in rocky outcrops, rock faces or cliffs?

    No

14. Will the action cause effects to a bridge?

    Note: Covered bridges should be considered as bridges in this question.

    Yes

15. Has a site-specific bridge assessment following USFWS guidelines been completed?

    Note: For information on conducting a bridge/structure assessment, please see Appendix K in the USFWS' Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines at:https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines Additional resources can be found at: https://www.fws.gov/media/bats-and-transportation-structures-references-and-additional-resources and a training video is located at: https://www.youtube.com/watch?v=iuFwkT7q8Ws.

    Yes

16. Was evidence of bat use found during the bridge assessment?

    No

    SUBMITTED DOCUMENTS

    - *607597_Lee_Bridge_Assessment.pdf https://ipac.ecosphere.fws.gov/project/WSKYC245SVH6NOHAB5TOQDJXMI/projectDocuments/152283732*

17. Did you coordinate with your local Ecological Services Field Office (ESFO) and receive approval of the bridge assessment results? If NO, please contact the appropriate local ESFO before completing this determination key.

    Yes

18. Will the action result in effects to a culvert or tunnel at any time of year?

    No

19. Are trees present within 1000 feet of the action area?

    Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

20. Does the action include the intentional exclusion of bats from a building or structure?

    Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

    No

21. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats?**

    No

22. Will the action cause construction of one or more new roads open to the public?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

23. Will the action include or cause any construction or other activity that is reasonably certain to increase average daily traffic permanently or temporarily on one or more existing roads?

    Note: For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

    No

24. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

    For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

    No

25. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

    Note: For information regarding NSF/ANSI 60 please visit https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects

    No

26. Will the proposed action involve the creation of a new point source discharge from a facility other than a water treatment plant or storm water system?

    No

27. Will the action include drilling or blasting?

    No

28. Will the action involve military training (e.g., smoke operations, obscurant operations, exploding munitions, artillery fire, range use, helicopter or fixed wing aircraft use)?

    No

29. Will the proposed action involve the use of herbicides or other pesticides other than herbicides (e.g., fungicides, insecticides, or rodenticides)?

    No

30. Will the action include or cause activities that are reasonably certain to cause chronic or intense nighttime noise (above current levels of ambient noise in the area) in suitable summer habitat for the northern long-eared bat or tricolored bat during the active season?

    Chronic noise is noise that is continuous or occurs repeatedly again and again for a long time. Sources of chronic or intense noise that could cause adverse effects to bats may include, but are not limited to: road traffic; trains; aircraft; industrial activities; gas compressor stations; loud music; crowds; oil and gas extraction; construction; and mining.

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    No

31. Does the action include, or is it reasonably certain to cause, the use of permanent or temporary artificial lighting within 1000 feet of suitable northern long-eared bat or tricolored bat roosting habitat?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

32. Will the action cause an increase in the extent of suitable forested habitat exposed to artificial lighting?

    No

33. Will the action include tree cutting or other means of knocking down or bringing down trees, tree topping, or tree trimming?

    Yes

34. Will the proposed action occur exclusively in an already established and currently maintained utility right-of-way?

    No

35. Does the action include emergency cutting or trimming of hazard trees in order to remove an imminent threat to human safety or property? See hazard tree note at the bottom of the key for text that will be added to response letters

    Note: A "hazard tree" is a tree that is an immediate threat to lives, public health and safety, or improved property.

    No

36. Does the project intersect with the 0- 9.9% forest density category?

    Automatically answered
    No

37. Does the project intersect with the 10.0- 19.9% forest density category map?

    Automatically answered
    No

38. Does the project intersect with the 20.0- 29.9% forest density category map?

    Automatically answered
    No

39. Does the project intersect with the 30.0- 100% forest density category map?

    Automatically answered
    Yes

40. Will the action cause trees to be cut, knocked down, or otherwise brought down across an area greater than 100 acres in total extent?

    No

41. Will the proposed action result in the use of prescribed fire?

    Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

    No

42. Does the action area intersect the northern long-eared bat species list area?

    Automatically answered
    Yes

43. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

    Automatically answered
    No

44. [Semantic] Is the action area located within 150 feet of a documented northern long-eared bat roost site?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered
    No

45. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?
    If unsure, answer "Yes."

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

46. Has a presence/probable absence summer bat survey targeting the northern long-eared bat following the Service's Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines been conducted within the project area?

    Yes

47. Was the survey conducted within the last 5 years?

    Yes

48. Did you coordinate with your Ecological Services Field Office (ESFO) and receive approval of the results? If NO, please contact the appropriate local ESFO before completing this determination key - you may change your answer to 'yes' only after coordinating with the ESFO and uploading survey results.

    Yes

    SUBMITTED DOCUMENTS

    - *607597_MassDOT_Lee_NLEB Memo-Final.pdf https://ipac.ecosphere.fws.gov/project/WSKYC245SVH6NOHAB5TOQDJXMI/projectDocuments/121134531*

49. Did survey results demonstrate the probable absence of northern long-eared bats?

    Yes

50. Does the action area intersect the tricolored bat species list area?

    Automatically answered
    Yes

51. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

    Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

    Automatically answered

    No

52. Is suitable summer habitat for the tricolored bat present within 1000 feet of project activities?
    (If unsure, answer ""Yes."")

    Note: If there are trees within the action area that may provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (Tillandsia usneoides), clusters of dead pine needles of large live pines) answer ""Yes."" For a complete definition of suitable summer habitat for the tricolored bat, please see Appendix A in the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

    Yes

53. Do any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pine trees)?

    Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines.

    Yes

54. Will any tree cutting/trimming or other knocking or bringing down of trees be conducted during the Pup Season for tricolored bat?

    Note: Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines.

    No

55. Do you have any documents that you want to include with this submission?

    No

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

1.1

IPAC USER CONTACT INFORMATION

Agency: Massachusetts Department of Transportation
Name: Hana Isihara
Address: 10 Park Plaza
City: Boston
State: MA
Zip: 02116
Email hana.l.isihara@dot.state.ma.us
Phone: 6178964454

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Federal Highway Administration

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 A00881

BAT HABITAT INSPECTION REPORT

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Maura Healey, Governor
Kimberley Driscoll, Lieutenant Governor
Monica Tibbits-Nutt, Secretary and CEO
Jonathan L. Gulliver, Highway Administrator

massDOT
Massachusetts Department of Transportation
Highway Division

October 8, 2024

Lee (DOT Project #607597) BRIDGE REPLACEMENTS ON MEADOW STREET OVER POWDER MILL BROOK
Bat Habitat Inspection

The MassDOT Wildlife and Endangered Species Unit (WESU) conducted a visual inspection for roosting bats and bat habitat at Bridge L-05-004 associated with MassDOT Project #607597 LEE- BRIDGE REPLACEMENT, L-05-004, MEADOW STREET OVER POWDER MILL BROOK. This project will provide a replacement bridge for the existing deteriorated steel stringer bridge. The replacement structure will most likely consist of a multi-beam steel stringer, or a pre-cast concrete butted box beam bridge with reinforced concrete deck, founded on pile-supported integral abutments located behind the existing abutments. Sheet pile scour protection will be placed in front of existing abutments, wing walls and retaining wall. Space between the sheet pile wall and front of footing will be filled with concrete, along with all scour voids below the footings. During the inspection, WESU biologists used flashlights, binoculars, and a borescope to search gaps, crevices, and other locations on bridge structures that could potentially hold roosting bats. **No bats, guano, or staining were observed at the bridge during the inspection.**

Bridge L-05-004 is a steel I-Beam structure with concrete decking over Powder Mill Brook (Figures 1-2). Inspection of gaps, pipes, and any small cracks/crevices of the bridge provided no indication of bat roosting (Figures 5-8). While suitable roosting habitat for several bat species may exist within pipes and between concrete decking, many of the observed gaps are unlikely to provide thermal protection due to their shallow depths and/or large widths. Additionally, visual inspection of the bridge's metal guardrails indicated they are unlikely to provide suitable roosting habitat due to the lack of crevices.

In conclusion, while the MassDOT Wildlife and Endangered Species Unit did observe areas of potential roosting bat habitat within gaps and between concrete decking, no roosting bats or evidence of roosting bats were observed during the inspection of bridge L-05-004. A completed bridge assessment form is included as Appendix A.

Sincerely,

David Paulson
Wildlife and Endangered Species Unit Supervisor, MassDOT, Environmental Services

Ten Park Plaza, Suite 4160, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
mass.gov/massdot




Figures 1-2. Bridge L-05-004 over Powder Mill Brook



Figure 3. Underside Bridge L-05-004 over Powder Mill Brook



Figure 4. Concrete abutment steel I-beam on Bridge L-05-004 over Powder Mill Brook



Figure 5. Concrete end wall, steel I-beams, and concrete decking on Bridge L-05-004



Figures 6-7. Existing conditions on steel I-beams on Bridge L-05-004 over Powder Mill Brook



Figure 8. Pipe on Bridge L-05-004 over Powder Mill Brook

APPENDIX A. Bridge Assessment Form

APPENDIX D: Bridge/Structure Bat Assessment Form

Bridge/Structure Bat Assessment Form Instructions

- This form will be completed to document bat occupancy or bat use of bridges, culverts, and other structures. This form shall be submitted to the appropriate personnel within the DOT and USFWS for recordkeeping (or uploaded into the Information, Planning, and Consultation (IPaC) Determination Key for use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat) prior to conducting: any activities below the deck surface either from the underside or from above the deck surface that bore down to the underside; any activities that could impact expansion joints; any activities involving deck removal on bridges; or any activities involving structure demolition for bridges, culverts, and/or other structures.
- Assessments must be completed within two (2) years of conducting any work (see the above bullet), regardless of whether assessments have been conducted in the past. Assessments must be completed in appropriate weather conditions, suitable for the assessor to observe common signs of bat use.
- Evidence of bat use may include visual observation (live and/or dead), presence of guano, presence of staining, audible observation, and/or odor observation. Presence of one or more indicators is sufficient evidence that bats may be using the bridge, culvert, and/or other structure.
- If bat use of a bridge, culvert, and/or other structure is noted, additional studies may be undertaken during bat active season to identify the specific bat species utilizing the structure, or protected bat species presence can be assumed, in order to comply with threatened and endangered species regulations. Bat active season dates, typically between April and November, vary regionally and by species, so assessors should consult with their local USFWS Field Office for more specific active season dates.
- For use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat – If the bridge/structure is 1,000 feet or more from suitable bat habitat[1] (e.g., an urban or agricultural area without suitable foraging habitat or corridors linking the bridge to suitable foraging habitat), check the appropriate box and fill out the table below. **No further assessment is required.**

Date & Time of Assessment	**DOT Project #**	**Route/Facility Carried**	**County**
7/31/2024 1:40pm	607597	Meadow Street	Berkshire County, MA
Federal Structure ID L-05-004	**Structure Coordinates** (latitude and longitude) 42.273223, -73.269395	☐ This bridge/structure is 1,000 feet or more from suitable bat habitat[2] Name: Trevor Burns Signature: Trevor Burns	

- Any questions pertaining to assessments or this form should be directed to the local USFWS Field Office.

[1] Refer to the USFWS's summer survey guidance for the definition of suitable habitat (http://www.fws.gov/midwest/endangered/mammals/inba/inbasummersurveyguidance.html).

[2] This condition is only for use of the Programmatic Biological Opinion for Transportation Projects in the Range of the Indiana Bat and Northern Long-Eared Bat

Date & Time of Assessment	DOT Project Number	Route/Facility Carried	County
7/31/2024 1:40pm	607597	Meadow Street	Berkshire County, MA
Federal Structure ID	**Structure Coordinates (latitude and longitude)**	**Structure Height (approximate)**	**Structure Length**
L-05-004	42.273223, -73.269395	8 feet	45 feet

Structure Type (check one)

Bridge Construction Style

- ○ Cast-in-place 
- ○ Flat Slab/Box 
- ○ Truss 
- ○ Parallel Box Beam 
- ○ Pre-stressed Girder 
- ◉ Steel I-beam 
- ○ Covered 
- ○ Other:

Culvert Type

- ◉ Box
- ◉ Pipe/Round
- ○ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☐ None	☒ Concrete
☒ Concrete	☐ Concrete	☐ Timber
☐ Timber	☒ Steel	☐ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☐ Other:	☐ Other:	

Culvert Material

- ☐ Metal
- ☐ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Creosote Evidence

- ○ Yes ◉ No
- ○ Unknown

Notes:

Crossings Traversed (check all that apply)

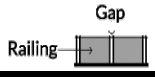
☐ Bare ground	☐ Open vegetation
☐ Rip-rap	☐ Closed vegetation
☒ Flowing water	☐ Railroad
☐ Standing water	☐ Road/trail - Type:
☐ Seasonal water	☐ Other:

Surrounding Habitat (check all that apply)

☐ Agricultural	☐ Grassland
☒ Commercial	☐ Ranching
☐ Residential-urban	☐ Riparian/wetland
☐ Residential-rural	☐ Mixed use
☒ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)
☒ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Concrete surfaces (open roosting on concrete)	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Spaces between concrete end walls and the bridge deck	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Crack between concrete railings on top of the bridge deck 	☒ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Vertical surfaces on concrete I-beams	☐ Not present Steel I-beams	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Spaces between walls, ceiling joists	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ Weep holes, scupper drains, and inlets/pipes	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ All guiderails	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☒ All expansion joints	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Trevor Burns

Signature: Trevor Burns

TETRA TECH

Date: November 18, 2022

TTCES-PTLD-2022-0143-0001

Mr. Tim Dexter

Massachusetts Department of Transportation – Highway Division

Ten Park Plaza, Room 4260

Boston, MA 02116-3973

Project	**Northern Long-eared Bat (NLEB) Presence/Absence Survey**
MassDOT PIN	**607597**
Town	**Lee**
Area of Forest for Clearing	**Unknown acres**
Surveyor Name/Firm	**Katelin Craven / Tetra Tech, Inc.**
Nights of Detector Operation	**July 8–11, 2022**
# of Detectors/Total Detector-nights	**1 Detector / 4 Detector-nights**
Survey Results	**NLEB NOT DETECTED**

Dear Mr. Dexter,

This report conveys results of the survey assessing presence/absence during the summer of the northern long-eared bat (*Myotis septentrionalis*, NLEB) for Massachusetts Department of Transportation (MassDOT) Lee Bridge project (MassDOT 607597; Project) located near Lee, Massachusetts. Tetra Tech, Inc. (Tetra Tech) deployed an acoustic detector that did not detect the presence of NLEB—the analysis software did not identify the federally threatened NLEB in any bat passes. Manual vetting of bat passes did not indicate presence of the NLEB. Tetra Tech reviewed all myotis (little brown bat [*Myotis lucifugus*], eastern small-footed bat [*Myotis leibii*]) and tri-colored bat (*Perimyotis subflavus*) classifications for false negatives. The survey confirmed presence of six species at the Project: big brown bat (*Eptesicus fuscus*), eastern red bat (*Lasiurus borealis*), hoary bat (*Lasiurus cinereus*), silver-haired bat (*Lasionycteris noctivagans*), little brown bat, and tri-colored bat.

The following memo summarizes the acoustic survey. Appendix A includes Project detector maps and photographs illustrating site conditions and microphone orientation. Appendix B includes copies of the completed Phase 1 Summer Habitat Assessment forms for the Project. Appendix C includes the completed Bridge/Structure Bat Assessment Form and photographs of bridge. Appendix D is a summary of Maximum Likelihood Estimates (MLE), and Appendix E includes resumes for relevant staff members involved with the Project.

1.0 Project Description

The proposed Project entails bridge replacement, L-05-004, Meadow Street over Powder Mill Brook (Figure 1). The linear area affected is 0.68 miles. The Project was adjacent to a large contiguous forest to the south and residential and commercial use to the north. Public land in the area near the project includes Beartown State Forest (over 7,200 forested acres) located adjacent to the Project and Longcope Property (45 acres) located 0.87 miles to the northwest. There were several open water bodies in the surrounding area including Beartown Brook adjacent to the Project, Housatonic River 0.06 miles north, and Goose Pond (250 acres) located 2.9 miles to the southeast.

2.0 Methods

The survey to assess NLEB summer presence/absence at the Project accorded with the 2022 U.S. Fish and Wildlife Service (USFWS) *Range-wide Indiana Bat Summer Survey Guidelines for Indiana Bat and Northern Long-eared Bat* (Guidelines) (USFWS 2022). This survey followed a two-phased approach: Phase 1, desktop and field-based habitat assessments, and Phase 2, acoustic surveys. Tetra Tech deployed a full-spectrum acoustic detector during Phase 2, and the resulting data were processed by use of Kaleidoscope Pro version 5.4.0 (Wildlife Acoustics, Inc.). Qualified Tetra Tech personnel conducted all phases of the survey—Table 1 summarizes their roles, and resumes of relevant staff are in Appendix D.

Table 1. Personnel involved in NLEB Acoustic Presence/Absence Surveys and analyses for Lee Bridge MassDOT Project #607597, Lee, Massachusetts (July 2022).

Personnel	Desktop Analysis	Field Assessment	Detector Deployment	Acoustic Analysis	Qualitative Analysis
Katelin Craven Wildlife Biologist	X	X	X	X	X

2.1 Habitat Assessment

The following sections describe the desktop assessment and the field-based assessment of summer presence of the NLEB at the Project.

2.1.1 Desktop Assessment

Prior to field work, Tetra Tech performed a desktop land cover analysis to identify suitable NLEB habitat within the proposed Project area (Figure 1). Tetra Tech reviewed aerial photography and Google Earth imagery to identify areas of possible use by the NLEB for foraging and roosting during the maternity and migration seasons. Determination of these areas was based on forest patch size,

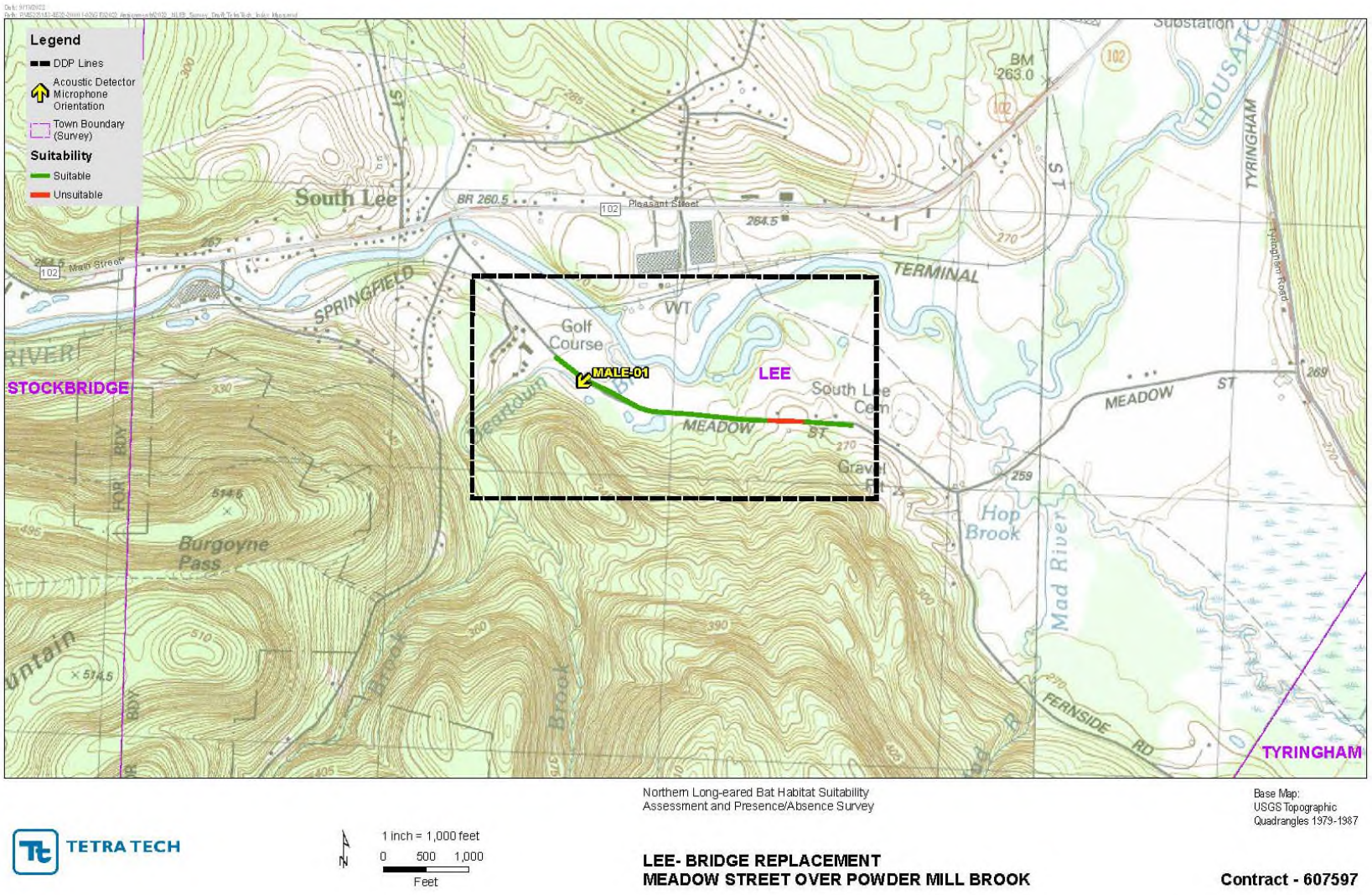


Figure 1. Locations of acoustic detectors deployed at Lee Bridge MassDOT Project #607597, Lee, Massachusetts.

A00881 - 12
Proposal No. 607597 - 132402

proximity to closed-canopy forests, and landscape features that bats may use to commute between roosting and foraging habitats (e.g., forested tracts, wetlands, and streams). All relatively contiguous forested lands that were not highly fragmented by residential or commercial developments were considered suitable NLEB habitat, and all densely populated or developed stretches were determined to be unsuitable (USFWS 2022). The Guidelines indicate requirement for linear projects of a minimum of one detector per kilometer of suitable habitat for four detector-nights. Therefore, one detector station was necessary for this linear project with 1.0 kilometer of suitable habitat.

2.1.2 Field-based Assessment

On July 8, 2022, Tetra Tech conducted a site visit to describe and verify presence of NLEB habitat identified during the desktop analysis, deploy full spectrum acoustic detectors, and conduct a Phase 1 Summer Habitat Assessment, and conduct a bridge/structure bat assessment. General habitat descriptions are in Table 2. The completed Phase 1 Summer Habitat Assessment is included in Appendix B and the completed Bridge/Structure Bat Assessment Form is included in Appendix C.

Table 2. Detector station descriptions and survey data for Lee Bridge MassDOT Project #607597, Lee, Massachusetts (July 2022).

Detector Station	Suitable NLEB Habitat	Description	GPS Coordinates	Microphone Orientation (degrees)	Survey Nights
MALE-01	Yes	Station was located on a bridge over the East Brook/Powder Mill Brook/Beartown Brook, a small stream with flat water pools.	42.273187, -73.269442	226°	7/8–7/11, 2022

2.2 Acoustic Surveys

The following sections discuss the various aspects of the acoustic surveys.

2.2.1 Detector Type

Tetra Tech used a Wildlife Acoustics Song Meter-4 BAT ultrasonic bat detector (Wildlife Acoustics, Inc., Massachusetts, USA) equipped with a SMM-U2 microphone over the duration of the survey. The detector was set to record from an hour before sunset to an hour after sunrise (approximately 7:33 PM – 6:23 AM) in full-spectrum mode, and files were saved in .WAV format on internal SD cards. The detector was fully waterproof and powered by internal D cell batteries. Tetra Tech tested the detector and microphone prior to deployment using a Wildlife Acoustics Ultrasonic Calibrator to ensure equipment was functioning properly and device sensitivity was within the manufacturer's suggested thresholds. A "chirp test" with the Ultrasonic Calibrator confirmed that all connections were sound and that the microphone registered high-frequency noise once the detector was set. Tetra Tech performed this test again at demobilization to ensure the microphone was functioning while deployed. Over the duration of the survey, Tetra Tech reviewed log files when the unit was recovered to verify proper functioning.

2.2.2 Detector Deployment

Tetra Tech micro-sited the detector in suitable habitat within the Project area to ensure sampling of potential habitats in accordance with the Guidelines. Deployment of the detector occurred on July 8, 2022, and retrieval on July 12, 2022.

The microphone was mounted at a minimum height of 9 feet to avoid ground vegetation and to elevate the cone of detection. Orientation of the microphone was along suspected flight paths to increase the number of call pulses and quality of recordings. Therefore, microsite conditions determined specific orientation. Appendix A includes station conditions and photographs.

2.2.3 Weather Requirements

For valid survey results, the Guidelines specify weather requirements during the first 5 hours after sunset of each detector-night as follows: temperatures remain above 50 degrees Fahrenheit, no precipitation exceeds 30 minutes, and sustained wind speed is less than 9 miles/hour. Tetra Tech reviewed hourly weather history from the weather station closest to the Project that had data on temperature, precipitation rate, and precipitation accumulation (Weather Underground 2022). A RainWise® WindLog™ Wind Data Logger was set up 6.5 miles south of the Project and wind speed was collected every two minutes and viewed in Windsoft software to determine if the weather guidelines were met.

2.2.4 Acoustic Analysis

Tetra Tech analyzed the recorded data according to the Guidelines. Data were filtered and analyzed via Kaleidoscope Pro version 5.4.0, by use of the classifier "Bats of North America 5.4.0" for species of bats in Massachusetts at the 0 Balanced "Neutral" sensitivity level. Signals of interest ranged from 16–120 kilohertz, lasting 2–500 milliseconds, with a minimum of two call pulses. Conversions of full spectrum .WAV files to zero-crossing proceeded by use of a division ratio of eight. Tetra Tech subsequently used SonoBat v 4.2.0 to manually review all files auto-classified as NLEB, eastern small-footed bat, little brown bat, and tri-colored bat. Eastern small-footed bats, little brown bats and tri-colored bats were included in qualitative analysis because of their elevated conservation status in Massachusetts. All bat passes were reviewed during any night with a significant NLEB MLE value. Indiana bat is listed as endangered federally and by the State of Massachusetts, yet the species has not been documented in the state since 1939 and Massachusetts is not within the putative range for the species, therefore presence is very unlikely and was not included as a potential species in the analysis (USFWS 2015, MADFW 2015a).

In addition, Tetra Tech manually reviewed a subsample of files auto-classified as big brown bat, silver-haired bat, and hoary bat to confirm presence of species. Bat passes auto-classified as "No ID" indicated that the program recognized the recording as a bat but could not identify it to the species level. These "No ID" auto-classifications were filtered by characteristic frequency (Fc), and those with an Fc greater than or equal to 35 kilohertz were labeled "unidentified high frequency bat species"

and those less than 35 kilohertz were labeled "unidentified low frequency bat species." Results were summarized by station and by night.

2.3 Bridge Assessment

On July 8, 2022, Tetra Tech conducted a site visit to perform a bridge inspection in accordance with the Department of Transportation (DOT) Environmental Division *Appendix D: Bridge/Structure Bat Assessment Form Guidance* (2020). The bridge inspection includes visual inspection for bats flying or roosting during the assessment, dead bats, guano, and staining. An audible inspection for bat vocalizations was also performed. The completed Bridge Inspection Form and photos of the bridge are included in Appendix C.

3.0 Results

3.1 Acoustic Survey

The desktop and field-based habitat assessments revealed approximately 0.6 miles of suitable NLEB habitat. The majority of the Project area with potential tree removal is comprised of forest. Based on the results of the habitat assessment, Tetra Tech deployed one detector for four nights between the nights of July 8 and July 11, 2022 for a total of four detector-nights. Weather conditions were met during all four nights of the survey (Table 3).

Table 3. Summary of Weather Information during the First 5 Hours of each Survey Night for Lee Bridge MassDOT Project #607597, Lee, Massachusetts (July 2022).

Survey Night	Temperature Range (Fahrenheit)	Wind Range (mph)	Precipitation (inches)	Qualifying Night
8-Jul	70–77	0–1.5	No	Y
9-Jul	60–72	0–1.2	No	Y
10-Jul	65–74	0–1.1	No	Y
11-Jul	68–75	0–2.6	No	Y

Interpreting results solely according to the number of species' bat passes by software auto-classification can be misleading because of varying levels of confidence in the classifications. Therefore, MLEs were applied as a secondary measure to determine likelihood of species presence by incorporation of known error rates for each species classifier within the software. MLEs indicated that five of the eight bat species currently occurring in Massachusetts (big brown bat, eastern red bat, hoary bat, silver-haired bat, and little brown bat) are likely present within the Project area (Table 4).

Moreover, manual review of bat passes by experienced biologists usually is the most accurate method of species identification. Manual review confirmed the presence of the species predicted above, and additionally confirmed the presence of tri-colored bat. NLEB was not confirmed during manual vetting.

Table 4. Summary of Species Presence by Kaleidoscope Pro at Lee Bridge MassDOT Project #607597, Lee, Massachusetts (July 2022).

Species	MLE Prediction[1]	Qualitative Analysis	Overall Evaluation
Big brown bat	**Present**	**Present**	**Present**
Eastern red bat	**Present**	**Present**	**Present**
Hoary bat	**Present**	**Present**	**Present**
Silver-haired bat	**Present**	**Present**	**Present**
Eastern Small-footed bat	Absent	Absent	Absent
Little brown bat	**Present**	**Present**	**Present**
Northern long-eared bat	Absent	Absent	Absent
Tri-colored bat	Absent	**Present**	**Present**
1. Based on probability of presence for any site on any night. See Appendix C for complete listing of MLEs by site/night.			

Tetra Tech recorded 880 total bat passes on the nights of July 8–11, 2022 (Table 5). The detector was functional over the duration of deployment. No bat passes were classified by analysis software as NLEB, 288 as little brown bat, and three as tri-colored bat and presence was confirmed during manual vetting for little brown bat and tri-colored bat, but was not confirmed for NLEB. All other species listed in Table 4 above were subsampled to confirm species presence.

Based on this survey, six species were present at the Project, with 13 percent of the activity by the big brown bat and 12 percent of the activity by the eastern red bat, followed by hoary bat, silver-haired bat, little brown bat, and tri-colored bat (Table 5).

Table 5. Summary of Bat Passes Recorded at Lee Bridge MassDOT Project #607597, Lee, Massachusetts (July 2022).

Station	Date	Big brown bat	Eastern red bat	Hoary bat	Silver-haired bat	Little brown bat	Northern Long-Eared Bat	Tri-colored Bat	Myotis Species	Unidentified high frequency species	Unidentified low-frequency species	Grand Total
Project Total		**118**	**106**	**90**	**50**	**3**	**-**	**2**	**1**	**480**	**31**	**880**
MALE-01	8-Jul	29	13	24	2	-	-	1	-	62	6	137
	9-Jul	6	5	5	4	-	-	-	-	32	-	52
	10-Jul	12	41	9	3	-	-	1	1	130	2	198

Station	Date	Big brown bat	Eastern red bat	Hoary bat	Silver-haired bat	Little brown bat	Northern Long-Eared Bat	Tri-colored Bat	Myotis Species	Unidentified high frequency species	Unidentified low-frequency species	Grand Total
	11-Jul	71	47	52	41	3	-	-	-	256	23	493

3.2 Bridge Visual Survey

The bridge on Meadow Street over Powder Mill Brook/East Brook, Beartown Brook was inspected on July 8, 2022. There were no indicators of bat presence, including visual or audible indications that bats were present. No staining or bat guano was observed. Only the north side of the bridge was accessible, but all areas were visible. There is no evidence that bats currently use the bridge.

4.0 Conclusion

No bat passes were auto-classified as the federally threatened NLEB by Kaleidoscope Pro software, and presence was not confirmed via manual vetting. Additionally, MLEs by the software indicated that presence of the NLEB was unlikely during any of the site/nights over the duration of the survey period—corroborating results of the qualitative analysis. Given detection of no NLEBs during this survey that conformed to the summer survey protocol and no visual evidence of bat use of the bridge, activities associated with the Project are unlikely to negatively impact the NLEB. The closest NLEB hibernacula was located 5.6 miles west of the Project (MassWildlife 2019). Avoiding tree removal activities when possible may improve foraging and roosting opportunities for this species.

Additionally, presence was not confirmed for the state endangered eastern small-footed bat, but presence was confirmed for the state endangered little brown bat and tri-colored bat. These three species have experienced significant regional population declines due to White Nose Syndrome (Frick et al. 2010). The MADFW recommend protection of hibernacula (MADFW 2019). Under the Massachusetts Endangered Species Act, all listed species are protected from activities that would destroy habitat and thus directly or indirectly cause mortality or disrupt critical behaviors. Listed species are specifically protected from activities that disrupt breeding, feeding, or migration (MADFW 2020, 2019, 2015b).

The limited amount of clearing planned is expected to have little effect on suitable habitat, however maintaining an unbroken forested corridor along Powder Mill Brook/East Brook, Beartown Brook is recommended. Retaining a forested buffer around ponds, wetlands and riparian corridors is recommended as little brown bat, tri-colored bat, and northern long-eared bat often forage over water in forested habitat (Broders et al. 2001, Krusic et al. 1996, Nelson and Gillam 2016). Retaining habitat for these species may allow them to use the Project area in the future.

Six species were present at the Project, with 13 percent of the activity by the big brown bat, a widespread generalist species, followed by eastern red bat, hoary bat, silver-haired bat, little brown bat, and tri-colored bat.

The detector station was located over Powder Mill Brook/East Brook, Beartown Brook and surrounding habitat was highly suitable, contiguous forest and the Beartown State Forest. The Project activity rate was on average 220 bat passes per night. Bats, particularly reproductive females, spend the day in roosts with high temperatures causing them to lose water during the hot summer months (Johnson and Gates 2008). Often, a drinking water source, like Powder Mill Brook/East Brook, Beartown Brook, is the first location visited to replenish evaporated water before they start evening foraging. Therefore, a water source may be drawing in multiple species in addition to providing good foraging habitat due to higher concentrations of insect prey (Hill and Smith 1984, Schmidly 2004).

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APPENDIX A. STATION CONDITIONS AND DETECTOR ORIENTATION PHOTOGRAPH



Northern Long-eared Bat Habitat Suitability Assessment and Presence/Absence Survey

Base Map: MassGIS Aerial 2021

TETRA TECH

1 inch = 300 feet
0 150 300
Feet

LEE- BRIDGE REPLACEMENT
MEADOW STREET OVER POWDER MILL BROOK

Contract - 607597

Tim Dexter
MassDOT NLEB Presence/Absence Survey

PHOTOGRAPHIC RECORD

Company: MassDOT

Project: Lee, Massachusetts



Photo No.: 01

Station: MALE-01

Date: July 8, 2022

Comments: Station was located on a bridge over the East Brook/Powder Mill Brook/Beartown Brook, a small stream with flat water pools.

Tim Dexter
MassDOT NLEB Presence/Absence Survey

PHOTOGRAPHIC RECORD

Company: MassDOT

Project: Lee, Massachusetts



Photo No.: 02

Station: MALE-01

Date: July 8, 2022

Comments: Station was located on a bridge over the East Brook/Powder Mill Brook/Beartown Brook, a small stream with flat water pools.

Tim Dexter
MassDOT NLEB Presence/Absence Survey

PHOTOGRAPHIC RECORD

Company: MassDOT

Project: Lee, Massachusetts



Photo No.: 03

Station: MALE-01

Date: July 8, 2022

Comments: Station was located on a bridge over the East Brook/Powder Mill Brook/Beartown Brook, a small stream with flat water pools. Dominant tree species included red maple (*Acer rubrum*) and elm (*Ulmus sp.*).

Tim Dexter
MassDOT NLEB Presence/Absence Survey

PHOTOGRAPHIC RECORD

Company: MassDOT

Project: Lee, Massachusetts



Photo No.: 04

Station: MALE-01

Date: July 8, 2022

Comments: Station was located on a bridge over the East Brook/Powder Mill Brook/Beartown Brook, a small stream with flat water pools.

Tim Dexter
MassDOT NLEB Presence/Absence Survey

PHOTOGRAPHIC RECORD

Company: MassDOT

Project: Lee, Massachusetts

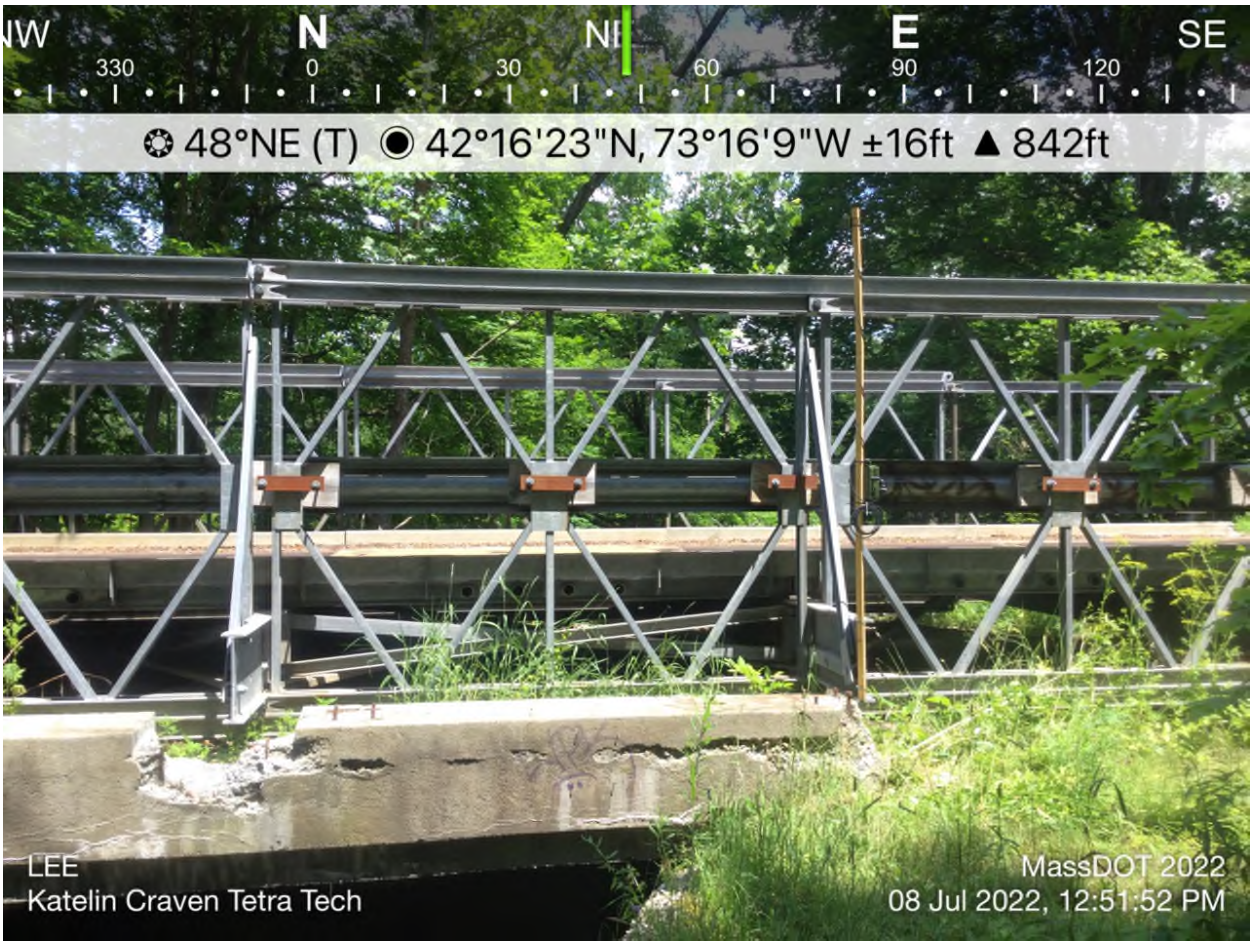


Photo No.: 05

Station: MALE-01

Date: July 8, 2022

Comments: Station was located on a bridge over the East Brook/Powder Mill Brook/Beartown Brook, a small stream with flat water pools.

Tim Dexter
MassDOT NLEB Presence/Absence Survey

PHOTOGRAPHIC RECORD

Company: MassDOT

Project: Lee, Massachusetts



Photo No.: 06

Station: MALE-01

Date: July 8, 2022

Comments: Station was located on a bridge over the East Brook/Powder Mill Brook/Beartown Brook, a small stream with flat water pools.

Tim Dexter
MassDOT NLEB Presence/Absence Survey

PHOTOGRAPHIC RECORD

Company: MassDOT

Project: Lee, Massachusetts



Photo No.: 07

Station: MALE-01

Date: July 8, 2022

Comments: Station was located on a bridge over the East Brook/Powder Mill Brook/Beartown Brook, a small stream with flat water pools.

APPENDIX B. COMPLETED PHASE 1 SUMMER HABITAT ASSESSMENT

INDIANA BAT HABITAT ASSESSMENT DATASHEET

Project Name: Lee MALE 607597 Date: 07/08/22

Township/Range/Section: Lee, MA

Lat Long/UTM/ Zone: 42.27226, -73.26658 Surveyor: Katelin Craven

Brief Project Description

Lee - Bridge replacement, L-05-004, Meadow Street over Powder Mill Brook

Project Area

	Total Acres	Forest Acres	Open Acres
Project	1.1 km Linear	1.0 km Linear	0.1 km Linear

Proposed Tree Removal (ac)	Completely cleared	Partially cleared (will leave trees)	Preserve acres- no clearing
	UNK		

Vegetation Cover Types

Pre-Project	Post-Project
Mixed forest and marsh	Similar

Landscape within 5 mile radius

Flight corridors to other forested areas?

Yes, there are flight corridors to the north and south of the road.

Describe Adjacent Properties (e.g. forested, grassland, commercial or residencial development, water sources)

Forested, commercial, residential homes, marsh and river.

Proximity to Public Land

What is the distance (mi.) from the project area to forested public lands (e.g., national or state forests, national or state parks, conservation areas, wildlife management areas)?

Beartown State Forest - > 7,200 acres - Adjacent
Longcope Property - 45 acres - 1.4 km NW

Beartown Brook - Adjacent
Housatonic River - 0.1 km N
Goose Pond - > 250 acres - 4.7 km NE

APPENDIX A: PHASE 1 HABITAT ASSESSMENTS

Use additional sheets to assess discrete habitat types at multiple sites in a project area
Include a map depicting locations of sample sites if assessing discrete habitats at multiple sites in a project area
A single sheet can be used for multiple sample sites if habitat is the same

Sample Site Description	Lee
Sample Site No.(s): MATE-01	over small pool along East Brook

Water Resources at Sample Site				
Stream Type (# and length)	Ephemeral	Intermittent	Perennial	Describe existing condition of water sources:
			1	open - flat
Pools/Ponds (# and size)		Open and accessible to bats?		
		Y		East Brook
Wetlands (approx. ac.)	Permanent	Seasonal		

Forest Resources at Sample Site				
Closure/Density	Canopy (> 50')	Midstory (20-50')	Understory (<20')	1=1-10%, 2=11-20%, 3=21-40%, 4=41-60%, 5=61-80%, 6=81=100%
		6	5	
Dominant Species of Mature Trees	red maple	elm		
% Trees w/ Exfoliating Bark	0%			
Size Composition of Live Trees (%)	Small (3-8 in)	Med (9-15 in)	Large (>15 in)	
	3	4	1	
No. of Suitable Snags		1		

Standing dead trees with exfoliating bark, cracks, crevices, or hollows. Snags without these characteristics are not considered suitable.

IS THE HABITAT SUITABLE FOR INDIANA BATS? Y

Additional Comments:
one lane loud metal bridge over stream

Attach aerial photo of project site with all forested areas labeled and a general description of the habitat

Photographic Documentation: habitat shots at edge and interior from multiple locations; understory/midstory/canopy; examples of potential suitable snags and live trees; water sources

APPENDIX C. BRIDGE/STRUCTURE BAT ASSESSMENT AND BRIDGE PHOTOGRAPHS

Project No. 607597 122402

Bridge/Structure Bat Assessment Form

Date & Time of Assessment: July 8, 2022 1:03 pm	DOT Project Number: 607597	Route/Facility Carried: Meadow St.	County: Berkshire
Federal Structure ID:	Structure Coordinates (latitude and longitude): 42.273187 -73.269442	Structure Height (approximate): 5 ft	Structure Length: 30 ft

Structure Type (check one)

Bridge Construction Style

- ○ Cast-in-place
- ○ Flat Slab/Box
- ○ Truss (Side View)
- ○ Parallel Box Beam
- ○ Pre-stressed Girder
- ● Steel I-beam
- ○ Covered
- ○ Other:

Culvert Type

- ○ Box
- ○ Pipe/Round
- ○ Other:

Other Structure

- ○

Structure Material (check all that apply)

Deck Material	*Beam Material*	*End/Back Wall Material*
☐ Metal	☐ None	☑ Concrete
☑ Concrete	☐ Concrete	☐ Timber
☐ Timber	☑ Steel	☐ Stone/Masonry
☐ Open grid	☐ Timber	☐ Other:
☐ Other:	☐ Other:	

Creosote Evidence

- ○ Yes ● No ○ Unknown

Culvert Material

- ☐ Metal
- ☐ Concrete
- ☐ Plastic
- ☐ Stone/Masonry
- ☐ Other:

Notes:

Crossings Traversed (check all that apply)

☐ Bare ground	☐ Open vegetation
☐ Rip-rap	☐ Closed vegetation
☑ Flowing water	☐ Railroad
☐ Standing water	☐ Road/trail - Type:
☐ Seasonal water	☐ Other:

Surrounding Habitat (check all that apply)

☐ Agricultural	☐ Grassland
☑ Commercial	☐ Ranching
☐ Residential-urban	☑ Riparian/wetland
☐ Residential-rural	☐ Mixed use
☑ Woodland/forested	☐ Other:

Areas Assessed (check all that apply)

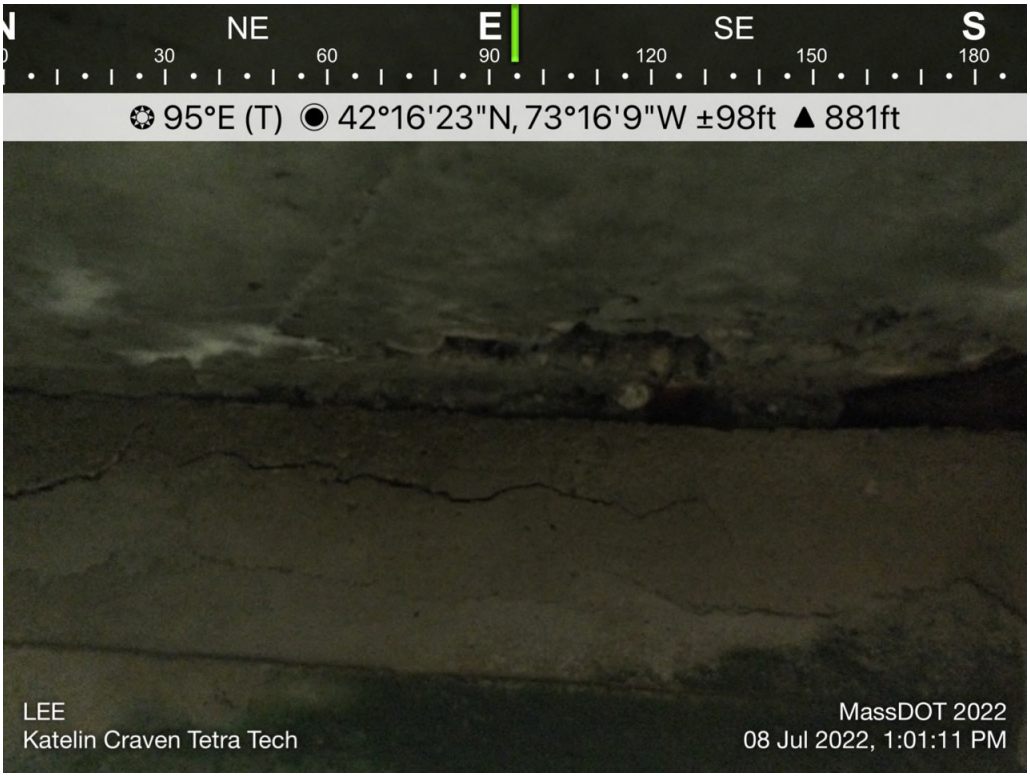
Check all areas that apply. If an area is not present in the structure, check the "not present" box.
Document all bat indicators observed during the assessment. Include the species present, if known, and provide photo documentation as indicated.

Area (check if assessed)	Assessment Notes	Evidence of Bats (include photos if present)
☑ All crevices and cracks: **Bridges/culverts:** rough surfaces or imperfections in concrete **Other structures:** soffits, rafters, attic areas	☐ Not present: Only able to access North side but everything visible	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☑ Concrete surfaces (open roosting on concrete)	☐ Not present: horizontal crevice on ledge	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☑ Spaces between concrete end walls and the bridge deck	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Crack between concrete railings on top of the bridge deck (Gap, Railing)	☑ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ Vertical surfaces on concrete I-beams	☑ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☑ Spaces between walls, ceiling joists	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☑ Weep holes, scupper drains, and inlets/pipes	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☑ All guiderails	☐ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species
☐ All expansion joints	☑ Not present	☐ Visual - live # dead # ☐ Guano ☐ Staining ☐ Audible ☐ Odor ☐ Photos ☐ Species

Name: Katelin Craven

Signature: Katelin Craven


NE
E
SE
S
SW
60
90
120
150
180
210
136°SE (T) 42°16'23"N, 73°16'9"W ±16ft 857ft
LEE
Katelin Craven Tetra Tech
MassDOT 2022
08 Jul 2022, 1:03:28 PM


NE
E
SE
S
30
60
90
120
150
180
95°E (T) 42°16'23"N, 73°16'9"W ±98ft 881ft
LEE
Katelin Craven Tetra Tech
MassDOT 2022
08 Jul 2022, 1:01:11 PM

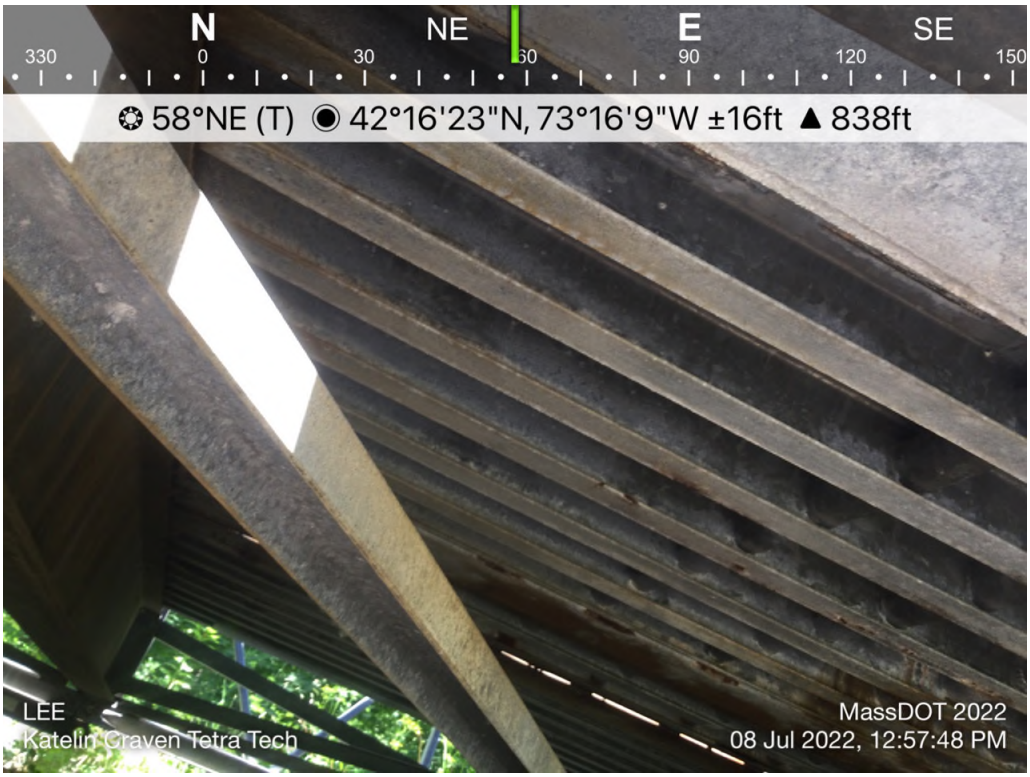
Tim Dexter
MassDOT NLEB Presence/Absence Survey





Tim Dexter
MassDOT NLEB Presence/Absence Survey





Tim Dexter
MassDOT NLEB Presence/Absence Survey



APPENDIX D. MAXIMUM LIKELIHOOD ESTIMATES (MLE) SUMMARY

Summary of Maximum Likelihood Estimates (MLEs) for species presence by Kaleidoscope Pro 5.4.0 at Lee Bridge MassDOT Project #607597, Lee, Massachusetts (July 2022).

Station	Night	Big brown bat	Eastern red bat	Hoary bat	Silver-haired bat	Eastern small-footed bat	Little brown bat	Northern long-eared bat	Tri-colored bat
MALE-01	8-Jul	**0.00**	**0.00**	**0.00**	1.00	1.00	**0.00**	1.00	1.00
	9-Jul	**<0.01**	**0.01**	**<0.01**	0.46	1.00	**0.00**	1.00	1.00
	10-Jul	**<0.01**	**0.00**	**<0.01**	1.00	1.00	**0.00**	1.00	1.00
	11-Jul	**0.00**	**0.00**	**0.00**	**<0.01**	1.00	**0.00**	1.00	1.00

APPENDIX E. RELEVANT STAFF RESUMES

TETRA TECH

Katelin Craven
Wildlife/Bat Biologist

EXPERIENCE SUMMARY

Ms. Craven has over 13 years of experience as a biologist, including 9 years of experience as a bat biologist conducting acoustic and mist-net surveys across the United States. She has a broad background in environmental science and wildlife biology, but has particular expertise in bat acoustic data monitoring and data analysis. Ms. Craven has conducted habitat assessments and long-term acoustic surveys for Indiana bat (*Myotis sodalis*) in Indiana and Illinois. Ms. Craven has conducted over 133 northern long-eared bat (*Myotis septentrionalis*) (NLEB) presence/absence surveys, comprised of over 497 detector stations in Maine, Massachusetts, Rhode Island, Connecticut, North Carolina, West Virginia, and Virginia. Over 60 percent of these deployed detectors were in support of surveys for Massachusetts Department of Transportation (MassDOT) for the federally threatened and state endangered NLEB, little brown bat (*M. lucifugus*), eastern small-footed bat (*M. leibii*), and tri-colored bat (*Periomyotis subflavus*). She has provided data analysis, according to United States Fish and Wildlife Service (USFWS) policy and protocols, for United States Department of the Navy (Navy) facilities across the eastern U.S. and commercial energy facilities in the Northeast, and Mid-west, Northwest U.S. and Canada, incorporating the data into summary reports.

EMPLOYMENT HISTORY

Tetra Tech, Inc., Wildlife Biologist, 2015–present

Maine Inland Fisheries and Wildlife, Contractor Wildlife Biologist, 2015

U.S. Geological Survey, Contractor Wildlife Biologist, 2013-2014

RELEVANT PROPOSAL AREA EXPERIENCE

Wildlife Biologist, Massachusetts Department of Transportation, NLEB Presence/Absence Habitat Assessment and Detector Deployment, Various Road and Bridge Improvement Projects, MA. 2016–2021. Deployed 40 detectors in 2016, 67 detectors in 2017, 82 detectors in 2018, 43 detectors in 2019, 64 detectors in 2020, and 39 detectors in 2021 and conducted habitat assessments at each location according to USFWS Indiana Bat Summer Survey Guidelines. Surveyed species include four state endangered bat species. Analyzed bat acoustic data with Kaleidoscope Pro and manually vetted calls with Sonobat software. Summarized data and wrote technical memorandums.

Wildlife Biologist, Rhode Island Department of Transportation, NLEB Presence/Absence Habitat Assessment and Detector Deployment, Various Bridge Improvement Projects, RI. 2021. Deployed 20 detectors and conducted habitat assessments at each location according to USFWS Indiana Bat Summer Survey Guidelines. Analyzed bat acoustic data with Kaleidoscope Pro and manually vetted calls with Sonobat software. Summarized data and wrote technical memorandums.

Wildlife Biologist, Liberty Power, Bat Acoustic Analysis and Reporting, Mural Wind Energy Project, IL., 2021. Deployed four detectors, conducted acoustic analysis including Indiana bat and NLEB, and incorporated results into summary reports.

EDUCATION

M.S. Biology, University of Northern Colorado, 2013

B.S. Environmental Science, The Colorado College, 2007

AREAS OF EXPERTISE

- Bat data analysis using Kaleidoscope Pro and Sonobat
- Bat acoustic manual vetting including federal and state listed species
- Field deployment of Wildlife Acoustics bat detectors
- Northern long-eared bat Presence/Absence Surveys

TRAINING AND CERTIFICATIONS

- Advanced Bat Acoustics: A Master Class with Dr. Joe Szewczak, 2021
- Bat Acoustic Survey Techniques and Analysis, Bat Conservation and Management, PA, 2016
- Qualified Acoustics Bat Surveyor in Pennsylvania
- Virginia Approved Bat Surveyor List for Acoustics
- Recognized Qualified NLEB Acoustic Surveyor for New Jersey

OFFICE LOCATION

Golden, CO

YEARS OF EXPERIENCE

13

YEARS WITH FIRM

7

Wildlife Biologist, RWE, Bat Acoustic Analysis and Reporting, Greenswitch Wind Energy Project, IL., 2021. Deployed two detectors including a MET tower, conducted acoustic analysis including Indiana bat and NLEB, and incorporated results into summary reports.

Wildlife Biologist, E.On, Bat Acoustic Analysis and Reporting, Gibson West Wind Energy Project, IN., 2019. Deployed three detectors including a MET tower, conducted acoustic analysis including Indiana bat and NLEB, and incorporated results into summary reports.

Wildlife Biologist, E.On, Bat Acoustic Analysis and Reporting, Gibson Central Wind Energy Project, IN., 2019. Deployed three, conducted acoustic analysis including Indiana bat and NLEB, and incorporated results into summary reports.

Wildlife Biologist, Tennessee Gas Pipeline Company, L.L.C., Visual Survey and Acoustic Survey, Broad Run, WV. 2019. Conducted a visual survey of roost boxes, deployed detectors, analyzed data from the from acoustic surveys, manually reviewed to confirm presence of all species, manually reviewed all bat passes from *Myotis*, and incorporated results in summary report.

Wildlife Biologist, Pine Gate Renewables, NLEB Presence/Absence Habitat Assessment and Detector Deployment, Various Solar Projects, RI. 2018. Deployed 10 detectors over five proposed solar project sites and conducted habitat assessments at each location according to USFWS Indiana Bat Summer Survey Guidelines. Analyzed bat acoustic data with Kaleidoscope Pro and manually vetted calls with Sonobat software. Summarized data and wrote technical memorandums.

Wildlife Biologist, Massachusetts Army National Guard, Acoustic Data Analysis, Camp Curtis Guild and Camp Edwards, MA. 2018-2020. Analyzed data from the 2016/2017, 2018, 2019, and 2020 acoustic surveys using Sonobat software. Manually reviewed all bat passes from *Myotis* and tri-colored bat. Incorporated results in summary reports.

Wildlife Biologist, Navy Facilities, Bat Detector Deployment, and Mist-netting, Cutler, ME. 2017. Deployed five Wildlife Acoustic SM3 bat acoustic detectors, checked detectors bi-weekly, downloaded and managed data, and repaired any detector system issues. Conducted mist-net surveys.

Wildlife Biologist, Navy Facilities, Bat Acoustic Detector Deployment, Data Survey Analysis and Reporting, Various Installations, Eastern U.S. 2016–2019. Deployed Wildlife Acoustic SM3 acoustic detectors and acoustically surveyed Installations according to USFWS Indiana Bat Summer Survey Analysis Guidelines. Analyzed data for both baseline and presence/absence surveys for the federally threatened NLEB. Analyzed bat calls using Kaleidoscope Pro and manually vetted species of interest and spot checked for accuracy. Summarized mist-netting survey data, emergence counts, and interpreted NLEB radio-tracking results. Compiled data into summary reports.

Wildlife Biologist, NextEra, Bat Acoustic Analysis and Reporting, Mower Commercial Wind Energy Project, MN. 2019. Deployed two detectors, one MET tower. Conducted acoustic analysis and incorporated results into summary reports.

Wildlife Biologist, Navy Facilities, Bat Mist-netting, Radio Tracking, and Roost Emergence Surveys, Various Installations, VA. 2016–2018. Mist-netted, radio tracked, and conducted roost emergence counts according to USFWS Indiana Bat Summer Survey Analysis Guidelines. Experience handling the federally threatened NLEB and various northeastern bat species.

Wildlife Biologist, Hill Country, Bat Detector Deployment, Acoustic Analysis, and Reporting, Rock Creek Commercial Wind Energy Project, TX. 2018. Deployed Wildlife Acoustics SM3 detectors at commercial wind energy project, Quality Assurance/Quality Control data during field season, conducted acoustic analysis (including manual vetting to confirm all species present), and incorporated results into summary reports.

Data Analyst and Reviewer, USFWS Refuge System, Bat Acoustic Monitoring Analysis, Various Refuges, Eastern U.S. 2015–2017. **O**ne of two biologists responsible for managing and processing up to 32 National Wildlife Refuges located in Maine, New Jersey, Massachusetts, New Hampshire, Vermont, Connecticut, New York, Maryland, West Virginia, and Virginia. File formats and level of organization have varied depending on refuge, and were arranged in standardized directories prior to processing using full spectrum (Sonobat) classification software. Automated classifications were then summarized and qualitatively vetted (i.e., manually reviewed on a spectrogram) to determine accuracy of automated classification.

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DOCUMENT A00882

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

ENDANGERED SPECIES DETERMINATION

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MASSWILDLIFE

DIVISION OF
FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581
p: (508) 389-6300 | f: (508) 389-7890
MASS.GOV/MASSWILDLIFE

May 21, 2025

Lindsey Forg
10 Park Plaza
Boston, MA 02116

RE: Applicant: Lindsey Forg
Project Location: Meadow Street over Powder Mill Brook, Lee (73.2694284°W 42.2731474°N)
Project Description: Bridge Replacement
NHESP File No.: 25-19537

Dear Applicant:

The Natural Heritage & Endangered Species Program of the Massachusetts Division of Fisheries & Wildlife (the "Division") received the MESA Project Review Checklist and supporting documentation for review pursuant to the Massachusetts Endangered Species Act (MGL. c. 131A) and its implementing regulations (321 CMR 10.00) (MESA).

STATE-LISTED SPECIES

The Project as currently proposed will occur within Priority Habitat of the following state-listed species:

Scientific Name	Common Name	Taxonomic Group	State Status
Glyptemys insculpta	Wood Turtle	Reptile	Special Concern

State-listed species and their habitats are protected in accordance with the MESA.

PROJECT DESCRIPTION (the "Project")

The project, as currently proposed, includes the replacement of the Meadow Street Bridge over Powder Mill Brook (a.k.a. Beartown Brook) in Lee, MA, as shown on the Project Plan.

MASSACHUSETTS ENDANGERED SPECIES ACT (MESA)

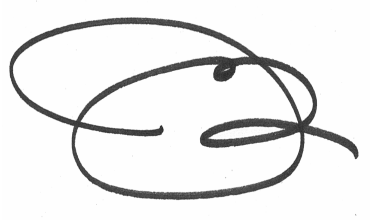
The MESA is administered by the Division and prohibits the Take of state-listed species, which includes actions that "in reference to animals, means to harass, harm, pursue, hunt, shoot, hound, kill, trap, capture, collect, process, disrupt the nesting, breeding, feeding or migratory activity or attempt to engage in any such conduct, or to assist such conduct, and in reference to plants, means to collect, pick, kill, transplant, cut or process or attempt to engage or to assist in any such conduct. Disruption of nesting, breeding, feeding or migratory activity may result from, but is not limited to, the modification, degradation or destruction of habitat of state-listed wildlife species" (321 CMR 10.02). The purpose of the Division's review under the MESA regulations is to determine whether a Take of state-listed species will result from the proposed project.

Based on the information provided and the information contained in our database, the Division finds that the Project **must be conditioned** to avoid a prohibited Take of state-listed species (321 CMR 10.18(2)(a)). **To avoid a prohibited Take of state-listed species, the conditions attached to this letter must be met.**

Provided the attached conditions are fully implemented and there are no changes to the project plans, this project will not result in a Take of state-listed species. We note that all work is subject to the anti-segmentation provisions (321 CMR 10.16) of the MESA. This determination is a final decision of the Division of Fisheries and Wildlife pursuant to 321 CMR 10.18. Any changes to the proposed project or any additional work beyond that shown on the site plans may require an additional filing with the Division pursuant to the MESA. This project may be subject to further review if no physical work is commenced within five years from the date of issuance of this determination, or if there is a change to the project.

If you have any questions regarding this letter please contact Tim McGuire Endangered Species Review Biologist, at timothy.mcguire2@mass.gov, (508) 389-6366

Sincerely,



Jesse Leddick
Assistant Director

cc: David Paulson

Attachment: List of Conditions

List of Conditions

Applicant: Lindsey Forg
Project Location: Meadow Street over Powder Mill Brook, Lee (73.2694284°W 42.2731474°N)
Project Description: Bridge Replacement
NHESP File No.: 25-19537
Heritage Hub Form ID: RC-94497
Approved Plan: Town of Lee Meadow Street Over Powder Mill Brook (a.k.a. Beartown Brook) Bridge L-05-004
Plan date: 3/28/25

To avoid a prohibited Take of state-listed species, the following condition(s) must be met:

1. **Turtle Protection Plan:** Prior to the start of work (including vegetation clearing or soil disturbance), the Applicant shall submit a Wood Turtle Protection Plan to the Division for review and written approval. Said Plan shall detail procedures for protecting state-listed turtles during construction, and be prepared and implemented by a qualified, Division-approved wildlife biologist. The Division is available for consultation on Plan development and can provide contact information for qualified biologists. The Division-approved Plan shall be implemented as written; any proposed changes to the Plan must be submitted to the Division for review and written approval prior to implementation of said changes. By December 31st of any year in which work occurs, the qualified biologist shall submit: a) a summary report to the Division detailing project status and compliance with the Plan; and b) any observations of state-listed turtles at https://www.mass.gov/how-to/report-rare-species-vernal-pool-observations.

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DOCUMENT B00420

PROPOSAL

LEE

For: **Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook**

COMMONWEALTH OF MASSACHUSETTS

LOCATION

The work referred to herein is in the Town of LEE in Berkshire 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:

Meadow Street

Beginning – Station 9+75.00 +/-

Bridge L-05-004

Ending –Station 14+50.00 +/-

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 **935 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 # 607597	Contract # 132402			
Location : LEE				
Description : Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
101.	0.23	CLEARING AND GRUBBING AT _____ PER ACRE		
102.	0.23	SELECTIVE CLEARING AND THINNING AT _____ PER ACRE		
102.1	860	TREE TRIMMING AT _____ PER FOOT		
102.3	40	HERBICIDE TREATMENT OF INVASIVE PLANTS AT _____ PER HOUR		
102.33	40	INVASIVE PLANT MANAGEMENT STRATEGY AT _____ PER HOUR		
102.523	35	TREE AND PLANT PROTECTION FENCE - VISIBILITY STAKES AT _____ PER FOOT		
102.55	40	ARBORIST AT _____ PER HOUR		
103.	3	TREE REMOVED - DIAMETER UNDER 24 INCHES AT _____ EACH		
115.1	1	DEMOLITION OF BRIDGE NO. L-05-004 AT _____ LUMP SUM		

Project # 607597	Contract # 132402			
Location : LEE				
Description : Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
120.	660	EARTH EXCAVATION AT _____ PER CUBIC YARD		
123.	5	MUCK EXCAVATION AT _____ PER CUBIC YARD		
127.42	8	REINFORCED CONCRETE DECK EXCAVATION BRIDGE L-05 -002 (057) AT _____ PER CUBIC YARD		
140.	766	BRIDGE EXCAVATION AT _____ PER CUBIC YARD		
141.1	5	TEST PIT FOR EXPLORATION AT _____ PER CUBIC YARD		
143.	630	CHANNEL EXCAVATION AT _____ PER CUBIC YARD		
144.	5	CLASS B ROCK EXCAVATION AT _____ PER CUBIC YARD		
150.	95	ORDINARY BORROW AT _____ PER CUBIC YARD		
150.1	75	SPECIAL BORROW AT _____ PER CUBIC YARD		

Project # 607597	Contract # 132402			
Location : LEE				
Description : Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
151.	310	GRAVEL BORROW AT _____ PER CUBIC YARD		
151.1	238	GRAVEL BORROW FOR BRIDGE FOUNDATION AT _____ PER CUBIC YARD		
156.	250	CRUSHED STONE AT _____ PER TON		
160.3	2	CONTROLLED LOW-STRENGTH MATERIAL (> 300 PSI) AT _____ PER CUBIC YARD		
170.	950	FINE GRADING AND COMPACTING - SUBGRADE AREA AT _____ PER SQUARE YARD		
180.01	1	ENVIRONMENTAL HEALTH AND SAFETY PROGRAM AT _____ LUMP SUM		
180.02	40	PERSONAL PROTECTION LEVEL C UPGRADE AT _____ PER HOUR		
180.03	40	LICENSED SITE PROFESSIONAL SERVICES AT _____ PER HOUR		
181.11	2,310	DISPOSAL OF UNREGULATED SOIL AT _____ PER TON		

Project # 607597	Contract # 132402			
Location : LEE				
Description : Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
181.12	30	DISPOSAL OF REGULATED SOIL - IN-STATE FACILITY AT _____ PER TON		
181.13	30	DISPOSAL OF REGULATED SOIL - OUT-OF-STATE FACILITY AT _____ PER TON		
181.14	30	DISPOSAL OF HAZARDOUS WASTE AT _____ PER TON		
402.	105	DENSE GRADED CRUSHED STONE FOR SUB-BASE AT _____ PER CUBIC YARD		
402.13	80	PAVEMENT MILLING MULCH FOR SHOULDERS AT _____ PER FOOT		
415.2	120	PAVEMENT FINE MILLING AT _____ PER SQUARE YARD		
443.	3	WATER FOR ROADWAY DUST CONTROL AT _____ PER 1000 GALLONS		
450.23	101	SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) AT _____ PER TON		
450.31	105	SUPERPAVE INTERMEDIATE COURSE - 12.5 (SIC -12.5) AT _____ PER TON		

Project # 607597	Contract # 132402			
Location : LEE				
Description : Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
450.42	214	SUPERPAVE BASE COURSE - 37.5 (SBC - 37.5) AT _____ PER TON		
450.60	17	SUPERPAVE BRIDGE SURFACE COURSE - 9.5 (SSC-B - 9.5) AT _____ PER TON		
450.70	17	SUPERPAVE BRIDGE PROTECTIVE COURSE - 9.5 (SPC-B - 9.5) AT _____ PER TON		
451.	5	HMA FOR PATCHING AT _____ PER TON		
452.	151	ASPHALT EMULSION FOR TACK COAT AT _____ PER GALLON		
453.	560	HMA JOINT ADHESIVE AT _____ PER FOOT		
472.	5	TEMPORARY ASPHALT PATCHING AT _____ PER TON		
504.	50	GRANITE CURB TYPE VA4 - STRAIGHT AT _____ PER FOOT		
509.	25	GRANITE TRANSITION CURB FOR PEDESTRIAN CURB RAMPS - STRAIGHT AT _____ PER FOOT		

Project # 607597	Contract # 132402			
Location : LEE				
Description : Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
620.12	400	GUARDRAIL, TL-2 (SINGLE FACED) AT _____ PER FOOT		
620.131	310	GUARDRAIL, DEEP POST (SINGLE FACED) AT _____ PER FOOT		
627.1	5	TRAILING ANCHORAGE AT _____ EACH		
627.82	1	GUARDRAIL TANGENT END TREATMENT, TL-2 AT _____ EACH		
628.24	4	TRANSITION TO BRIDGE RAIL AT _____ EACH		
630.1	531	HIGHWAY GUARD REMOVED AND STACKED AT _____ PER FOOT		
657.	100	TEMPORARY FENCE AT _____ PER FOOT		
698.2	4	GEOTEXTILE FABRIC FOR SUBSURFACE DRAINAGE AT _____ PER SQUARE YARD		
698.4	570	GEOTEXTILE FABRIC FOR PERMANENT EROSION CONTROL AT _____ PER SQUARE YARD		

Project # 607597	Contract # 132402			
Location : LEE				
Description : Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
702.	15	HOT MIX ASPHALT SIDEWALK OR DRIVEWAY AT _____ PER TON		
722.3	1	SCHEDULE OF OPERATIONS (TYPE C) - FIXED PRICE $28000 AT Twenty Eight Thousand Dollars LUMP SUM	$28,000.00	$28,000.00
740.	32	ENGINEER'S FIELD OFFICE AND EQUIPMENT (TYPE A) AT _____ PER MONTH		
748.	1	MOBILIZATION AT _____ LUMP SUM		
751.7	20	COMPOST BLANKET AT _____ PER CUBIC YARD		
755.45	50	WETLAND RESTORATION AT _____ PER SQUARE YARD		
756.1	1	CONSTRUCTION PERIOD POLLUTION PREVENTION AND EROSION AND SEDIMENT CONTROL PLAN AT _____ LUMP SUM		
765.21	5	ANNUAL COVER CROP FOR NATIVE SEEDING AT _____ PER POUND		
765.451	5	PART SHADE ROADSIDE MIX AT _____ PER POUND		

Project # 607597	Contract # 132402			
Location : LEE				
Description : Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
765.555	5	WETLAND SEED - PART SHADE MIX AT _____ PER POUND		
765.635	680	NATIVE SEED AND ESTABLISHMENT AT _____ PER SQUARE YARD		
765.664	680	MOWING FOR NATIVE SEED ESTABLISHMENT AT _____ PER SQUARE YARD		
767.121	1,285	SEDIMENT CONTROL BARRIER AT _____ PER FOOT		
767.9	60	JUTE MESH AT _____ PER SQUARE YARD		
769.	710	PAVEMENT MILLING MULCH UNDER GUARD RAIL AT _____ PER FOOT		
776.836	5	MAPLE - SUGAR 2-2.5 INCHES CALIPER AT _____ EACH		
777.138	4	OAK - PIN 2-2.5 INCH CALIPER AT _____ EACH		
833.7	6	DELINEATION FOR GUARD RAIL TERMINI AT _____ EACH		

Project # 607597	Contract # 132402			
Location : LEE				
Description : Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
852.	383	SAFETY SIGNING FOR TRAFFIC MANAGEMENT AT _____ PER SQUARE FOOT		
853.1	6	PORTABLE BREAKAWAY BARRICADE TYPE III AT _____ EACH		
853.2	100	TEMPORARY BARRIER (TL-2) AT _____ PER FOOT		
856.12	1,320	PORTABLE CHANGEABLE MESSAGE SIGN AT _____ PER DAY		
859.	2,100	REFLECTORIZED DRUM AT _____ PER DAY		
859.1	90	REFLECTORIZED DRUMS WITH SEQUENTIAL FLASHING WARNING LIGHTS AT _____ PER DAY		
861.106	950	6 INCH REFLECTORIZED YELLOW LINE (PAINTED) AT _____ PER FOOT		
874.4	5	TRAFFIC SIGN REMOVED AND STACKED AT _____ EACH		
904.01	8	4000 PSI, 3/4 INCH, 610 CEMENT CONCRETE BRIDGE L-05-002 (057) AT _____ PER CUBIC YARD		

Project # 607597	Contract # 132402			
Location : LEE				
Description : Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
910.11	700	STEEL REINFORCEMENT FOR STRUCTURES EPOXY COATED BRIDGE L-05-002 (057) AT _____ PER POUND		
942.124	900	STEEL PILE HP 12 X 84 AT _____ PER FOOT		
948.41	2	DYNAMIC LOAD TEST BY CONTRACTOR AT _____ EACH		
948.5	12	PILE SHOES AT _____ EACH		
960.01	2,000	STRUCTURAL STEEL MODIFICATIONS BRIDGE L-05-002 (057) AT _____ PER POUND		
961.301	1	CLEAN (FULL REMOVAL) AND PAINT SELECT STEEL ELEMENTS OF BRIDGE NO. L-05-002 (057) AT _____ LUMP SUM		
983.1	670	RIPRAP AT _____ PER TON		
984.1	270	NATURAL STREAMBED RESTORATION MATERIAL AT _____ PER CUBIC YARD		
984.2	65	BOULDER BENDWAY WEIRS AT _____ PER CUBIC YARD		

Project # 607597	Contract # 132402			
Location : LEE				
Description : Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook				
ITEM #	**QUANTITY**	**ITEM WITH UNIT BID PRICE WRITTEN IN WORDS**	**UNIT PRICE**	**AMOUNT**
986.	1	MODIFIED ROCKFILL AT _____ PER TON		
991.1	1	CONTROL OF WATER - STRUCTURE NO. L-05-004 AT _____ LUMP SUM		
995.01	1	BRIDGE STRUCTURE, BRIDGE NO. L-05-004 AT _____ LUMP SUM		
996.51	500	PREFABRICATED MODULAR GRAVITY RETAINING WALL AT _____ PER SQUARE FOOT		
Total Qty:	24,632.46			

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SCHEDULE OF PARTICIPATION
BY DISADVANTAGED BUSINESS ENTERPRISES (DBEs)

PRIME BIDDER: _____

DATE OF BID OPENING: _____ MassDOT PROJECT NO.: 607597

FEDERAL AID PROJECT NUMBER: HIP(NGB)-003S(900)X

PROJECT LOCATION: LEE

Name Address and Phone Number of DBE	Name of Activity	NAICS Code(s)	(a) DBE Contractor Activity Amount *Construction Work*	(b) DBE Other Business Amount *Services, Supplies, Material*	(c) Total amount eligible for credit
Total Bid Amount	TOTALS:		$		$
	DBE Percentage of Total bid:		%		%

A copy of the DBE's most recent certification and an original affidavit must be attached to this document.

Is a Joint Check Approval being submitted for any of the above? ☐ Yes X No
Will any of the contractors listed above be using a third party to deliver materials or perform any portion of work?
☐ Yes X No
(i.e. manufacturing)

SIGNATURE:_____ DATE_____

NAME AND TITLE (*PRINT*):_____

EMAIL ADDRESS: _____TEL NO.:_____

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DOCUMENT B00854

DBE Letter of Intent

(To be completed by the DBE – Page 1 of 2)

The DBE firm will also include the latest MassUCP letter with this Letter of Intent.

To: _____ (Prime Bidder)

From: _____ (DBE Firm)

Federal Aid Project No.: HIP(NGB)-003S(900)X Bid Opening or Due Date: _____

Project Name: _____ Project Location: LEE

I, _____, authorized signatory of the above-reference DBE firm hereby declare:

(Print Name)

(a) My company is currently certified as a Disadvantaged Business Enterprise (DBE) by the Massachusetts Supplier Diversity Office (SDO), as a (check all that apply):

☐ CONTRACTOR ☐ REGULAR DEALER ☐ OTHER
☐ MANUFACTURER ☐ TRUCKING OPERATIONS ☐ PROFESSIONAL SERVICES

[Additional guidance is available at Title 49, Code of Federal Regulations, Part 26.55 (49 CFR Part 26.55)]

(b) My firm has the ability to manage, supervise and perform the activity described on page 3 of this Letter of Intent. If you are awarded the contract, my company intends to enter into a contract with your firm to perform the items of work or other activity described on the following sheet for the prices indicated.

(c) There have been no changes affecting the ownership, control or independence of my company since my last certification review on _____. If any such change is planned or occurs prior to my company's completion of this proposed work, I will give prior written notification to your firm and to the Office of Diversity and Civil Rights (ODCR)(MBTA/MassDOT) and SDO.

(d) I have read the MassDOT proposal for the Project, and acknowledge that my company will comply with that document and the requirements of 49 CFR Part 26.

(e) For the purpose of obtaining subcontractor approval from the MassDOT, my firm will provide to you:

a. ***The following construction work:***
   i. a complete list of contact information for proposed Superintendent, i.e., address, phone number and e-mail address, and;
   ii. a list of projects completed in the last 10 years. I shall also include, for each project: the name and telephone number of a contact person for the contracting authority, person, or organization; project title / location (City/State), dollar value of the work; a description of the work; and the date project completed .

b. The following professional services work:
   i. resume, stating the qualifications and experience of person responsible for project oversight and contact information, i.e., address, phone number and e-mail address.
   ii. proposed team and organization,
   iii. resumes of key personnel;
   iv. example projects

c. The following services, materials or supplies:
   i. a written agreement and invoices for the materials or supplies, and any other documents evidencing the terms of providing such items to be sent to the Office of Diversity and Civil Rights Government Compliance Unit designee;
   ii. information concerning brokers fees and commissions for providing services or materials.

DBE Firm Authorized Signature _____ Date _____

DBE Letter of Intent (Continued)

(To be completed by the DBE – Page 2 of 2)

Prime Bidder: _____

DBE Firm: _____

Federal Aid Project No.: HIP(NGB)-003S(900)X Bid Opening or Due Date: _____

Project Name: _____ Project Location: LEE

Item number if applicable	NAICS Code	Description of Activity with notations such as Services, or Brokerage, Labor Only, Material Only, or Complete	Quantity	Unit Price	Amount
			TOTAL AMOUNT:		

Please give full explanations, attach additional sheets if necessary.

I HEREBY VERIFY THAT _____

(DBE Firm)

WILL SOLELY PERFORM THE WORK, OR PROVIDE THE SERVICES OR MATERIALS, AS DESCRIBED ABOVE.

DBE Authorized Signature: _____

_____

Name (Print): _____

Title: _____

Email Address: _____

Phone Number: _____ Fax Number: _____

END OF DOCUMENT

DOCUMENT B00855

DBE JOINT CHECK ARRANGEMENT APPROVAL FORM

(to be submitted by Prime Contractor)

Contract No: 132402 **Project No.** 607597 **Federal Aid No.:** HIP(NGB)-003S(900)X

Location: LEE **Bid Opening Date:** _____

Project Description: Bridge Replacement, L-05-004, Meadow Street over Powder Mill Brook

We have received the attached request for the use of a joint check arrangement from _____ _____ , a DBE on the above- referenced Contract and _____ _____, a Material Supplier/Vendor for the subject Contract. The DBE has complied with the requirements of 49 CFR Part 26.55(c)(1). In particular, the DBE has:

- a written agreement with the material supplier/vendor;
- applied for credit with the subject material supplier and has supplied the vendor's response;
- shown that it will place all orders to the subject material supplier/vendor;
- made and retains all decision-making responsibilities concerning the materials; and
- provided a Joint Check Agreement that is acceptable to MassDOT;

As the Contractor for the Project, we agree to issue joint checks (made payable to the Material Supplier/Vendor and the DBE) for payment of sums due pursuant to invoices from the Supplier/Vendor and DBE.

Contractor:

_____ _____
Company Name Signature
Duly Authorized

_____
Printed Name

_____ _____
Date Title

SubContractor:

_____ _____
Company Name Signature –
Duly Authorized

_____
Printed Name

_____ _____
Date Title

*** END OF DOCUMENT ***

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DOCUMENT B00856

JOINT VENTURE AFFIDAVIT

(All Firms)

- All Information Requested By This Schedule Must Be Answered. Additional Sheets May Be Attached.
- If, there is any change in the information submitted, the Joint Venture parties must inform MassDOT Pre-Qualifications Office (and, if one of the companies is a DBE, the Director of Contract Compliance, Office of Civil Rights) *prior* to such change, in writing, either directly or through the Prime Contractor if the Joint Venture is a subcontractor.
- If the Joint Venture Entity will be the bidder on a prime Contract, it must bid and submit all required documents (insurance, worker's compensation, bonds, etc.) in the name of the Joint Venture Entity.

I. Name of Joint Venture: _____

Type of Entity if applicable (Corp., LLC):_____Filing State _____

Address of joint venture: _____

_____

Phone No(s) for JV Entity: _____E-mail:_____

Contact Person(s)_____

Tax ID/EIN of Joint Venture: _____Vendor Code:_____

II. Identify each firm or party to the Joint Venture:

Name of Firm: _____

Address: _____

Phone : _____E-mail:_____

Contact person(s) _____

Name of Firm: _____

Address: _____

Phone: _____E-mail:_____

Contact Person(s)_____

III. Describe the role(s) of the each party to the Joint Venture:

_____

_____

IV. Attach a copy of the Joint Venture Agreement. The proposed Joint Venture Agreement should include specific details including, but not limited to: (1) the contributions of capital and equipment; (2) work items to be performed by each company's forces, (3) work items to be performed under the supervision of any DBE Venturer; (4) the commitment of management, supervisory and operative personnel employed by the DBE to be dedicated to the performance of the Project; and (5) warranty, guaranty, and indemnification clauses.

V. Attach any applicable Corporate or LLC Votes, Authorizations, etc.

VI. Ownership of the Joint Venture:

A. What is the percentage(s) of each company's ownership in the Joint Venture?

ownership percentage(s): _____

ownership percentage(s): _____

B. Specify percentages for each of the following (provide narrative descriptions and other detail as applicable):

1. Sharing of profit and loss: _____

2. Capital contributions:

(a) Dollar amounts of initial contribution: _____

(b) Dollar amounts of anticipated on-going contributions: _____

(c) Contributions of equipment (specify types, quality and quantities of equipment to be provided by each firm): _____

_____

4. Other applicable ownership interests, including ownership options or other agreements, which restrict or limit ownership and/or control:

_____

_____

5. Provide copies of all other written agreements between firms concerning bidding and operation of this Project or projects or contracts.

6. Identify all current contracts and contracts completed during the past two (2) years by either of the Joint Venture partners to this Joint Venture:

_____

_____

VII. Control of and Participation in the Joint Venture. Identify by name and firm those individuals who are, or will be, responsible for and have the authority to engage in the following management functions and policy decisions. (Indicate any limitations to their authority such as dollar limits and co-signatory requirements.):

A. Joint Venture check signing:

_____

_____

B. Authority to enter Contracts on behalf of the Joint Venture:

_____

_____

C. Signing, co-signing and/or collateralizing loans:

_____

_____

D. Acquisition of lines of credit:

E. Acquisition and indemnification of payment and performance bonds:

F. Negotiating and signing labor agreements:

G. Management of contract performance. *(Identify by name and firm only)*:

1. Supervision of field operations:
2. Major purchases:
3. Estimating:
4. Engineering:

VIII. Financial Controls of Joint Venture:

A. Which firm and/or individual will be responsible for keeping the books of account?

B. Identify the "Managing Partner," if any, and describe the means and measure of their compensation:

C. What authority does each firm have to commit or obligate the other to insurance and bonding companies, financing institutions, suppliers, subcontractors, and/or other parties participating in the performance of this Contract or the work of this Project?

IX. Personnel of Joint Venture: State the approximate number of personnel (by trade) needed to perform the Joint Venture's work under this Contract. Indicate whether they will be employees of the majority firm, DBE firm, or the Joint Venture.

	Firm 1 (number)	Firm 2 (number)	Joint Venture (number)
Trade			
Professional			
Administrative/Clerical			
Unskilled Labor			

Will any personnel proposed for this Project be employees of the Joint Venture?: _____

If so, who: _____

A. Are any proposed Joint Venture employees currently employed by either firm?

Employed by Firm 1: _____ Employed by firm 2 _____

B. Identify by name and firm the individual who will be responsible for Joint Venture hiring: ____

_____

X. Additional Information. Please state any material facts and additional information pertinent to the control and structure of this Joint Venture.

_____

_____

XI. AFFIDAVIT OF JOINT VENTURE PARTIES. The undersigned affirm that the foregoing statements and attached documents are correct and include all material information necessary to identify and explain the terms and operations of our Joint Venture and the intended participation of each firm in the undertaking. Further, the undersigned covenant and agree to provide to MassDOT current, complete and accurate information regarding actual Joint Venture work, payments, and any proposed changes to any provisions of the Joint Venture, or the nature, character of each party to the Joint Venture. We understand that any material misrepresentation will be grounds for terminating any Contract awarded and for initiating action under Federal or State laws concerning false statements.

Firm 1	Firm 2
Signature Duly Authorized	Signature Duly Authorized
Printed Name and Title	Printed Name and Title
Date	Date

*** END OF DOCUMENT ***